DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, D.C. 20314-1000

EC 5-2-1

CECW-I

Circular
No. 5-2-1

30 June 2016

EXPIRES 30 JUNE 2018

Management

EXECUTION OF CHANGE CONTROL BOARDS

1. Purpose. This circular provides guidance for Major Subordinate Commands (MSC) and Districts in the use and conduct of Change Control Boards (CCB) to formalize changes to projects, ensure leadership visibility, and adherence to the USACE change management processes. This document describes the CCB responsibilities, membership, roles, activities, and processes that will be followed for conducting CCBs at MSCs and Districts.

2. Applicability. This document applies to all HQUSACE Civil Works authorized projects and programs for Construction.

3. Distribution. This information is for internal use; unlimited distribution internal to USACE.

4. References.

a. Engineer Regulation (ER) 5-1-11, U.S. Army Corps of Engineers Business Process.

b. ER 1110-1-1300 Cost Engineering Policy and General Requirements.

c. ER 1110-2-1150 Engineering and Design For Civil Works Projects.

d. ER 1110-2-1302 Civil Works Cost Engineering

e. Project Management Business Process (PMBP) Manual 2009.

f. Engineering and Construction Bulletin (ECB) 2014-14 Mega Project Management.

g. Memorandum, HQUSACE Delegated Authority for Project Cost Management 29 May 2013.

h. USACE Inspection of Section 902 Cost Limit Requirements for Civil Works Projects May 2013.

i. Memorandum, HQUSACE Section 902 Cost Limit Policy Clarification and Applicability 07 March 2012.

5. District Requirements.

a. District Change Control Boards. Districts responsible for managing Civil Works projects will establish a Change Control Board (CCB). The intent is to improve the monitoring and control of project changes, provide oversight of the cumulative changes for quality assurance, and to achieve the stated objectives in the approved PMP. At the discretion of District leadership, the CCB function may be accomplished in conjunction with other key meetings (e.g. Project Review Boards (PRBs), an Executive Session post-PRB, etc.); however, its function and value should not be diminished or diluted. The Change Control Board process is shown in Appendix A.

(1) CCB Roles and Responsibilities. The District CCB is responsible for reviewing, evaluating, and recommending to the District Engineer (DE) or his/her designee approving, delaying, or rejecting changes to a project within their approved threshold. There are several documents and tools that will assist in carrying out these responsibilities such as approved Change Management Plans (CMPs), risk registers, well-documented change requests, and good management of project contingencies. Upon receiving a decision from the DE or his/her designee, the District CCB is responsible for ensuring the decision is recorded in the Change/Decision Log and communicating the decision appropriately.

(2) CCB Membership. The recommended District CCB membership is the Deputy District Engineer for Programs and Project Management, Engineering & Construction Division Chief, and Planning & Policy Chief. However, at a minimum, the District CCB should be consistent with the membership of the Change Control Board at the MSC.

(3) CCB Meetings: It is recommended that the District CCB establish at minimum, a monthly meeting battle rhythm. This ensures and secures the availability of CCB members.

b. Change Management Plan. In accordance with PMBP, PROC 3010 and REF 8009G, each project is required to have an approved Change Management Plan (CMP) (see template, Appendix B). The CMP defines the process for managing change on a project as well as the use of risk contingency as it relates to scope, cost, schedule, and quality. The level of detail of the CMP is based on the complexity of the project. It is a supporting plan that facilitates the execution of the Project Management Plan (PMP). It also addresses the use of Change Request Forms, contingency usage, established and approved decision thresholds, and maintains a Change/Decision Log (see Appendix C) in conjunction with the project's risk register. The utilization of CMPs will result in continuous management and control of approved changes to the authorized project scope, schedule and cost contributing to the successful execution and delivery of quality projects and services to our stakeholders.

(1) Change Requests. All changes impacting project scope, schedule, cost, and any use of risk contingency must be formally requested and documented. It is recommended that each change request be accompanied by an Analysis of Alternatives to ensure the requested change is required and needed. Establishing decision thresholds ensure requested changes are addressed by the appropriate decision maker in a timely fashion. Appendix D.1 is a sample Change Request Form and Appendix D.2 is a sample Analysis of Alternatives.

(2) Risk Register. The risk register is a project management tool used to identify, record, and track all project risks (and details) that could result from actions taken or not taken during each stage of a project's life cycle. The risk register plays a key role in determining the project contingency. The document is also used to record the results of the risk analysis and risk response planning efforts.

