


MANUAL CHANGE TRANSMITTAL		NO. 13-12
TITLE: Department of Transportation <i>Construction Manual</i>	APPROVED BY:  for Mark Leja, Chief Division of Construction	DATE ISSUED: July 3, 2013
SUBJECT AREA Table of Contents and various sections of the <i>Construction Manual</i>	ISSUING UNIT Division of Construction	
SUPERSEDES CPBs 06-1, 06-5, and 06-6 CPDs 05-2, 06-3, and 09-7	DISTRIBUTION All Requested Manual Holders	

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

Please update your manual according to the table below.

Section	Incorporates	Remove Old Page(s)	Insert New/Revised Page(s)
Table of Contents	None	TOC.3	TOC.3
Goldenrod, Chapter 5, Section 3, "Change Orders"	None	5-3.i thru 5-3.iii	5-3.i thru 5-3.iii
Chapter 5, Section 3, "Change Orders"	All of CPB: 06-1, 06-5, 06-6 All of CPD: 05-2, 06-3, 09-7 Parts of CPB: 05-3, 06-9, 09-2, 10-2, 10-6	5-3.1 thru 5-3.62	5-3.1 thru 5-3.92

Section 5-3, "Change Orders"

- Updates references to align with 2010 Standard Specifications.
- Updates cross references to other sections of the Construction Manual.
- Converts SI units to US customary units and updates examples/figures accordingly.
- Updates terminology and content to align with 2010 Standard Specifications, current policy, and FHWA.
- Corrects language, redundancy, formatting, and references to Caltrans divisions.
- Corrects content regarding disputes, potential claims, and exceptions to the PFE.
- Corrects content regarding final pay items and nonfinal pay items.
- Added content to consult contractor for AC manufacturing estimates.
- Corrects content for "changed work."
- Included need for explanation of scope and reason for change on Change Order Memo.
- Updates two missing payment methods in Section 5-306C, "Methods of Payment."

- Added new sub-section 5-306C(3), “Payment Adjustment.”
- Added new sub-section 5-308A(3), “FHWA Denial.”
- Added new sub-section 5-312, “Substantiation.”
- Includes parts of the following Construction Policy Bulletins:
 - 05-3, “Compensation Adjustment for Price Index Fluctuations”
 - 06-9, “Payment of Construction Disputes with Merit”
 - 09-2, “Asphalt Price Adjustments”
 - 10-2, “Contract Change Order Standardized Clause on Merited Disputes”
 - 10-6, “Revised Special Provision for Asphalt Price Adjustments”
- Includes all of the following Construction Policy Bulletins:
 - 06-1, “Prior Authorization to Proceed”
 - 06-5, “CCO Approval Delegation”
 - 06-6, “Executed Contract Change Order Copy Distribution”
- Includes all of the following Construction Policy Directives:
 - 05-2, “Inconsequential Contract Change Order Determinations”
 - 06-3, “Division of Construction Approved Contract Change Order Direction”
 - 09-7, “Federal Segregation Determination on Contract Change Order”

CONSTRUCTION MANUAL**TABLE OF CONTENTS***Chapter-Section*

4-64	Plastic Pipe
4-65	Concrete Pipe
4-66	Corrugated Metal Pipe
4-67	Structural Metal Plate Pipe
4-68	Subsurface Drains
4-69	Overside Drains
4-70	Miscellaneous Drainage Facilities
4-72	Slope Protection
4-73	Concrete Curbs and Sidewalks
4-74	Pumping Equipment and Controls
4-75	Miscellaneous Metal
4-80	Fences
4-81	Monuments
4-82	Markers and Delineators
4-83	Railings and Barriers
4-84	Traffic Stripes and Pavement Markings
4-85	Pavement Markers
4-86	Electrical Systems
4-88	Geosynthetics
4-90	Concrete
4-91	Paint
4-92	Asphalts
4-93	Liquid Asphalts
4-94	Asphaltic Emulsions
4-95	Epoxy

5 Contract Administration

5-0	Conduct of the Work
5-1	Project Records and Reports
5-2	Funds
5-3	Change Orders
5-4	Disputes

Section 3 Change Orders

5-301 General

5-302 Change Order Policy

5-303 Purpose of Change Orders

5-304 Initiation of Change Orders

5-305 Preliminary Considerations

5-306 Change Order Content

5-306A Specifications

5-306B Description of Work

5-306C Methods of Payment

5-306C (1) *Increases and Decreases in Bid Item at Bid Item Unit Prices*

5-306C (2) *Payment Adjustment*

5-306C (2a) Adjustments for Increased or Decreased Quantities

5-306C (2b) Adjustment Calculations Involving Hot Mix Asphalt Dikes and Miscellaneous Areas

5-306C (2c) Deferred Bid Item Adjustments

5-306C (2d) Exemption from Adjustment

5-306C (2e) Adjustments for Work-Character Changes

5-306C (3) *Extra Work*

5-306C (3a) Extra Work at Agreed Prices

5-306C (3b) Extra Work at Force Account

5-306D Adjustments to Time of Completion

5-306E Change Order Standard Clauses

5-306F Work Designated as Extra Work in the Specifications

5-306G Change Order Format

5-307 Change Order Memorandum

5-307A Contents of the Memorandum

5-307B Change Order Category Codes

Table 5-3.1 *Change Order Type (Character 1)*

Table 5-3.2 *Specification or Physical Asset (Character 2)*

Table 5-3.3 *Source Document (Characters 3 and 4)*

Table 5-3.4 *Dispute Disposition (Characters 3 and 4)*

5-307C Coordination and Concurrence by Others

5-307C (1) *Project Development*

- 5-307C (2) *Project Management*
- 5-307C (3) *Structures*
- 5-307C (4) *Materials*
- 5-307C (5) *Traffic*
- 5-307C (6) *Maintenance*
- 5-307C (7) *Right-of-Way*
- 5-307C (8) *Environmental*
- 5-307C (9) *Locally Funded Projects*

5-308 Federal Highway Administration Change Order Requirements

5-308A High-Profile Projects

- 5-308A (1) *Federal Highway Administration Approval Requirements—Major Change Orders*
- 5-308A (2) *Federal Highway Administration Approval Requirements—Minor Change Orders*
- 5-308A (3) *FHWA Denial*

5-308B Assigned Projects

- 5-308B (1) *Federal Highway Administration Involvement Requirements—Major Change Orders*

5-308C All Federally Funded Projects

5-309 Federal Segregation Determination on Change Orders

5-310 Locally Funded State Highway Projects

5-311 Change Order Approval Process

5-311A Division of Construction Approval

- 5-311A (1) *Change Order Determinations*

Table 5-3.5 Division of Construction's Change Order Direction

5-311B District Approval Limitations

5-311C Division of Construction Prior Authorization

5-311D District Prior Authorization to Proceed

5-312 Substantiation

5-312A Engineering Analysis

5-312B Contractual Analysis

5-312C Cost Analysis

5-312D Time Impact Analysis

5-313 Executed Change Order Copy Distribution

5-314 Value Engineering Change Proposals

5-315 Examples of Change Orders

Example 5-3.1 Flagging and Traffic Control (Extra Work at Force Account)

Example 5-3.2 Flagging Only (Extra Work at Agreed Unit Price)

Example 5-3.3 Resolution of an Initial Notice of Potential Claim (Payment Adjustment)



<i>Example 5-3.4</i>	<i>Compensation of Interest for Late Payment of Change Order Bills (Payment Adjustment)</i>
<i>Example 5-3.5A</i>	<i>Modify Lump Sum Bid Item with a Specified “Cost Break-Down” (Payment Adjustment and Clause for no Adjustment due to Eliminated Work)</i>
<i>Example 5-3.5B</i>	<i>Modify Lump Sum Bid Item Without a Specified “Cost Break-Down”</i>
<i>Example 5-3.6</i>	<i>Differing Site Condition (Payment Adjustment at Force Account)</i>
<i>Example 5-3.7</i>	<i>Additional Work. Change Material Specifications. Increase in Bid Item Quantities (Work-Character Change Payment Adjustment and Extra Work at Force Account)</i>
<i>Example 5-3.8</i>	<i>Compensation for Critical Delay (Payment Adjustment)</i>
<i>Example 5-3.9</i>	<i>Value Engineering Change Proposal (Decrease Bid Item Quantity and Payment Adjustment)</i>
<i>Example 5-3.10A</i>	<i>Additional Work. Increase Bid Item Quantities (Clause for Final Pay Items and Extra Work at Agreed Price)</i>
<i>Example 5-3.10B</i>	<i>Item Increase/Decrease and Extra Work</i>
<i>Example 5-3.11A</i>	<i>Payment Adjustment for Price Index Fluctuations (Before Paving)</i>
<i>Example 5-3.11B</i>	<i>Payment Adjustment for Price Index Fluctuations (After Paving)</i>
<i>Example 5-3.12</i>	<i>Claim Entitlement</i>
<i>Example 5-3.13</i>	<i>Resolution of Deferred Time Adjustment</i>
<i>Example 5-3.14</i>	<i>Item Adjustment</i>

Section 3 Change Orders

5-301 General

5-302 Change Order Policy

5-303 Purpose of Change Orders

5-304 Initiation of Change Orders

5-305 Preliminary Considerations

5-306 Change Order Content

5-306A Specifications

5-306B Description of Work

5-306C Methods of Payment

5-306C (1) *Increases and Decreases in Bid Item at Bid Item Unit Prices*

5-306C (2) *Payment Adjustment*

5-306C (2a) Adjustments for Increased or Decreased Quantities

5-306C (2b) Adjustment Calculations Involving Hot Mix Asphalt Dikes and Miscellaneous Areas

5-306C (2c) Deferred Bid Item Adjustments

5-306C (2d) Exemption from Adjustment

5-306C (2e) Adjustments for Work-Character Changes

5-306C (3) *Extra Work*

5-306C (3a) Extra Work at Agreed Prices

5-306C (3b) Extra Work at Force Account

5-306D Adjustments to Time of Completion

5-306E Change Order Standard Clauses

5-306F Work Designated as Extra Work in the Specifications

5-306G Change Order Format

5-307 Change Order Memorandum

5-307A Contents of the Memorandum

5-307B Change Order Category Codes

Table 5-3.1 *Change Order Type (Character 1)*

Table 5-3.2 *Specification or Physical Asset (Character 2)*

Table 5-3.3 *Source Document (Characters 3 and 4)*

Table 5-3.4 *Dispute Disposition (Characters 3 and 4)*

5-307C Coordination and Concurrence by Others

5-307C (1) *Project Development*

- 5-307C (2) *Project Management*
- 5-307C (3) *Structures*
- 5-307C (4) *Materials*
- 5-307C (5) *Traffic*
- 5-307C (6) *Maintenance*
- 5-307C (7) *Right-of-Way*
- 5-307C (8) *Environmental*
- 5-307C (9) *Locally Funded Projects*

5-308 Federal Highway Administration Change Order Requirements

5-308A High-Profile Projects

- 5-308A (1) *Federal Highway Administration Approval Requirements—Major Change Orders*
- 5-308A (2) *Federal Highway Administration Approval Requirements—Minor Change Orders*
- 5-308A (3) *FHWA Denial*

5-308B Assigned Projects

- 5-308B (1) *Federal Highway Administration Involvement Requirements—Major Change Orders*

5-308C All Federally Funded Projects

5-309 Federal Segregation Determination on Change Orders

5-310 Locally Funded State Highway Projects

5-311 Change Order Approval Process

5-311A Division of Construction Approval

- 5-311A (1) *Change Order Determinations*

Table 5-3.5 Division of Construction's Change Order Direction

5-311B District Approval Limitations

5-311C Division of Construction Prior Authorization

5-311D District Prior Authorization to Proceed

5-312 Substantiation

5-312A Engineering Analysis

5-312B Contractual Analysis

5-312C Cost Analysis

5-312D Time Impact Analysis

5-313 Executed Change Order Copy Distribution

5-314 Value Engineering Change Proposals

5-315 Examples of Change Orders

Example 5-3.1 Flagging and Traffic Control (Extra Work at Force Account)

Example 5-3.2 Flagging Only (Extra Work at Agreed Unit Price)

Example 5-3.3 Resolution of an Initial Notice of Potential Claim (Payment Adjustment)

<i>Example 5-3.4</i>	<i>Compensation of Interest for Late Payment of Change Order Bills (Payment Adjustment)</i>
<i>Example 5-3.5A</i>	<i>Modify Lump Sum Bid Item with a Specified “Cost Break-Down” (Payment Adjustment and Clause for no Adjustment due to Eliminated Work)</i>
<i>Example 5-3.5B</i>	<i>Modify Lump Sum Bid Item Without a Specified “Cost Break-Down”</i>
<i>Example 5-3.6</i>	<i>Differing Site Condition (Payment Adjustment at Force Account)</i>
<i>Example 5-3.7</i>	<i>Additional Work. Change Material Specifications. Increase in Bid Item Quantities (Work-Character Change Payment Adjustment and Extra Work at Force Account)</i>
<i>Example 5-3.8</i>	<i>Compensation for Critical Delay (Payment Adjustment)</i>
<i>Example 5-3.9</i>	<i>Value Engineering Change Proposal (Decrease Bid Item Quantity and Payment Adjustment)</i>
<i>Example 5-3.10A</i>	<i>Additional Work. Increase Bid Item Quantities (Clause for Final Pay Items and Extra Work at Agreed Price)</i>
<i>Example 5-3.10B</i>	<i>Item Increase/Decrease and Extra Work</i>
<i>Example 5-3.11A</i>	<i>Payment Adjustment for Price Index Fluctuations (Before Paving)</i>
<i>Example 5-3.11B</i>	<i>Payment Adjustment for Price Index Fluctuations (After Paving)</i>
<i>Example 5-3.12</i>	<i>Claim Entitlement</i>
<i>Example 5-3.13</i>	<i>Resolution of Deferred Time Adjustment</i>
<i>Example 5-3.14</i>	<i>Item Adjustment</i>

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

Section 3 Change Orders

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5-301 General

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A change order is a legally binding document used to make changes to the contract. Form CEM-4900, “Change Order,” is used for change orders. Form CEM-4903, “Change Order Memorandum,” must be prepared for each change order.

This section describes the use of Form CEM-4900 and Form CEM-4903, describes Caltrans policies for change orders, and provides guidelines for writing change orders and memorandums.

5-302 Change Order Policy

5-302 Change Order Policy

The authority for Caltrans to make changes to a contract is located in Section 3-403, “Changes and Extra Work,” of this manual. Work that is outside the scope of an existing contract should be done in a separate contract. However, in special situations it may be added to an existing contract if:

- A director’s order has been approved for the new work in accordance with Deputy Directive 26-R2, “Use of Director’s Orders”, dated July 31, 2009, available at:
http://www.dot.ca.gov/ser/downloads/general/DD_26_R2_Signed.pdf,
- The Division of Construction chief concurs with adding new work to the existing contract by co-signing the director’s order,
- On all federal-aid projects, the Federal Highway Administration (FHWA) transportation engineer approves the change as outlined in Section 5-308, “Federal Highway Administration Change Order Requirements,” of this manual,
- On locally funded state highway projects, the contributing agency agrees to the change as outlined in Section 5-310, “Locally Funded State Highway Projects,” of this manual, and
- The contractor agrees to the change.

District construction personnel should consider the following in determining if the proposed change is within the scope of the original contract. Answering “yes” to any of the following questions indicates that the new work may be outside the scope of the original contract:

- Is the type of work for the proposed change significantly different from other types of work within the original contract?
- Is it necessary for the prime contractor or a subcontractor to mobilize specialized forces and equipment to perform the work of the proposed change?
- Will the estimated cost of the proposed work, when combined with all other changes, be outside the approved contract allotment?
- Does the proposed change represent a significant deletion to the original contract?

- Does the proposed change significantly delay completion of the contract when compared to the number of original contract working days?
- Is the proposed change outside the original contract limits?
- Can the project be completed as contemplated at the time of bid without the proposed change?

Answering the previous questions assists in determining if a proposal is within the scope of the existing contract. However a complete analysis of all the facts and circumstances surrounding the proposed change or new work is required to make a final determination. When district construction is uncertain if the new work is within the scope of the original contract, the district construction deputy director must consult the appropriate Division of Construction field coordinator for determination.

When new work resulting from the director's order may be accomplished best by adding to an existing contract, the district submits a request to the Division of Construction chief to co-sign the order. After the director's order is approved, district personnel may process a change order incorporating the new work, in accordance with the procedures described in Section 5-311, "Change Order Approval Process," of this manual.

5-303 Purpose of Change Orders

5-303 Purpose of Change Orders

Use change orders to change any part of the original contract. In addition, change orders are used for administrative and other purposes. The following are some of the reasons for writing change orders:

- To change contract plans, specifications, or both.
- To describe the work and method of payment for work stipulated in the contract to be paid as extra work.
- To authorize an increase in extra work funds necessary to complete a previously authorized change.
- To make payment adjustments.
- To implement a value engineering change proposal or a construction evaluated research proposal. Refer to Section 3-5, "Control of Work," of this manual for a discussion of value engineering change proposals.
- To clarify terms of the contract.
- To resolve disputes or potential claims prior to the proposed final estimate, or exceptions (claims) after the proposed final estimate, and to pay for contract claim determinations. For the use of change orders in the dispute resolution process, refer to Section 5-4, "Disputes," of this manual.

5-304 Initiation of Change Orders

5-304 Initiation of Change Orders

The resident engineer usually determines the need for and initiates a change order. However, the contractor, other Caltrans units, or outside agencies or individuals may request changes. Other Caltrans units requesting a change order must clearly document the need for the change and provide information sufficient to demonstrate that the requested change meets Caltrans policy for making changes to the contract. For all changes requested by any person except the contractor, indicate "Change Requested by Engineer" on Form CEM-4900, "Change Order."

5-305 Preliminary Considerations

When preparing to write a change order, consider the following:

- Is the proposed change order necessary to complete the work as contemplated at the time the plans and specifications were approved?
- What is the overall impact on the planned work?
- Are there sufficient unobligated contingency funds? If additional funds are required, can they be obtained soon enough to prevent delays? Refer to Section 5-2, "Funds," of this manual for the procedure for obtaining additional funds.
- Will the contract time be affected?
- What are the impacts of adjusting contract time?
- When a project is nearing completion, give careful consideration to the effect the change will have on the time of completion. Changes near the end of a contract tend to extend the time of completion more than changes made earlier. Late changes may adversely affect the contractor's schedule, delay public use of the facility, and disrupt the planned use of Caltrans personnel.
- If the adjustment of time of completion is deferred, how will the adjustment be determined?
- Will the proposed change order affect or change the contractor's planned method of performing the work?
- Is the proposed work already covered in the contract?
- Will the ordered change cause a work-character change?
- If a payment adjustment resulting from a work-character change is deferred, how will the adjustment be determined?
- Is timely coordination with other affected Caltrans units possible? Does the proposed change adhere to existing permit conditions, environmental mitigation requirements, local agency and utility obligations, and right-of-way agreements? Does the proposed change require new coordination, permits, or agreements?
- Will the contractor cooperate in providing timely cost estimates for extra work at agreed price and cost information for payment adjustments? Should you make your own cost estimates and determinations first and present them to the contractor?
- What methods of payment should be used?

To avoid misunderstanding and obtain full agreement, discuss with the contractor all elements of a change, including the method of compensation and the affect on time. Failure to identify elements requiring consideration may lead to protest.

5-306 Change Order Content

The change order must be clear, concise, and explicit. When appropriate, it must include the following:

- What is to be done.
- Location and limits of proposed work.
- Any applicable specification changes and references to specifications.

5-305 Preliminary Considerations

5-306 Change Order Content

- The proposed change order's affect on time of completion.
- Method and amount of compensation.

5-306A Specifications

The specifications for bid item work already included in the contract will apply to added bid item work. You do not need to repeat or reference specifications for added work that is clearly shown to be bid item work.

In the change order, completely describe extra work. Include directly or by reference the specifications for extra work, whether paid for at agreed price or at force account.

The contractor must complete this extra work exactly as it is specified in the change order.

The contract will include some supplemental work specifically designated as extra work. For an example of this situation, refer to Section 12-1.02 [12-2.01], "Flaggers," and Section 12-1.03 [12-2.02], "Flagging Costs," of the *Standard Specifications*.

5-306B Description of Work

The change order must clearly describe added work or other changes to the contract. Include appropriate references to special provisions, contract plans, *Standard Plans*, or *Standard Specifications*. Decide whether a written statement clearly defines the proposed change or if plans or drawings need to be included.

The contractor normally chooses the method of performing extra work, subject to the resident engineer's approval for labor, equipment, and materials for force account work. If, for any reason, the engineer wants to control the method of performing the work, the method must be specified in the change order.

On plans attached to a change order, show pertinent dimensions and the scale or label the plans "not to scale." Plainly mark reduced reproductions "Reduced Plans, Scales Reduced Accordingly." When using existing plan sheets, clearly show the difference between new work, work already included in the contract, and changed or eliminated work. A simple sketch on a letter-sized sheet will more clearly depict the change than an obscure revision to an existing sheet of the original plans. An 8.5" x 11" attachment is always preferable to a full-size contract plan sheet.

Section 6735, "Preparation, signing, and sealing of civil engineering documents," of the Professional Engineers Act, requires that all civil engineering plans and specifications that are permitted or that are to be released for construction shall bear the signature and seal or stamp of the licensee and the date of signing and sealing or stamping. All final civil engineering calculations and reports shall bear the signature and seal or stamp of the licensee, and the date of signing and sealing or stamping. Plans or specifications attached to a proposed change order must meet this requirement, with the exception that a licensed civil engineer does not need to sign revisions already covered by *Standard Plans*, *Standard Specifications*, standard special provisions, previously engineered drawings, or minor changes not requiring calculations or determinations by a licensed engineer.

Show the Caltrans contract number, sheet number, and change order number on plans or other documents made a part of a change order. Include all attachments with each distributed copy of a change order.

5-306C Methods of Payment

When writing a change order, the resident engineer often can choose the payment method for added or changed work. The following lists, in order of preference, the payment methods:

1. Bid item unit prices.
2. Bid item unit prices with a payment adjustment at agreed unit price or lump sum.
3. Payment adjustment at agreed unit price or lump sum.
4. Force account.
 - a. Payment adjustment.
 - b. Extra work.

