


**SAN FRANCISCO PUBLIC UTILITIES COMMISSION
WATER SYSTEM IMPROVEMENT PROGRAM
CONSTRUCTION MANAGEMENT PROCEDURES**

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| SECTION: WSIP CONSTRUCTION MANAGEMENT | APPROVED:  |
| PROCEDURE NO.: 016 TITLE: CONSTRUCTION CHANGE MANAGEMENT | DATE: 07/23/2012 REVISION NO.: 8 |

1.0 Policy

Change management is a process used to formalize the documentation, evaluation and approval or rejection of changes to the Contract. Proposed Changes to the Contract shall be handled expeditiously in order to reduce the impact on the cost or time of the project and promote fairness to all parties.

This CM Procedure applies to all personnel working on the Water System Improvement Program (WSIP) to the extent that their Work is affected by these WSIP Construction Management (CM) Procedures and does not conflict with specific San Francisco Public Utilities Commission (SFPUC) policies or the contract under which the Work is executed.

2.0 Description

This CM Procedure establishes the requirements for the process, control, coordination of review and response, and retention of requests for Changes to the Contract from the City and Contractor. The procedure describes the processing of a Proposed Change Order (PCO) from its original submittal by the City and of a Change Order Request (COR) from its original submittal by the Contractor through the review, response, and through the subsequent negotiation of the Change to the submittal of the Change Order for approval by the WSIP Management and certification by the City Controller.

3.0 Definitions

3.1 Approved Change Management

The status of a Change following its certification by the City Controller.

3.2 Change Control Board (CCB)

A WSIP Change Control Board shall be established to review proposed pre-construction and construction project changes that exceed threshold limits. Changes due to additional work, not included in the scope of the construction contract and required by Owner/Client Representative that are greater than or equal to \$50,000 are considered major changes requiring review by the Change Control Board. The CCB is required to review major scope changes during construction and provide recommendations to the WSIP Director on final approval/rejection.

3.3 Change Management Tracking Log

A log of all Changes maintained by the FCA in CMIS that includes the type and category of change, summary description of the change, a change status code, summary cost and/or time impact, actual dates of key steps in the process required through issuance of the certified change, and an aging analysis of the dates of the key process steps.

3.4 Change Order

A written instrument prepared by the City and issued after the effective date of the Agreement and executed in writing by the City and Contractor, stating their agreement upon all of the following:

- (i) a change in the Work;
- (ii) the amount of the adjustment in the Contract Sum, if any;
- (iii) the extent of the adjustment in the Contract time, if any; and
- (iv) a modification to any other Contract term or condition.

3.5 Change Order Request (COR)

A document prepared by the Contractor requesting a change of cost or time for changes in the Work or any other Contract term or condition of the Contract.

3.6 Claim

A written demand by Contractor for an adjustment in the Contract Sum or Contract Time, or both, which is submitted in accordance with the requirements of the Contract Documents.

3.7 Construction Change Order Authority

A project construction phase authority matrix that defines the approvals required for various types and levels of change orders to approved baseline scope, budget and schedule.

3.8 Construction Management Information System (CMIS)

The WSIP Construction Management Information System (CMIS) is an on-line management tool for the processing of contract documents based on established construction management business processes. It serves as a tool for effective storage and retrieval of various documents generated during a WSIP construction project. Processing of Changes will utilize the WSIP CMIS Change Management, Proposals and Change Orders modules, which are process-specific portions of the CMIS application designed to facilitate the processing of Change documents, retention of data pertinent to Changes and reporting of Changes and their status. The CMIS is designed for Project CM team data entry directly into the system.

3.9 Contract Modification

A modification of the Contract Documents resulting from one or more Change Orders.

3.10 Field Order

A written order issued by the City which requires minor changes in the Work but which does not involve a change in the Contract cost or time.

3.11 Force Account Change Order

A change order paid on the basis of itemized costs for labor, equipment and materials recorded and agreed upon on a daily basis by the City and the Contractor.

3.12 Notice of Potential Claim

A written notice, submitted in accordance with the Contract Documents, from the Contractor of a dispute with any directive, determination, Proposed Change Order, Unilateral Change Order, payment, or other act by the City impacting or potentially impacting the performance of the Work, known collectively as "potential claim events."

3.13 Pending Change Management

The status of a Change from completion of negotiations to certification by the City Controller.

3.14 Potential Change Management

The status of a Change from initiation as a Proposed Change Order (PCO) by the City or as a Change Order Request (COR) by the Contractor through the completion of negotiations.

3.15 Proposed Change Order (PCO)

A document prepared by the City requesting a quotation of cost or time from Contractor for additions, deletions or revisions in the Work initiated by the City.

3.16 Rejected Change Management

The status of a Change that has been rejected at any point in the analysis or approval process.

3.17 Unilateral Change Order

A written instrument issued by the City when time does not allow for a change order to be negotiated or when the City and the Contractor are not able to agree on the cost of a change order.

3.18 CM Cost/Time Impact Estimate

Estimated cost and/or time impact of the change order independently prepared by the CM.

3.19 Record of Negotiation

All documents prepared during a pre-negotiation and negotiating of the change order including a summary and index of all documentation. The Record of Negotiation shall be documented on the Change Order Summary, reference Attachment 016-10.

4.0 Responsibilities

4.1 Contractor

The Contractor generates a COR to request consideration of a potential change. The Contractor provides supporting documentation pertinent to the understanding of the issue raised in the COR and a good faith estimate of the impact of the requested change on the project cost and schedule.

4.1.1 The Contractor must submit a COR following the approval of a Value Engineering Change Proposal (VECP), and may submit a COR if the Contractor believes the response to a Request for Information (RFI), review to a Submittal or any direction given to the Contractor from the City creates a change to the cost, time or other terms of the Contract.

4.1.2 The Contractor responds to a Proposed Change Order (PCO) issued by the City to the Contractor requesting a quotation after the approval of the PCO by the Project CM and City Regional Project Manager. The Contractor's Quotation represents a good faith estimate of the cost and time impact of the PCO.

4.1.3 The Contractor negotiates with the Project CM to reach mutually satisfactory terms to execute the Work described in the PCO and, upon City certification of the Change Order, executes the work described in the Change Order.

4.2 Project Construction Manager (Project CM)

The Project CM is responsible as the single point of contact with the Contractor as the “City Representative” as defined by the Contract. The Project CM is responsible for timely and efficient management of all Contract changes, including the initiation of PCOs, processing of CORs, conducting negotiations with the Contractor and monitoring and, if necessary, expediting the approval of the Change Order.

4.2.1 Within 10 working days of issuing a PCO or receiving a COR, the Project CM shall consult with the Contractor to review and clarify the scope change and address any questions either party may have which may affect the cost or schedule impact of the change.