(3) Contingency. Every project has an associated contingency for risk in the form of dollars and/or time in accordance with ER 1110-2-1302. Having undergone a Cost and Schedule Risk Analysis (CSRA) based on the project's risk register, the Cost MCX produces a certified cost estimate. A Total Project Cost Summary (TPCS) is part of the certified cost estimate. Note: Although all projects are not required to obtain a cost certification from the Cost MCX, one will be required for the HQ CCB. It is imperative that the PDT manage the project contingency within and based on the approved decision thresholds.

(4) Cost Analysis. Every change request must be accompanied by a cost analysis. A sample Cost Analysis worksheet is provided, Appendix E. The cost analysis, using the TPCS, provides a current status of overall costs in relation to the proposed change request as well as assists in determining what decision thresholds have been triggered.

(5) Decision Thresholds. Decision thresholds within the risk contingency for a project may be established. These thresholds will be used to determine/measure the tolerance for change within or outside of the risk contingency for a project. A threshold is a cost, time, quality, technical, or resource value used as a parameter to establish a lower and/or upper limit to trigger an action. The project delivery team (PDT) will examine, at the lowest level practicable, the project’s scope, schedule, cost and risk to develop change thresholds. Decision thresholds may be developed for multiple levels of approval to include the PDT level, District CCB, and MSC CCB. The HQUSACE CCB decision threshold has already been established and is the authorized project cost plus inflation.

(6) Performance Measurement Baseline (PMB). The PMB is an approved, integrated scope-schedule-cost plan for the project work against which project execution is compared to measure and manage performance. The PMB is the authorized project cost (congressionally authorized or other as approved by HQUSACE) which includes contingency. For projects which do not have a congressional authorization, HQUSACE may establish an equivalent amount. As an example, the

Dam Safety Program has determined that an approved Dam Safety Modification Report is equivalent to the authorized amount for a project. Based on leadership at the District, MSC, and other programs similar to the Dam Safety Program, the contingency may be split thus establishing layered thresholds within the PMB for the District and the MSC.

6. MSC Requirements.

a. MSC Change Control Boards. A CCB will be established in MSCs having districts responsible for managing Civil Works projects with the responsibility for reviewing, evaluating, and recommending to the MSC Commander or his/her designee approving, delaying, or rejecting changes to a project within their approved threshold, and for recording and communicating such decisions. The intent is to improve the monitoring and control of project changes, provide oversight of the cumulative changes for quality assurance, and to achieve the stated objectives in the approved PMP. At the discretion of Division leadership, the CCB function may be accomplished in conjunction with other key meetings. The Change Control Board process is shown in Appendix A.

b. CCB Roles and Responsibilities. The MSC CCB is responsible for reviewing, evaluating, and recommending to the MSC Commander approving, delaying, or rejecting changes to a project within their approved decision threshold or as required by the MSC CCB. There are several documents and tools that will assist in carrying out these responsibilities such as approved Change Management Plans (CMPs), risk registers, well-documented change requests, and good management of project contingencies. Upon receiving a decision from the MSC Commander or his/her designee, the MSC CCB is responsible for ensuring the decision is recorded in the Change/Decision Log and communicating the decision appropriately. For change requests that require HQ CCB decision, the MSC is responsible for notifying the respective HQ Civil Works Deputy RIT Leader and coordinating/scheduling a HQ CCB meeting.

(1) Change Requests. It is recommended that the MSC CCB review the disposition of all change requests as all other change requests could impact and influence decisions and recommendations on current proposed change requests that have reached MSC and HQ decision thresholds.

(2) Risk Registers. MSC must ensure the risk register for each project is up-to-date and used to identify, record, and track all project risks (and details) as they arise. As decisions are made that impact identified risks, they should be appropriately recorded as risk responses.

(3) Contingency. The MSC has the overall responsibility for ensuring the project is managed within the authorized cost plus inflation. Although not required, the MSC may determine that a portion of the contingency will be managed at the MSC's discretion.

(4) Cost Analysis. MSCs may use the Cost Analysis worksheet as a tool for discussion of project health (e.g. to measure use of contingency, project progress, and

remaining work) during CCB meetings. The sample Cost Analysis worksheet is designed to utilize decision thresholds for contingency.