When a bid item has a work-character change, the resident engineer may delete the entire bid item, or the portion of it affected by the change, and pay for the entire work at force account. A much better choice, though, is to determine a correct and equitable payment adjustment to the bid item unit price. A payment adjustment providing for increased or decreased costs due to the work-character change allows the contract price to remain unchanged. Before resorting to force account payment, resident engineers must make every effort to make payment adjustments or negotiate agreed prices.

Refer to Section 3-901, "General," of this manual for methods of payment. Section 3-904, "Payment Adjustments," of this manual describes how the various methods of payment are used in change orders.

5-306C (1) *Increases and Decreases in Bid Items at Bid Item Unit Prices*

Changes in planned work or adding or decreasing work will often result in increases or decreases in bid item quantities. Except for bid items designated in the bid item list as final pay quantities, show changes in bid item quantities as estimates on a change order. Calculate the estimated increases or decreases that will result from the work as changed by the change order. The actual quantity paid for each bid item will be determined by the method specified for measuring each bid item quantity. For guidelines on measuring bid item quantities, refer to Section 3-9, "Payment," of this manual.

Show changes in the quantity of bid items that are designated as final pay quantities as fixed amounts added to the quantity shown in the bid item list. If a portion of a final pay item quantity is eliminated, the final pay quantity will be revised in the amount represented by the eliminated portion of the item of work quantity. For a standard clause for revised final pay quantities, refer to Section 5-306E, "Change Order Standard Clauses," of this manual.

For the method of indicating changes in bid item quantities, refer to Section 5-306G, "Change Order Format," and the following example change orders which are provided in Section 5-315, "Examples of Change Orders," of this manual:

- Example 5-3.7, "Additional Work. Change Material Specifications. Increase in Bid Item Quantities (Work-Character Change Payment Adjustment and Extra Work at Force Account)."
- Example 5-3.9, "Value Engineering Change Proposal (Decrease Bid Item Quantity and Payment Adjustment)."

- Example 5-3.10A, “Additional Work. Increase Bid Item Quantities (Clause for Final Pay Items and Extra Work at Agreed Price.”
- Example 5-3.10B, “Item Increase/Decrease and Extra Work.”

Increases and decreases or estimated increases or decreases in bid items at contract prices may be executed unilaterally or with the contractor’s agreement.

5-306C (2) *Payment Adjustment*

For the definition of payment adjustments, refer to Section 3-904, “Payment Adjustments,” of this manual. Section 3-4, “Scope of Work,” of this manual discusses payment adjustments for increased or decreased quantities and for work-character changes.

Payment adjustments usually involve estimating the cost of work or determining the actual cost of work performed. The following explains how to estimate or determine such costs.

Verify the contractor’s records of item cost by comparing labor and equipment charged to the item by the contractor to the labor and equipment shown on the daily reports. Charge equipment to the item cost in accordance with the force account method. Exclude down time, and apply the correct force account rental rates. Exclude any overhead costs and any items that should be charged to other work.

Sometimes a contractor may submit cost estimates based on the billing from a specialist plus a markup. When the work is of such a nature that it would qualify under Section 9-1.05 [9-103B], “Extra Work Performed by Specialists,” of the *Standard Specifications*, you may calculate the adjustment on this basis. Ensure the specialist rate or billing is in line with the firm’s usual charges.

For bid item overrun and underrun adjustments, when the contractor does not furnish sufficient and timely cost information, issue a unilaterally approved change order adjusting the item. Base the adjustment on your cost determination. This approved change order establishes the time allowed for protest and helps avoid delays.

Even though the contractor may have agreed to pay a fixed price to others for an item of work, you can still use a force account based adjustment of the item price. You must use a force account cost determination even when the work is subcontracted unless the item of work was performed by a specialist, as defined in Section 9-1.05 [9-1.03B], “Extra Work Performed by Specialists,” of the *Standard Specifications*.

For large and complex adjustments, request auditing assistance from the Division of Audits & Investigations through the Division of Construction. Refer to procedures in Section 5-409, “Audits,” of this manual.

5-306C (2a) *Adjustments for Increased or Decreased Quantities*

As soon as it is known that a bid item quantity will vary from the bid item list by more than 25 percent, consider the method of adjustment that will be used. Make daily reports for the item with the same degree of detail used in force account daily reports. Doing so will facilitate determining any necessary adjustment. When required, make payment adjustments for increased or decreased quantities as soon as the contractor completes work on a bid item. Refer to Section 3-904, “Payment Adjustments,” of this manual.

You may calculate adjustments by analyzing the performance of a portion of an item, provided the portion is typical of the item as a whole.

You may verify a contractor's records by comparing them with Caltrans' records. Where more extensive auditing is required, request the assistance of the Division of Audits & Investigations. When examining the contractor's records to determine the cost of equipment used, consider only the hours worked. Force account equipment rental rates must be used regardless of what rate the contractor may have used. When verifying the contractor's records, eliminate supervision and overhead costs and any costs properly chargeable to other work.

When making adjustments, use Caltrans records to determine the amounts of labor, equipment, and materials. The verified contractor's records may supplement the Caltrans records, or in some instances, you may need to use only the verified contractor's records. The resident engineer must use good judgment when reconciling differences between the contractor's and the engineer's records to arrive at a reasonable and equitable adjustment.

An item that has been adjusted under the provisions of Section 4-1.05B [4-1.03C], "Work-Character Changes," of the *Standard Specifications*, may later become eligible for further adjustment under Section 9-1.06 [4-1.03B], "Changed Quantity Payment Adjustments," of the *Standard Specifications*. In making the quantity payment adjustment, deduct or add payments made in making the work-character change adjustment to determine the contractor's total cost of the work.

5-306C (2b) Adjustment Calculations Involving Hot Mix Asphalt Dikes and Miscellaneous Areas

The bid item "HMA [hot mix asphalt] dike" is paid for by the ton of HMA and by the linear foot for HMA dike. The bid item "HMA (miscellaneous areas)" is paid for by the ton of HMA and by the square yard for HMA (miscellaneous areas). The specifications do not exactly separate the work covered under each bid item. This lack of separation requires special attention when it is necessary to adjust either the HMA dike bid item or the HMA (miscellaneous areas) bid item.

The following is the recommended procedure to determine the costs for computing adjustments of HMA dike and HMA (miscellaneous areas):

1. Subtract the estimated normal haul and placing unit cost for HMA used in paving from the bid item unit price to determine the cost of manufacturing HMA. Also, consult the contractor for an accurate estimate for comparison purposes. For commercial plants, you may use published price lists to determine the cost of manufacturing HMA.
2. To obtain the total cost of manufacturing HMA used in dikes or miscellaneous areas, multiply the actual mass of HMA used for dikes or miscellaneous areas by the unit cost of manufacturing HMA as determined above.
3. To obtain the total force account cost of dikes or miscellaneous areas, add to the total cost of manufacturing HMA the total force account haul and placing costs for HMA used in dikes or miscellaneous areas.
4. Calculate the force account unit cost of the dike or miscellaneous areas item and proceed as with any bid item increase or decrease adjustment.

To some extent, this procedure constitutes an adjustment in the HMA item as well as in the items for HMA dike or HMA (miscellaneous areas) paid by linear foot or square yard. However, this statement is true only for the HMA used on that portion of the dike or miscellaneous areas in excess of 125 percent of the bid item list. Also, an overrun or underrun in HMA dike or HMA (miscellaneous areas) will usually have little effect on the overall quantity of HMA.

5-306C (2c) Deferred Bid Item Adjustments

Upon completion of the changed work, promptly resolve all deferred item adjustments.

If a bid item adjustment will not be made, you do not need to write a supplemental change order. In this case, a letter from the contractor is sufficient. File a copy of the contractor's letter with the original change order that deferred the adjustment.

5-306C (2d) Exemption from Adjustment

Unless requested in writing by the contractor, do not adjust a bid item when the total pay quantity is less than 75 percent of the bid item list. You also do not need to adjust, unless requested in writing by the contractor, if the value based on the contract price for the units of work in excess of 125 percent is less than \$5,000, as shown in Section 9-1.06B [4-103B(1)], "Increases of More than 25 Percent," of the *Standard Specifications*. As soon as a final bid item quantity is known, decide whether to make the adjustment. Unless an obvious imbalance exists between the bid item unit price and actual cost, do not make the adjustment. Inform the contractor in writing whether or not Caltrans will adjust the bid item price.

5-306C (2e) Adjustments for Work-Character Changes

Section 3-403A, "Work-Character Changes" of this manual defines work-character changes.

Payment adjustments for work-character changes may be unit or lump sum adjustments. Normally, a lump sum adjustment is only applied to a lump sum bid item.

A work-character change payment adjustment requires a force account determination of the cost of an entire item as changed and a force account estimate of the cost of the work as planned.

When only a portion of the work has changed, separate the changed portion of the work from the unchanged portion. Perform a force account analysis of the cost of the changed portion, and make payment at the contract price plus a separate payment for the added work or credit for any deleted work.

Do not eliminate a bid item and pay for the work at agreed price or force account unless the change is so extensive that the original item no longer applies.

There can be no work-character change unless there was an executed change order. At times, it will not be possible to come to an immediate agreement with the contractor regarding an adjustment in compensation. You may need to complete the entire item before adjusted costs can be determined. In such cases, provide for payment at bid item prices, and defer adjustment in the initial change order. Include an appropriate deferment clause.

5-306C (3) Extra Work

For the definition of extra work and guidelines for using extra work in change orders, refer to Section 3-4, "Scope of Work," of this manual. Before designating additional

work as extra work, ensure that it cannot be paid for as a bid item, a combination of bid items, or a bid item with a payment adjustment.

5-306C (3a) Extra Work at Agreed Prices

For guidelines for determining and paying for extra work at agreed price, refer to Section 3-9, “Payment” of this manual.

File with the contract records any calculations made to determine extra work at agreed price. These calculations are subject to audit and must be in such a form that they clearly substantiate and justify the amount paid for extra work. In lieu of showing all the calculations necessary to substantiate extra work at agreed price in the change order memorandum, you may include a statement that such calculations are on file in the project records.

When a subcontractor is to perform extra work at agreed price, include the subcontractor markup in the agreed price calculations. For subcontractor markup guidelines, refer to Section 3-9, “Payment,” of this manual.

Agreed prices may be unit prices or lump sum. Before an agreed price may be used to pay for extra work, the resident engineer and the contractor must agree on compensation. The contractor must execute the change order providing for extra work at agreed price.

After the extent of extra work has been determined, request the contractor to submit a proposed agreed price. Analyze the contractor’s proposed price using the force account method. You may also initially determine a proposed agreed price based on a force account analysis and present it to the contractor. When you have reached agreement, process the change order and retain in the project files the records fully justifying the agreed price.

Ensure that payments of agreed lump sum prices do not exceed the amount authorized on the change order. Agreed unit prices can be applied to an estimated number of units in the change order. Although the unit price remains fixed, the number of units paid may vary from the estimated number.

When extra work consists entirely of work that neither the contractor nor any of the subcontractors would normally perform, the work is considered “specialist work,” and the contractor should obtain three bids for the extra work. Determine the agreed price by taking the lowest bid and adding the markup, as described in Section 9-1.05 [9-103B], “Extra Work Performed by Specialists,” of the *Standard Specifications*.

When this method is used, ensure that the work is accurately and completely described when bids are solicited. The same description of the work must be used in the change order. If the contractor or a subcontractor includes a bid along with independent firms, you must make an analysis using the force account method. The contractor’s or subcontractor’s bid will be acceptable only if the analysis can justify it. If the contractor or a subcontractor is capable of performing the extra work, the work is not considered “specialist work.”

For examples of change orders with extra work at agreed price, refer to Example 5-3.2, “Flagging Only (Extra Work at Agreed Unit Price),” and Example 5-3.10A, “Additional Work. Increase Bid Item Quantities (Clause for Final Pay Items and Extra Work at Agreed Price),” in Section 5-315, “Examples of Change Orders,” of this manual.

5-306C (3b) Extra Work at Force Account

Pay for extra work at force account under the following conditions:

- When the work cannot be estimated within reasonable limits of accuracy.
- When the resident engineer and the contractor are unable to agree on a unit or lump sum price for the work.
- When the contractor refuses to sign a change order.

For guidelines for paying for extra work at force account, refer to Section 3-9, "Payment," of this manual. For examples of change orders with extra work paid for on a force account basis, refer to Example 5-3.1, "Flagging and Traffic Control (Extra Work at Force Account)," and Example 5-3.7, "Additional Work. Change Material Specifications. Increase in Bid Item Quantities (Work-Character Change Payment Adjustment and Extra Work at Force Account)," in Section 5-315 of this manual.

5-306D Adjustments to Time of Completion

For a discussion of time of completion and adjustments to time, refer to Section 3-804, "Time," of this manual.

A change order may specify a positive, negative, or no adjustment to time of completion.

Whenever you can estimate an adjustment to time with reasonable accuracy, try to reach agreement with the contractor. Enter the amount of the time adjustment on the change order (including when there is no adjustment). Regardless of the amount of time actually required to perform the changed work, the agreed adjustment becomes binding on both parties. File with the contract records the calculations and other data used to determine adjustments to time.

If you cannot determine or agree on an adjustment of time in the initial change order, you may defer the adjustment. When doing so, write "deferred" on the time adjustment line and include a time adjustment deferred clause in the change order.

As soon as the change order work is completed, determine the appropriate time adjustment. If you cannot reach agreement with the contractor, issue a unilaterally approved supplemental change order adjusting time.

On contracts with internal time limits or multiple time limits, ensure any change order that includes a time adjustment contains a statement that identifies the applicable time limits of the adjustment. If an internal milestone date will change, but total time remains unaffected, specify the new date in the change order and indicate there is no time adjustment due to the change.

Periodically during the progress of the change order work, resolve deferred time adjustments. Do so by issuing a supplemental change order covering time allowable. If it is an extensive deferment, resolve the time allowed to a current date, with part of the deferment continued for subsequent work. Your objective is to resolve deferred time adjustments as soon as possible. Timely resolution of time deferments allows the contractor to efficiently schedule remaining work to complete the project within the time limits.

The resident engineer may not unilaterally decrease time unless this is permitted by the specifications. Otherwise, the contractor must agree to changes that reduce time. Without this agreement, you can do one of two things:

1. Do not recommend approval of the change if no benefit exists for Caltrans.
2. If substantial benefits exist for Caltrans, issue a unilaterally approved change order with no time adjustment.

5-306E Change Order Standard Clauses

The following are examples of standard clauses for specific situations found in various types of change orders. Note that any items in brackets are not part of the clause, but are instructions to you in using the clause. In using any of these clauses, ensure that the clause states what is appropriate for your change order.

Situation 1: Adjustment Deferred for Increase in Quantities in Excess of 25 Percent of the Quantities Shown on the Bid Item List

Standard Clause for Situation 1:

Any adjustment due in accordance with Section 9-1.06B, "Increases of More Than 25 Percent," of the *Standard Specifications* for bid item(s) No. _____ is deferred.

Situation 2: Adjustment for Increase in Quantities in Excess of 25 Percent of the Quantities Shown on the Bid Item List

Standard Clause for Situation 2:

Payment adjustment in accordance with Section 9-1.06B, "Increases of More Than 25 Percent," of the *Standard Specifications*:

The following adjustment(s) will be made for units of work in excess of 125 percent of the quantities shown on the bid item list:

[List the bid(s), unit adjustments, quantities, and total item adjustment(s).]

Or, for a single bid item:

In accordance with Section 9-1.06B, "Increases of More Than 25 Percent," of the *Standard Specifications*, the adjustment of the bid item unit price for the quantity in excess of 125 percent of the quantities shown on the bid item list for bid item No. _____ [item description] will be \$_____ per _____ increase [or decrease].

[When you know the total pay quantity, you may apply the unit adjustment to a fixed quantity for an exact total adjustment. When the total pay quantity has not yet been determined, you may apply the unit adjustment to an estimated quantity for an estimated total adjustment.]

Situation 3: Adjustment Deferred for Decrease of More Than 25 Percent of the Quantities Shown on the Bid Item List

Standard Clause for Situation 3:

Any adjustment due in accordance with Section 9-1.06C, “Decreases of More Than 25 Percent,” of the *Standard Specifications* for bid item(s) No. ____, [item title] is deferred.

Situation 4: Adjustment for Decrease of More Than 25 Percent

Standard Clause for Situation 4:

Adjustment in accordance with Section 9-1.06C, “Decreases of More Than 25 Percent,” of the *Standard Specifications*:

The following adjustments will be made for bid items that underran the quantities shown on the bid item list by more than 25 percent:

Or [for a single bid item]

In accordance with Section 9-1.06C, “Decreases of More Than 25 Percent,” of the *Standard Specifications*, the adjustment of the bid item unit price for bid item No. ____ [item description] will be \$ ____ increase.

[Normally, in the case of an underrun, you must know the total pay quantity before determining the adjustment. It is usually more efficient to show the adjustment as a lump sum amount because of the specified limit of 75 percent of the quantities shown on the bid item list for total compensation.]

Situation 5: No Adjustment Due to Increases or Decreases of More Than 25 Percent of the Quantities Shown on the Bid Item List

Standard Clause for Situation 5:

No adjustment(s) to the bid item unit price of item(s), No. ____ [item title], will be made in accordance with Section 9-1.06B, “Increases of More Than 25 Percent,” of the *Standard Specifications*. [Or, for decreases, use Section 9-1.06C, “Decreases of More Than 25 Percent,” of the *Standard Specifications*.]

Or [when waiving adjustments for both increases and decreases]

There will be no adjustment for items No. ____ and No. ____ [item titles] in accordance with Section 9-1.06, “Changed Quantity Payment Adjustments,” of the *Standard Specifications* by reason of this change order.

[The contractor must be in agreement and execute the change order before a payment adjustment for increased or decreased quantities is waived.]

Situation 6: Adjustment Deferred Due to Possible Work-Character Change

Standard Clause for Situation 6:

Any adjustment due in the bid item unit price(s) of item(s) No. ____, [*item title*] in accordance with the provisions in Section 4-1.05B, “Work-Character Changes,” of the *Standard Specifications*, is deferred.

Situation 7a: Eliminated Item, Adjustment Deferred

Standard Clause for Situation 7a:

Any adjustment due in accordance with Section 9-1.06D, “Eliminated Items,” of the *Standard Specifications* of bid item No. ____ will be deferred until all incurred or unavoidable costs can be determined.

Situation 7b: Eliminated Item, Adjustment Determined

Standard Clause for Situation 7b:

In accordance with Section 9-1.06D, “Eliminated Items,” of the *Standard Specifications*, the adjustment due to the elimination of item(s) No. ____, [*item title*] is zero. [*Or replace zero with whatever costs the contractor has incurred.*]

Situation 8: Revised Final Pay Item Quantities

Standard Clause for Situation 8:

The quantity increase shown for bid item No. ____, [*item title*] when combined with the quantity shown in the bid item list, and as modified by any previous change orders or revisions to dimensions made by the engineer, shall be the final quantity for which payment will be made.

Situation 9: Extra Work or Payment Adjustment at Agreed Unit Price

Standard Clause for Situation 9:

For this work, the contractor shall receive and accept \$ __ per [*unit*] of [*pipe, fence, among other items*]. This sum constitutes full and complete compensation for furnishing all labor, material, equipment, tools, and incidentals including all markups by reason of this change.

Situation 10: Extra Work or Payment Adjustment at Agreed Lump Sum Price

Standard Clause for Situation 10:

For this work, the contractor will be paid the sum of \$ _____. This sum constitutes full and complete compensation, including all markups for this change.

Or

For this work, the contractor shall receive and accept the agreed lump sum of \$ _____. This sum constitutes full and complete compensation for providing all labor, material, equipment, tools and incidentals, and includes all markups by reason of this change.

Or

For this reduction, the contractor agrees to [*or will*] credit [*or pay*] the state a lump sum of \$ _____. This sum constitutes full and complete compensation, including all markups for this change.

Or

The state will accept a lump sum payment of \$ _____ as full compensation for this change.

Or

The contractor shall credit the state \$ _____ for each [*unit*] of item(s) No. _____ [*item title*]. This sum constitutes full and complete compensation for this change.

Or

There shall be no cost or credit to the state by reason of this change.

Situation 11: Time Adjustment

Standard Clause for Situation 11:

Consideration of a time adjustment will be deferred until completion of the work specified in this change order. A determination of a time adjustment will be made in accordance with Section 8-1.07, "Delays," of the *Standard Specifications*.

Or

A determination of the delay in completion of the contract due to the work specified by change order No. _____ has been made in accordance with the provisions of Section 8-1.07, "Delays," of the *Standard Specifications*. [*Add either of the following sentences to this clause.*]

Change order No. _____ included the controlling activity for the following dates: [*list dates—mm/dd/yy*].

The contractor shall be granted [number] working days for the following dates: [*list dates—mm/dd/yy*].

Or

A determination of the delay in completion of the contract due to work specified by change order no. _____ for work performed from [mm/dd/yy] to [mm/dd/yy] [*or on mm/dd/yy*] has been made. Consideration of a time adjustment for the remaining work continues to be deferred.

Refer to Example 5-3.13, "Resolution of Deferred Time Adjustment," of this manual.

Situation 12: Deferred Adjustment for Delay

Standard Clause for Situation 12:

Any payment adjustment due to possible delays to the work resulting from this change is deferred until completion of the work. The adjustment will be made in accordance with Section 8-1.07, “Delays,” of the *Standard Specifications*.

Situation 13: Payment Adjustment for Overhead Costs

Standard Clause for Situation 13:

In accordance with Section 9-1.17C, “Proposed Final Estimate,” of the *Standard Specifications*, the contractor shall receive the total sum of \$ ____ to compensate adjusted overhead costs.

Situation 14: Claim Settlement

Standard Clause for Situation 14:

Payment indicated in this change order provides for full settlement of all claims on this contract [*or the contractor’s claim No. ____.*]

Or

Grant the contractor [*number*] working days, reducing the overrun in contract time by [*number*] calendar days, which provides for full settlement of all claims on this contract.