4.2.2 Prior to negotiating a PCO or a COR with the Contractor, the Project CM is responsible for ensuring that a detailed engineer’s cost estimate is prepared by the Project Engineer or by the Estimator for change work that is not force account work and anticipated to exceed \$60,000. The Project CM or the Field Contracts Administrator may perform the estimate if qualified to do so. For change work that is not force account and is less than or equal to \$60,000 the criteria in the table below shall be followed for preparing an estimate. In all cases the estimate is to be reviewed by the Regional Construction Manager prior to reviewing the Contractor’s cost proposal and prior to any negotiations.

| Change Order Magnitude | Estimate Requirements |
|--|---|
| Change Order Requests Over \$60,000 except for Force Account Work | A detailed estimate shall be prepared including a detailed breakdown of labor, materials and equipment as well as documentation of all assumptions. |
| Change Orders valued at over \$30,000 up to \$60,000 except for Force Account Work | An order of magnitude estimate of the cost of labor, a material takeoff and material costs estimated, and an order of magnitude estimate of equipment costs. All assumptions are to be documented. |
| Change Orders up to \$30,000 | A material takeoff at a minimum is to be prepared. All assumptions are to be documented. |
| All Force Account Work | An order of magnitude estimate is to be prepared for all force account work. All assumptions are to be documented. The estimate should be reviewed with the Contractor at the consultation meeting as required above to determine reasonableness and any factors that may impact costs. |

4.2.3 Prior to negotiating a PCO or a COR with the Contractor, the Project CM will analyze the Contractor’s proposal/quote and document in a Record of Negotiations the developed pre-negotiation position and objectives, and document facts to be used in negotiating the Change Order.

4.2.4 For all Change Orders exceeding \$1 million, and prior to finalizing the Change Order Summary and the Change Order, the Project CM shall forward the draft Change Order Summary and proposed Change Order (with all associated supporting documentation such as letters and/or proposals from the Contractor, Project CM cost estimates and records of scope changes or negotiations) to the Program Construction Manager for review.

- 4.2.5 For all Change Orders that include a time extension, and prior to finalizing the Change Order Summary and the Change Order, the Project CM shall forward the draft Change Order Summary and proposed Change Order (with all associated supporting documentation such as Time Impact Analysis, letters and/or proposals from the Contractor, Project CM cost estimates and records of scope changes or negotiations) to the Program Construction Manager for review. The Program Controls Manager will review the documentations and certify that it meets the Contract requirements.
- 4.2.6 For all Change Orders exceeding \$1 million, or for all Change Orders that include a time extension, the Program Construction Manager will analyze and review the draft Change Order Summary and the proposed Change Order for merit, completeness, adequacy and general conformance to the Contract requirements with prescribed format and content as defined in this procedure and attachments. The Program Construction Manager will make every effort to complete review within 10 calendar days of receipt of complete documentation and will provide a written independent assessment and comments to the submitting Project CM, with copies to the Regional Project Manager, the Regional Construction Managers (RCM and RCCM), and the Deputy Director, Construction.
- 4.2.7 All change orders initiated or requiring approval after Substantial Completion is awarded must be approved by the Deputy Director of construction.
- 4.2.8 The Project CM is required to review the Contractor's proposal for completeness, accuracy and to make sure the proposal represents a reasonable cost for completing the work as outlined in the PCO or the COR.
- 4.2.9 The Project CM is responsible to ensure the completion of the work described in the certified Change Order and the correct billing against the Change Order to accomplish the work.
- 4.2.10 During construction phase, the construction management team should obtain the WSIP Director approval before implementing any Owner/Client Representative requested changes that are greater than or equal to \$50,000. Refer to Procedure PM 5.02 "WSIP Change Management".

4.3 Field Contracts Administrator (FCA)

The FCA is responsible:

- To enter the Schedule of Bid Prices into the CMIS Contracts module at the project inception;
- To maintain the Schedule of Bid Prices during the project execution as certified Change Orders cause it to be modified and to reconcile the CMIS Schedule of Bid Prices with Contracts Administration Bureau data;
- To research the Contract and assist the Project CM in determining whether PCOs and CORs are in compliance with the Contract Documents;
- To facilitate and administer the processing of potential changes from the initiation of a potential change through creation of the change order; and,
- To monitor the approval process of the pending Change Order through its certification by the City Controller.
- For maintaining and recording of the Record of Negotiation and preparation of a Change Order Summary including a list of back up documentation, copies of the backup documentation, to be attached to the executed Change Order. All attachments including a copy of the signed Change Order will also be attached to the electronic Change Order in CMIS.

For smaller projects, as agreed in the approved CM Work Plan, the OE or other project CM team member designated by the Project CM can perform the role of the FCA.

4.4 Regional Project Manager (RPM)

The RPM is responsible to work with the Project CM to review and approve or reject all potential changes upon receipt of a Contractor's Quote and, after negotiations are complete, at the initiation of a resulting pending Change Order:

- 4.4.1 The RPM manages the processing of the Change Order or Unilateral Change Order, to include bundling of Change Orders into Change Modification packages and submitting the Change Orders for WSIP approval according to the WSIP Construction Change Order Authority, City Commission if the cumulative effect of Change Orders exceeds 10% of the Contract budget or duration, and City Controller certification.
- 4.4.2 The RPM is also responsible for monitoring project contingency to ensure that change orders do not exceed project budgets.
- 4.4.3 The City RCM/RPM should submit the Owner/Client Representative requested changes that are greater than or equal to \$50,000.00 to the CCB by completing the Owner/Client Representative Requested Changes Form (Attachment 11). Then CCB will provide recommendations to the WSIP Director on final approval/rejection.

4.5 City Regional Construction Manager (City RCM)

The City RCM monitors the timely response to PCOs and CORs. The City RCM reviews and approves or recommends approval to the RPM of Change Orders within the parameters of the WSIP Construction Change Order Authority.

4.6 Administrative/Document Control Specialist (ADCS)

The ADCS is responsible for the verification of the file code, logging all potential, pending and approved Change documentation into CMIS Correspondence Received and Sent modules and to assist the FCA, Project CM, City RCM and RPM to manage, log, store and retrieve Change documents as needed. For smaller projects, as agreed in the approved CM Work Plan, the OE or other project CM team member designated by the Project CM can perform the role of the ADCS.

4.7 San Francisco Public Utilities Commission (SFPUC)

The SFPUC members must approve:

- Any change order request requiring funding beyond the designated 10% construction contract contingency, and,
- Any change order requesting extension of time that cumulatively extend the Contract Time in excess of 10% of the original contract duration as specified in Technical Specifications 00802, Division 0; Contract Time, Incentives, and Liquidated Damages.

4.8 Construction Schedule/Cost Specialist

- Reviews and recommends for approval the Contractor's baseline schedule and cost/resource loading of the baseline schedule.
- Provides time impact analysis for change orders and claims analysis.
- Assists the project CM and Estimator in evaluating PCOs and CORs including preparation of the pre-negotiation position and attending negotiations with the Contractor as required by the Project CM.

4.9 Estimator

- Prepares engineer's estimates for change work.
- Assists the project CM in evaluating PCOs and CORs including preparation of the pre-negotiation position and attending negotiations with the Contractor as required by the Project CM.

5.0 Implementation

5.1 Throughout the processing of a Change, the Project CM team members shall forward received or transmitted electronic or hardcopy documents to the ADCS for logging in the CMIS Correspondence modules, scanning and attaching to the appropriate Change document records (PCO, COR, Negotiation, Change Order or Claim), and for maintenance of complete hardcopy files of associated documentation.

5.1.1 Project CM team members shall use the CMIS Inbox function to notify the ADCS of documents generated by CMIS that require logging in the Correspondence modules and filing.

5.2 Proposed Change Order

5.2.1 At the initiation of discussion of a potential Change, the Project CM may instruct the FCA to initiate a Change in the CMIS Change Management module. This initiation allows the Project CM team to monitor the elapsed time to develop a PCO. Upon receipt of a PCO, and at the instruction of the Project CM, the FCA enters the PCO into the CMIS Proposals module and reviews the PCO documentation for compliance to contractual documents. If the PCO documentation does not comply with contractual documents, FCA returns the documentation to the originator with instructions for correction.