(5) Decision Thresholds. The decision threshold for an MSC will not exceed the authorized project cost plus inflation. Guidance currently exists for both mega projects and dam safety projects requiring the use of thresholds for PDTs, Districts, MSCs, and HQUSACE.

c. CCB Membership. The recommended MSC CCB membership is the MSC Programs Director, the MSC Engineering & Construction Chief, and the MSC Planning & Policy Chief. However, MSC CCB membership is at the discretion of the MSC Commander or his/her designee.

d. CCB Meetings: It is recommended that the MSC CCB establish a monthly meeting battle rhythm. This ensures and secures the availability of CCB members.

e. Performance Measurement Baseline. Unless otherwise approved by the HQ CCB, the PMB is the authorized project cost plus inflation or its equivalent as determined by HQUSACE.

7. HQ CCB Requirements.

a. HQ Change Control Boards. A CCB has been established in HQUSACE with the responsibility for reviewing, evaluating, and recommending to the DCG-CEO approving, delaying, or rejecting changes to a project as well as recording and communicating such decisions. The intent is to improve the monitoring and control of project changes, provide oversight of the cumulative changes for quality assurance, and to achieve the stated objectives in the approved PMP. The Change Control Board process is shown in Appendix E.

b. CCB Roles and Responsibilities. The HQ CCB is responsible for reviewing, evaluating, and recommending to DCG-CEO approving, delaying, or rejecting changes to a project. Upon receiving a decision from the DCG-CEO, the HQ CCB is responsible for ensuring the decision is recorded in the Change/Decision Log and communicating the decision appropriately. The HQ Project Cost Management Review (PCMR) team provides initial recommendations to the HQ CCB as well as informs HQ CCB of systemic issues, challenges, and concerns regarding USACE policy, guidance, and regulations. For change requests that require approval beyond the Section 902 limit, HQ CCB will collaborate with the Deputy RIT Leader, MSC CCB, and District CCB on the most appropriate path forward.

c. CCB Membership. The HQ CCB membership is comprised of Chief, Civil Works Programs Integration, Chief, Engineering & Construction Division, and the Chief, Planning & Policy Division.

d. HQ Project Cost Management Review Team. The HQ Project Cost Management Review (PCMR) team was established by the HQ CCB to review and evaluate MSC requests to exceed the authorized project cost plus inflation as well as to provide recommendations to approve, delay, or reject changes to a project to the HQ CCB. In addition, the PCMR team assists in identifying systemic issues and challenges that generally cannot be resolved at the district or MSC. Details on how the PCMR team operates are found at Appendix F.

e. Meetings.

(1) CCB Meetings: The HQ CCB will establish and publish pre-scheduled CCB meetings annually to ensure and secure the availability of CCB members.

(2) On-Board Review Meetings. An on-board review meeting is required for all projects scheduled for a HQ CCB meeting. Details are found at Appendix F.

f. Civil Works Budget and Work Plan Eligibility. The Corps of Engineers Civil Works Direct Program Development Policy Guidance, EC 11-2-208, states that project cost estimates exceeding the authorized cost plus inflation must be approved by the DCG-CEO for budget eligibility. Similarly, DCG-CEO decisions may impact work plan eligibility.

g. Decision Thresholds. When the decision threshold for an MSC has been exceeded, HQ CCB must be notified immediately. A HQ CCB meeting must be scheduled.

h. Performance Measurement Baseline. Unless otherwise approved by the HQ CCB, the PMB is the authorized project cost plus inflation or its equivalent as determined by HQUSACE.