Or

This change order resolves notice of potential claim No. ____, dated [*date*].

5-306F Work Designated as Extra Work in the Specifications

The *Standard Specifications* and the special provisions describe certain work and specify that it is to be paid for as extra work. In some cases, supplemental funds are set aside to pay for this extra work. Make an independent cost estimate of the work for which the supplemental funds were provided. This estimate must be as accurate as possible.

Refer to the specific section of the specifications that identifies the extra work for the change order. Also, describe the exact work to be performed.

Traditionally, Change Order No. 1 provides for extra work specified for public traffic and public convenience. This change order must be limited to the following:

- Work designated as extra work in the specifications
- Work related to the needs of public traffic or for public convenience

Refer to the example change order, Example 5-3.1, “Flagging and Traffic Control (Extra Work at Force Account),” in Section 5-315 of this manual. This change order indicates the method for incorporating specified extra work into a change order. Note that the example change order is written as extra work at force account. You may also pay for specified extra work as extra work at agreed price if the extent of the work can be accurately determined. This approach is illustrated in Example 5-3.2, “Flagging Only (Extra Work at Agreed Unit Price),” which provides for payment for flaggers at an agreed unit price. Payment for flaggers at an agreed price may be written as a separate change order or combined with the other traffic related work paid for as extra work at force account.

5-306G Change Order Format

The example change orders at the end of this section follow the generally accepted format for writing change orders. The following describes the format:

- Describe the work or change that will cause increases and decreases to bid item quantities. Refer to any attached drawings or documents (sheets __ and ____ of ____). If the bid item work cannot be described separately from other work, describe the entire work at this stage. Describe work paid for by other methods in the appropriate sections of the change order. The intent is that the change order clearly specifies the work paid for by each payment method.
- Show the increases and decreases in bid item quantities. Include the percent of the bid item list represented by this change. Also show the accumulated percent change to date from the original quantity in the bid item list.
- Write clauses for situations resulting from increases or decreases or estimated increases or decreases in bid item quantities (deferred adjustments or actual payment adjustments for overruns or underruns).
- Write clauses for adjustments or deferred payment adjustments due to any cause. Describe the work or change causing the adjustment or deferred adjustment. Show the amounts of adjustments if not deferred.
- Describe work to be paid for as extra work at agreed price. Show the price as agreed. Agreed prices may be fixed unit prices and an estimated or actual number of units, or agreed prices may be fixed lump sums.
- Describe the work to be paid for as extra work at force account. Show the estimated cost of the extra work.
- Write time deferment or time adjustment clauses.

5-307 Change Order Memorandum

5-307 Change Order Memorandum

Include with all change orders sufficient documentation to explain the scope and reasons for the change. For this purpose, use Form CEM-4903, “Change Order Memorandum,” with any necessary attachments. The memorandum is intended for interdepartmental use only. Do not send the memorandum to the contractor.

The memorandum must be sufficiently complete to enable a person unfamiliar with the details of the project to review the change order and understand the justification for the work, the reasonableness of the compensation, and the time adjustment provisions.

5-307A Contents of the Memorandum

Include the following in the memorandum:

- State what the change order provides. Supplemental change orders should also include a description of the original change order.
- Explain the need for the change, including the contractual basis of the change. When another Caltrans unit requests a change, the correspondence requesting the change should also justify the need for the change. Attach supporting letters to the memorandum.
- State the reasons a particular method of payment was chosen. Include a complete cost analysis, or state that the cost analysis is on file with the project records. The statement should include the method used in making the cost analysis.
- Explain the reasons the ordered change causes any change in the character of the work. To substantiate any additional compensation due, you may need to provide a summary of events leading up to the change.
- State the extent of coordination and concurrence. If agreement with any district unit cannot be obtained, then indicate specific discussions that would influence a decision for approval. Refer to Section 5-307C, "Coordination and Concurrence by Others," of this manual.
- If prior approval of the change order has been obtained, state the name of the person who granted prior approval and the date.
- Show the unobligated balance of funds available to finance the change order. The resident engineer must ensure the available funds are not exceeded. For obtaining additional funds, refer to Section 5-2, "Funds," of this manual.
- Show the total authorized funds to date, as well as the dollar amount of a supplemental change order.
- Indicate when funds for supplemental work shown in the detailed estimate of job cost are used in the change order.
- For major changes on federal high-profile projects, indicate the name and date of discussion and concurrence, if any, by the FHWA transportation engineer. Refer to Section 5-308, "Federal Highway Administration Change Order Requirements," of this manual. For details relating to federal funding to be shown on the change order memorandum, refer to Section 5-309, "Federal Segregation Determination on Change Orders," of this manual.
- For change orders involving participation by local agencies, identify the portion of the work that is applicable to the contributing agency.
- For a change order that is to be unilaterally approved, explain why the contractor will not sign or why the contractor's signature is not required. Attach a copy of any correspondence from the contractor regarding the change order.
- Include justification for a time adjustment. Describe the method used to determine time adjustments. State the controlling activity during the delay period. Whenever possible, and when resolving a previously deferred time adjustment, indicate the specific working days that experienced delay and represent the period of the time adjustment. By indicating the specific working days, you ensure other time adjustments do not cover the same time period.

- Indicate the cumulative time adjustments and total number of change orders with unreconciled deferred time.

5-307B Change Order Category Codes

The resident engineer is responsible for assigning a four-letter code to every change order to indicate the main reason for the change. Preferably, there should only be one issue per change order. For change orders with multiple distinct issues, assign the coding based on the one issue that has the greatest impact to the project. Assign the coding according to the reason for the change, not according to how the problem was corrected. To determine the code, the resident engineer may use the “CCO Code Generator” from the following Division of Construction intranet site:

<http://projdel.dot.ca.gov/construction/contractmanagement/cmpage.htm>.

The resident engineer should enter this code on Forms CEM-4903, “Change Order Memorandum,” and CEM-4901, “Change Order Input.”

The change order code will identify one or more discrete pieces of information about the change:

1. The type of change order (first character).
2. The specification which authorizes the change, or the physical asset which is affected by the change (second character).
3. The source document that led to the need for a change (third and fourth characters).
4. The disposition of a dispute resolution (third and fourth characters).

Administrative types of change orders (accelerations, and changes that are anticipated and authorized by existing administrative specifications) require only minimal coding information. Consequently, extra coding positions will be assigned a default character placeholder, the letter Z. Assign characters from left to right, as subsequent character code selection is dependent on the preceding characters.

Character 1: Change Order Type:

Use the codes in Table 5-3.1, “Change Order Type,” to categorize the change order according to its general type (for example: administrative, dispute resolution and others). Coding for dispute resolution takes precedence over coding for any other potential scenario. After selecting the first character code, use the corresponding directions on Table 5-3.1 to complete the coding for the remaining three characters.

Character 2: Specification or Physical Asset:

Next, based on your selection for the first character code, and using the directions within Table 5-3.2, “Specification or Physical Asset,” select the code that most accurately identifies the appropriate administrative specification, or the affected physical asset. Enter this code as the second character. In the case of a change order that is strictly for acceleration, with no physical change in the planned work (the first character code is a B); then the second character code is defaulted to a placeholder Z character.

Characters 3 and 4: Source Document or Dispute Disposition:

If the change order is needed to bring about a plan or specification change (the first character code is C or D), use Table 5-3.3, “Source Document,” to identify the pair of

character codes that together best describe the original document that created the need for the change order. The reason for the change may be from:

- Constructability issues, errors, conflicts, or inconsistencies.
- The introduction of improved products, means, or methods.
- Any other reason, provided that the change will affect some physical aspect of the planned work.

If the change order is for a dispute resolution (first character code from Table 5-3.1 is either E, F, G, or H), use Table 5-3.4, “Dispute Disposition,” to assign the third and fourth characters. Begin by selecting the code for the third character that most closely identifies the time frame *before* the dispute was resolved, Table 5-3.4. The milestones for the third character are listed chronologically. For the fourth character, choose a code from Table 5-3.4 that most accurately explains how the dispute was resolved (entitlement, negotiated settlement, and arbitration award, full or partial resolution.)

If the change order type was administrative (first character code is either A or B), then the third and fourth character codes are defaulted to Zs.

General Examples:

Change orders that are strictly for constructive accelerations when there is no change to the final configuration of a planned permanent physical asset are all coded “BZZZ.” No additional coding information is necessary.

When a change order resolves a dispute based on contract administration, and there was no change to the planned work on some permanent physical asset:

1. The first character will be either E or G (refer to Table 5-3.1).
2. The second character represents the disputed administrative specification. Choose this character from the upper portion of Table 5-3.2.
3. The third and fourth coding characters are selected depending on when and how the dispute was resolved. Choose these characters from Table 5-3.4, “Dispute Disposition.”

When a change order is authorized by an administrative specification and there is no formalized dispute involved:

1. The first character will be A (refer to Table 5-3.1).
2. Select the second character from the upper portion of Table 5-3.2.
3. The third and fourth characters will both default to the placeholder letter Z. No other coding information is necessary in this particular example.

Table 5-3.1: Change Order Type (Character 1)

Change Order Type		Code	Description
Administrative	Contract or Supplemental Work	A	Change order used to pay for work or adjustments already authorized by specifications (supplemental work, quantity adjustments, and other). (Use only the specification codes from the upper portion of Table 5-3.2 for the second character, and Zs for the third and fourth characters.)
	Acceleration	B	Change order used to accelerate certain planned work. Describe the reason for acceleration in the transmittal memo (public convenience, staging coordination, delay mitigation, and other). (Use only Zs for subsequent code characters 2, 3, and 4.)
Plan or Specification Change	Non-VECP	C	Change order needed to change plans or specifications for reasons unrelated to a value engineering change proposal (VECP). (Use only the physical asset codes from Table 5-3.2 for the second character, and Table 35-3.3 for the third and fourth characters.)
	VECP-Related	D	Change order needed to change plans or specifications due to a VECP. (Use only the physical asset codes from Table 5-3.2 for the second character, and Table 5-3.3 for the third and fourth characters.)
Dispute Resolution	Potential Claim	E	Change order either fully or partially resolves certain potential claim records due to some dispute over contract administration. (Use the specification codes from the upper portion of Table 5-3.2 for the second character, and Table 5-3.4 for the third and fourth characters.)
		F	Change order either fully or partially resolves certain NOPCs due to a dispute over an ordered change, which affected some physical asset. (Use either the physical asset codes from the lower portion of Table 5-3.2 for the second character, and Table 5-3.4 for the third and fourth characters.)
	Claim	G	Change order either fully or partially resolves certain contract claims due to some dispute over contract administration. (Use the specification codes from the upper portion of Table 5-3.2 for the second character, and Table 5-3.4 for the third and fourth characters.)
		H	Change order either fully or partially resolves certain contract claims due to a dispute over an ordered change, which affected some physical asset. (Use the physical asset codes from the lower portion of Table 5-3.2 for the second character, and Table 5-3.4 for the third and fourth characters.)

Table 5-3.2: Specification or Physical Asset (Character 2)

	Code	Specification (use this portion of Table 5-3.2 only when the first character code is A, E, or G)	
Authorizing Specification Standard Specifications (No.) or Special Provision (SP)	A	9-1.06 [4-1.03B(1 & 2)]:	Changed Quantity Payment Adjustments
	B	7-1.04 [4-1.04]:	Public Safety
	C	4-1.06 [5-1.116]:	Differing Site Conditions
	D	7-1.02K [7-1.01A(5)]:	Labor Code
	E	7-1.03 [7-1.08]:	Public Convenience
	F	8-1.10 [8-1.07]:	Liquidated Damages
	G	8-1.07 [8-1.09]:	Delays
	H	5-1.36D [8-1.10]:	Nonhighway Facilities
	I	9-1.17C [9-1.08]:	Proposed Final Estimate
	J	12-1.03 [12-2, 12-4]:	Flagging Costs
	K	15-2.04 [15-2.05]:	Reconstruct
	L	4-1.05B [19-1.04]:	Work-Character Changes
	M	19-1.03B [19-2.02]:	Unsuitable Material
	N	19-2.03F [19-2.04]:	Slides and Slipouts
	O	20-7.03C [20-4.03]:	Prepare Planting Area
	P	20-3.03B(3), 86-1.06 [20-5.025, 86-1.06]:	Maintain Existing Water Supply, Maintaining Existing and Temporary Electrical System
	Q	SP:	California Paving Asphalt Index Price Adjustment
	R	SP:	Dispute Review Board Meetings
	S	SP:	Interest for Late Payments
	T	SP:	Value Analysis Meetings (Not VECPs)
	U	SP:	Partnering meetings
	V	SP:	Quality Control/Assurance
	W	SP:	Other listed Supplemental Work (Describe in transmittal memo) (Use only if no other code describes this supplemental work)
	X	Other:	Other (Describe the "other" specification in transmittal memo)
	Z	Default:	(Use only when the first character is B)
	Code	Physical Asset (use this portion of Table 5-3.2 only when the first character code is C, D, F, or H)	
Affected Permanent Physical Asset	A	Building (maintenance facilities, pump stations, etc.)	
	B	Electrical (signals, lighting, communications, electrical systems, etc.)	
	C	Drainage (culvert, subsurface, roadway drainage, gutters, lined ditches, etc.)	
	D	Earthwork (excavation, embankment, soil stabilization, slope protection, erosion control, etc.)	
	E	Landscaping (plants, irrigation, etc.)	
	F	Materials (borrow or disposal sites, surplus, salvage, etc.)	
	G	Property (fence, survey monument, easements, right-of-way obligations, etc.)	
	H	Structure (vehicle or pedestrian)	
	I	Base, subbase, shoulder backing	
	J	Surfacing (pavement, pavement reinforcing, shoulders, sidewalks)	
	K	Traffic control devices (barriers, railing, signing, delineation, etc.)	
	L	Utility	
	M	Wall (retaining, sound, aesthetic, etc.)	
	X	Other (Describe the "other" affected permanent physical asset in transmittal memo)	
	Z	Default (Use only when the first character is B)	

Table 5-3.3: Source Document (Characters 3 and 4)

(Use Table 5-3.3 only when the first character code is C or D from Table 5-3.1)

Character 3 (General)		Character 4 (Specific)	
A	Agreement	A	Cooperative
		B	Permit
		C	Right-of-Way Obligation
C	Certificate	A	Environmental Clearance
		B	Right-of-Way Clearance
G	Survey	A	Data/Control
		B	Detailed Cross-Sections
M	Materials	A	Log of Test Borings
		B	Information Handout, Brochure
P	Plan	A	Construction detail
		B	Contour grading
		C	Electrical
		D	Elevation view
		E	Environmental mitigation
		F	Erosion control
		G	Foundation
		H	General cross-sections
		I	Irrigation
		J	Layout/plan view
		K	Mechanical
		L	Pavement delineation
		M	Planting
		N	Profile
		O	Schedule of materials
		P	Signage
		Q	<i>Standard Plans</i>
		R	Substructure
		S	Superelevation
		T	Superstructure
		U	Typical section
		V	Utilities
S	Specification	A	Special Provision
		B	<i>Standard Specifications</i>
T	Temporary Plan	A	Construction area signs
		B	Construction easements
		C	Construction staging
		D	Electrical
		E	Erosion control
		F	Environmentally Sensitive Area (ESA)
		G	Lane closure chart
		H	<i>Standard Plans</i>
		I	Water Pollution Control/Prevention (WPCP or SWPPP)
		J	Traffic handling
		K	Traffic management plan
A,C,G,M, P,S,T	Any of Above	X	Other specific document (describe in transmittal memo)
X	Other	Y	Other (describe in transmittal memo)
Z	Default	Z	When the first character is either A or B

Table 5-3.4: Dispute Disposition (Characters 3 and 4)

(Use **Table 5-3.4** only when the first character code is *E, F, G, or H*, from **Table 5-3.1**, representing a Dispute Resolution)

Character 3 (Time Frame)		
Code		Chronological Milestone
Potential Claims (Use only when first character code from Table 5-3.1 is <i>E or F</i>)	A	Prior to a “Differing Site Condition Management Review Committee” (DSC-MRC) hearing
	B	Prior to a “Dispute Review Board” (DRB) hearing
	C	Prior to the “Construction Contract Acceptance” (CCA) date
	D	Prior to the Proposed Final Estimate (PFE) date
Claims (Use only when first character code from Table 5-3.1 is <i>G or H</i>)	E	Prior to a “Board of Review” (BOR) hearing
	F	Prior to an Arbitration Filing
	G	Prior to the Arbitration Hearing
	H	Prior to the Arbitrator’s Decision
	I	After the Arbitrator’s Decision
Character 4 (Resolution Authority)		
Code		Description
A		Entitlement, Partial Resolution (Describe unresolved issues in transmittal memo)
B		Entitlement, Full Resolution
C		Negotiated Settlement, Partial Resolution (Describe unresolved issues in transmittal memo)
D		Negotiated Settlement, Partial Resolution (Describe unresolved issues in transmittal memo)
E		Arbitration Award, Partial Resolution (Describe unresolved issues in transmittal memo) (Use only with first character code from Table 5-3.1 is <i>G or H</i>)
F		Arbitration Award, Full Resolution (Use only with first character code from Table 5-3.1 is <i>G or H</i>)
X		Other (Describe in transmittal memo)

5-307C Coordination and Concurrence by Others

Secure recommendation or concurrence from affected functional units and other agencies. Concurrence is evidence of agreement but does not constitute approval of a change order. Process all change orders for approval as described in Section 5-311, “Change Order Approval.”

Use district procedures for circulating change orders for concurrence. If contacted parties are unresponsive, in the change order memorandum, state the facts of the circulation process to ensure the proposed change is appropriate. Obtaining concurrence should not cause delay to the project.

The following lists some of the Caltrans functional units and reasons for seeking their concurrence.

5-307C (1) Project Development

The project engineer must concur with all design-related change orders, including plan or specification changes and value engineering change proposals. You may obtain design assistance from the project engineer on some of the more complex design changes. Remember that the project engineer is the engineer of record, and unless the project engineer is consulted, the resident engineer may not know why some design decisions were made.

By coordinating with the project engineer on all design and specification change orders, a continuous and informal “constructability review” process develops. Cooperation between design and construction personnel will result in better plans and specifications and fewer change orders. Cooperation will also reduce potential for construction delays, limit impacts on the contractor, and lessen the potential for claims.

5-307C (2) Project Management

For change orders with the following conditions, obtain concurrence from the project manager:

- Potential for significant delays to the planned work.
- Unanticipated large project cost increases, including those requiring a request for additional funds.
- Changes that may be considered outside the scope or intent of the planned work.

The project manager’s duties relating to change orders include the following:

- Monitoring project costs.
- Expediting decisions by functional units as needed, so there is no delay or other adverse affect to the contractor’s activities.

5-307C (3) Structures

Where changes are to be made that involve structures, Structure Construction determines the need for the change, the intent or content of the change order, and any methods or restrictions in doing the work. The resident engineer is responsible for administration, including processing the change order for approval. The structure construction engineer and other personnel in the Division of Engineering Services may need to concur. For procedures for obtaining concurrence for structure change orders, refer to Section 7-0.0, “Contract Change Orders,” of the *Bridge Construction Records and Procedures* manual.

5-307C (4) *Materials*

The district materials engineer, as well as the project engineer, must concur with all change orders that change or modify material specifications. Also, seek concurrence from the district materials engineer for proposed changes in structural section, slope rates, installation of subsurface drains, removal of unsuitable material, erosion control, and repair of slides and slipouts.

5-307C (5) *Traffic*

Obtain concurrence from the appropriate traffic engineer in the district for change orders affecting traffic management plans, hours of work, detours, signing, delineation, highway lighting, traffic signals, illuminated signs, guardrail, barriers, or any other traffic control device or facility. Clear any proposed special sign with the district traffic design engineer.

5-307C (6) *Maintenance*

Obtain concurrence from the appropriate maintenance region manager or engineer for changes affecting maintenance facilities, lands and buildings, and maintenance activities. Concurrence from the appropriate maintenance manager or engineer is required for all change orders affecting the use of maintenance funds.

5-307C (7) *Right-of-Way*

Obtain concurrence from the district right-of-way unit for any changes to right-of-way contracts or agreements, right-of-way fencing or alignment, or gates.

Contact the district right-of-way unit for assistance with any required rights-of-entry permits, permanent or temporary construction easements, or agreements.

The district utility coordinator must concur with all changes involving utility work. The district utility coordinator must also make proposed revisions to Form RW 13-14, "Notice to Owner." For information about coordinating utility work, refer to Section 3-518C, "Non-Highway Facilities," of this manual.

5-307C (8) *Environmental*

For environmental concerns and requirements, refer to Chapter 7, "Environmental Stewardship," of this manual. Contact the district environmental unit for assistance and concurrence with any change affecting environmental considerations or requirements or affecting obligations or commitments to other agencies.

The environmental document on any project is valid only for the work described by the document and shown on the plans submitted for environmental approval. For any work proposed in addition to or as a deviation from the approved work, consult with the district environmental unit. Significant changes may require amended or additional environmental approval or permits. The types of changes that may require additional consultation and approval include the following:

- New materials sites.
- New haul or access roads.
- Previously unidentified clearing and grubbing and hazardous materials.
- Increases in earthwork.
- Unforeseen utility relocation.

5-308 Federal Highway Administration Change Order Requirements

- Diversion or extraction of water from a stream not covered by a Lake/Streambed Alteration Agreement, more commonly known as a “1601 permit,” with the Department of Fish and Game.
- Use of disposal sites not specified in the contract.
- Revision to allowable work windows.

5-307C (9) Locally Funded Projects

For guidelines for processing change orders on locally funded projects, refer to Section 5-310, “Locally Funded State Highway Projects,” of this manual.

5-308 Federal Highway Administration Change Order Requirements

Change orders written for projects with federal funding participation must comply with the Code of Federal Regulations and FHWA contracting requirements.

5-308A High-Profile Projects

High-profile projects are subject to full FHWA oversight requirements. Refer to the *California Stewardship & Oversight Agreement - Approach to Identifying “High Profile” Projects*, available at:

http://www.dot.ca.gov/hq/oppd/stewardship/Process_for_Identifying_and_Selecting_High_Profile_Projects.pdf

Early and frequent communication with the FHWA transportation engineer is essential to ensure full compliance with all federal requirements.