5.2.2 If the documentation is sufficient, the FCA updates the status of the Change Management process in the Change Management module to "Potential", The FCA assists the Project CM to manage the Project CM team's analysis of the impact, updates the cost and schedule impacts, and uses the Ball in Court function to forward the action to the Project CM for review and approval or for rejection of the PCO.

5.2.3 The Construction Schedule/Cost Specialist and the Estimator provides PCO time impact analysis and estimating services and assists the Project CM in the development of a pre-negotiation position and in negotiations as needed by the Project CM.

5.2.4 The Project CM reviews and accepts or rejects the PCO based on the impact analysis, enters comments into the CMIS Change Management record and uses the Ball in Court function to forward the action to the FCA.

5.2.5 If rejected, the FCA revises the Change status to "Rejected" and notifies the Originator.

5.2.6 If approved, the FCA prepares and the Project CM issues the PCO to the Contractor requesting a Quotation and notifies the ADCS of its transmittal for logging in the CMIS Correspondence Sent module. The PCO must contain sufficient narrative explanation and detailed line items describing the labor and materials to permit the Contractor to make a full estimate of the cost and time impact of the PCO. If a CEQA variance is required, the Project CM may elect to delay issuing the PCO to the Contractor until there is certainty a variance will be received.

- 5.2.7 The Contractor submits a hardcopy Quotation with an itemized breakdown to the FCA providing sufficient detail of the means and methods, time impact and cost impact in terms of unit quantities and prices and/or rationale for the quoted lump sum price to permit analysis by the Project CM team.
- 5.2.8 The FCA notifies the ADCS of the receipt of the Quotation for logging in the CMIS Correspondence Received module, reviews the Quotation for compliance with the Contract specifications and completeness.
- 5.2.9 If non-compliant, lacking sufficient detail or incomplete, the FCA returns the Quotation to the Contractor for correction, notifying the ADCS of its transmittal.
- 5.2.10 If a Quotation is determined to satisfy requirements, the FCA enters the Quotation into CMIS as the Record of Negotiations document, assists the Project CM to manage the validation of cost and/or time impacts within the Project CM team, updates the narrative description and cost/schedule impact information in the Record of Negotiations document and uses the Ball in Court function to forward the action to review the Quotation to the Project CM.
- 5.2.11 The Project CM reviews and approves the potential change to continue in negotiations or rejects and cancels the potential change and uses the Ball in Court function to forward the action to the FCA.
- 5.2.12 If rejected, the FCA revises the Change status to "Rejected" and notifies the Contractor and Originator. If approved, the FCA updates the Change Log and the Project CM conducts negotiations with the Contractor.
- 5.2.13 The FCA shall monitor negotiations and log all negotiation rounds in the CMIS Proposal module and notifying the ADCS of receipt and transmittal of the Record of Negotiations documents for logging and filing in CMIS as attachments.

5.3 Change Order Request (COR)

- 5.3.1 The Contractor submits a COR to the Project CM. The COR must contain a good faith estimate in sufficient detail of the means and methods, time impact and cost impact in terms of unit quantities and prices and/or rationale for the quoted lump sum price to permit analysis by the Project CM team.
- 5.3.2 The City shall, within 10 working days, provide a written response to the Contractor. The Project CM reviews the COR and approves or rejects it based on merit or content. If rejected, the Project CM responds to the Contractor and instructs the ADCS to log all related correspondence in the CMIS Correspondence modules. If accepted, the Project CM forwards the COR to the FCA with instructions to process it.
- 5.3.3 The FCA initiates a Change Management record and enters the COR in the CMIS Proposals module, notifies the ADCS to log it in the Correspondence Received module and to file the hardcopy documents, and reviews it for compliance with the Contract specifications and for completeness.
- 5.3.4 If the COR is non-compliant, the FCA updates the Change status to "Rejected" in the CMIS Change Management module, returns the hardcopy COR to the Contractor and notifies the ADCS to log it in the Correspondence Sent module.
- 5.3.5 If the COR is compliant, the FCA updates the status of the Change Management process in the Change Management module to "Potential". The FCA, the Construction Schedule/Cost Specialist, and the Estimator assists the Project CM to manage the analysis of impacts within the Project CM team, including PE and/or lead designers where needed. When the analysis is complete, the FCA updates the impact information and assists with the preparation of the pre-negotiation position, uses the Ball in Court function to forward the action to review the COR to the Project CM in CMIS.

- 5.3.6 The Project CM reviews and accepts or rejects the COR based on the impact analysis and, if not rejected, uses the Ball in Court function to forward the action to review the COR to the City RCM and RPM along with comments and a recommendation.
- 5.3.7 The City RCM and RPM approve or reject the COR. If the Project CM is a City-Project CM, then the RPM can delegate the authority to approve or reject the COR to the City-Project CM for approval level based on Attachment 016 – 9.
The RPM uses the Ball in Court function to forward the action to the FCA.
- 5.3.8 If rejected, the FCA revises the Change status to “Rejected” and notifies the Contractor. If approved, the Project CM conducts negotiations with the Contractor. If a CEQA variance is required, the Project CM may elect to delay negotiation with the Contractor until there is certainty a variance will be received. In this case, the Project CM will notify the Contractor of the delay.
- 5.3.9 The FCA shall monitor negotiations and log all negotiation rounds in the CMIS Proposal module and notifying the ADCS of receipt and transmittal of the Record of Negotiations documents for logging and filing in CMIS as attachments.

5.4 Change Order

- 5.4.1 If the amount or scope elevates the approval authority requirement above the RPM, prior to preparing a Change Order, the Project CM and RPM shall notify WSIP Program management of the Potential Change Order and provide the background and impact information. The Change Request Summary may be used to summarize the information.
- 5.4.2 If negotiations are successful, FCA updates the status of the Change Management process in the Change Management module to "Pending," updates the Change Log and the cost/time impact information to reflect the Change Order at the completion of negotiations and prepares a Change Order.
- 5.4.3 The Project CM signs the Change Order.
- 5.4.4 FCA transmits a hardcopy of the Change Order to Contractor for signature and notifies the ADCS for logging in the CMIS Correspondence Sent module.
- 5.4.5 The Contractor signs the Change Order and returns it to the FCA. The FCA notifies the ADCS for logging in the CMIS Correspondence Sent module.
- 5.4.6 The FCA uses the Ball in Court function to forward the action to the City RCM and RPM for approval and entry into the WSIP and City approval process.
- 5.4.7 The RPM may elect to bundle multiple Change Orders into a single Change Order or Contract Modification. If so, the RPM instructs the Project CM, and the FCA uses the CMIS Change Order module to group the pertinent Change Orders. Change Orders can be grouped into a single Change Order Contract Modification by creating a new Change Order or Contract Modification in the CMIS Change Order module and identifying other Change Orders to be grouped.
- 5.4.8 The RPM is responsible for obtaining approvals pursuant to the WSIP Construction Project Change Order Authority Matrix including San Francisco Public Utilities Commission approval. (reference Attachment 016-9)
- 5.4.9 When change orders are processed for any amount over the original 10% construction contingency for a specific contract, all said change orders, regardless of arithmetic value or percentage of the original contract value must be approved as follows: (reference Attachment 016-9a)