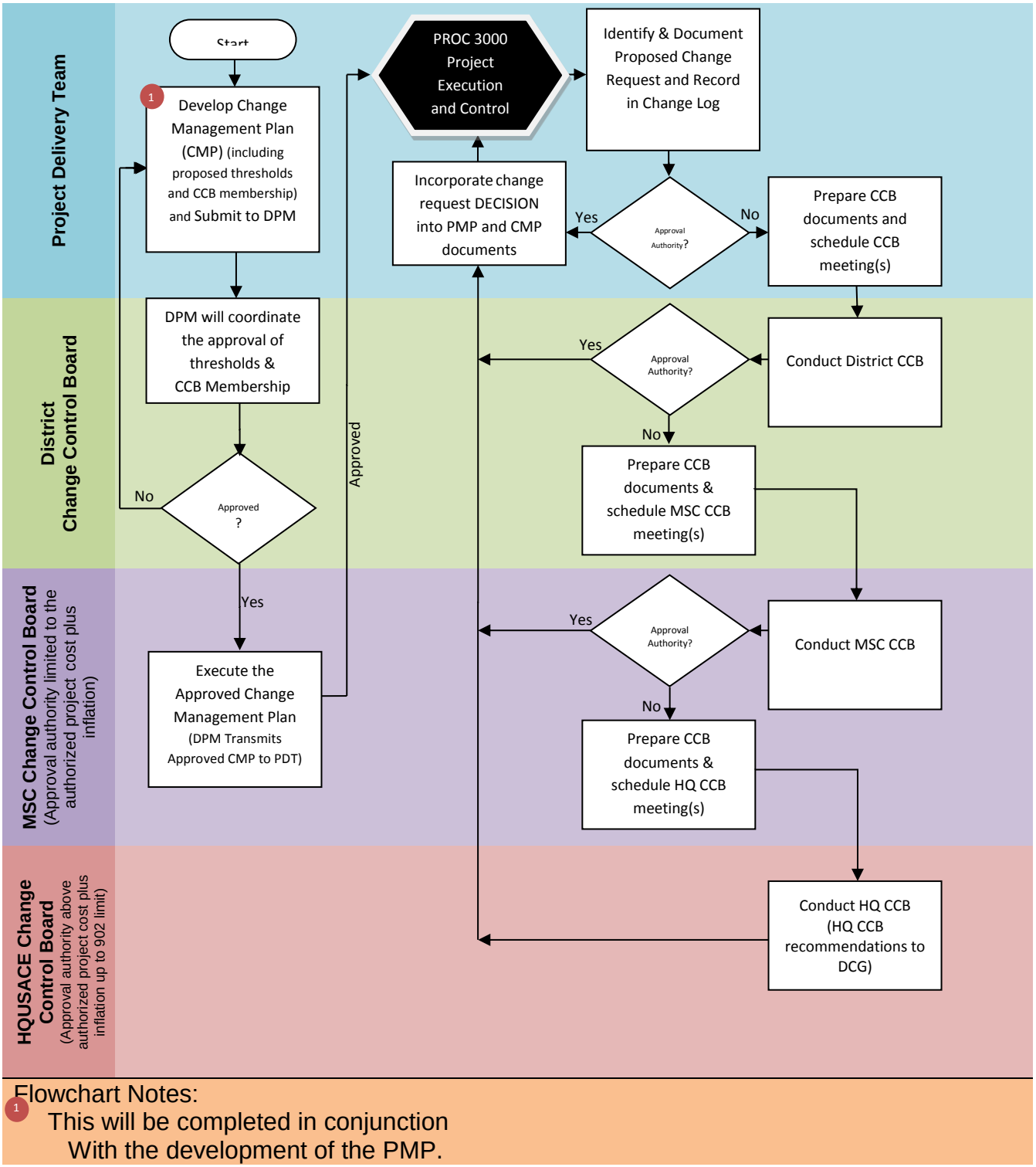
FOR THE COMMANDER:

STEVEN L. STOCKTON
Director of Civil Works

7 Appendices
Appendix A – Change Control Board Process
Appendix B – Change Management Plan Template
Appendix C – Change and Decision Log Sample
Appendix D – Scope, Schedule, and Cost Change Request (SSACCR) Form
Appendix E – Cost Analysis Worksheet Sample
Appendix F – On-Board Review Meeting Requirements

APPENDIX A

CHANGE CONTROL BOARD PROCESS



Flowchart Notes:

1 This will be completed in conjunction With the development of the PMP.

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APPENDIX B

CHANGE MANAGEMENT PLAN TEMPLATE

1. Introduction

Paragraph 1 Instructions:
Start the development of your Project Change Management Plan with this template or other as appropriate.

Change Management is an important part of any project. Changes must be vetted and managed to ensure that they are within the scope of the project and are communicated to all stakeholders if they are approved. The process for submitting, reviewing, and approving changes must also be communicated to all stakeholders in order to properly set expectations. If changes are allowed to be submitted or are implemented in and unorganized way, any project is sure to fail. ALL projects must include a Change Management Plan as part of the overall Project Management Plan. It can either be included as a section in the Project Plan or as an appendix as a subsidiary management plan.

The Change Management Plan was created for the [enter project name] Project in order to set expectations on how the approach to changes will be managed, what defines a change, the purpose and role of the change control board, and the overall change management process. All stakeholders (customers, PDT members, management, ALL) will be expected to formally submit or request changes to the [enter project name] Project in accordance with this Change Management Plan and all requests and submissions will follow the process detailed herein.