5-308A (1) Federal Highway Administration Approval Requirements – Major Change Orders

Major change orders require FHWA approval. The resident engineer must obtain approval before proceeding with a proposed change. The resident engineer may obtain same-day verbal approval by telephone upon furnishing the FHWA transportation engineer with the information they request. Following the verbal approval, the FHWA transportation engineer sends the written approval electronically (e-mail, fax, or both). The district sends a copy of the change order and change order memorandum to the FHWA transportation engineer upon approval of the change order.

Written and signed FHWA approval is required for any of the following major change orders:

- Change order that would increase the cost greater than \$200,000.
- Change order that would increase the cost of anticipated supplemental work item listed in the detail estimate greater than \$200,000.
- Supplemental change order above the \$200,000 threshold.
- Change in specifications (with the exception of lane requirements and hours of work charts).
- Change in method of payment.
- Change in material processing.
- Change in type or quantity of materials furnished (with the exception of minor building materials).

Example: The change order revises aggregate to an HMA material.

- Change in proprietary or sole source materials for which specific or blanket approval has not been previously given.
- Waiver to the Buy America requirements, above the minimal amount that is allowed in Section 3-606, “Certificates of Compliance,” of this manual and the project special provisions.
- Value engineering change proposal.
- Experimental Work Plan.
- Change to federal environmental requirements such as:
 1. Environmental mitigation. Refer to the Mitigation Monitoring Reporting Record, if available.
 2. Permit conditions.
 3. Agreements with federal resource agencies.

Example: Revising sound walls—height, length, location, adding auxiliary lanes, and disturbing a site on or eligible for National Register of Historic Places
- Introduction of new social, environmental, or economic issues that need to be addressed under applicable federal laws
- Change to, or requiring of, mandatory disposal or borrow sites, Public Interest Finding and National Environmental Policy Act (NEPA) clearance may be needed.
- Expansion of project limits beyond the limits set in the environmental document.
- Form of payment (not just a change order) to a contractor resulting from a claim, board of review, exception to proposed final estimate, district director determination or arbitration.
- Supplemental change orders to any of the above.
- Change resulting in a time adjustment of 20 or more working days. Additionally, if time is increased by more than 20 percent of the original working days, then that change and each subsequent change order that increases time.

5-308A (2) Federal Highway Administration Approval Requirements—Minor Change Orders

Change orders other than those listed above are considered minor. Although approval may be granted retroactively, minor change orders require written and signed FHWA approval. These approvals occur during FHWA construction reviews, or occur with final approval of the project by FHWA.

5-308A (3) FHWA Denial

When FHWA declines participation in a change order, the district can proceed with the change order by justifying it in the change order memorandum. The project manager must concur with the change in funding.

5-308B Assigned Projects

Projects not meeting criteria for high-profile projects are considered projects from FHWA. Caltrans is delegated the authority to administer the contract. Resident

engineers are not required to coordinate with the FHWA transportation engineer except for those instances described in the *California Stewardship & Oversight Agreement - Approach to Identifying High Profile Projects*.” However, discussions for technical guidance are encouraged. For the assigned projects, FHWA will verify compliance with federal regulations with annual program and process reviews.

5-308B (1) Federal Highway Administration Involvement Requirements—Major Change Orders

There are several events that may make FHWA involvement necessary. The FHWA transportation engineer is contacted sufficiently in advance of the project event deemed necessary to allow their participation. In all other cases, contact the FHWA transportation engineer as soon as practical to ensure federal concurrence and participation.

FHWA involvement is required for any of the following major change orders:

- Changes to federal environmental requirements:
 1. Environmental Mitigation. Refer to the Mitigation Monitoring Reporting Record, if available.
 2. Permit conditions.
 3. Agreements with federal resource agencies.

Example: Revising sound walls – height, length, location, adding auxiliary lanes, and disturbing a site on or eligible for the National Register of Historic Places.

- Introduction of new social, environmental or economic issues that need to be addressed under applicable federal laws.
- Changes for mandatory disposal or borrow sites—Public Interest Finding and NEPA clearance may be needed.
- Waivers to Buy America requirements, above the minimal amount that is allowed in Section 3-606, “Certificates of Compliance,” of this manual and the project special provisions.
- Expansion of project limits beyond the limits set in the environmental document.

5-308C All Federally Funded Projects

For each case listed in Section 5-308A (1) and 5-308B (1) of this manual, the resident engineer contacts the FHWA transportation engineer and provides documents as necessary. In addition to the major change orders listed above for high-profile projects and assigned projects, there are several other issues or events that may invoke the involvement of the FHWA. Refer to Section 5-007 “Federal Highway Administration Involvement in Contract Administration,” of this manual.

For high-profile projects, the FHWA transportation engineer should indicate concurrence on Form CEM-4903, “Change Order Memorandum” by signature in the appropriate box in the “Concurred By” section of the form or by providing signature on an FHWA concurrence form. In the “Federal Participation” section, check the appropriate box and provide an explanation when required:

- Participating: Full federal participation.

- Participating in Part: Partial federal participation; provide explanation for this decision.
- None: No federal participation provided; not a federally funded project.
- Non-participating (Maintenance): Project Funded by Caltrans Maintenance; no federal participation provided.
- Non-Participating: FHWA will not participate in the change order; provide explanation for this decision.

5-309 Federal Segregation Determination on Change Orders

The resident engineer is responsible for managing project construction costs within the current construction allotment. Funds for a project may come from more than one source, such as from state highway funds, local funds, and federal funds. For a change order, the resident engineer must identify and segregate the funds required from each source. Show the proper distribution of change order funding on Form CEM-4903, “Change Order Memorandum.” For more information on project funding, refer to Section 5-2, “Funds,” of this manual.

At the beginning of the project, the resident engineer should receive the federal detail estimate with an estimate for each category of funds and the applicable limits of federal eligibility. If you do not receive this detail estimate, contact the project manager. In some cases the FHWA transportation engineer has a color-coded plan title sheet for more complex multiple-funded projects.

Funding sources for a change order may be different from the funding sources indicated in the detail estimate for a particular project. If the change order funding percentages are the same as the detail estimate, simply mark the “CCO Funded Per Contract” in the “Federal Segregation” section on Form CEM-4903.

A change order may not be eligible for participation from one or more of the funding sources, depending upon the location and the work to be performed. In this case, mark the “CCO Funded as Follows” box and indicate the percentage of each funding source’s participation in the appropriate box. If this box is left blank or is incorrect, Caltrans may lose federal funds that should have been secured on this project.

For example, a change order written for a project funded from both federal and other sources may not be eligible for federal participation. In this case, the cost of the change order must be distributed between the other funding sources. In the box in the lower right-hand corner of Form CEM-4903, show the percentage of participation by each funding source.

5-310 Locally Funded State Highway Projects

Generally, participation will be based on Caltrans’ original agreement with the contributing agency.

Before making changes that affect work for contributing agencies, ensure that such changes are within the scope of the agreement. If not, take action (usually through the district local project’s unit) to have the agreement modified.

In the margin of the headquarters’ and district’s copies of change orders covering the work, obtain the signature of an authorized representative of the affected agency.

Include in the change order memorandum sufficient information to identify the portion of the work that is applicable to the contributing agency. As soon as the change order

5-309 Federal Segregation Determination on Change Orders

5-310 Locally-Funded State Highway Projects

5-311 Change Order Approval Process

and memorandum are approved, send the Division of Accounting Services, Accounts Receivable and Program Accounting sections a copy.

5-311 Change Order Approval Process

Caltrans must approve a change order, and whenever possible, the contractor should sign it. When the contractor signs a change order, it is referred to as “executed.” If the contractor refuses to sign the change order, then Caltrans may, in some cases, approve it unilaterally.

So that the contractor will execute the change order, make every effort possible to reach agreement. However, do not delay the work by waiting for the contractor to respond. If necessary, submit the change order for unilateral approval. Receipt by the contractor of an approved change order establishes a time for protest.

When the contractor does not agree with the method or amount of the payment and time adjustment, the resident engineer processes the change order using extra work at force account.

If the contractor disagrees with extra work at unit price, extra work at lump sum, or increase in contract items with a payment adjustment, the resident engineer writes the change order using extra work at force account. If the contractor declines to accept the change order within 7 working days, draft and process it unilaterally.

If the contractor agrees with the extra work unit of measurement and method of payment but disagrees with the affect on time proposed by the resident engineer, execute the change order using deferred time. Close out deferred time change orders within 21 working days of the completed change order work.

If the change order is not protested within the specified time, it is considered an executed change order. Refer to Section 5-1.06 [4-1.03A], “Protests,” of the *Standard Specifications* and Section 3-403, “Changes and Extra Work,” of this manual.

You may routinely submit for approval without the contractor’s signature any supplemental change orders written solely to increase force account funds. However, should the extent or type of work covered in the supplemental change order differ from that included in the original, consider writing a separate change order instead of a supplemental change order. If it is decided to write a supplemental change order, submit it to the contractor for acceptance.

On sensitive or complex change orders, districts are encouraged to submit a draft copy to the Division of Construction for review and recommendation before preparing the final version of the change order. In following this practice, however, discuss the work with the contractor in the usual manner.

Before issuance of the proposed final estimate, resolving entitlement for potential claims is delegated according to Table 5-4.2, “Delegation of Authority,” of this manual.

5-311A Division of Construction Approval

District construction personnel may approve all change orders, except those requiring Division of Construction approval. Division of Construction approval is required on the following types of change orders:

- Any change order that has a total absolute value exceeding \$200,000.

Example:

A change order containing a \$50,000 decrease of items, a \$20,000 increase of items, and \$150,000 of extra work at force account would require Division of Construction approval:

$$(|-\$50,000| + |\$20,000| + |\$150,000| = |\$220,000|).$$

- Any change order that increases the cost of anticipated supplemental work listed in the detail estimate by more than \$200,000.
- Once any of the above cost thresholds are reached, each associated supplemental change order will also require Division of Construction approval.
- Any change in the following:
 1. Method of payment,
 2. Method of materials processing,
 3. Type or quality of materials to be furnished, excluding those for minor changes to building facilities contracts,
 4. Proprietary material for which specific or blanket approval has not been previously received, or
 5. Specifications, except as follows:
 - a. "Lane Requirements and Hours of Work" charts,
 - b. Addition of approved standard special provisions, or
 - c. Any editing of an approved standard special provision, in accordance with its instructions.
- Any change resulting in a time adjustment of more than 19 working days or 10 percent of original working days, whichever is greater.
- Any change order that compensates the contractor for field or home office overhead costs as the result of a final audit report issued by Division of Audits and Investigations.

Before the contractor is allowed to commence work included in a non-delegated change order, the Division of Construction must approve the change order or grant prior authorization to proceed with the associated work.

5-311A (1) Change Order Determinations

The Division of Construction sometimes receives requests from the districts to review and approve change orders that contradict policy, delegation, and change order approval criteria. These requests are sometimes received after the district has approved the change order and the contractor has performed the work or the contract has been accepted. In each situation, the Division of Construction change order engineer issues a review determination. Additional criteria include:

1. Change order work started without the Division of Construction's authorization to proceed.
2. Change order not initiated by the district before the work has been completed.
3. Deferred time change orders not processed in a timely manner.

The Division of Construction will track these change orders and report performance to the Division of Construction chief. This information may be used to re-evaluate the appropriate level of change order delegation of authority to the district.

These change orders are divided into two categories: “ratify post performance” and “unauthorized direction,” and are shown in Table 5-3.5, “Division of Construction’s Change Order Direction.” This table explains scope and subsequent actions for change orders that require Division of Construction approval. This direction is communicated in a written Division of Construction telecopy addressed to the district change order desk.

Table 5-3.5: Division of Construction's Change Order Direction

Direction	Direction Scope	District Action
To Proceed with the Work	Division of Construction authorization to proceed required for change order work authorized prior to full execution of the change order. This written work authorization by the engineer is to be used only in an extenuating circumstance exception basis. The authorization is complete and satisfactorily prepared by the district.	Authorize the change order work in writing in accordance with <i>Standard Specifications</i> Section 4-1.05, "Changes and Extra Work." Prepare change order and obtain Division of Construction issue and approve direction within 7 working days. Execute the change order as soon as possible; no later than 21 working days.
To Issue and Approve	Division of Construction approval granted on the basis of a satisfactorily prepared change order and change order transmittal memorandum.	Approve the change order in accordance with Division of Construction direction including any required minor revisions or conditions designated by the Division of Construction telecopy.
To Revise - Not Authorized	Changes are required before Division of Construction approval will be granted.	Revise the change order in accordance with the Division of Construction telecopy. Submit for reconsideration or elevate the issue for resolution to the district construction division chief and the assistant Division of Construction chief.
To Process in the District	Division of Construction approval for this change order is not required. Authority to approve the change order has been delegated to the district.	Approve the change order in the district.
Ratify Post Performance	District administration of the change order committed the Division of Construction to a course of action without required approvals.	Review internal change order procedures and implement measures to assure future transgressions are prevented.
Request for Information	Additional information is required for the Division of Construction to evaluate the change order.	Collect the requested information and transmit it to the Division of Construction. The district may elect to revise the change order and resubmit it when the additional information is provided.
Void	Changes that are authorized or executed by the district outside their delegated authority and that are fatally flawed; including provisions that violate state law or federal law.	Void the change order.
Change Order Approved in Headquarters	Division of Construction originated and approved a change order without district involvement. Often used to expedite arbitration or other payments to the contractor.	Process the change order by entering it in the contract administration system and flagging the change order for payment.
Unauthorized	The district exercised authority outside of policy or delegation. The change order contradicts policy, delegation, or approval criteria. The contractor may have performed the work without authorization to proceed. The district may not have initiated the change order before the work was completed.	Review internal change order procedures and implement measures to ensure future transgressions are prevented
Other	Category used for all situations that cannot be classified above.	Division of Construction approval is not granted. District complies with instructions provided by the Division of Construction telecopy.

5-311B District Approval Limitations

Districts may not delegate below the level of construction manager the “Approval Recommended” signatures on Division of Construction-approved change orders.

Only a district construction deputy director may approve change orders for value engineering change proposals. Approval authority is determined by considering each element of the value engineering change proposal in the context of the delegation criteria listed above. Project engineer concurrence for all revisions of standard or project specific design elements is required prior to approving change orders to implement all value engineering change proposals.

District approval of the following types of change orders may not be delegated below the level of a region construction division chief or district construction deputy director:

- Project limit modifications.
- Acceleration of the contract work through a decrease of contract time.
- Order of work revisions.
- Revision of the contract staging requirements.

District approval of the following types of change orders may not be delegated below the level of construction manager:

- Those that include deferred time.
- “Lane Requirements and Hours of Work” charts.
- Addition of approved standard special provisions.
- Any editing of an approved standard special provision, in accordance with its instructions.

District approval of other types of change orders may not be delegated below the level of senior-level resident engineer or construction engineer. Within this delegation, senior-level resident engineers or construction engineers may be given written authority to approve change orders that increase the contract cost or approved supplemental work by up to \$50,000.

5-311C Division of Construction Prior Authorization

A “prior authorization to proceed” with change order work should be issued only on an exception basis due to extenuating circumstances.

Whoever holds delegated authority as stated in this section must recommend approval for all change orders requiring prior authorization to proceed.

In addition to writing and dating the prior authorization to proceed, the engineer must include the following information:

- Change order number reserved for the work.
- Estimated value of the work.
- Proposed method of payment.
- Estimated duration of the work.
- Estimate contract time adjustment needed to perform the work.
- Estimated time required to execute the associated change order.

Document in the resident engineer's daily report the date, time, and name of the division change order engineer who provided advance approval to issue the prior authorization to proceed. The change order which received the prior authorization to proceed should be submitted to the contractor for approval within 7 working days of the date of the prior authorization to proceed. If the contractor does not execute the change order within an additional 7 working days, a unilateral change order must be processed within 21 working days of the prior authorization to proceed.

5-311D District Prior Authorization to Proceed

The district should have procedures for prior authorization to proceed actions in accordance with this section. The district procedures should clearly designate the roles and responsibilities of the staff involved in preparing and approving change orders.

5-312 Substantiation

Each change order must be carefully considered, analyzed, and documented in the project records. For things to consider when preparing to write a change order, refer to Section 5-305, "Preliminary Considerations," of this manual.

5-312

Substantiation

5-312A Engineering Analysis

Conduct an engineering analysis for each change to the contract plans and specifications. Consider the impact of each change on the entire project and related facilities.

Change orders must meet all engineering and design standards unless a design exception is approved by the Division of Design. The project engineer who stamped the project plans is the engineer of record for the project and must concur with all engineered changes.

5-312B Contractual Analysis

Determine the contractual basis and authority to issue each change order. Include this information in the transmittal memorandum and change order. Use Figure 5-3.1, "Change Order Decision-Making Concept Flowchart," at the end of this section, to assist you in this determination.

5-312C Cost Analysis

Prepare an independent force account or bid item cost analysis for comparison with the contractor's estimated cost. Accept the contractor's estimated cost only if it is justified by this analysis. Do not include costs for disputed work. Include subcontractor markups in the cost estimate when a subcontractor will be performing extra work paid for by unit price, payment adjustment, or lump sum. For subcontractor markup guidelines, refer to Section 3-9, "Payment," of this manual.

File in the project records any calculations made to determine extra work at unit price, payment adjustment, or lump sum. These calculations substantiate and justify the amount paid for extra work and are therefore subject to audit. Either show these calculations in the change order memorandum or include a statement that the calculations are on file in the project records.

5-312D Time Impact Analysis

A time impact analysis (TIA) illustrates the impact of each change on the scheduled completion date or an internal milestone. The contractor submits a written TIA to the resident engineer with each time adjustment request. Review the TIA for logic and

5-313
Executed Change
Order Copy
Distribution

duration impacts to determine the time adjustment or construct an independent TIA to determine the time adjustment. Refer to Section 8-1.02D (8), “Time Impact Analysis,” of the *Standard Specifications* for more information regarding TIA submittals. For an example of a TIA reference on a Change Order Memorandum, refer to Example 5-3.8, “Compensation for Critical Delay (Payment Adjustment).”

5-313 Executed Change Order Copy Distribution

For all contracts, one copy of each executed authorization to proceed, change order, and corresponding memorandum is electronically scanned and transmitted to the Division of Construction file server.

Combine each executed authorization to proceed or change order and change order memorandum for each contract change, supplemental change, and authorization to proceed into a single Adobe Acrobat file using the following filename convention:

Filename Convention:

Contract No. CCO No. or ATP No. Supplemental No. Approval Date

Examples:

04-012024 ATP 002 S00 11-20-06.pdf

04-012024 CCO 002 S02 11-27-06.pdf

Transmit the file directly to the Division of Construction file server using the centralized access provided to each district. Transmit approved change orders at least once a month.

Send an email notification to the change order engineer upon transfer of any information to the Division of Construction file server.

A desk guide to assist districts with this process is available on Division of Construction’s intranet website:

<http://pd.dot.ca.gov/construction/contractmanagement/cmpage.htm>.

For high-profile projects, districts are delegated authority to send one copy of each approved change order and corresponding change order memorandum directly to the FHWA field operations engineer assigned to the district or program administering the contract. The method of document transfer to the FHWA field operations engineer will be negotiated between the district and the FHWA field operations engineer on a case by case basis.

The FHWA field operations engineer:

- May issue a determination of funding ineligibility or modify the level of funding participation for any reviewed change order.
- Will communicate all funding eligibility findings by stamping the change order and returning it to the district.
- Notify districts of all changes in federal participation prior to issuance of a final voucher.

Districts are responsible for updating the Contract Administration System for federal participation information on change orders.

5-314 Value Engineering Change Proposals

For procedures for a value engineering change proposal, refer to Section 3-5, “Control of Work,” of this manual.

Prepare value engineering change proposal change orders as a complete package, with no deferred time or deferred cost considerations.

Give careful attention to the clauses in the change order covering payment. Value engineering change proposal change orders may involve any combination of bid item work, payment adjustments, and extra work at agreed price.

Prices for bid items might not represent the costs of doing either the planned or changed work as computed on a force account basis. In this case, in addition to increases and decreases at contract prices, include payment adjustments to reflect the actual force account cost of increases and decreases in bid item quantities. Also, in the analysis of cost savings, you may have to consider adjustments based on a 25 percent overrun or underrun.

Value engineering change proposal change orders must include a payment adjustment that returns either one half or 60 percent of the savings to the contractor. Determine the adjustment in the following manner:

- Determine the total decrease in construction cost. This decrease will be the sum of increases and decreases in bid items at bid item unit prices, payment adjustments including work-character change adjustments, and extra work at agreed price.
- Provide for a payment adjustment to pay the contractor either one half or 60 percent of the total decrease as allowed by the specifications.

5-315 Examples of Change Orders

The following are examples of change orders and change order memorandums. Use these “cookbook” examples and standard clauses cautiously. The examples are for guidance and general format only. For instance, the examples contain assumptions that may or may not fit actual project situations. Also, the *Standard Specifications* and special provisions in use at the time the examples were written are the basis for the example change orders. Do not assume that your project uses the same specifications. Base change orders on specifications included in the project.

The following list provides brief descriptions of the example change orders and methods of payment included in this section:

- Example 5-3.1 Flagging and Traffic Control (Extra Work at Force Account).
- Example 5-3.2 Flagging Only (Extra Work at Agreed Unit Price).
- Example 5-3.3 Resolution of an Initial Notice of Potential Claim (Payment Adjustment).
- Example 5-3.4 Compensation of Interest for Late Payment of Change Order Bills (Payment Adjustment).
- Example 5-3.5A Modify Lump Sum Bid Item with a Specified “Cost Break-Down” (Payment Adjustment and Clause for No Adjustment Due to Eliminated Work).