- 5.4.9.1 All change orders over the original 10% construction contingency and up to 75% of the increased construction contingency must be approved by the Regional Project Manager (RPM) and WSIP Deputy Director of Construction; and
- 5.4.9.2 All change orders exceeding 75% of the increased construction contingency must be approved by the RPM, WSIP Deputy Director of Construction and the WSIP Director.
- 5.4.9.3 All change orders exceeding the first additional contingency approved by the Commission must be approved by the RPM, WSIP Deputy Director of Construction and the WSIP Director.
- 5.4.9.4 Although Attachment 016-9a provides instructions herein focus on cost change orders, the same requirements apply to schedule change orders, where the contract completion date is delayed by more than 10 percent of the original contract duration.
- 5.4.9.5 In the absence of the WSIP Deputy Director of Construction, all change orders in excess of the original 10% construction contingency must be approved by the WSIP Director. There are no exceptions to this requirement.
- 5.4.10 Upon submittal of the Contract Modification to Contracts Administration Bureau for processing, the RPM uses the Ball in Court function to return the action to the FCA to monitor the progress of the Contract Modification.
- 5.4.11 The FCA monitors the progress and coordinates with the RPM to update actual milestone dates of key process steps in the Change Log:
 - City RCM approval
 - RPM approval
 - WSIP approval
 - Accounting transmits to Controller
 - Controller certification
- 5.4.12 If the Change Order is rejected at any time after entry into the WSIP and City approval processes, the RPM returns the Change Order to the Project CM for resolution with the Contractor.

5.5 Unilateral Change Order

- 5.5.1 If negotiations fail, or if the urgency of the Work to be performed under the Change Order does not permit delay until Change Order certification, the Project CM may direct that a Unilateral Change Order be prepared and issued to the Contractor.
- 5.5.2 The FCA initiates a Unilateral Change Order in CMIS and references the Change Order, and uses the Ball in Court function to forward the action to the Project CM for approval.
- 5.5.3 The Project CM signs the Unilateral Change Order and forwards a hardcopy to the City RCM and RPM for approval and entry into the WSIP and City approval process.
- 5.5.4 The RPM is responsible for obtaining approvals pursuant to the WSIP Construction Project Change Order Authority Matrix including San Francisco Public Utilities Commission approval and if necessary, obtaining Commission approval. (reference paragraph 5.4.8 and Attachment 016-9)

- 5.5.5 When change orders are processed for any amount over the original 10% construction contingency for a specific contract, all said change orders, regardless of arithmetic value or percentage of the original contract value must be approved as follows: (reference Attachment 016-9a)
- 5.5.5.1 All change orders over the original 10% construction contingency and up to 75% of the increased construction contingency must be approved by the Regional Project Manager (RPM) and WSIP Deputy Director of Construction; and
 - 5.5.5.2 All change orders exceeding 75% of the increased construction contingency must be approved by the RPM, WSIP Deputy Director of Construction and the WSIP Director.
 - 5.5.5.3 All change orders exceeding the first additional contingency approved by the Commission must be approved by the RPM, WSIP Deputy Director of Construction and the WSIP Director.
 - 5.5.5.4 Although Attachment 016-9a provides instructions herein focus on cost change orders, the same requirements apply to schedule change orders, where the contract completion date is delayed by more than 10 percent of the original contract duration.
 - 5.5.5.5 In the absence of the WSIP Deputy Director of Construction, all change orders in excess of the original 10% construction contingency must be approved by the WSIP Director. There are no exceptions to this requirement.
- 5.5.6 The FCA monitors the progress of the Unilateral Change Order and coordinates with the RPM to update actual milestone dates of key process steps in the Change Log (see paragraph 5.4.11). If the Unilateral Change Order is rejected at any time after entry into the WSIP and City approval processes, the RPM returns the Unilateral Change Order to the Project CM. The FCA closes the Change Management action.

5.6 “Approved” Change

- 5.6.1 Upon certification of a Change Order by the City Controller, the Contracts Administration Bureau amends the Contract to reflect the approved Change Order or Unilateral Change Order modifies the Schedule of Bid Prices data stored in the electronic invoicing system and transmits copies to the Contractor and to the Project CM.
- 5.6.2 The FCA updates the Change Log and marks the Change Order as approved and saved. The ADCS files the certified copy in the project files.
- 5.6.3 If, upon receipt of a certified Unilateral Change Order, the Contractor submits a Notice of Potential Claim, it will be processed as described above for CORs (see Section 6.3, Claims Tracking).

6.0 Other Procedural Requirements

6.1 Schedule of Bid Prices

- 6.1.1 At the implementation of the project, the Contractor submits the Schedule of Values as it is reflected in the cost-loaded Project Baseline Schedule. The Construction Scheduler/Cost Control Specialist validates the Schedule of Values, and the Contractor submits it to conform to the Schedule of Bid Prices that was negotiated during Bidding.
- 6.1.2 In coordination with the Construction Scheduler/Cost Control Specialist, the FCA enters in the CMIS Contracts module the Schedule of Bid Prices listed in Technical Specification No. 00410, Division 0; Schedule of Bid Prices.
- 6.1.3 The FCA uses the Schedule of Bid Prices in CMIS to develop and document the potential Change.
- 6.1.4 As Change Orders are certified, the FCA ensures the Schedule of Bid Prices in CMIS is updated correctly to conform to the current Contract.

6.2 Field Order

- 6.2.1 The Project CM determines if a Field Order is required.
- 6.2.2 The FCA prepares the Field Order, enters a new entry in the Field Order Log and forwards to the ADCS.
- 6.2.3 The ADCS adds the project file code, files a hard copy in the project files and forwards it to the Project CM.
- 6.2.4 The Project CM reviews and approves the Field Order and transmits the signed Field Order to the Contractor for signature.
- 6.2.5 The FCA updates the Field Order Log.

6.3 Claims Tracking

- 6.3.1 In the event that a Unilateral Change Order results in a dispute, the FCA notes the change as disputed.
- 6.3.2 If the dispute results in a Notice of Potential Claim, the FCA uses the CMIS to log, document and track the Claim to resolution.

6.4 Unit Price Items and Allowances

- 6.4.1 Application for Payment line items shall not exceed the Unit Price and/or Allowance Bid Item values in the Schedule of Values or the Bid Price Proposal, without prior authorization through an approved change order.
- 6.4.2 When the Application for Payment line item value has reached 80% of the value of the Unit Price or Allowance Bid Item and the Project CM determines that the Work will exceed the value of the Bid Price line item, the Project CM shall issue a Change Order for the anticipated added cost of Work prior to that Work being performed.
- 6.4.3 No additional billing shall be made to Schedule of Bid Price line items for which work is complete and the billed value shall not exceed the value of the completed work. The Percent Complete value shall be a true representation of the percentage of the value of the Unit Price and Allowance Schedule of Bid Price line item that has been expended and shall remain unchanged for the duration of the contract period.

- 6.4.4 A Bid Reconciliation Change Order shall be issued at the discretion of the Project CM to adjust the total Contract value to account for the unused funds associated with Unit Price and Allowance Schedule of Bid Price line items.