This plan, including thresholds, has been approved by:

District Change Control Board:

MSC Change Control Board:

Other entity (i.e. Dam Safety/RMC/etc):

2. Change Management Approach

Paragraph 2 Instructions:
This section of the Change Management Plan describes the approach the organization will use for managing change throughout the project. Throughout a project's lifecycle there may be very few or very many submitted changes. The approach taken to manage these changes must be consistent and repeatable in order to provide a quality change management plan and process.

The Change Management approach for the [enter project name] Project will ensure that all proposed changes are defined, reviewed, agreed upon, and approved so they can be properly implemented and communicated to all stakeholders. This approach will also ensure that only changes within the authorized scope of this project are approved and implemented.

The Change Management approach is not to be confused with the Change Management Process which will be detailed later in this plan. The Change Management approach consists of three areas:

- Ensure changes are within scope and beneficial to the project
- Determine how the change will be implemented
- Manage the change as it is implemented

The Change Management process has been designed to make sure this approach is followed for all changes. By using this approach methodology, the [enter project name] Project Team will prevent unnecessary change from occurring and focus its resources only on beneficial changes within the project's authorized scope.

3. Definitions of Change

Paragraph 3 Instructions:
This section of the Change Management Plan defines the different types of changes that may be requested and considered for the project. These changes may include schedule change, budget change, scope change, or project document changes. Most changes will impact at least one of these areas and it is important to consider these impacts and how they will affect the project.

There are several types of changes which may be requested and considered for the [enter project name] Project. Depending on the extent and type of proposed changes, formal documentation and the communication of these changes will be required to include any approved changes into the project plan as well as ensure all stakeholders are notified. Types of changes include:

- Scheduling Changes: changes which will impact the approved project schedule. These changes may require fast tracking, crashing, or re-baselining the schedule depending on the significance of the impact.
- Budget Changes: changes which will impact the approved project budget (i.e. authorized cost). These changes may require requesting additional funding, releasing funding which would no longer be required or adding to project or management reserves. This may require changes to the cost baseline for the project.

- Scope Changes: changes which are necessary and impact the project's scope which may be the result of unforeseen requirements which were not initially planned for. These changes may also impact budget and schedule. These changes may require revision to WBS, project scope statement, and other project documentation as necessary.

The project manager must ensure that any approved changes are communicated to the project stakeholders. Additionally, as changes are approved, the project manager must ensure that the changes are captured in the project documentation where necessary. These document updates must then be communicated to the project delivery team and stakeholders as well.

4. Decision Thresholds

Paragraph 4 Instructions:
Decision thresholds within the risk contingency for a project may be established (see Figure 1). These thresholds will be used to determine/measure the tolerance for change within or outside of the risk contingency for a project. A threshold is a cost, time, quality, technical, or resource value used as a parameter to establish a lower and/or upper limit to trigger an action. The project delivery team (PDT) will examine, at the lowest level practicable, the project's scope, schedule, cost and risk to develop change thresholds. Decision thresholds will be developed for multiple levels of approval to include the PDT level, District CCB, MSC CCB and the HQUSACE CCB, as applicable. See sample Decision Threshold Matrix, Figure 1. Consideration will be given to individual changes, cumulative changes, and remaining contingency for schedule and cost. Note: Guidance currently exists for both mega projects and dam safety projects requiring the use of thresholds for PDT, District, MSC, and headquarters. The chart below is only an example. Prior to including such a chart, the leadership at district, MSC, and headquarters should be included in the decision.

For [enter project name], the following decision thresholds have been approved.

Decision Authority	Estimated Cumulative Contingency Usage	Overall Physical Progress
HQ CCB/DCG-CEO	Estimating that all contingency exhausted	TBD
MSC CCB	(range)% or $$$	TBD
District CCB	(range) % or $$	TBD
PDT	(range)% and/or $ below	TBD

Figure 1: Decision Threshold Matrix Example

5. Change Control Boards

Paragraph 5 Instructions:
Here the Change Management Plan describes the Change Control Board, the purpose of the board, and the members and their roles on the board. The change control board is the approval authority for all proposed project changes. If a change is not approved by the control board then it will not be implemented with the project. The size and function of change control boards may vary depending on the organization but their purpose and the roles and responsibilities are consistent.