5-314 Value Engineering Change Proposals

5-315 Examples of Change Orders

Example 5-3.5B	Modify Lump Sum Bid Item Without a Specified “Cost Break-Down.”
Example 5-3.6	Differing Site Condition (Payment Adjustment at Force Account).
Example 5-3.7	Additional Work. Change Material Specifications. Increase in Bid Item Quantities (Work-Character Change Payment Adjustment and Extra Work at Force Account).
Example 5-3.8	Compensation for Critical Delay (Payment Adjustment).
Example 5-3.9	Value Engineering Change Proposal (Decrease Bid Item Quantity and Payment Adjustment).
Example 5-3.10A	Additional Work. Increase Bid Item Quantities (Clause for Final Pay Items and Extra Work at Agreed Price).
Example 5-3.10B	Item Increase/Decrease and Extra Work.
Example 5-3.11A	Payment Adjustment for Price Index Fluctuations (Before Paving).
Example 5-3.11B	Payment Adjustment for Price Index Fluctuations (After Paving).
Example 5-3.12	Claim Entitlement.
Example 5-3.13	Resolution of Deferred Time Adjustment.
Example 5-3.14	Item Adjustment.

Example 5-3.1 Flagging and Traffic Control (Extra Work at Force Account) (1 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 1

DATE _____

TO _____			FILE PROJECT ID _____	
FROM _____			CO-RTE-PM _____	
			FED NO. _____	
CHANGE ORDER NO. <u>1</u>	SUPPLEMENT NO. _____	CATEGORY CODE <u>AJZZ</u>	CONTINGENCY BALANCE (Including this change): \$ _____	
CHANGE ORDER AMOUNT \$ <u>20,000.00</u>			<input checked="" type="checkbox"/> INCREASE <input type="checkbox"/> DECREASE	
SUPPLEMENTAL FUNDS PROVIDED \$ <u>50,000.00</u>			HEADQUARTERS APPROVAL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME: _____ DAY(S)	TIME ADJUSTMENT THIS CHANGE: <u>0</u> DAY(S)	PREVIOUSLY APPROVED TIME ADJUSTMENTS: _____ DAY(S)	PERCENTAGE TIME ADJUSTED (Including this change) _____ %	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change) _____

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

Flagging and traffic control work specified in the *Standard Specifications*.

The *Standard Specifications* specify certain work to be paid as extra work to expedite the safe and convenient passage of public traffic through or around the work.

This change order provides for payment for extra work at force account of all such traffic-related work. \$50,000 in supplemental funds has been provided for this extra work.

This change order will not affect the controlling activity; therefore, no time adjustment is warranted.

CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	ITEMS	THIS REQUEST TOTAL TO DATE
PROJECT ENGINEER	DATE	FORCE ACCOUNT	\$20,000.00 \$20,000.00
PROJECT MANAGER	DATE	AGREED PRICE	
FHWA REP.	DATE	ADJUSTMENT	
ENVIRONMENTAL	DATE	TOTAL	\$20,000.00 \$20,000.00
OTHER (SPECIFY)	DATE	FEDERAL PARTICIPATION	
	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
RESIDENT ENGINEER SIGNATURE	DATE	<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS FEDERAL FUNDING SOURCE PERCENT	

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Example 5-3.1 Flagging and Traffic Control (Extra Work at Force Account) (2 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 2

CEM-4900 (REV 3/2013)

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO.	SUPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
1				

TO

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Extra Work at Force Account:

In accordance with Section 9-1.04, "Force Account," of the *Standard Specifications*, perform the following:

Furnish flaggers in accordance with Section 7-1.03, "Public Convenience," and Section 7-1.04, "Public Safety," of the *Standard Specifications*. Payment for flaggers is as specified in Section 12-1.03, "Flagging Costs," of the *Standard Specifications*.

In accordance with Section 7-1.03, "Public Convenience" of the *Standard Specifications*, except as otherwise provided for construction area signs in Section 12, "Temporary Traffic Control," of the *Standard Specifications*, furnish, install, and remove sign covers. Furnish a pilot car and driver for the purpose of expediting the passage of public traffic through the work under one-way controls. In order to expedite the passage of public traffic through or around the work and as ordered by the engineer, furnish and install signs, lights, flares, temporary railing (Type K), barricades, and other facilities, not to be paid for as separate bid items. Perform work ordered by the engineer for the accommodation of public traffic after the roadbed has been brought to a smooth and even condition and prior to commencing subgrade activities. Shape shoulders and reshape subgrade as necessary for the passage of public traffic during subgrade preparation. Apply water for the purpose of controlling dust caused by public traffic in accordance with Section 14-9.03, "Dust Control," of the *Standard Specifications*.

In accordance with Sections 12-3.02D, "Payment"; 12-3.06D, "Payment"; and 12-3.08D, "Payment," of the *Standard Specifications*, perform the following: After initial placement of barricades, and if ordered by the engineer, move barricades from location to location. Move temporary railing (Type K) laterally when ordered by the engineer and when such repositioning is not shown on the plans. Furnish, erect, maintain, move, and remove additional construction area signs when ordered by the engineer.

In accordance with Section 12-3.15, "Temporary Crash Cushion Module," of the *Standard Specifications*, repair crash cushion modules damaged by public traffic and when ordered by the engineer, and reposition crash cushion modules when such repositioning is not shown on the plans.

In accordance with Section 12-3.11, "Plastic Traffic Drums," of the *Standard Specifications*, after initial placement move plastic traffic drums from location to location when ordered by the engineer.

Estimate of Extra Work at Force Account = \$20,000.00

This change order will not affect the controlling activity. No time adjustment of is warranted.

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Example 5-3.1 Flagging and Traffic Control (Extra Work at Force Account) (3 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 2 of 2

CEM-4900 (REV 05/2001) CT# 7541-3501-0

CCO NUMBER	SUPPL. NUMBER	CONTRACT NUMBER	ROAD	FEDERAL NUMBER(S)
1				

Estimated Cost: ☒ Increase ☐ Decrease \$20,000.00

For this order the time of completion will be adjusted as follows: None

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
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Example 5-3.2 Flagging Only (Extra Work at Force at Agreed Unit Price) (1 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 1

DATE _____

TO _____			FILE PROJECT ID _____	
FROM _____			CO-RTE-PM _____	
			FED NO. _____	
CHANGE ORDER NO. 2	SUPPLEMENT NO.	CATEGORY CODE AJZZ	CONTINGENCY BALANCE (including this change): \$ _____	
CHANGE ORDER AMOUNT \$ 48,302.80			HEADQUARTERS APPROVAL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
SUPPLEMENTAL FUNDS PROVIDED \$ _____			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME: _____ DAY(S)	TIME ADJUSTMENT THIS CHANGE: 0 DAY(S)	PREVIOUSLY APPROVED TIME ADJUSTMENTS: _____ DAY(S)	PERCENTAGE TIME ADJUSTED (Including this change) _____ %	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change) _____

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

Flagging in accordance with Section 12-1.03, "Flagging Costs," of the *Standard Specifications*.

Payment for flaggers and furnishing flaggers as extra work under this change order will be made at agreed unit (hourly) prices.

Hourly costs based on prevailing wage rates with force account markups applied have been determined for laborers and for the contractor's and subcontractors' foremen.

The straight time and overtime rates for foremen include the cost of a pickup truck at the specified equipment rental rate.

In accordance with Section 9-1.04, "Force Account Payment," of the *Standard Specifications*, an additional 10 percent markup is added to the cost of extra work at force account performed by a subcontractor. The hourly rates shown in the change order for a subcontractor's employees include the additional 10 percent markup.

In case there is a change in prevailing wages or labor surcharge rates affecting the cost of flaggers and furnishing flaggers, a supplemental change order will be written to revise the hourly agreed prices.

Calculations used to determine the agreed unit prices are on file in the project records.

This change order will not affect the controlling activity; therefore, no time adjustment is warranted.

CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	ITEMS	TOTAL TO DATE
PROJECT ENGINEER	DATE	FORCE ACCOUNT	
PROJECT MANAGER	DATE	AGREED PRICE	\$48,302.80
FHWA REP.	DATE	ADJUSTMENT	
ENVIRONMENTAL	DATE	TOTAL	\$48,302.80
OTHER (SPECIFY)	DATE	FEDERAL PARTICIPATION	
	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
RESIDENT ENGINEER SIGNATURE	DATE	<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS FEDERAL FUNDING SOURCE PERCENT	

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Example 5-3.2 Flagging Only (Extra Work at Force at Agreed Unit Price) (2 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 2

CEM-4900 (REV 3/2013)

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO.	SUPPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
2				

TO

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Extra Work at Agreed Unit Price:

Furnish flaggers in accordance with Section 7-1.03, "Public Convenience," and Section 7-1.04, "Public Safety," of the *Standard Specifications*.

The contractor must maintain a daily log of flagging labor segregated by individual. A copy of the log and a signed change order bill must be submitted to the resident engineer before the 15th day of each month for payment.

Payment for flaggers and furnishing flaggers is as specified in Section 12-1.03, "Flagging Costs," of the *Standard Specifications* and as follows:

In conformance with Section 9-1.04, "Force Account," of the *Standard Specifications*, the following agreed hourly prices have been determined. These hourly prices represent the Department's 50 percent share of flagging costs. For work performed by a subcontractor, an additional 10 percent markup has been included.

For this work, the contractor agrees to accept the following hourly prices as the Department's 50 percent share. These agreed prices constitute full and complete compensation including all markups for this change.

These agreed prices are subject to revision due to any changes in prevailing wage rates or labor surcharge rates.

Flaggers (contractor's employees)	1000 hrs straight time @ \$21.41/hr =	\$ 21,410.00
Flaggers (contractor's employees)	200 hrs overtime @ \$28.71/hr =	\$ 5,742.00

Foreman & pickup truck (contractor's employee)	20 hrs straight time @ \$41.90/hr =	\$ 838.00
Foreman & pickup truck (contractor's employee)	20 hrs overtime @ \$52.75/hr =	\$ 1,055.00

Flaggers (subcontractors' employees)	500 hrs straight time @ \$22.48/hr =	\$ 11,240.00
Flaggers (subcontractors' employees)	200 hrs overtime @ \$30.15/hr =	\$ 6,030.00

Foreman & pickup truck (subcontractor's employee)	20 hrs straight time @ \$44.00/hr =	\$ 880.00
Foreman & pickup truck (subcontractor's employee)	20 hrs overtime @ \$55.39/hr =	\$ 1,107.80

Estimate of Extra Work at Agreed Unit Price =	\$ 48,302.80
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This change order will not affect the controlling activity. No time adjustment is warranted.

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Example 5-3.2 Flagging Only (Extra Work at Force at Agreed Unit Price) (3 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 2 of 2

CEM-4900 (REV 05/2001) CT# 7541-3501-0

CCO NUMBER	SUPL. NUMBER	CONTRACT NUMBER	ROAD	FEDERAL NUMBER(S)
2				

Estimated Cost: ☒ Increase ☐ Decrease \$ 48,302.80

For this order the time of completion will be adjusted as follows: None

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------



Example 5-3.3 Resolution of an Initial Notice of Potential Claim (Payment Adjustment) (1 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 2

DATE

TO			FILE	
FROM			PROJECT ID	
CHANGE ORDER NO. 3			CO-RTE-PM	
SUPPLEMENT NO.			FED NO.	
CATEGORY CODE FMEB			CONTINGENCY BALANCE (Including this change):	
CHANGE ORDER AMOUNT \$ 23,000.00			\$	
<input checked="" type="checkbox"/> INCREASE <input type="checkbox"/> DECREASE			HEADQUARTERS APPROVAL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
SUPPLEMENTAL FUNDS PROVIDED \$			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME:	TIME ADJUSTMENT THIS CHANGE:	PREVIOUSLY APPROVED TIME ADJUSTMENTS:	PERCENTAGE TIME ADJUSTED (Including this change)	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change)
DAY(S)	0 DAY(S)	DAY(S)	%	

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

Resolution of Initial Potential Claim Record No. 2 dated June 1, 2011 and described as "Retaining Wall No. 3 Unpaid Additional Costs."

In accordance with Section 5-1.43, "Potential Claims and Dispute Resolution," of the *Standard Specifications*, this change order compensates the contractor for additional costs incurred in the construction of Retaining Wall No. 3.

The project plans showed an existing 36-inch drainage culvert to be 6 yards in back of the top of the retaining wall. It was found to be much closer. The contractor was required to install shoring not shown on the plans to protect the culvert. The contractor submitted Initial Potential Claim Record No. 2 for reimbursement of the shoring work. Records of the shoring work were maintained during construction of the retaining wall. The resident engineer determined that, due to the project plan error, the contractor is entitled to be reimbursed for the cost of the shoring.

The payment adjustment at agreed lump sum is based on the force account cost analysis of constructing and maintaining the shoring. Records and calculations used to determine the payment adjustment are on file in the project records.

This change order was discussed with the construction engineer and she agrees that the contractor should receive additional compensation for the shoring work.

There will be no time adjustment for this change since the work involved did not affect the controlling activity.

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Example 5-3.3 Resolution of an Initial Notice of Potential Claim (Payment Adjustment) (2 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 2 of 2

DATE

CCO NO. 3	SUPPLEMENT NO	E. A. NUMBER
--------------	---------------	--------------

CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	THIS REQUEST	TOTAL TO DATE
PROJECT ENGINEER	DATE	ITEMS	
PROJECT MANAGER	DATE	FORCE ACCOUNT	
FHWA REP.	DATE	AGREED PRICE	
ENVIRONMENTAL	DATE	ADJUSTMENT	\$23,000.00
OTHER (SPECIFY)	DATE	TOTAL	\$23,000.00
	DATE	FEDERAL PARTICIPATION	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE	
RESIDENT ENGINEER SIGNATURE	DATE	<input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
		FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
		<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS	
		FEDERAL FUNDING SOURCE	PERCENT



Example 5-3.3 Resolution of an Initial Notice of Potential Claim (Payment Adjustment) (3 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

CEM-4900 (REV 3/2013)

Sheet 1 of 1

Change Requested by: ☐ Engineer ☒ Contractor

CHANGE ORDER NO.	SUPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
3				

TO

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Payment Adjustment at Agreed Lump Sum:

In accordance with Section 5-1.43, "Potential Claims and Dispute Resolution" of the *Standard Specifications*, compensate the contractor for additional costs incurred in the construction of Retaining Wall No. 3.

The contractor agrees to accept the lump sum of \$23,000.00 for this change order.

This change order provides full and final compensation for and resolves all aspects of the Initial Potential Claim Record No. 2, dated June 1, 2011, and described as "Retaining Wall No. 3 Unpaid Additional Costs."

Payment Adjustment at Agreed Lump Sum = \$23,000.00

There will be no time adjustment for this change order since the work involved did not affect the controlling activity.

Estimated Cost: ☒ Increase ☐ Decrease \$ 23,000.00

For this order the time of completion will be adjusted as follows: None

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

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Example 5-3.4 Compensation of Interest for Late Payment of Change Order Bills (Payment Adjustment) (1 of 2)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 1

DATE

TO			FILE	
FROM			PROJECT ID	
			CO-RT-PM	
			FED NO.	
CHANGE ORDER NO.	SUPPLEMENT NO.	CATEGORY CODE	CONTINGENCY BALANCE (Including this change):	
4		ASZZ	\$	
CHANGE ORDER AMOUNT			HEADQUARTERS APPROVAL REQUIRED?	
\$ 843.84			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
SUPPLEMENTAL FUNDS PROVIDED			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS?	
\$			<input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME:	TIME ADJUSTMENT THIS CHANGE:	PREVIOUSLY APPROVED TIME ADJUSTMENTS:	PERCENTAGE TIME ADJUSTED (Including this change)	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change)
DAY(S)	0 DAY(S)	DAY(S)	%	

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

Payment of interest for late payments of undisputed change order bills.

The contractor submitted acceptable change order bills in the amount of \$40,000 on September 8, 2010, for work performed on Change Order No. 2 and Change Order No. 3. However, because of filing errors in the resident engineer's office, these bills were not paid within the time limits specified in Section 9-1.03, "Payment Scope," of the *Standard Specifications*. The bills were paid on the estimate for the period ending December 20, 2010, and the check including payment for these bills was issued January 6, 2011.

The interest paid by this change order is calculated for the 77-day period beginning October 20, 2010 and ending January 5, 2011. Records and calculations used to determine the payment adjustment at lump sum are on file in the project records.

CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	ITEMS	TOTAL TO DATE
PROJECT ENGINEER	DATE	FORCE ACCOUNT	
PROJECT MANAGER	DATE	AGREED PRICE	
FHWA REP.	DATE	ADJUSTMENT	\$843.84
ENVIRONMENTAL	DATE	TOTAL	\$843.84
OTHER (SPECIFY)	DATE	FEDERAL PARTICIPATION	
	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
RESIDENT ENGINEER SIGNATURE	DATE	<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS FEDERAL FUNDING SOURCE PERCENT	

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Example 5-3.4 Compensation of Interest for Late Payment of Change Order Bills (Payment Adjustment)
(2 of 2)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 1

CEM-4900 (REV 3/2013)

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO. 4	SUPPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
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TO

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Payment Adjustment at Agreed Lump Sum:

In accordance with Section 9-1.03, "Payment Scope" of the *Standard Specifications*, provide payment for interest on late payments of the following undisputed change order bills received on September 8, 2010:

CO No. 2, Daily Extra Work Reports 28, 29, 30, and 32 for \$25,000.

CO No. 3, Daily Extra Work Reports 1, 2, 5, 7, and 8 for \$15,000.

Interest is calculated for the 77-day period beginning October 20, 2010 and ending January 5, 2011.

Interest = \$40,000 X (0.10/365) X 77 days = \$843.84

The contractor agrees to accept the lump sum of \$843.84 as full and complete compensation for this change order.

Payment Adjustment at Agreed Lump Sum = \$843.84

Estimated Cost: ☒ Increase ☐ Decrease **\$ 843.84**

For this order the time of completion will be adjusted as follows: None

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3680 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

Example 5-3.5A Modify Lump Sum Bid Item with a Specified "Cost Break-Down" (Payment Adjustment and Clause for no Adjustment due to Eliminated Work) (1 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 2

TO			FILE		DATE
FROM			PROJECT ID		
			CO-RTE-PM		
			FED NO.		
CHANGE ORDER NO.	SUPPLEMENT NO.	CATEGORY CODE	CONTINGENCY BALANCE (Including this change):		
5A		CEPM	\$		
CHANGE ORDER AMOUNT			HEADQUARTERS APPROVAL REQUIRED?		
\$ -335.00			<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
SUPPLEMENTAL FUNDS PROVIDED			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS?		
\$			<input type="checkbox"/> YES <input type="checkbox"/> NO		
ORIGINAL CONTRACT TIME:	TIME ADJUSTMENT THIS CHANGE:	PREVIOUSLY APPROVED TIME ADJUSTMENTS:	PERCENTAGE TIME ADJUSTED (Including this change)	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change)	
DAY(S)	0 DAY(S)	DAY(S)	%		

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

Eliminating the foliage protectors shown under the plant list remarks column on plan sheet PL-1 and replacing Plant No. 7 with Plant No. 8 on plan sheet PP-4.

The district landscape architect has determined that foliage protectors are not needed on this project. The full quantity of Plant No. 7 on plan sheet PP-4 should have been replaced with Plant No. 8 but was not corrected before bid opening. Attached is a letter from the district landscape architect requesting and justifying these changes.

As required in Section 10-2, "Highway Planting and Irrigation Systems," subsection, "Cost Break-Down," of the special provisions, the contractor submitted a cost breakdown for highway planting. The price for foliage protectors is \$1.50 ea., Plant No. 7 is \$15.00 ea., and Plant No. 8 is \$20.00 ea.

This change order provides for a payment adjustment at agree lump sum to Bid Item 36 (Lump Sum), Highway Planting, based on the submitted prices.

The deleted portion of Bid Item 36 (Lump Sum), "Highway Planting," is subject to Section 9-1.06D, "Eliminated Items," of the *Standard Specifications*. The contractor purchased no material, did not work on foliage protectors, and thus incurred no costs. Therefore, no adjustment in compensation is warranted.

There will be no payment adjustments to cost-breakdown line items Plant No. 7 and Plant No. 8 for quantity increases and decreases more than 25% of the Bid Item List in accordance with Section 9-1.06, "Changed Quantity Payment Adjustments," of the *Standard Specifications* and Section 10-2, "Highway Planting and Irrigation Systems," subsection, "Cost Break-Down," of the special provisions, for this change.

This change order does not affect the controlling activity; therefore, no time adjustment is warranted.

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Example 5-3.5A Modify Lump Sum Bid Item with a Specified "Cost Break-Down" (Payment Adjustment and Clause for no Adjustment due to Eliminated Work) (2 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 2 of 2

CCO NO. 5A		SUPPLEMENT NO.	E. A. NUMBER	DATE
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CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	THIS REQUEST	TOTAL TO DATE
PROJECT ENGINEER	DATE	ITEMS	
PROJECT MANAGER	DATE	FORCE ACCOUNT	
FHWA REP.	DATE	AGREED PRICE	
ENVIRONMENTAL	DATE	ADJUSTMENT	(\$335.00)
OTHER (SPECIFY)	DATE	TOTAL	(\$335.00)
	DATE	FEDERAL PARTICIPATION	
	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE	
	DATE	<input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
	DATE	FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
	DATE	<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL FUNDING SOURCE	PERCENT
RESIDENT ENGINEER SIGNATURE	DATE		

Example 5-3.5A Modify Lump Sum Bid Item with a Specified "Cost Break-Down" (Payment Adjustment and Clause for no Adjustment due to Eliminated Work) (3 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 2

CEM-4900 (REV 3/2013)

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO.	SUPPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
5A				

TO

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Payment Adjustment at Agreed Lump Sum:

In accordance with Section 10-2, "Highway Planting and Irrigation Systems," subsection, "Cost Break-Down," of the *Special Provisions*, perform the following modifications to Bid Item 36 (Lump Sum), "Highway Planting," as shown on the attached revised plan sheets PL-1 and PP-4 (sheets 2 and 3):

- 1) Delete the foliage protectors shown under the plant list remarks column on plan sheet PL-1.

Item 36, Highway Planting: (Foliage Protector cost-breakdown line item)
Decrease 240 EA Foliage Protectors (-100%) @ \$1.50 EA.....(-\$360) (-100%)

In accordance with Section 9-1.06D, "Eliminated Items," of the *Standard Specifications* and Section 10-2, "Highway Planting and Irrigation Systems," subsection, "Cost Break-Down," of the special provisions, the payment adjustment due to eliminating the foliage protectors is zero.