7.0 References

7.1 Technical Specifications

00802, Division 0; Contract Time, Incentives, and Liquidated Damages
00410, Division 0; Schedule of Bid Prices

7.2 CM Procedures

No. 002 Requests for Information
No. 003 Value Engineering Change Proposal
No. 006 Document Control and Correspondence
No. 010 Applications for Payment
No. 013 Construction Claims Management

7.3 Others

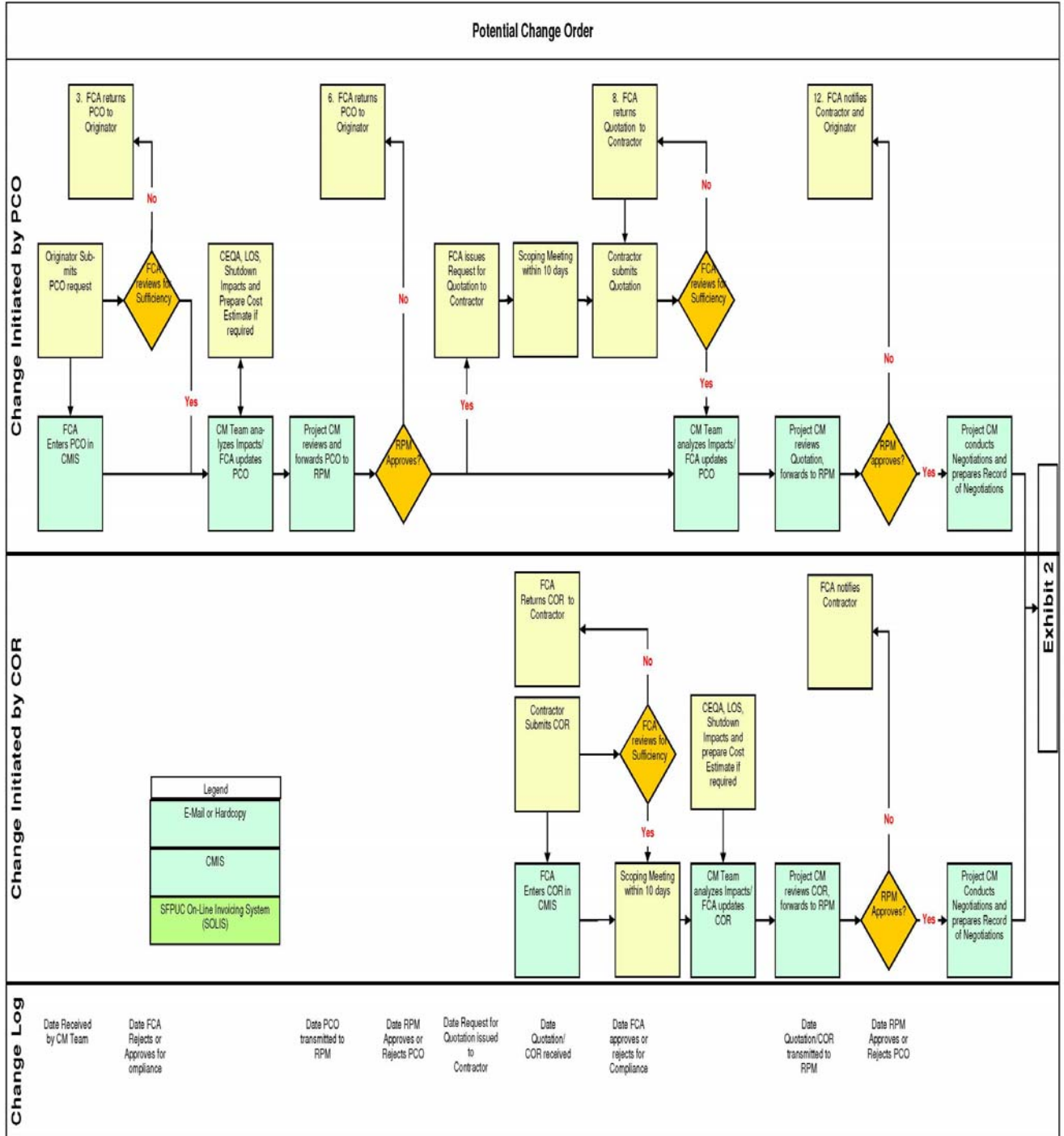
WSIP Business Processes 1a, Submittals and Requests for Information
WSIP Business Processes 1c, Value Engineering Change Proposal
WSIP Business Processes 3a, Change Management
SFPUC Infrastructure Procedures Manual Volume 4, Program & Project Management,
Procedure PM 5.02: WSIP Project Change Management

8.0 Attachments

016 - 1 Potential Change Management Flow Chart
016 - 2 Pending Change Management Flow Chart
016 - 3 Change Request Summary Form
016 - 4 Proposed Change Order Internal Analysis Report
016 - 5 Proposed Change Order Form
016 - 6 Change Order Request Form
016 - 7 Change Order Form
016 - 8 Change Management Tracking Log
016 – 9 WSIP Construction Project Change Order Authority Matrix
016 – 9a WSIP Construction Project Authority Matrix for Additional Change Order Exceeding Original 10% Commission Approved
016 – 10 Change Order Summary
016 – 11 Owner Representative /Operations Requested Changes During Construction
016 - 12 Revision Control Log

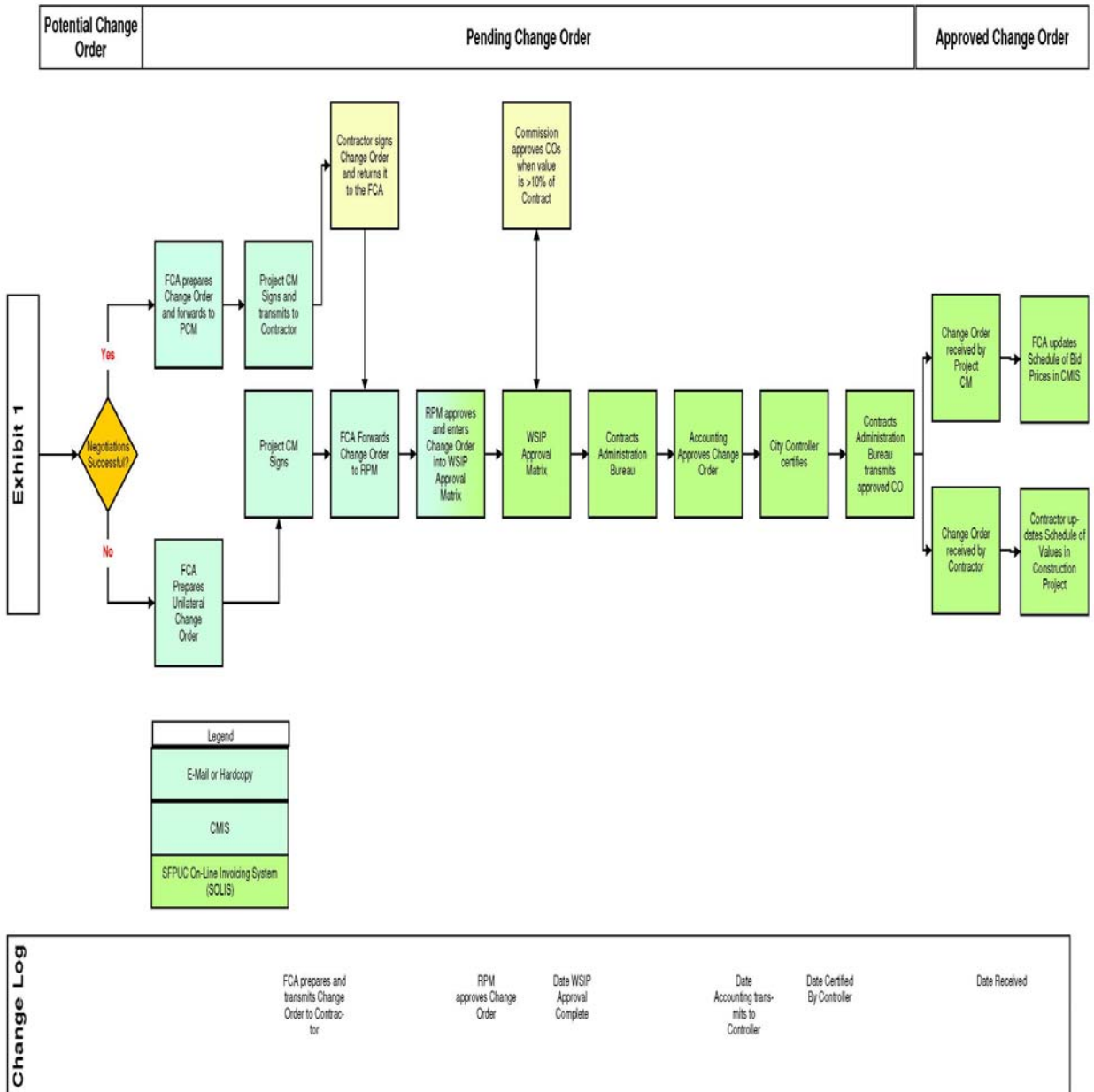
Attachment 016 – 1 Potential Change Management Flow Chart