The Change Control Board (CCB) is the approval authority for all proposed change requests pertaining to the [enter project name] Project. The purpose of the CCB is to review all change requests, determine their impacts on the project risks, scope, cost, and schedule, and to approve or deny each change request. The following chart provides a list of the CCB members for the [enter project name] Project:

[Enter district name] District CCB

Name	Position	CCB Role
	DPM/Programs Chief	CCB Chair - recommends
	Chief, Planning	CCB Co-Chair - recommends
	Chief, Engineering	CCB Co-Chair - recommends
	Chief, Construction	CCB Member- recommends
	District Engineer	Approves/Rejects Changes

[Enter MSC name] Division CCB

Name	Position	CCB Role
	DPM/Programs Chief	CCB Chair
	Chief, Planning	CCB Member
	Chief, Engineering	CCB Co-Chair
	Chief, Construction	CCB Member
	MSC Commander	Approves/Rejects Changes

HQUSACE CCB

Name	Position	CCB Role
	HQ, Chief, CW Integration Division	CCB Chair
	HQ, Chief, Planning Division	CCB Co-Chair
	HQ, Chief, Engineering & Construction Division	CCB Co-Chair
	DCG-CEO	Approves/Rejects Changes

As change requests are submitted to the [enter project name] Project Manager by the project team/stakeholders, the Project Manager will log the requests in the change log and the CCB will convene [enter frequency] to review all change requests. For a change request to be approved, all CCB members must vote in favor. In the event more information is needed for a particular change request, the request will be deferred and sent back to the requestor for more information or clarification. If a change is deemed critical, an ad hoc CCB meeting can be called in order to review the change prior to the next scheduled CCB meeting.

6. Roles and Responsibilities

Paragraph 6 Instructions:
This section of the Change Management Plan describes the roles and responsibilities of project team members in regards to the change management process. It is important that everyone understands these roles and responsibilities as they work through the change management process. These roles and responsibilities must be communicated as part of the change management plan to all project stakeholders.

The following are the roles and responsibilities for all change management efforts related to the [enter project name] Project:

District Engineer/MSC Commander/DCG-CEO:

- Approve/reject all changes to budget/funding allocations within approved thresholds
- Approve/reject all changes to schedule baseline within approved thresholds
- Approve/reject any changes in project scope within approved thresholds
- Chair the CCB

Project Manager:

- Receive and log all change requests from project stakeholders
- Conduct preliminary risk, cost, schedule, scope analysis of change prior to CCB

- Seek clarification from change requestors on any open issues or concerns
- Make documentation revisions/edits as necessary for all approved changes
- Participate on CCB

Project Delivery Team / Stakeholders:

- Submit all change requests on standard organizational change request forms
- Provide all applicable information and detail on change request forms
- Be prepared to address questions regarding any submitted change requests
- Provide feedback as necessary on impact of proposed changes

7. Change Control Process

Paragraph 7 Instructions:
This part of the Change Management Plan should describe the change control process from beginning to end. Typically, a change control process should be an organizational standard and repeatable. This process is the tool which is used to ensure adherence to the organization's change management approach which was discussed in an earlier section. By following all of the steps, the project team can successfully incorporate approved changes, communicate the changes, and update project documentation.

The Change Control Process for the [enter project name] Project will follow the organizational standard change process for all projects. The project manager has overall responsibility for executing the change management process for each change request.

[Enter Change Control Board Process or processes/standard operating procedures to be used.]

APPENDIX C

Change and Decision Log Template

Change & Decision Log

Project: **Utopia County, USA**

P2 Project # **123456**

Change / Decision No.	Phase	Change Type	Description of Change OR Decision	Impacts			Requestor	Date Submitted	Date of Final Status	Status	Comments
				Scope/Quality	Schedule	Cost					
PCR001	PED	Scope/Materials	On 25 Mar 2015, Real Estate communicated that homeowners will not sell. Utopia County informed USACE that eminent domain will not be envoked and that levee needs to be realigned.	additional 3 miles of levee	3 to 12 months (seasonal)	$5.25M	Customer (Mr Johnson, Utopia County Water District)	3/25/2015	4/14/2015	Approved w Comments	District CCB scheduled for 07 April 2015 and MSC CCB for 14 Apr 2015. Change request was approved with cmts - report status at monthly PRB and all future changes must be approved by MSC CCB thru District CCB.
PCR002											
PCR003											
PCR004											
PCR005											

1. ADD ADDITIONAL ROWS FOR EACH CHANGE REQUEST
2. SEE TABS FOR SCOPE, SCHEDULE, AND COST CHANGE REQUEST (SSCCR) FORMS

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APPENDIX D

SCOPE, SCHEDULE, AND COST CHANGE REQUEST (SSACCR) FORM

Print Form | Save As | E-mail

U.S. Army Corps of Engineers

SCOPE, SCHEDULE, AND COST CHANGE REQUEST (SSACCR)

For use of this form, see EC 5-2-01; the proponent agency is CECW-CB.