- 2) Replace Plant No. 7, Purple Crape Myrtle, with Plant No. 8, Chanticleer Ornamental Pear, from Plant Group U as shown on the revised plan sheets PL-1 and PP-4.

Item 36, Highway Planting: (Plant No. 7, Purple Crape Myrtle, cost-breakdown line item)

Decrease 5 EA Plant No. 7 (-42%) @ \$15.00 EA.....(-\$75.00) (-42%)

Item 36, Highway Planting: (Plant No. 8, Chanticleer Ornamental Pear, cost-breakdown line item)
Increase 5 EA Plant No. 8 (+10%) @ \$20.00 EA.....\$100.00 (+30%)

There will be no payment adjustments to cost-breakdown line items Plant No. 7, Purple Crape Myrtle, and Plant No. 8, Chanticleer Ornamental Pear, in accordance with Section 9-1.06, "Changed Quantity Payment Adjustments," of the *Standard Specifications* and Section 10-2, "Highway Planting and Irrigation Systems," subsection, "Cost Break-Down," of the special provisions, for this change.

For this work, the contractor shall credit the Department (-\$335.00). This sum constitutes full and complete compensation, for providing all labor, materials, equipment, tools and incidentals, including all markups for this change.

Payment Adjustment at Agreed Lump Sum = (-\$335.00)

This change order does not affect the controlling activity. No time adjustment of is warranted.

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Example 5-3.5A Modify Lump Sum Bid Item with a Specified "Cost Break-Down" (Payment Adjustment and Clause for no Adjustment due to Eliminated Work) (4 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 2 of 2

CEM-4900 (REV 05/2001) CT# 7541-3501-0

CCO NUMBER	SUPL. NUMBER	CONTRACT NUMBER	ROAD	FEDERAL NUMBER(S)
5A				

Estimated Cost: ☐ Increase ☒ Decrease \$ -335.00

For this order the time of completion will be adjusted as follows: None

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

Example 5-3.5B Modify Lump Sum Bid Item Without a Specified "Cost Break-Down" (1 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 2

DATE _____

TO _____			FILE PROJECT ID _____	
FROM _____			CO-RTE-PM _____	
			FED NO. _____	
CHANGE ORDER NO. 5B	SUPPLEMENT NO.	CATEGORY CODE CKXX	CONTINGENCY BALANCE (Including this change): \$ _____	
CHANGE ORDER AMOUNT \$ -41,200.60			<input type="checkbox"/> INCREASE <input checked="" type="checkbox"/> DECREASE	
SUPPLEMENTAL FUNDS PROVIDED \$ _____			HEADQUARTERS APPROVAL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME: _____ DAY(S)	TIME ADJUSTMENT THIS CHANGE: -3 DAY(S)	PREVIOUSLY APPROVED TIME ADJUSTMENTS: _____ DAY(S)	PERCENTAGE TIME ADJUSTED (Including this change) _____ %	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change) _____

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

Eliminating part of the planned removal of existing barrier rail, wingwalls, pedestrian rail, and chain link fence under Bid Item 10, "Bridge Removal (Portion)"; eliminating the installation of the planned Concrete Barrier (Type 11) under Bid Item 20, "Concrete Barrier (Special)"; and eliminating Bid Item 11, "Reconstruct Metal Railing (Bridge)," completely from the contract.

At Location 14 (Kings Avenue OC), structure design engineer John Dillinger has confirmed that the removal of the existing barrier rail and associated components will not be required for installation of the new ADA curb ramps. The barrier rail has been found to be in good condition and can be left in-place.

The ADA curb ramp work can proceed without the above deleted work. However, the reinforcement for the new ADA curb ramps will need to be doweled into the existing barrier rail. The details for this dowel work will be provided and paid as extra work on a supplemental change order.

Bid Item 11, "Reconstruct Metal Railing (Bridge)," will be eliminated from the contract with no incurred costs. A payment adjustment at agreed lump sum credit to the Department of (-\$34,635.60) for the reduction of work for lump sum Bid Item 10 (LS), "Bridge Removal (Portion)," and Bid Item 20 (LS), "Concrete Barrier (Special)," is taken.

Backup information and a force account cost analysis supporting the lump sum payment adjustment credit are on file in the project records.

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Example 5-3.5B Modify Lump Sum Bid Item Without a Specified "Cost Break-Down" (2 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 2 of 2

CCO NO. 5B		SUPPLEMENT NO.	E. A. NUMBER	DATE
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CONCURRED BY:		ESTIMATE OF COST		
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	ITEMS	THIS REQUEST	TOTAL TO DATE
			(\$6,565.00)	(\$6,565.00)
PROJECT ENGINEER	DATE	FORCE ACCOUNT		
		AGREED PRICE		
PROJECT MANAGER	DATE	ADJUSTMENT	(\$34,635.60)	(\$34,635.60)
		TOTAL	(\$41,200.60)	(\$41,200.60)
FHWA REP.	DATE	FEDERAL PARTICIPATION		
ENVIRONMENTAL	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE		
OTHER (SPECIFY)	DATE	<input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING		
	DATE	FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)		
	DATE	<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS		
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL FUNDING SOURCE	PERCENT	
RESIDENT ENGINEER SIGNATURE	DATE			

Example 5-3.5B Modify Lump Sum Bid Item Without a Specified "Cost Break-Down" (3 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 2

CEM-4900 (REV 3/2013)

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO.	SUPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
5B				
TO				

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

In accordance with Section 4-1.05, Changes and Extra Work, of the *Standard Specifications*, eliminate the following work at Location 14 (Kings Avenue OC) as indicated on revised contract plan sheet 55, 56, and 57 (sheets 2, 3, and 4):

- 1) Eliminate Bid Item 11, "Reconstruct Metal Railing (Bridge)," from the contract.
- 2) Eliminate a part of the planned removal of the existing barrier rail, wingwalls, pedestrian rail, and chain link fence under Bid Item 10, "Bridge Removal (Portion)."
- 3) Eliminate the installation of the planned Concrete Barrier (Type 11) under Bid Item 20, "Concrete Barrier (Special)."

Decrease (Eliminate) Bid Item at Bid Item Price:

Item 11, Reconstruct Metal Railing (Bridge) . . . -1LS (-100%) @ \$6565.00 = (-\$6565.00) (-100%)

In accordance with Section 9-1.06D, "Eliminate Items," of the *Standard Specifications*, the payment adjustment due to the elimination of Bid Item No. 11, "Reconstruct Metal Railing (Bridge)," is zero.

Decrease (Eliminate) Bid Item at Bid Item Price = (-\$6565.00)

Payment Adjustment at Agreed Lump Sum:

For the elimination of the portion of work of lump sum Bid Item Nos. 10 and 20 at Location 14 (Kings Avenue OC) as shown on sheets 2, 3, and 4, the Department shall be credited the following amounts:

Item 10, Bridge Removal (Portion) (LS): (-\$6,930.00)
Item 20, Concrete Barrier (Special) (LS): (-\$27,705.60)

For this reduction, the contractor agrees to credit the Department a lump sum of (-\$34,635.60). This sum constitutes full and complete compensation, including all markups for this change.

Payment Adjustment at Agreed Lump Sum = (-\$34,635.60)

This change will affect the controlling activity. A time adjustment of -3 working days is taken.

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 5-3.5B Modify Lump Sum Bid Item Without a Specified "Cost Break-Down" (4 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 2 of 2

CEM-4900 (REV 05/2001) CT# 7541-3501-0

CCO NUMBER	SUPL. NUMBER	CONTRACT NUMBER	ROAD	FEDERAL NUMBER(S)
5B				

Estimated Cost: ☐ Increase ☒ Decrease \$ -41,200.60

For this order the time of completion will be adjusted as follows: - 3 working days

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

Example 5-3.6 Differing Site Condition (Payment Adjustment at Force Account) (1 of 2)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 1

DATE _____

TO _____			FILE PROJECT ID _____	
FROM _____			CO-RTE-PM _____	
			FED NO. _____	
CHANGE ORDER NO. 6	SUPPLEMENT NO.	CATEGORY CODE ACZZ	CONTINGENCY BALANCE (Including this change): \$ _____	
CHANGE ORDER AMOUNT \$ 12,000.00			<input checked="" type="checkbox"/> INCREASE <input type="checkbox"/> DECREASE	
SUPPLEMENTAL FUNDS PROVIDED \$ _____			HEADQUARTERS APPROVAL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME: _____ DAY(S)	TIME ADJUSTMENT THIS CHANGE: DEF _____ DAY(S)	PREVIOUSLY APPROVED TIME ADJUSTMENTS: _____ DAY(S)	PERCENTAGE TIME ADJUSTED (Including this change) _____ %	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change) _____

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

Compensating the contractor for additional costs of footing excavation and related conduit trenching for sign structure SS1-A at Sta. "A" 235+78 Rt. due to the presence of subsurface rock in accordance with Section 4-1.06, "Differing Site Conditions," of the *Standard Specifications*.

During potholing to confirm the location of an adjacent utility line, subsurface rock was encountered. The contract's log of test borings and the Informational Handout provide no indication that rock at any depth would be present at this location. After a review of the original boring data, the geotechnical engineer, Janet Whitney, confirmed that the boring log for this location is incorrect and should have indicated subsurface rock.

The additional compensation will be paid for as a payment adjustment at force account.

The geotechnical engineer, project engineer, and construction engineer agreed with this change.

A determination of a time adjustment will be deferred until completion of the excavation and trenching work specified in this change order.

CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	ITEMS	TOTAL TO DATE
PROJECT ENGINEER	DATE	FORCE ACCOUNT	\$12,000.00
PROJECT MANAGER	DATE	AGREED PRICE	
FHWA REP.	DATE	ADJUSTMENT	
ENVIRONMENTAL	DATE	TOTAL	\$12,000.00
OTHER (SPECIFY)	DATE	FEDERAL PARTICIPATION	
	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE	
	DATE	<input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
	DATE	FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
	DATE	<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL FUNDING SOURCE	PERCENT
RESIDENT ENGINEER SIGNATURE	DATE		

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Example 5-3.6 Differing Site Condition (Payment Adjustment at Force Account) (2 of 2)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 1

CEM-4900 (REV. 3/2013)

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO.	SUPPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
6				
TO				

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Payment Adjustment at Force Account:

In accordance with Section 4-1.06, "Differing Site Conditions," and Section 9-1.04, "Force Account," of the *Standard Specifications*, compensate the contractor for additional costs to be incurred during the excavation for the footing and conduit trenching for sign structure SS1-A at Sta. "A" 235+78 Rt. on contract plan sheet SD-1 due to the presence of subsurface rock.

As determined necessary by the engineer, provide all additional labor, material, equipment, tools, and incidentals to complete the footing excavation and related conduit trenching for sign structure SS1-A. All work shall be done in accordance with the *Standard Specifications*.

Payment Adjustment at Force Account = \$12,000.00

Consideration of a time adjustment will be deferred until completion of work specified in this change order.

Estimated Cost: ☒ Increase ☐ Decrease \$ 12,000.00

For this order the time of completion will be adjusted as follows: Deferred

SUBMITTED BY		
SIGNATURE	(PRINT NAME AND TITLE)	DATE
APPROVAL RECOMMENDED BY		
SIGNATURE	(PRINT NAME AND TITLE)	DATE
ENGINEER APPROVAL BY		
SIGNATURE	(PRINT NAME AND TITLE)	DATE

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY		
SIGNATURE	(PRINT NAME AND TITLE)	DATE

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 5-3.7 Additional Work. Change Material Specifications. Increase in Bid Item Quantities (Work-Character Change Payment Adjustment and Extra Work at Force Account) (1 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 2

DATE _____

TO _____			FILE PROJECT ID _____	
FROM _____			CO-RTE-PM _____	
			FED NO. _____	
CHANGE ORDER NO. 7	SUPPLEMENT NO.	CATEGORY CODE CCSA	CONTINGENCY BALANCE (Including this change): \$ _____	
CHANGE ORDER AMOUNT \$ 404,250.00			<input checked="" type="checkbox"/> INCREASE <input type="checkbox"/> DECREASE	
SUPPLEMENTAL FUNDS PROVIDED \$ _____			HEADQUARTERS APPROVAL REQUIRED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME: _____ DAY(S)	TIME ADJUSTMENT THIS CHANGE: 8 DAY(S)	PREVIOUSLY APPROVED TIME ADJUSTMENTS: _____ DAY(S)	PERCENTAGE TIME ADJUSTED (Including this change) _____ %	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change) _____

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

1. A work-character change to furnish Class 1 permeable material in lieu of the specified Class 3 permeable material.
2. Removing the previously placed planned Class 3 permeable material and incorporating into embankment.
3. Extending the permeable blanket and underdrain system to "A" 737+00.

The Class 3 permeable material specified in the special provisions has not functioned properly. The district materials engineer recommended that Class 1 permeable material be used instead for all permeable blankets. Unanticipated ground water has been encountered throughout the entire cut section of the roadway between Stations "A" 725+00 and "A" 737+00. The district materials engineer recommended that the planned permeable blanket and underdrain system between Stations "A" 722+50 and "A" 725+00 be extended to Station "A" 737+00. The district materials engineer's letter recommending these changes is attached.

This change order increases the quantities of Bid Item 6, "Roadway Excavation"; Bid Item 46, "8" Perforated Plastic Pipe Underdrain"; and Bid Item 48, "Permeable Material (Blanket)." Consideration of a payment adjustment for the overrun in Bid Item 48, "Permeable Material (Blanket)," is deferred until completion of the item work.

A work-character change payment adjustment at an agreed unit price is provided for the material change to Bid Item 48, "Permeable Material (Blanket)." The payment adjustment, based on the contractor's force account analysis and verified by the engineer, represents the increased cost in processing the permeable material. Calculations supporting the payment adjustment are on file in the project records.

Removing and incorporating the previously placed Class 3 permeable material in the embankment fill will be paid as extra work at force account. There is no bid item applicable to this work.

The contractor requested a time adjustment of an additional 8 working days. Placing the additional permeable material will delay structural section work (the controlling activity), and a time adjustment is granted to begin producing the Class 1 permeable material. The engineer's time impact analysis, on file with the contract records, verifies that an 8-day time adjustment is reasonable.

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Example 5-3.7 Additional Work. Change Material Specifications. Increase in Bid Item Quantities (Work-Character Change Payment Adjustment and Extra Work at Force Account) (2 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 2 of 2

CCO NO. 7		SUPPLEMENT NO	E. A. NUMBER	DATE
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CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	THIS REQUEST	TOTAL TO DATE
PROJECT ENGINEER	DATE	ITEMS \$268,850.00	\$268,850.00
PROJECT MANAGER	DATE	FORCE ACCOUNT \$17,000.00	\$17,000.00
FHWA REP.	DATE	AGREED PRICE	
ENVIRONMENTAL	DATE	ADJUSTMENT \$118,400.00	\$118,400.00
OTHER (SPECIFY)	DATE	TOTAL \$404,250.00	\$404,250.00
	DATE	FEDERAL PARTICIPATION	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE	
RESIDENT ENGINEER SIGNATURE	DATE	<input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
		FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
		<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS	
		FEDERAL FUNDING SOURCE	PERCENT

Example 5-3.7 Additional Work. Change Material Specifications. Increase in Bid Item Quantities (Work-Character Change Payment Adjustment and Extra Work at Force Account) (3 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 2

CEM-4900 (REV 3/2013)

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO.	SUPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
7				

TO

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

As shown on sheets 3 and 4 of this change order, place a permeable blanket and underdrain system from station "A" 725+00 to "A" 737+00 using Class 1 permeable material.

Between stations "A" 722+50 and "A" 725+00, remove the previously placed Class 3 permeable material (blanket), incorporate the permeable material into the embankment at "A" 715+00, and dispose of the filter fabric. Reinstall the permeable material (blanket) as planned using Class 1 permeable material instead.

Class 1 permeable material in accordance with Section 68-2.02f(2), "Class 1 Permeable Material," of the *Standard Specifications* will now be used in all permeable blankets on this contract in lieu of the specified Class 3 permeable material.

Increases in Bid Items at Bid Item Prices:

Item 6 Roadway Excavation: 185 CY (1 %) @ \$34.00/ CY =	\$ 6,290.00 (+ 8 %)
Item 46 8" Perforated Plastic Pipe Underdrain: 2,600 LF (23 %) @ \$60.00/LF =	\$ 156,000.00 (+23%)
Item 48 Permeable Material (Blanket): 17,760 TON (27 %) @ \$6.00/TON =	\$ 106,560.00 (+27%)

Estimate of Increases in Bid Items at Bid Unit Prices: \$ 268,850.00

Any payment adjustment due in accordance with Section 9-1.06B, "Increases of More Than 25 Percent," of the *Standard Specifications*, for Bid Item 48 is deferred.

Payment Adjustment at Agreed Unit Price:

In lieu of Class 3 permeable material, as specified for Item 48, Permeable Material (Blanket), use Class 1 permeable material for all permeable blankets. In accordance with Section 4-1.05B, "Work-Character Changes," of the *Standard Specifications*, the contractor agrees to accept \$1.48 per TON permeable material (blanket). This sum constitutes full payment, including all markups, for this change.

Estimated Payment Adjustment at Agreed Unit Price: 80,000 Tons @ \$1.48/TON = \$ 118,400.00

Extra Work at Force Account:

As determined necessary by the Engineer, remove the previously placed Class 3 permeable material (blanket) from the roadbed between station "A" 722+50 and "A" 725+00, incorporate the permeable material into the embankment at station "A" 715+00 and dispose of the blanket's filter fabric.

Estimate of Extra Work at Force Account = \$ 17,000.00

Based on a time impact analysis, this change affects the controlling activity by 8 days. A time adjustment of 8 working

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Example 5-3.7 Additional Work. Change Material Specifications. Increase in Bid Item Quantities (Work-Character Change Payment Adjustment and Extra Work at Force Account) (4 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 2 of 2

CEM-4900 (REV 05/2001) CT# 7541-3501-0

CCO NUMBER	SUPPL. NUMBER	CONTRACT NUMBER	ROAD	FEDERAL NUMBER(S)
7				

days is granted.

Estimated Cost: ☒ Increase ☐ Decrease \$ 404,250.00

For this order the time of completion will be adjusted as follows: 8 working days

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
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APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

Example 5-3.8 Compensation for Critical Delay (Payment Adjustment) (1 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 2

DATE

TO			FILE	
FROM			PROJECT ID	
			CO-RTE-PM	
			FED NO.	
CHANGE ORDER NO.	SUPPLEMENT NO.	CATEGORY CODE	CONTINGENCY BALANCE (Including this change):	
8		AGZZ	\$	
CHANGE ORDER AMOUNT			HEADQUARTERS APPROVAL REQUIRED?	
\$ 12,203.00			<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
SUPPLEMENTAL FUNDS PROVIDED			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS?	
\$			<input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME:	TIME ADJUSTMENT THIS CHANGE:	PREVIOUSLY APPROVED TIME ADJUSTMENTS:	PERCENTAGE TIME ADJUSTED (Including this change)	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change)
	10 DAY(S)		%	

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

Compensation for a delay to the controlling work in accordance with Section 8-1.07, "Delays," of the *Standard Specifications*.

A 12-inch waterline, crossing the right-of-way at station "A" 453+45, was previously lowered and placed in a steel conduit by others under an encroachment permit before construction work began on this contract. During roadway excavation activities, the State inspector made an elevation check on the waterline. It was discovered that an elevation error of approximately 10 feet had been made during the relocation of the waterline. This line is critical for water service in the area and could only be taken out of service for short periods of time. Therefore, roadway excavation, the controlling activity at the time, was suspended from September 29, 2011, through October 12, 2011, while city water crews lowered the waterline to an elevation below the planned subgrade.

While the contractor relocated some of the roadway excavation equipment to other work, the remainder of the equipment that was made idle by the delay remained on the job site. A payment adjustment at agreed lump sum provides for the cost of idle equipment calculated, as specified in Section 8-1.07, "Delays," of the *Standard Specifications*. Records were kept of the equipment moved off the site to other work and moved back in when roadway excavation resumed. The move-out and move-in costs are paid for as a payment adjustment at agreed lump sum.

There will be no payment adjustment for the idle time of workers because a full work day was completed on September 28, 2010, before the work was delayed.

A time adjustment of 10 working days is confirmed by a time impact analysis in accordance with Sections 8-1.02, "Schedule," of the *Standard Specifications*. Roadway excavation (earthwork) was the controlling activity during the delay period between September 29, 2011 and October 12, 2011, inclusive. In accordance with Section 9-1.11, "Time-Related Overhead," of the *Standard Specifications*, a pro-rated payment adjustment at agreed lump sum is provided for Bid Item No. 3, "Time-Related Overhead," for the 10-day delay.

Records and calculations for the payment adjustment are on file with the project records.

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Example 5-3.8 Compensation for Critical Delay (Payment Adjustment) (2 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 2 of 2

CCO NO. 8		SUPPLEMENT NO.	E. A. NUMBER	DATE
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CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	THIS REQUEST	TOTAL TO DATE
PROJECT ENGINEER	DATE	ITEMS	
PROJECT MANAGER	DATE	FORCE ACCOUNT	
FHWA REP.	DATE	AGREED PRICE	
ENVIRONMENTAL	DATE	ADJUSTMENT	\$12,203.00
OTHER (SPECIFY)	DATE	TOTAL	\$12,203.00
	DATE	FEDERAL PARTICIPATION	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE	
RESIDENT ENGINEER SIGNATURE	DATE	<input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
		FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
		<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS	
		FEDERAL FUNDING SOURCE	PERCENT

Example 5-3.8 Compensation for Critical Delay (Payment Adjustment) (3 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 2

CEM-4900 (REV 3/2013)

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO.	SUPPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
8				
TO				

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Payment Adjustment at Agreed Lump Sum:

In accordance with Sections 8-1.02, "Schedule," and 8-1.07, "Delays," of the *Standard Specifications*, the contractor shall be compensated for the delay to the controlling activity, roadway excavation (earthwork), from September 29, 2011 through October 12, 2011 caused by relocation of the city waterline.