Change Management Flow Chart Exhibit 1: PCO/COR Flow Chart





Attachment 016 – 2 Pending Change Management Flow Chart

Change Management Flow Chart Exhibit 2: Change Order Flow Chart



**Attachment 016 – 3
Change Request Summary Form**

|  | SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|-------------|------|------|------------|------|------|-------|------|------|--|--|--|-----------|--|--|--------|--|--|------------|--|--|-------|--|--|------|------|------|------|------|------|------|------|------|------|------|------|
| CONTRACT NAME: | | CHANGE MANAGEMENT NO: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONTRACT NO: | | TITLE: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONTRACT CM: | | CONTRACTOR: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | CHANGE TYPE: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Description: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Change Impact: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="12" style="text-align: center;">Cost Impact</th> </tr> <tr> <th colspan="3" style="text-align: center;">Estimated</th> <th colspan="3" style="text-align: center;">Quoted</th> <th colspan="3" style="text-align: center;">Negotiated</th> <th colspan="3" style="text-align: center;">Final</th> </tr> <tr> <th>Date</th><th>Cost</th><th>Time</th> <th>Date</th><th>Cost</th><th>Time</th> <th>Date</th><th>Cost</th><th>Time</th> <th>Date</th><th>Cost</th><th>Time</th> </tr> </table> | | | Cost Impact | | | | | | | | | | | | Estimated | | | Quoted | | | Negotiated | | | Final | | | Date | Cost | Time | Date | Cost | Time | Date | Cost | Time | Date | Cost | Time |
| Cost Impact | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Estimated | | | Quoted | | | Negotiated | | | Final | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date | Cost | Time | Date | Cost | Time | Date | Cost | Time | Date | Cost | Time | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Change Narrative Change Order Request / Quotation Negotiated | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Impacts (Analysis of operational impacts of the Change): Operations Level of Service Shutdowns CEQA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Related Documents | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Attachment 016 – 4
Proposed Change Order Internal Analysis Report**



**SAN FRANCISCO PUBLIC UTILITIES COMMISSION
WATER SYSTEM IMPROVEMENT PROGRAM**



CONTRACT NAME:

PCO NO:

TO:

DATE:

FROM:

CONTRACT NO:

SUBJECT:

REQUIRED DATE:

SPEC SECTION:

REASON FOR PCO:

DESCRIPTION OF PROPOSAL

| Item | Description | Stock# | Qty | Units | Unit Price | Tax Rate | Tax Amount | Net Amount |
|------|-------------|--------|-----|-------|------------|----------|------------|------------|
|------|-------------|--------|-----|-------|------------|----------|------------|------------|

Total: **\$0.00**

Grand Total:

Approval:

By: _____

Date: _____

**Attachment 016 – 5
Proposed Change Order Form**



**SAN FRANCISCO PUBLIC UTILITIES COMMISSION
WATER SYSTEM IMPROVEMENT PROGRAM**



CONTRACT NAME:

PCO NO:

TO:

REQUEST DATE:

FROM:

CONTRACT NO:

SUBJECT:

QUOTATION DATE:

SPEC SECTION:

REASON FOR PCO:

DESCRIPTION OF PROPOSAL



| Item | Description | Stock# | Qty | Units |
|------|-------------|--------|-----|-------|
|------|-------------|--------|-----|-------|

APPROVAL:



By: _____

Date: _____



**Attachment 016 – 6
Change Order Request Form**

|  <p style="font-size: 8px;">Services of the San Francisco Public Utilities Commission</p> | <p>SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM</p> |  <p style="font-size: 8px;">HETCH HETCHY WATER SYSTEM IMPROVEMENT PROGRAM</p> | | | | | | | | | | | | | | | | | | |
|---|--|--|----------|-------------|------------|----------|------------|------------|----------|------------|------------|--|--|--|--|--|--|--|--|--|
| <p>CONTRACT NAME:</p> | | <p>NO:</p> | | | | | | | | | | | | | | | | | | |
| <p>CONTRACT NO:</p> | | <p>DATE:</p> | | | | | | | | | | | | | | | | | | |
| <p>TO:</p> | | | | | | | | | | | | | | | | | | | | |
| <p>FROM:</p> | | | | | | | | | | | | | | | | | | | | |
| <p>SUBJECT:</p> | | | | | | | | | | | | | | | | | | | | |
| <p>DESCRIPTION OF REQUEST</p> | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:10%;">Item</th> <th style="width:40%;">Description</th> <th style="width:10%;">Stock#</th> <th style="width:10%;">Quantity</th> <th style="width:10%;">Units</th> <th style="width:10%;">Unit Price</th> <th style="width:10%;">Tax Rate</th> <th style="width:10%;">Tax Amount</th> <th style="width:10%;">Net Amount</th> </tr> </thead> <tbody> <tr> <td colspan="9" style="height: 200px;"> </td> </tr> </tbody> </table> | | | Item | Description | Stock# | Quantity | Units | Unit Price | Tax Rate | Tax Amount | Net Amount | | | | | | | | | |
| Item | Description | Stock# | Quantity | Units | Unit Price | Tax Rate | Tax Amount | Net Amount | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| <p>APPROVAL:</p> | | | | | | | | | | | | | | | | | | | | |
| <p>By: _____</p> | | <p>By: _____</p> | | | | | | | | | | | | | | | | | | |
| <p>Date: _____</p> | | <p>Date: _____</p> | | | | | | | | | | | | | | | | | | |