1. PROJECT: *(Authorizing Document Title)*	2. SSACCR NO. 3. DATE
4. FROM:	5. THRU:
6. TO:	7. PM: *(Name & Number)*

SECTION I - REQUEST

1. DESCRIPTION OF RECOMMENDED CHANGE REQUEST (*Alternative #1*):

2. JUSTIFICATION FOR CHANGE: (*Include attempted resourcing through use of Contingencies and Schedule Float*)

SECTION II - IMPACT ASSESSMENT

1. ORGANIZATION(S)	2. BRIEF DESCRIPTION OF IMPACT OF CHANGE

SECTION III - PROJECT MANAGER'S EVALUATION

1. CATEGORY	2. IMPACT	3. RESOURCES REQUIRED
COSTS		
SCHEDULE (*Months*)		
MANPOWER		

SECTION IV - COORDINATION WITH SPONSOR(S)/CUSTOMER(S)

1. STAKEHOLDER/SPONSOR'S POSITION & ACKNOWLEDGEMENT OF CHANGE REQUEST

2. SPONSOR'S NAME	3. DATE	4. SPONSOR'S SIGNATURE

SECTION V - CHANGE CONTROL BOARD DECISION/ACTION/RESOLUTION/RECOMMENDATION

1. DDE(PM) RECOMMENDATION

2. DDE(PM)'S NAME	3. DATE	4. DDE(PM)'S SIGNATURE

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APPENDIX D

SCOPE, SCHEDULE, AND COST CHANGE REQUEST (SSACCR) FORM

Print Form | Save As | E-mail

SECTION V - CHANGE CONTROL BOARD DECISION/ACTION/RESOLUTION/RECOMMENDATION (*continue*)		
1. DISTRICT CCB RECOMMENDATION:	2. MSC CCB RECOMMENDATION:	3. HQUSACE CCB RECOMMENDATION:
☐ Approval	☐ Approval	☐ Approval
☐ Approval with Modifications/Comments	☐ Approval with Modifications/Comments	☐ Approval with Modifications/Comments
☐ Disapproval	☐ Disapproval	☐ Disapproval
☐ Returned to PM Without Action	☐ Returned Without Action	☐ Returned Without Action
☐ Referred to Division	☐ Referred to HQUSACE	☐ Requires ASA(CW) Approval
☐ Requires MSC CCB Approval	☐ Requires HQUSACE CCB Approval	☐ Other
☐ Other	☐ Other	

SECTION VI - RESOLUTION OF REQUEST	
1. BASIS OF ACTION	
2. DISTRICT APPROVING/RECOMMENDING OFFICIAL'S SIGNATURE	3. DATE
4. MSC APPROVING/RECOMMENDING OFFICIAL'S SIGNATURE	5. DATE
6. HQUSACE APPROVING OFFICIAL'S SIGNATURE	7. DATE

ALTERNATIVE #1
1. DESCRIPTION OF RECOMMENDED CHANGE REQUEST (Alternative #1)
2. IMPACT ASSESSMENT

ALTERNATIVE #2 (AVOIDANCE)
1. HOW TO AVOID THE CHANGE
2. IMPACT ASSESSMENT

ALTERNATIVE #3 (TRADE-OFFS)
IMPACT ASSESSMENT

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APPENDIX E

COST ANALYSIS WORKSHEET SAMPLE

Project Level Contingency: This option allows the Change Control Boards' contingency thresholds to be established at the project level. In this instance the total project contingency is $21,862k. The PM will fill in columns highlighted in yellow at the beginning of the project. Columns highlighted in blue will be changed each time a new change is either approved (in column G) or proposed (in column K). The fields highlighted in green are the threshold percentages that the PDT, District CCB, and Division CCB has authority to approve and will add up to 100%. When the total of the cumulative approved change requests plus the current change request(s) is greater than a threshold, the next higher approver will be required to authorize the change.