The contractor agrees to accept the sum of \$6,853.00 as full compensation for idle equipment. No adjustment for idle time of workers will be made since a full work-day was completed on September 28, 2010 before work was delayed.

The contractor agrees to accept the sum of \$2,350.00 as full compensation for the cost of moving equipment made necessary by the delay.

In accordance with Section 9-1.11, "Time-Related Overhead" of the *Standard Specifications*, the contractor shall be compensated for time-related overhead caused by the delay.

\$45,000.00 (Item No. 3, Time Related Overhead (LS) / 150 Working Days = \$300/WD x 10 WDs = \$3000.00

As determined by a pro-rated adjustment to lump sum Bid Item No. 3, "Time Related Overhead," the contractor agrees to accept the sum of \$3000.00 as full compensation for the additional time-related overhead.

The contractor agrees to accept the sum of \$12,203.00 as full and complete compensation for this change.

Payment Adjustment at Agreed Lump Sum = \$12,203.00

Time Adjustment:

A determination of delay in completion of the contract due to the delay to the controlling activity, roadway excavation (earthwork), from September 29, 2011, through October 12, 2011, has been made in accordance with Sections 8-1.02, "Schedule" and 8-1.07, "Delays," of the *Standard Specifications*. The contractor is granted 10 working days for the following dates: August 29, 2011, through September 12, 2011, inclusive.

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Example 5-3.8 Compensation for Critical Delay (Payment Adjustment) (4 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 2 of 2

CEM-4900 (REV 05/2001) CT# 7541-3501-0

CCO NUMBER	SUPPL. NUMBER	CONTRACT NUMBER	ROAD	FEDERAL NUMBER(S)
8				

Estimated Cost: ☒ Increase ☐ Decrease \$ 12,203.00

For this order the time of completion will be adjusted as follows: 10 working days

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
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APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

Example 5-3.9 Value Engineering Change Proposal (Decrease Bid Item Quantity and Payment Adjustment)
(1 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 2

TO			FILE		PROJECT ID
FROM					CO-RTE-PM
					FED NO.
CHANGE ORDER NO.	SUPPLEMENT NO.	CATEGORY CODE	CONTINGENCY BALANCE (Including this change):		
9		DXTX	\$		
CHANGE ORDER AMOUNT			HEADQUARTERS APPROVAL REQUIRED?		
\$ -4,286.00			<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
SUPPLEMENTAL FUNDS PROVIDED			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS?		
\$			<input type="checkbox"/> YES <input type="checkbox"/> NO		
ORIGINAL CONTRACT TIME:	TIME ADJUSTMENT THIS CHANGE:	PREVIOUSLY APPROVED TIME ADJUSTMENTS:	PERCENTAGE TIME ADJUSTED (Including this change)	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change)	
DAY(S)	0 DAY(S)	DAY(S)	%		

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

A value engineering change proposal to eliminate the falsework opening for the County road at the Brighton Overhead (Br. No. 24-289 R/L) and use the adjacent private driveway falsework opening as a detour for local county traffic instead in accordance with Section 4-1.07B, "Value Engineering Change Proposal," of the *Standard Specifications*.

The contractor negotiated a use agreement with Ms. Mary Smith, owner of the property served by the private driveway road passing under the Brighton Overhead that parallels the local county road. A copy of the agreement is attached. The falsework opening for the private driveway will remain as planned. The District Traffic County's Public Works Director has agreed with the proposed detour package since the local traffic volumes are very low and the driveway road is as wide as the county road and in good condition. However, at the southern intersection of the County road and private driveway road the existing painted traffic delineation will need to be refreshed.

As a result of the agreements, the falsework opening at the Brighton Overhead can be eliminated. The Division of Structure Construction has approved revised falsework plans.

The estimated overall net savings in construction costs resulting from this change order is (-\$8572.00). The net decrease is based on the following:

1. A decrease of (-\$4,312.00) of Bid Item 3, "Temporary Railing (Type K)," using the bid item price. A cost analysis, on file with the project records, verifies that the bid price of this item is reasonably close to the actual cost of the work determined by the force account method.
2. A work-character change payment adjustment at agreed lump sum decrease of (-\$5,580.00) for the reduced cost of constructing the Brighton Overhead falsework revision without the county road opening. This decrease is based on the contractor's submitted force account analysis verified by the engineer. Cost information and analysis are on file with the project records.
3. Extra work at agreed lump sum of \$1,320.00 for the installation and removal the detour sign package and refreshing of the intersection delineation. Cost information and analysis are on file with the project records. Since Bid Item 20, "Traffic Stripe (Paint)," unit cost was found to be more than the unit cost for this change as determined by a force account analysis, the contractor and engineer agreed to the lump sum cost for the delineation.

One half of the construction cost savings, \$4,286.00, is returned to the contractor as a payment adjustment in accordance with Section 4-1.07B, "Value Engineering Change Proposal," of the *Standard Specifications*.

This change had no affect on the controlling activity and no time adjustment in is warranted.

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Example 5-3.9 Value Engineering Change Proposal (Decrease Bid Item Quantity and Payment Adjustment) (2 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 2 of 2

DATE	
CCO NO. <u>9</u>	SUPPLEMENT NO. _____ E. A. NUMBER _____

CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	THIS REQUEST	TOTAL TO DATE
PROJECT ENGINEER	DATE	ITEMS (\$4,312.00)	(\$4,312.00)
PROJECT MANAGER	DATE	FORCE ACCOUNT	
FHWA REP.	DATE	AGREED PRICE \$1,320.00	\$1,320.00
ENVIRONMENTAL	DATE	ADJUSTMENT (\$1,294.00)	(\$1,294.00)
OTHER (SPECIFY)	DATE	TOTAL (\$4,286.00)	(\$4,286.00)
	DATE	FEDERAL PARTICIPATION	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
RESIDENT ENGINEER SIGNATURE	DATE	FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
		<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS	
		FEDERAL FUNDING SOURCE	PERCENT

Example 5-3.9 Value Engineering Change Proposal (Decrease Bid Item Quantity and Payment Adjustment) (3 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 2

CEM-4900 (REV 3/2013)

Change Requested by: ☐ Engineer ☒ Contractor

CHANGE ORDER NO.	SUPPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
9				

TO

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

In accordance with Section 4-1.07B, "Value Engineering Change Proposal," of the *Standard Specifications*, eliminate the falsework opening for the county road at the Brighton Overhead (Br. No. 24-289 R/L) and use the adjacent private driveway road as a detour for the local traffic instead.

Decrease Bid Item at Bid Item Price:

Eliminate the planned Temporary Railing (Type K) at the county road falsework opening at the Brighton Overhead.

Item No. 3, "Temporary Railing (Type K)," -392 LF (-7 %) @ \$11.00/LF = (-\$ 4,312.00) (-7 %)

Decrease Bid Item at Bid Item Price = (-\$ 4,312.00)

Payment Adjustment at Agreed Lump Sum:

In accordance with Section 4-1.05B, "Work-Character Changes," of the *Standard Specifications*, the Department will receive a credit of (-\$5580.00) as full compensation for the reduction in the construction cost of the revised falsework by the elimination of the county road's falsework opening at the Brighton Overhead.

Payment Adjustment at Agreed Lump Sum = (-\$5,580.00)

Extra Work at Agreed Lump Sum:

As shown on sheet 2 of this change order, install and remove the detour sign package to direct the local traffic from the county road to and from the private driveway road.

As shown on sheet 3 of this change order, refresh the existing painted traffic delineation at the southern intersection of County road and private driveway road in accordance with Section 84-3, "Painted Traffic Stripe and Pavement Markings," of the *Standard Specifications*.

For this work, the contractor shall be compensated \$1,320.00. This sum constitutes full and complete compensation, for providing all labor, materials, equipment, tools and incidentals, including all markups for this change.

Extra Work at Agreed Lump Sum = \$1,320.00

Payment Adjustment at Agreed Lump Sum:

In accordance with Section 4-1.07B, "Value Engineering Change Proposal," of the *Standard Specifications*, the contractor agrees to accept the above changes and lump sum payment of \$4,286.00 representing half of the net savings as full and complete compensation for this change. $[(-\$ 4,312.00) + (-\$5,580.00) + \$1,320.00] / 2 = (-\$4,286.00)]$

Payment Adjustment at Agreed Lump Sum = \$4,286.00

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 5-3.9 Value Engineering Change Proposal (Decrease Bid Item Quantity and Payment Adjustment) (4 of 4)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 2 of 2

CEM-4900 (REV 05/2001) CT# 7541-3501-0

CCO NUMBER	SUPPL. NUMBER	CONTRACT NUMBER	ROAD	FEDERAL NUMBER(S)
9				

This change order does not affect the controlling activity. No time adjustment of is warranted.

Estimated Cost: ☐ Increase ☒ Decrease \$ -4,286.00

For this order the time of completion will be adjusted as follows: None

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
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Example 5-3.10A Additional Work. Increase Bid Item Quantities (Clause for Final Pay Items and Extra Work at Agreed Price) (1 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 1

TO			FILE		DATE
FROM			PROJECT ID		
			CO-RTE-PM		
			FED NO.		
CHANGE ORDER NO.	SUPPLEMENT NO.	CATEGORY CODE	CONTINGENCY BALANCE (Including this change):		
10A		CGAC	\$		
CHANGE ORDER AMOUNT			HEADQUARTERS APPROVAL REQUIRED?		
\$ 43,807.10			<input checked="" type="checkbox"/> INCREASE <input type="checkbox"/> DECREASE		
SUPPLEMENTAL FUNDS PROVIDED			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS?		
\$			<input type="checkbox"/> YES <input type="checkbox"/> NO		
ORIGINAL CONTRACT TIME:	TIME ADJUSTMENT THIS CHANGE:	PREVIOUSLY APPROVED TIME ADJUSTMENTS:	PERCENTAGE TIME ADJUSTED (Including this change)	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change)	
DAY(S)	0 DAY(S)	DAY(S)	%		

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

Constructing a reinforced concrete box culvert at Station 782 + 32, to serve as a cattle pass.

Before the project was advertised, the district right-of-way agents were unable to close negotiations with the abutting property owner adjacent to Station 782 + 32. An Order of Immediate Possession was obtained so that construction could begin. Before the start of construction, negotiations were finally closed. The major item of agreement was the construction of an 8 foot x 8 foot reinforced concrete box culvert, located at Station 782 + 32, to serve as a cattle pass from one portion of the property to the other.

There are no applicable bid items for constructing the reinforced concrete box culvert. The contractor quoted a price of \$216.00 per cubic foot of concrete, in-place, for the reinforced concrete box culvert. The resident engineer verified this cost as reasonable by performing an independent force account analysis. The cost submittal and independent analysis are filed in the job records. Structure excavation and structure backfill will be measured and paid by final pay Bid Items 43 and 44.

The project engineer, project manager, and construction engineer agreed with this change.

Construction of the reinforced concrete box culvert will not affect the controlling activity. No time adjustment of is warranted.

CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	ITEMS	TOTAL TO DATE
		FORCE ACCOUNT	
PROJECT ENGINEER	DATE	AGREED PRICE	
		ADJUSTMENT	
PROJECT MANAGER	DATE	TOTAL	
FHWA REP.	DATE	FEDERAL PARTICIPATION	
		<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE	
ENVIRONMENTAL	DATE	<input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
OTHER (SPECIFY)	DATE	FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
	DATE	<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL FUNDING SOURCE	PERCENT
RESIDENT ENGINEER SIGNATURE	DATE		

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Example 5-3.10A Additional Work. Increase Bid Item Quantities (Clause for Final Pay Items and Extra Work at Agreed Price) (2 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 2

CEM-4900 (REV 3/2013)

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO. 10A	SUPPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
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TO

, contractor

*You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Increases in Bid Items at Bid Item Prices:

At station 782 + 32, perform excavation and backfill for the reinforced concrete box culvert shown on sheet 3 of 3 of this change order.

Item No. 43 (F), Structure Excavation: 220 CF (7 %) @ \$8.83/CF = \$ 1,942.60 (+18 %)

Item No. 44 (F), Structure Backfill: 250 CF (3%) @ \$18.85/CF = \$ 4,712.50 (+11 %)

Increases in Bid Items at Bid Item Prices = \$ 6,655.10

The quantity increase shown here for Bid Item 43 and Bid Item 44, when combined with quantities shown in the Bid Item List, and as modified by any previous change orders or revisions to dimensions made by the engineer, are the final quantities for which payment is made for each bid item.

Extra Work at Agreed Unit Price:

In accordance with Section 4-1.05, "Changes and Extra Work," of the *Standard Specifications*, construct a reinforced concrete box culvert at station 782 + 32 as shown on sheet 3 of 3 of this change order and *Standard Plans* D80, D82, and D83. Perform all work in accordance with Section 51, "Concrete Structures," and Section 52, "Reinforcement," of the *Standard Specifications*.

A unit price of \$216.00 per cubic yard of concrete, measured in accordance with the *Standard Specifications*, will constitute full and complete compensation, including all markups, for constructing the reinforced concrete box culvert, complete in-place, including all reinforcing steel and incidentals.

Extra Work at Agreed Unit Price = 172 CF @ \$216.00 = \$37,152.00 increase

This change order does not affect the controlling activity. No time adjustment of is warranted.

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Example 5-3.10A Additional Work. Increase Bid Item Quantities (Clause for Final Pay Items and Extra Work at Agreed Price) (3 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 2 of 2

CEM-4900 (REV 05/2001) CT# 7541-3501-0

CCO NUMBER	SUPPL. NUMBER	CONTRACT NUMBER	ROAD	FEDERAL NUMBER(S)
10A				

Estimated Cost: ☒ Increase ☐ Decrease \$ 43,807.10

For this order the time of completion will be adjusted as follows: None

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------



Example 5-3.10B Item Increase/Decrease and Extra Work (1 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 1

DATE

TO			FILE	
FROM			PROJECT ID	
			CO-RTE-PM	
			FED NO.	
CHANGE ORDER NO.	SUPPLEMENT NO.	CATEGORY CODE	CONTINGENCY BALANCE (Including this change):	
10B		CCPX	\$	
CHANGE ORDER AMOUNT			HEADQUARTERS APPROVAL REQUIRED?	
\$ 313.50			<input checked="" type="checkbox"/> INCREASE <input type="checkbox"/> DECREASE	
SUPPLEMENTAL FUNDS PROVIDED			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS?	
\$			<input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME:	TIME ADJUSTMENT THIS CHANGE:	PREVIOUSLY APPROVED TIME ADJUSTMENTS:	PERCENTAGE TIME ADJUSTED (Including this change)	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change)
DAY(S)	2 DAY(S)	DAY(S)	%	

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

1. Installing two additional sections of each type of HMA Dike (Type A and Type C). After consulting with the project engineer, it was confirmed these four sections of cut slope dike were accidentally omitted from the project plans. This work will be paid by increasing the respective bid item quantity.
2. Adding three sections of HMA Dike (Type F). After consulting the project engineer, it was confirmed the mountable dike was not included in the project plans. This work will be paid as extra work at agreed unit price since there is no applicable bid item.
3. Deleting four sections of planned HMA Dike (Type E). Dike at these locations is not necessary because they are located on the high side of the roadway super. This deletion will be credited by decreasing the bid item quantity.
4. Adding three HMA overside drains with rock energy dissipaters. For each section of added HMA Dike (Type F), an overside drain at their respective low point is necessary to transfer water from the dike to the adjacent ditch. This work will be paid as extra work at agreed lump sum since there are no applicable bid items.

The project engineer, project manager, and construction engineer concur with this change.

Cost information and a force account analysis supporting the unit price and lump sum for the respective extra work are on file in the project records.

This change will affect the controlling activity by 2 days. A time adjustment of 2 working days is granted

CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	ITEMS	TOTAL TO DATE
PROJECT ENGINEER	DATE	FORCE ACCOUNT	
PROJECT MANAGER	DATE	AGREED PRICE	
FHWA REP.	DATE	ADJUSTMENT	
ENVIRONMENTAL	DATE	TOTAL	
OTHER (SPECIFY)	DATE		
	DATE		
HQ OR DISTRICT PRIOR APPROVAL BY	DATE		
RESIDENT ENGINEER SIGNATURE	DATE		

FEDERAL PARTICIPATION	
<input type="checkbox"/> PARTICIPATING	<input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE
<input type="checkbox"/> NON-PARTICIPATING (Maintenance)	<input type="checkbox"/> NON-PARTICIPATING
FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT	<input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS
FEDERAL FUNDING SOURCE	PERCENT

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Example 5-3.10B Item Increase/Decrease and Extra Work (2 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 2

CEM-4900 (REV 3/2013)

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO.	SUPPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
10B				

TO

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Increases in Bid Items at Bid Item Prices:

As marked in the field by the Engineer, install HMA Dike (Type A) between the following stations: 118+02 Lt. to 118+62 Lt. and 118+50 Rt. to 119+16 Rt. and install HMA Dike (Type C) between the following stations: 112+44 Lt. to 113+31 Lt. and 115+32 Rt. to 115+80 Rt.

Item No. 66, Place HMA Dike (Type A): 126 LF (+29.6 %) @ \$3.50/LF = \$ 441.00 (+34.8 %)

Item No. 67, Place HMA Dike (Type C): 135 LF (+201.2 %) @ \$3.50/LF = \$ 472.50 (+201.2 %)

Any payment adjustment in accordance with Section 9-1.06B, "Increases of More Than 25 Percent," of the *Standard Specifications* for Item No. 66 and Item No. 67 is deferred.

Increases in Bid Items at Bid Item Prices = \$ 913.50

Decreases in Bid Item at Bid Item Price:

Eliminate the planned HMA Dike (Type E) from the following stations: 118+02 Lt. to 118+62 Lt., 117+00 Rt. to 119+16 Rt., 133+20 Lt. to 135+00 Lt. and 135+90 to 137+34 Lt.

Item No. 68, Place HMA Dike (Type E): -600 LF (-40.8 %) @ \$3.50/LF = (-\$ 2,100) (-40.8 %)

Any payment adjustment in accordance with Section 9-1.06C, "Decreases of More Than 25 Percent," of the *Standard Specifications* for Bid Item No. 68 is deferred.

Decreases in Bid Items at Bid Item Prices = (-\$ 2,100)

Extra Work at Agreed Unit Price:

In accordance with Sections 4-1.05, "Changes and Extra Work" and 39-1.15, "Minor Hot Mix Asphalt (HMA)," of the *Standard Specifications*, and Standard Plan A87B, furnish all labor, materials and equipment to install approximately 45 LF of HMA Dike (Type F) between the following stations: 113+33 Lt. to 113+45 Lt., 115+09 Lt. to 115+26 Lt., and 115+09 Rt. to 115+27 Rt. as marked in the field by the Engineer.

A unit price of \$4.00 per linear foot measured in accordance with the *Standard Specifications* will constitute full and complete compensation, including all markups, for installing HMA Dike (Type F), complete in-place, including incidentals.

Extra Work at Agreed Unit Price: 45 LF @\$4.00/LF = \$180.00 increase

Extra Work at Agreed Lump Sum:

In accordance with Sections 4-1.05, "Changes and Extra Work" and 39-1.15, "Minor Hot Mix Asphalt (HMA)," of the *Standard Specifications*, and Standard Plan D87D, furnish all labor, materials and equipment to install three HMA

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Example 5-3.10B Item Increase/Decrease and Extra Work (3 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 2 of 2

CEM-4900 (REV 05/2001) CT# 7541-3501-0

CCO NUMBER	SUPPL. NUMBER	CONTRACT NUMBER	ROAD	FEDERAL NUMBER(S)
10B				

overside drains with rock energy dissipaters as shown on sheet 3.

For this work, the contractor is compensated \$1,320.00. This sum constitutes full and complete compensation, for providing all labor, materials, equipment, tools, and incidentals, including all markups for this change.

Extra Work at Agreed Lump Sum = -\$1,320.00

Based on a time impact analysis, this change delays the controlling activity by 2 days. A time adjustment of 2 working days is granted.

Estimated Cost: ☒ Increase ☐ Decrease \$ 313.50

For this order the time of completion will be adjusted as follows: 2 working days

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
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Example 5-3.11A Payment Adjustment for Price Index Fluctuations (Before Paving) (1 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 1

DATE _____

TO _____			FILE PROJECT ID _____	
FROM _____			CO-RTE-PM _____	
			FED NO. _____	
CHANGE ORDER NO. 11A	SUPPLEMENT NO.	CATEGORY CODE AQZZ	CONTINGENCY BALANCE (Including this change): \$ _____	
CHANGE ORDER AMOUNT \$ 100,000.00			<input checked="" type="checkbox"/> INCREASE <input type="checkbox"/> DECREASE	
SUPPLEMENTAL FUNDS PROVIDED \$ 200,000.00			HEADQUARTERS APPROVAL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME: _____ DAY(S)	TIME ADJUSTMENT THIS CHANGE: 0 DAY(S)	PREVIOUSLY APPROVED TIME ADJUSTMENTS: _____ DAY(S)	PERCENTAGE TIME ADJUSTED (Including this change) _____ %	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change) _____

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

A payment adjustment for California statewide crude oil price index fluctuations.

The California statewide crude oil price index may fluctuate more than 5 percent during the project relative to the price index at the time of bid. Therefore, payment adjustments to Bid Item No. 28, [HMA]; Bid Item No. 29, [RHMA-OG] must be made in accordance with Section 9-1.07, "Payment Adjustments for Price Index Fluctuations," of the *Standard Specifications*.

Compensation is to be provided as a Payment Adjustment at Agreed Unit Price for each month of paving. Calculations for compensation are on file in the project records. \$200,000.00 in supplemental funds have been provided for this payment adjustment. (The payment adjustment numbers shown below are for preliminary budgeting purposes only.)

Estimate of Increase: \$150,000.00

Estimate of Decrease: \$50,000.00

Estimate of Payment Adjustment: \$100,000.00

There will be no time adjustment for this change order since the work involved did not affect the controlling activity.

CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	ITEMS	THIS REQUEST TOTAL TO DATE
PROJECT ENGINEER	DATE	FORCE ACCOUNT	
PROJECT MANAGER	DATE	AGREED PRICE	
FHWA REP.	DATE	ADJUSTMENT	\$100,000.00 \$100,000.00
ENVIRONMENTAL	DATE	TOTAL	\$100,000.00 \$100,000.00
OTHER (SPECIFY)	DATE	FEDERAL PARTICIPATION	
	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE	
	DATE	<input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
	DATE	FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
	DATE	<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL FUNDING SOURCE	PERCENT
RESIDENT ENGINEER SIGNATURE	DATE		

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Example 5-3.11A Payment Adjustment for Price Index Fluctuations (Before Paving) (2 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 2

CEM-4900 (REV 3/2013)

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO.	SUPPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
11A				

TO

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Payment Adjustment at Agreed Unit Price:

In accordance with Section 9-1.07, "Payment Adjustments for Price Index Fluctuations," of the *Standard Specifications*, compensation payable for the bid item(s) below will be subject to increased and/or decreased payment adjustments for fluctuations whenever the California statewide crude oil price index for the month the material is placed is more than 5 percent higher or lower than the crude oil price index at the time of bid.

Item No. 28 - HMA

Item No. 29 - RHMA OG

The Department shall compensate the contractor for increased payment adjustments and the contractor shall be liable to the Department for decreased payment adjustments. Compensation will be made at the unit price payment adjustment calculated using the formula prescribed in the above section. (The payment adjustment numbers shown below are for preliminary budgeting purposes only.)

Payment Adjustment at Agreed Unit Price [Estimate of Increase (Payment)]: \$150,000.00

Payment Adjustment at Agreed Unit Price [Estimate of Decrease (Credit)]: (\$50,000.00)

Net Total Payment Adjustment at Agreed Unit Price (Estimate of Net Adjustment): \$100,000.00

There will be no time adjustment due to this change order since the change does not affect the controlling activity.

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Example 5-3.11A Payment Adjustment for Price Index Fluctuations (Before Paving) (3 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 2 of 2

CEM-4900 (REV 05/2001) CT# 7541-3501-0

CCO NUMBER	SUPL. NUMBER	CONTRACT NUMBER	ROAD	FEDERAL NUMBER(S)
11A				

Estimated Cost: ☒ Increase ☐ Decrease \$ 100,000.00

For this order the time of completion will be adjusted as follows: None

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
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APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------



Example 5-3.11B Payment Adjustment for Price Index Fluctuations (After Paving) (1 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 1

DATE _____

TO _____			FILE PROJECT ID _____	
FROM _____			CO-RTE-PM _____	
			FED NO. _____	
CHANGE ORDER NO. 11B	SUPPLEMENT NO.	CATEGORY CODE AQZZ	CONTINGENCY BALANCE (Including this change): \$ _____	
CHANGE ORDER AMOUNT \$ -7,880.22			<input type="checkbox"/> INCREASE <input checked="" type="checkbox"/> DECREASE	
SUPPLEMENTAL FUNDS PROVIDED \$ 50,000.00			HEADQUARTERS APPROVAL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME: _____ DAY(S)	TIME ADJUSTMENT THIS CHANGE: 0 DAY(S)	PREVIOUSLY APPROVED TIME ADJUSTMENTS: _____ DAY(S)	PERCENTAGE TIME ADJUSTED (Including this change) _____ %	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change) _____

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

A payment adjustment due to paving asphalt price index fluctuations.

The California statewide crude oil price index has fluctuated more than 5 percent during the life of this contract relative to the price index at the time of bid. Therefore, adjustments to Bid Item No. 12 [Replace Asphalt Concrete Surfacing] must be made in accordance with Section 9-1.07, "Payment Adjustments for Price Index Fluctuations," of the *Standard Specifications*.

Compensation will be provided as a Payment Adjustment at Agreed Unit Price. Calculations for the compensation are on file in the project records. \$50,000.00 in supplemental funds have been provided for this payment adjustment.

Payment Adjustment at Agreed Unit Price = (-\$7,880.22)

This change order does not affect the controlling activity; therefore, no time adjustment of is warranted.

CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	ITEMS	THIS REQUEST TOTAL TO DATE
PROJECT ENGINEER	DATE	FORCE ACCOUNT	_____
PROJECT MANAGER	DATE	AGREED PRICE	_____
FWHA REP.	DATE	ADJUSTMENT	(\$7,880.22) (\$7,880.22)
ENVIRONMENTAL	DATE	TOTAL	(\$7,880.22) (\$7,880.22)
OTHER (SPECIFY)	DATE	FEDERAL PARTICIPATION	
	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
RESIDENT ENGINEER SIGNATURE	DATE	<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS FEDERAL FUNDING SOURCE PERCENT _____ _____	

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Example 5-3.11B Payment Adjustment for Price Index Fluctuations (After Paving) (2 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

CEM-4900 (REV 3/2013)

Sheet 1 of 2

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO.	SUPPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
11B				

TO

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Payment Adjustment at Agreed Unit Price:

In accordance with Section 9-1.07, "Payment Adjustments for Price Index Fluctuations," of the *Standard Specifications*, compensation payable for the bid item(s) below will be subject to increased and/or decreased payment adjustments for fluctuations in the California Paving Asphalt Price Index for the month the material is placed exceeds more than 5 percent relative to the crude oil price index at the time of bid. Sales Tax, T = X.XX%

Item No. 12, [Replace Asphalt Concrete Surfacing]

For an increase in crude oil price index exceeding 5 percent: $A = [(I_u / I_b) - 1.05] \times I_b \times [1 + (T / 100)]$

For a decrease in crude oil price index exceeding 5 percent: $A = [(I_u / I_b) - 0.95] \times I_b \times [1 + (T / 100)]$

ITEM	MONTH	% OIL	TONS	Q	I_u	I_b	I_u/I_b	A	ADJUSTMENT
12	Aug	4.00	2238.2	86.08	549.7	664.1	0.83	(87.89)	(-\$7,565.57)
12	Aug	100.00	3.58	3.58	549.7	664.1	0.83	(87.89)	(-\$314.65)
									TOTAL (-\$7,880.22)

For this work, the contractor agrees to credit the Department (-\$7,880.22). This sum constitutes full and complete compensation, for providing all labor, materials, equipment, tools and incidentals, including all markups for this change.

Payment Adjustment at Agreed Unit Price = (-\$7,880.22)

This change order does not affect the controlling activity. No time adjustment is warranted.

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Example 5-3.11B Payment Adjustment for Price Index Fluctuations (After Paving) (3 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 2 of 2

CEM-4900 (REV 05/2001) CT# 7541-3501-0

CCO NUMBER	SUPPL. NUMBER	CONTRACT NUMBER	ROAD	FEDERAL NUMBER(S)
11B				

Estimated Cost: ☐ Increase ☒ Decrease \$-7,880.22

For this order the time of completion will be adjusted as follows: None

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
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APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
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We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
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Example 5-3.12 Claim Entitlement (1 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 2

DATE _____

TO _____			FILE PROJECT ID _____	
FROM _____			CO-RTE-PM _____	
			FED NO. _____	
CHANGE ORDER NO. 12	SUPPLEMENT NO.	CATEGORY CODE GXEB	CONTINGENCY BALANCE (Including this change): \$ _____	
CHANGE ORDER AMOUNT \$ 212,427.53			<input checked="" type="checkbox"/> INCREASE <input type="checkbox"/> DECREASE	
SUPPLEMENTAL FUNDS PROVIDED \$ _____			HEADQUARTERS APPROVAL REQUIRED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME: _____ DAY(S)	TIME ADJUSTMENT THIS CHANGE: _____ DAY(S)	PREVIOUSLY APPROVED TIME ADJUSTMENTS: _____ DAY(S)	PERCENTAGE TIME ADJUSTED (Including this change) _____ %	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change) _____

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

Full resolution for Claim Nos. 2, 5, and 6 identified in the contractor's Claim Statement dated October 28, 2011.

Claim No. 2 - Change Order 8 Work-Character Change Payment Adjustment

Claim No. 5 - Bid Item 49 Item Quantity Adjustment

Claim No. 6 - Change Order 19 Differing Site Condition Payment Adjustment

For Claim No. 2, it was determined that the original force account analysis performed for Change Order 8 used the wrong equipment rates which affected the adjustment total.

For Claim No. 5, the contractor has requested Bid Item 49 to be adjusted since the quantity performed is less than 75% of the quantity of the Bid Item List.

For Claim No. 6, it was determined that the original force account analysis performed for Change Order 19 did not include all the diaries for all the days which affected the adjustment total.

In accordance with 9-1.17D, "Final Payment and Claims," of the *Standard Specifications*, this change order compensates the contractor with a Payment Adjustment at Agreed Lump Sum of \$212,427.53 for the claims listed above.

The agreed lump sum payment adjustment is based on a force account cost analyses. Records and calculations used to determine the payment adjustment are on file in the project records.

This change was discussed with the construction engineer and district claims engineer. They agree that the contractor should receive the additional compensation.

Submitted by: _____ Date: _____

Name
Deputy District Director of Construction
or Chief, _____ Region of Construction

Approved by: _____ Date: _____

Name
Field Coordinator, Division of Construction

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Example 5-3.12 Claim Entitlement (2 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 2 of 2

CCO NO. 12		SUPPLEMENT NO	E. A. NUMBER	DATE
---------------	--	---------------	--------------	------

CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	THIS REQUEST	TOTAL TO DATE
PROJECT ENGINEER	DATE	ITEMS	
PROJECT MANAGER	DATE	FORCE ACCOUNT	
FHWA REP.	DATE	AGREED PRICE	
ENVIRONMENTAL	DATE	ADJUSTMENT	\$212,427.53
OTHER (SPECIFY)	DATE	TOTAL	\$212,427.53
	DATE	FEDERAL PARTICIPATION	
	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
	DATE	FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
	DATE	<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL FUNDING SOURCE	PERCENT
RESIDENT ENGINEER SIGNATURE	DATE		

Example 5-3.12 Claim Entitlement (3 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 1

CEM-4900 (REV 3/2013)

Change Requested by: ☐ Engineer ☒ Contractor

CHANGE ORDER NO.	SUPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
12				
TO				

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Payment Adjustment at Agreed Lump Sum:

In accordance with Section 9-1.17D, "Final Payment and Claims," of the *Standard Specifications*, compensate the contractor for Claim Nos. 2, 5, and 6 identified in the contractor's Claim Statement dated October 28, 2011.

Claim No. 2 - Change Order 8 Work-Character Change Payment Adjustment

Claim No. 5 - Bid Item 49 Item Quantity Adjustment

Claim No. 6 - Change Order 19 Differing Site Condition Payment Adjustment

For the above listed claims, the contractor agrees to accept a lump sum payment of \$212,427.53 including all markups for this change.

Payment Adjustment at Agreed Lump Sum = \$212,427.53

This change order provide full and final compensation for and resolves all aspects of the contractor's Claim Statement Claim Nos. 2, 5, and 6 as described above.

Estimated Cost: ☒ Increase ☐ Decrease \$ 212,427.53

For this order the time of completion will be adjusted as follows: None

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
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APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

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Example 5-3.13 Resolution of Deferred Time Adjustment (1 of 2)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 1

TO			FILE	
FROM			PROJECT ID	
			CO-RTE-PM	
			FED NO.	
CHANGE ORDER NO.	SUPPLEMENT NO.	CATEGORY CODE	CONTINGENCY BALANCE (Including this change):	
13		AFZZ	\$	
CHANGE ORDER AMOUNT			HEADQUARTERS APPROVAL REQUIRED?	
\$ 2,250.00			<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
SUPPLEMENTAL FUNDS PROVIDED			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS?	
\$			<input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME:	TIME ADJUSTMENT THIS CHANGE:	PREVIOUSLY APPROVED TIME ADJUSTMENTS:	PERCENTAGE TIME ADJUSTED (Including this change)	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change)
DAY(S)	3 DAY(S)	DAY(S)	%	

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

Resolution of deferred time for Change Order No. 16.

The delay in completion of the contract due to the work specified by Change Order No. 16 has been determined to be 3 working days based on a time impact analysis made in accordance with Sections 8-1.02, "Schedule," and 8-1.07, "Delays," of the *Standard Specifications*.

Change Order No. 16 was the controlling activity for the following dates: 03/11/12, 03/17/12, and 03/30/12.

In accordance with Section 9-1.11, "Time-Related Overhead," of the *Standard Specifications*, the contractor shall be compensated for the delay caused by work performed under Change Order No. 16.

Time-Related Overhead will be paid by increase in bid item at bid item price of Bid Item No. 2.

CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	THIS REQUEST	TOTAL TO DATE
PROJECT ENGINEER	DATE	ITEMS	
PROJECT MANAGER	DATE	FORCE ACCOUNT	\$2,250.00
FHWA REP.	DATE	AGREED PRICE	
ENVIRONMENTAL	DATE	ADJUSTMENT	
OTHER (SPECIFY)	DATE	TOTAL	\$2,250.00
	DATE	FEDERAL PARTICIPATION	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE	
RESIDENT ENGINEER SIGNATURE	DATE	<input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
		FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
		<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS	
		FEDERAL FUNDING SOURCE	PERCENT

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Example 5-3.13 Resolution of Deferred Time Adjustment (2 of 2)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 1

CEM-4900 (REV 3/2013)

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO.	SUPPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
13				
TO				

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Time of Delay Determination:

Based on a time impact analysis (TIA), a determination of the delay in completion of the contract due to the work specified by Change Order No. 16 has been made in accordance with Sections 8-1.02, "Schedule," and 8-1.07, "Delays," of the *Standard Specifications*.

Change Order No. 16 was the controlling activity for the following dates: 03/11/12, 03/17/12, and 03/30/12. Three working days are granted.

Increase in Bid Item at Bid Item Price:

In accordance with Section 9-1.11, "Time-Related Overhead," of the *Standard Specifications*, the contractor shall be compensated for the delay caused by work performed under Change Order No. 16. Based on a TIA, the work of Change Order No. 16 delayed the completion of the contract by 3 days.

Item No. 2, Time-Related Overhead: 3 days (+1.2%) @ \$750.00 per Day = \$2,250.00 (+3.6%)

Increase in Bid Item at Bid Item Price = \$2,250.00

Estimated Cost: ☒ Increase ☐ Decrease \$ 2,250.00

For this order the time of completion will be adjusted as follows: 3 working days

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
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APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
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Example 5-3.14 Item Adjustment (1 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER MEMORANDUM

CEM-4903 (REV 3/2013)

Page 1 of 1

DATE _____

TO _____			FILE PROJECT ID _____	
FROM _____			CO-RTE-PM _____	
			FED NO. _____	
CHANGE ORDER NO. 14	SUPPLEMENT NO.	CATEGORY CODE AAZZ	CONTINGENCY BALANCE (Including this change): \$ _____	
CHANGE ORDER AMOUNT \$ 48,299.18			<input checked="" type="checkbox"/> INCREASE <input type="checkbox"/> DECREASE	
SUPPLEMENTAL FUNDS PROVIDED \$ _____			HEADQUARTERS APPROVAL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
ORIGINAL CONTRACT TIME: _____ DAY(S)	TIME ADJUSTMENT THIS CHANGE: 0 DAY(S)	PREVIOUSLY APPROVED TIME ADJUSTMENTS: _____ DAY(S)	PERCENTAGE TIME ADJUSTED (Including this change) _____ %	TOTAL # OF UNRECONCILED DEFERRED TIME (Including this change) _____

THIS CHANGE ORDER PROVIDES FOR (Use additional pages as needed):

This Change Order Provides for:

Payment adjustments to the unit prices for Bid Item No. 18, "Temporary Crash Cushion Module"; Bid Item No. 19, "Remove Yellow Thermo Stripe"; Bid Item No. 33, "Geotextile Cushion"; and Bid Item No. 34, "Geomembrane (Gas Resistant)," in accordance with Section 9-1.06B, "Increases of More Than 25 Percent," of the *Standard Specifications*.

As requested by the contractor, payment adjustments to unit prices for Bid Item No. 48, Hot Mix Asphalt (Type A) and Bid Item No. 49, Hot Mix Asphalt (Open-Graded), in accordance with Section 9-1.06C, "Decreases of More Than 25 Percent," of the *Standard Specifications*.

The method of payment will be a Payment Adjustment at Agreed Lump Sum Price. Cost analyses and backup information is on file in the project records.

There will be no time adjustment due to this change order since the change did not affect the controlling activity.

CONCURRED BY:		ESTIMATE OF COST	
CONSTRUCTION ENGINEER/BRIDGE ENGINEER	DATE	THIS REQUEST	TOTAL TO DATE
PROJECT ENGINEER	DATE	ITEMS	
PROJECT MANAGER	DATE	FORCE ACCOUNT	
FHWA REP.	DATE	AGREED PRICE	
ENVIRONMENTAL	DATE	ADJUSTMENT	\$48,299.18
OTHER (SPECIFY)	DATE	TOTAL	\$48,299.18
	DATE	FEDERAL PARTICIPATION	
HQ OR DISTRICT PRIOR APPROVAL BY	DATE	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input type="checkbox"/> NONE	
RESIDENT ENGINEER SIGNATURE	DATE	<input type="checkbox"/> NON-PARTICIPATING (Maintenance) <input type="checkbox"/> NON-PARTICIPATING	
		FEDERAL SEGREGATION (If more than one funding source or P.I.P. type)	
		<input type="checkbox"/> CHANGE ORDER FUNDED PER CONTRACT <input type="checkbox"/> CHANGE ORDER FUNDED AS FOLLOWS	
		FEDERAL FUNDING SOURCE	PERCENT

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Example 5-3.14 Item Adjustment (2 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 1 of 2

CEM-4900 (REV 3/2013)

Change Requested by: ☒ Engineer ☐ Contractor

CHANGE ORDER NO.	SUPPL. NUMBER	PROJECT ID	CO-RTE-PM	FEDERAL NUMBER(S)
14				
TO				

, contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price, and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Bid Item List.

Payment Adjustment at Agreed Lump Sum:

In accordance with Section 9-1.06B, "Increases of More Than 25 Percent," of the *Standard Specifications*, the following payment adjustments to the bid items listed below will be made for the units of work in excess of 125 percent of their respective bid quantities shown on the Bid Item List.

	Item No. 18 Temporary Crash Cushion Module	Item No. 19 Remove Yellow Thermo Stripe	Item No. 33 Geotextile Cushion	Item No.34 Geomembrane (Gas Resistant)
Bid Item List Quantity	100 EA	23,000 LF	1,820 SQYD	1,820 SQYD
125% Bid Item List Quantity	125 EA	28,750 LF	2,275 SQYD	2,275 SQYD
Total Quantity Worked	140 EA	48,173 LF	3,569 SQYD	3,569 SQYD
Quantity Subject to Adjustment	15 EA	19,423 LF	1,294 SQYD	1,294 SQYD
Total Actual Cost (FA Analysis)	\$30,858.81	\$37,667.27	\$19,099.00	\$165,907.00
Actual Unit Cost	\$220.42	\$0.78	\$5.35	\$46.49
Bid Unit Price	\$340.00	\$0.65	\$6.00	\$32.00
Adjusted Unit Price (Actual - Bid)	(-\$119.58)	\$0.13	(-\$0.65)	\$14.49
Total Item Adjustment	(-\$1,793.70)	\$2,525.00	(-\$841.10)	\$18,750.06
Total "Net" Adjustment		\$18,640.26		

The contractor is compensated a lump sum adjustment of \$18,640.26 that represents the net total of the unit price payment adjustments for the above listed items. This sum constitutes full and complete compensation for this change.

In accordance with Section 9-1.06C, "Decreases of More Than 25 Percent," of the *Standard Specifications*, and as requested by the contractor, the following payment adjustments to the bid items listed below will be made to their total pay quantity which is less than 75 percent of their respective bid quantities shown on the Bid Item List.

	Item No. 48 Hot Mix Asphalt (Type A)	Item No.49 Hot Mix Asphalt (Open-Graded)
Bid Item List Quantity	1360 Ton	190 Ton
75% Bid Item List Quantity	1020 Ton	142.50 Ton
Total Quantity Worked	670.10 Ton	105.60 Ton
Bid Unit Price	\$82.00	\$90.00
Total Actual Cost (FA Analysis)	\$81,216.12	\$19,062.37
Actual Unit Cost	\$121.20	\$180.51
Amount Paid to Date	\$54,948.20	\$9,504.00
Max Allowable Compensation	\$83,640.00	\$12,825.00
Adjustment	\$26,267.92*	\$3,321.00**
Total "Net" Adjustment	\$29,588.92	

*The maximum allowable compensation is more than the total actual cost determined by force account analysis. The total actual cost controls the payment adjustment for Bid Item 48.

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Example 5-3.14 Item Adjustment (3 of 3)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

CHANGE ORDER

Sheet 2 of 2

CEM-4900 (REV 05/2001) CT# 7541-3501-0

CCO NUMBER	SUPL. NUMBER	CONTRACT NUMBER	ROAD	FEDERAL NUMBER(S)
14				

****The maximum allowable compensation is less than the total actual cost determined by force account analysis. The maximum allowable compensation controls the payment adjustment for Bid Item 49.**

The contractor shall be compensated a lump sum adjustment of \$29,588.92 that represents the net total of the unit price payment adjustments for the above listed bid items. This sum constitutes full and complete compensation for this change.

Total Payment Adjustment at Agreed Lump Sum = \$48,229.18

There will be no time adjustment due to this change order since the change did not affect the controlling activity.

Estimated Cost: ☒ Increase ☐ Decrease \$ 48,229.18

For this order the time of completion will be adjusted as follows: None

SUBMITTED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

APPROVAL RECOMMENDED BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

ENGINEER APPROVAL BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
-----------	------------------------	------

We, the undersigned contractor, have given careful consideration to the change proposed and agree to provide equipment, furnish materials, and perform the work specified above, and will accept as full payment the prices shown above. **NOTE: If you do not sign this order, you are directed to proceed with the ordered work. You may file a Request for Information within the time specified.**

CONTRACTOR ACCEPTANCE BY

SIGNATURE	(PRINT NAME AND TITLE)	DATE
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Figure 5-3.1 Change Order Decision-Making Concept Flowchart