**Attachment 016 – 7
Change Order Form**

| | | |
|---|--|---|
|  <p style="font-size: 8px;">Services of the San Francisco Public Utilities Commission</p> | <p>SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM</p> |  |
| <p>CONTRACT NAME: _____</p> <p>CONTRACT NO: _____</p> <p>TO: _____</p> <p>FROM: _____</p> <p>SUBJECT: _____</p> | | <p>NO: _____</p> <p>DATE: _____</p> |
| <p>SCOPE OF WORK</p> <p>DRAWING REFERENCE: _____</p> | | <p>REFERENCE SECTION: _____</p> |
| | | <p>Unit Cost: _____</p> <p>Unit Tax: _____</p> <p>Total: _____</p> |
| <p>The Original Contract Sum was</p> <p>Net Change by Previously Authorized Requests and Changes</p> <p>The Contract Sum Prior to This Change Order was</p> <p>The Contract Sum Will be Increased</p> <p>The New Contract Sum Including This Change Order</p> <p>The Contract Time Will Not Be Changed</p> <p>The Date of Substantial Completion as of this Change Order Therefore is.....</p> | | |
| <p>The Contractor and the City acknowledge that this agreement constitutes full accord and satisfaction of all costs including disruption, productivity losses, acceleration, re-sequencing of the work, escalation and/or claims submitted or not submitted by the subcontractors and suppliers. The Contractor also agrees to indemnify the City against the schedule impact of all other known issues that have compacted the project schedule.</p> | | |
| <p>Signed By: _____</p> <p>Date: _____</p> | | |

Attachment 016 – 8 Change Management Tracking Log

|  | | SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM | | | | | | | | | |  | | | | | | | | | |
|---|-----|---|-----|-------------|--------|-------------|-----|----------------------|-----|-------------|--------|---|-------------|--------------|---------------|--------------|----------|---------------|-----------|--------|--|
| CONTRACT NAME: | | | | | | | | | | DATE: | | | | | | | | | | | |
| CONTRACT NO: | | | | | | | | | | | | | | | | | | | | | |
| | | PROPOSED CHANGE ORDER | | | | | | CHANGE ORDER REQUEST | | | | | | NEGOTIATION | | CHANGE ORDER | | | | | |
| Type | No. | Initiated | Rvd | PCM App/Rej | To RPM | RPM App/Rej | RFQ | Quote COR Rec'd | Rvd | PCM App/Rej | To RPM | RPM App/Rej | PCM App Neg | Neg Complete | To Contractor | RPM App/Rej | WSIP App | To Controller | Certified | Closed | |
| Change Management No: 00001 | | Change Management Name | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| Change Management No: 00001 | | Change Management Name | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |

Attachment 016 – 9

|  | SAN FRANCISCO PUBLIC UTILITIES COMMISSION WATER SYSTEM IMPROVEMENT PROGRAM (WSIP) |  | | | | | |
|---|--|---|---|-------------------------------|------------------------------|---------------------|---|
| CONSTRUCTION PROJECT CHANGE ORDER AUTHORITY MATRIX | | | | | | | |
| Approval Level | Approving Authority ¹ | Authority Limit Percentage ² (% Contract Value) | Maximum Authority Limit for Changes to Project Construction Costs | | | | Extension of Approved project Schedule ⁷ |
| | | | < \$10M | \$10M - < \$25M | \$25M - < \$100M | \$100M | |
| 1 | Regional Project Manager (RPM) ³ | 2% (per CO) | \$200K (per CO) | \$350K (per CO) | \$1.0M (per CO) | \$1.0M (per CO) | N/A |
| 2 | WSIP Deputy Director – Construction | 4% (per CO) | \$400K (per CO) | \$700K (per CO) | \$2.0M (per CO) | \$2.0M (per CO) | <5% (cumulative) |
| 3 | WSIP Director ⁴ | 6% (per CO) | \$600K (per CO) | \$1.0M (per CO) | \$4.0M (per CO) | \$4.0M (per CO) | 5 – 10% (cumulative) |
| 4 | AGM – Infrastructure ⁵ | >6% (per CO) | >\$600K (per CO) | >\$1.0M (per CO) | >\$4.0M (per CO) | >\$4.0M (per CO) | N/A |
| 5 | SFPUC Commission ⁶ | >10% (cumulative) | >\$1.0M (cumulative) | >\$1.0M - \$2.5M (cumulative) | >\$2.5M - \$10M (cumulative) | >\$10M (cumulative) | >10% (cumulative) |

Notes:

- (1) Changes in cost or schedule to Construction Contracts must be approved by the designated Approval Levels with recommendation for approval forwarded by each level below the designated Approving Authority. The Approving Authority is responsible to forward final approval to the Contract Administration Bureau (CAB).
- (2) The Authority Limit for Approval Levels 1, 2, 3 and 4 is applicable to each individual Change Order, whereas the Authority Limit for Approval Level 5 is applicable to the total value of all Change Order (Cos). The Authority Limit Percentages apply up to the specific limits shown in the table under "Maximum Authority Limit for Changes to Project Construction Costs". In other words, the applicable authority limit is the smallest of the Authority Limit Percentage and the maximum authority Limit specified in the table.
- (3) The RPM may delegate part or all of his/her Approving Authority to the City Regional Construction Manager (RCM) or Project Construction Manager (Project CM), only if the Project CM is a City employee, who will be responsible for negotiating changes with the Contractor. The RPM will be held responsible/accountable for the decisions made by the City RCM or Project CM in regards to the approval of Change Orders.
- (4) A report summarizing the Change Orders is to be approved by the WSIP Director will be submitted to the Assistant General Manager (AGM) – Infrastructure. The report will be submitted at least one (1) week prior to approval of these changes to give the AGM-Infrastructure an opportunity to provide direction.
- (5) A report summarizing the Change Orders to be approved by the AGM-Infrastructure will be submitted to the Deputy General Manager (DGM) and General Manager (GM). The report will be submitted at least two (2) weeks prior to approval of these changes to give the DGM and GM opportunity to provide direction.
- (6) Change Order requiring funding or schedule beyond the designated 10% construction contract contingency will require SFPUC Commission approval.
- (7) The authority limits assigned for the extension of an approved project schedule (or duration) is applicable to each individual CO, taking into account the total extension approved previously through other Cos.
- (8) In situations of imminent danger, where immediate action may be required to address risk to life or property, the Project CM, with concurrence from the City RCM, may authorize a change order independent of the cost of work to be performed.
- (9) On this Attachment, "CO" refers to both Change Order Request and Proposed Change Order.

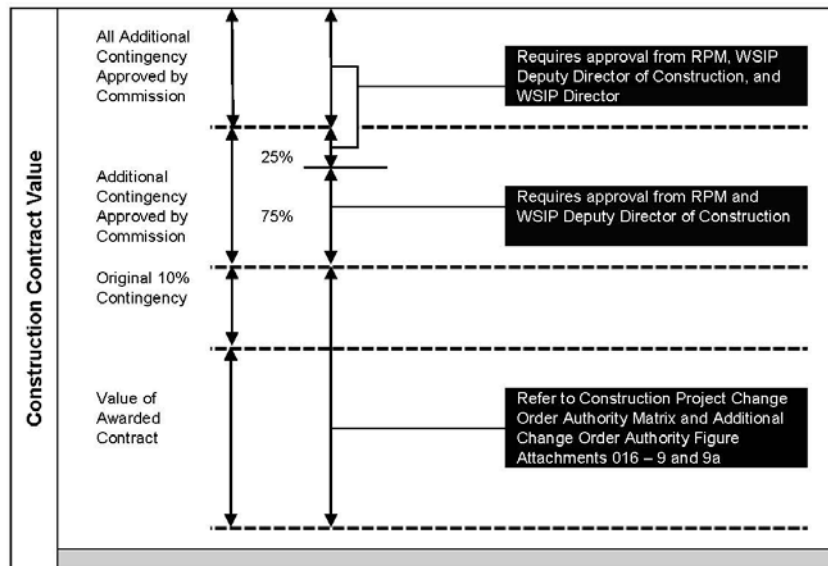
Attachment 016 – 9a

WSIP Construction Project Authority Matrix for Additional Change Order Exceeding Original 10% Commission Approved

When change orders are processed for any amount over the original 10% construction contingency after the Commission has approved additional contingency for a specific contract, all said change orders, regardless of arithmetic value or percentage of the original contract value, must be approved as follows:

- All change orders over the original 10% construction contingency and up to 75% of the increased construction contingency must be approved by the Regional Project Manager (RPM) and WSIP Deputy Director of Construction, and
- All change orders exceeding 75% of the increased construction contingency must be approved by the RPM, WSIP Deputy Director of Construction and the WSIP Director.
- All change orders exceeding the first additional contingency approved by the Commission must be approved by the RPM, WSIP Deputy Director of Construction and WSIP Director.