Change Request Cost Analysis Summary

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
	Account Number & Feature Description	Feature Base Costs	Feature Contingency	Feature Full Costs	Sunk Costs	Cumulative Cost of Approved Change Requests	Remaining Base Cost	Remaining Contingency	Remaining Full Cost	Current Change Request(s)	Remaining Contingency After Change Request
		($k)	($k)	($k)	($k)	($k)	($k)	($k)	($k)	($k)	($k)
01	LANDS AND DAMAGES	625	156	781	350	-	275	156	431	22,200	(22,044)
02	RELOCATIONS						-	-	-	-	-
03	RESERVOIRS						-	-	-	-	-
04	DAMS						-	-	-	-	-
05	LOCKS						-	-	-	-	-
06	FISH & WILDLIFE FACILITIES	62,492	15,623	78,115	24,000	-	38,492	15,623	54,115	-	15,623
07	POWER PLANT						-	-	-	-	-
08	ROADS, RAILROADS & BRIDGES						-	-	-	-	-
09	CHANNELS & CANALS						-	-	-	-	-
10	BREAKWATER & SEAWALLS						-	-	-	-	-
11	LEVEES & FLOODWALLS						-	-	-	-	-
12	NAVIGATION PORTS & HARBORS						-	-	-	-	-
13	PUMPING PLANT						-	-	-	-	-
14	RECREATION FACILITIES						-	-	-	-	-
15	FLOODWAY CONTROL & DIVERSION STRUC.						-	-	-	-	-
16	BANK STABILIZATION						-	-	-	-	-
17	BEACH REPLENISHMENT						-	-	-	-	-
18	CULTURAL RESOURCE PRESERVATION						-	-	-	-	-
19	BUILDINGS, GROUNDS & UTILITIES						-	-	-	-	-
20	PERMANENT OPERATING EQUIPMENT						-	-	-	-	-
30	Planning Engineering and Design	16,111	4,028	20,139	6,500	-	9,611	4,028	13,639	-	4,028
31	Construction Management (S&A)	8,220	2,055	10,275	2,500	-	5,720	2,055	7,775	-	2,055
32	HTRW Investigation						-	-	-	-	-
99	Project Risk						-	-	-	-	-
							-	-	-	-	-
Total		87,448	21,862	109,310	33,350	-	54,098	21,862	75,960	22,200	(338)
Authorized Cost Inflated thru Midpoint of Construction				**109,310**							
Maximum Authorized Project Cost Limit (Section 902 Limit or Administrative Limit)				**115,000**							
Project Delivery Team Contingency Threshold	10.00%	2,186									
District Change Control Board Contingency	40.00%	8,745									
Division Change Control Board Contingency Thre	50.00%	10931									
Total Project Risk Contingency		21,862									

This change request will be evaluated by the HQUSACE Change Control Board

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APPENDIX F

ON-BOARD REVIEW MEETING REQUIREMENTS

Two weeks prior to a schedule HQ Change Control Board (CCB) meeting, the MSC must schedule a meeting with the HQ Project Cost Management Review (PCMR) team to conduct an on-board project review with the district and MSC.
The HQ PCMR team comprises of selected members from Programs & Project Management, Engineering & Construction, Planning & Policy Division, Real Estate, Cost Mandatory Center of Expertise (MCX), Cost Engineering, and other programs and offices as needed.

1. Documents: At a minimum, the following documents are required:

a. Certified Cost Estimate from the Cost MCX in Walla Walla

b. MSC Request to Exceed Authorized Cost Plus Inflation FORM (all signatures required)

c. HQUSACE CCB Briefing

d. The last three Justification Sheets submitted

e. Other supporting documents that may be requested: CSRA, Risk Register, Change/Decision Log, Decision Documents, VE reports, etc.

2. Typical Questions: Typical questions asked during the review meeting are listed below; however, some questions may lead to additional follow-on questions.

a. When will this project be complete?

b. What is the project duration?

c. Are there new requirements for the project? Please describe the new requirement(s). When were the requirements identified? What was the estimated cost to implement the new requirement(s)? Who approved the change?

d. If new requirements are associated with new design standards in Corps regulations and/or guidance, please specify the regulations including paragraphs.

e. What is the project scope and deliverables as stated in the Chief's report?

f. What has been completed?

g. What work remains to be completed?

h. What will be completed within the authorized cost plus inflation and/or the Section 902 limit?

i. Has the customer/sponsor been notified of the cost increase including their associated responsibility for increased costs? If so, what was their response?

j. Has a Value Engineering (VE) study been done on the project? If so, when? What was the outcome/savings?

k. Is a PACR/GRR/LRR document underway or planned? If so, when did it begin? When is it scheduled for MSC and HQ submission? What is the estimated cost for the PACR/GRR/LRR?

3. Comments: Districts and MSCs should pay attention to project duration, total project cost estimate versus authorized cost plus inflation, data accuracy, commitments in Justification Sheets, statutory cost limits for projects, physical progress on projects, and remaining work to complete projects.