The following summarizes the required approvals for construction change orders:



Although the above figure and instructions provided herein focus on cost change orders, the same requirements apply to schedule change orders, where the contract completion date is delayed by more than 10 percent of the original contract duration.

In the absence of the WSIP Deputy Director of Construction, all change orders in excess of the original 10% construction contingency must be approved by the WSIP Director. There are no exceptions to this requirement.



**SAN FRANCISCO PUBLIC UTILITIES COMMISSION
WATER SYSTEM IMPROVEMENT PROGRAM**



CHANGE ORDER SUMMARY

DATE:

By: Project Construction Manager/Field Contracts Administrator

PROJECT: WD-2600, Sample Water Improvement Project

1. SCOPE OF CHANGE

Describe what was in the base design and what was changed. If scope is relatively simple and self explanatory, could just write "Refer to Change Order No. 4". This is already included in the PCO or COR and clarified during the scoping meeting. The final scope is included in the executed Change Order. Reference the CO and attach a copy.

2. REASON FOR CHANGE

Explain why the change is necessary. Go into more detail as needed if a simple classification as error and omission, different site condition, client request and etc. explanation is insufficient depending on the content of the change. Explain the original design and its problem, and what was done in the CO to correct it.

3. WHAT EFFECT WILL CHANGE HAVE ON OPERATIONS?

4. CONTRACTOR'S INITIAL PROPOSAL, PRELIMINARY OR ENGINEER'S ESTIMATE, AND FINAL CHANGE ORDER AMOUNT

Indicate cost and time from the Contractor's initial proposal, the Engineer's estimate (if any), and the final change order amount for the proposed change. This section summarizes the Contractor's cost and time requirements.

| Item | Contractor Initial Proposal | | Engineer Estimate | | Final CO Amount | |
|--------------|-----------------------------|------|-------------------|------|-----------------|------|
| | Cost | Time | Cost | Time | Cost | Time |
| PCO #4 | | | | | | |
| PCO #5a | | | | | | |
| PCO #5b | | | | | | |
| PCO #6 | | | | | | |
| PCO #7 | | | | | | |
| Total | | | | | | |

5. RECORD OF NEGOTIATION

The intent of this section is not to document the chronology of the negotiations as the PCO, COR or CO files should contain documents that reflect the chronology, however, a summary of the chronology is to be attached. This section shall document discussions between the Project CM team and the Contractor, and summarize special assumptions, revisions, conditions or agreements made between the Contractor and the City during the negotiation process, which may not be evident from the documents contained in the files.

This section should indicate personnel present at the negotiations. Describe details of the settlement or negotiations such as assumptions and conditions made by the Contractor and accepted by the City, supplements or revisions to the proposed design change, swaps or "horse trades", assumptions for the negotiated profit, overhead, escalation, bonding and insurance, or reasons why the PCO or COR took unusually long to resolve.

Field Contracts Administrator should formalize any important assumptions, revisions, conditions or agreements in the change order itself or in a letter to the Contractor which shall be referenced in the CO.

The Project Construction Manager, Field Contracts Administrator or anyone else preparing the documentation should be cognizant of sensitive content when drafting this Change Order Summary.

Attachment 016 – 11

**OWNER REPRESENTATIVE / OPERATIONS REQUESTED
CHANGES DURING CONSTRUCTION**

| | | | | | | | |
|---|-----------------|-----------------|----------------------|-----------------|-----------------|--|-----------------------------------|
| Project No. & Name: | | | | | | <input type="checkbox"/> Construction / Closeout | |
| Change Description: <i>Describe change(s) in scope, and justify/explain the cost and schedule impacts recorded below.</i> | | | | | | | |
| Estimated Cost Impact: | | | | | | | |
| | <u>Increase</u> | <u>Decrease</u> | | <u>Increase</u> | <u>Decrease</u> | | |
| Project Mgt | _____ | _____ | Construction | _____ | _____ | | |
| Design | _____ | _____ | Subtotal | \$0 | | \$0 | |
| CM | _____ | _____ | Project Total | \$0 | | | |
| Estimated Schedule Impact: | | | | | | | |
| Project Completion Delayed by: _____ months | | | | | | | |
| Approved and Submitted by | | | | | | | |
| Responsible Operations Manager | | | | | | | |
| _____ | _____ | _____ | | _____ | _____ | _____ | <input type="checkbox"/> Approved |
| | Name | | Signature | | Date | | |
| WSIP Deputy Director - Construction Review and Forward Request to the CCB: | | | | | | | |
| WSIP Deputy Director - Construction: | | | | | | | |
| _____ | _____ | _____ | | _____ | _____ | _____ | |
| | Name | | Signature | | Date | | |
| Comments: | | | | | | | |

**Attachment 016 – 12
Revision Control Log**

| Revision No. | Revision Date | What changed? |
|---------------------|----------------------|---|
| Revision 8 | July 23, 2012 | <ul style="list-style-type: none"> • Section 4.2; 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.2.6, 4.2.7, 4.2.8, 4.2.9 • Section 4.4; 4.4.1, 4.4.2, 4.4.3 • Section 5.0; 5.5.6 • Section 7.0; 7.3 |
| Rev 7 | February 17, 2012 | <ul style="list-style-type: none"> • Section 5.4; 5.4.8, 5.4.9, 5.4.9.1, 5.4.9.2, 5.9.4.3, 5.9.4.4, 5.9.4.5, 5.4.10, 5.4.11, 5.4.12 text added • Section 5.5; 5.5.4, 5.5.5, 5.5.5.1, 5.5.5.2, 5.5.5.3, 5.5.5.4, 5.5.5.5, 5.5.6 text added • Added New: Attachment 016-9a |
| Rev 6 | August 12, 2011 | <ul style="list-style-type: none"> • Revised Section 3.0; 3.2 • Revised Section 4.0; 4.2.5, 4.2.6, 4.4.3 • Added New: Attachment 11 |
| Rev 5 | May 23, 2011 | <ul style="list-style-type: none"> • Revised Section 3.0; 3.18 • Revised Section 4.0; 4.2.2 • Revised Section 6.0; 6.4; 6.4.1, 6.4.2 6.4.3, 6.4.4 |
| Rev 4 | January 12, 2011 | archive file |
| Rev 3 | December 22, 2010 | archive file |
| Rev 2 | October 20, 2009 | archive file |
| Rev 1 | September 14, 2009 | archive file |
| Rev 0 | April 17, 2009 | Signed |