



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
SOUTH PACIFIC DIVISION, CORPS OF ENGINEERS  
1455 MARKET STREET  
SAN FRANCISCO, CALIFORNIA 94103-1399

CESPD-PDC

18 Dec 2012

MEMORANDUM FOR Commander, San Francisco District, US Army Corps of Engineers,  
ATTN: CESPN-PM-C (Mr. Neil Hedgecock)

Subject: Review Plan Approval for the Oakland Harbor Deepening, 50 Foot, Alameda County,  
California, 13 December, 2012

1. The attached Review Plan for the Oakland Harbor Deepening, 50 Foot, Alameda County, California, 13 December, 2012, has been prepared in accordance with EC 1165-2-209. The Review Plan has been coordinated internally within the DST. CESPD will serve as the RMO.
2. The Review Plan does not include independent external peer review.
3. I hereby approve this Review Plan, which is subject to change as circumstances require, consistent with project development under the Project Management Business Process. Subsequent revisions to this Review Plan or its execution will require new written approval from this office.
4. For any additional information or assistance, contact Paul Devitt, District Support Team Lead, (415) 503-6558, Paul.A.Devitt@usace.army.mil

***Building Strong All The Way From New Mexico To The Pacific!***

Encl

*for Andrew B. Johnson* COL, EN  
MICHAEL C. WEHR  
BG, USA  
Commanding  
*Prof Cdr*



DEPARTMENT OF THE ARMY  
US ARMY CORPS OF ENGINEERS  
SOUTH ATLANTIC DIVISION  
60 FORSYTH STREET SW, ROOM 10M15  
ATLANTA, GA 30303-8801

CESAM-PD-D (1105-2-40a)

07 December 2012

MEMORANDUM FOR MR. CRAIG S. CONNER, PLANNING LEAD, (CESPN-ET-PF),  
USACE, SAN FRANCISCO DISTRICT, 1578C 1455 MARKET STREET, SAN FRANCISCO,  
CALIFORNIA, 94103-1398

SUBJECT: Review Plan Approval, Oakland Harbor Deepening, 50-foot, Alameda County,  
California, Decision & Implementation Work Products, San Francisco District

1. The Deep Draft Navigation Planning Center of Expertise (DDNPCX) has reviewed the subject Review Plan (RP) and concurs with the review plan proposed for this document. The RP satisfies peer review policy requirements outlined in Engineering Circular (EC) 1165-2-209 Civil Works Review Policy, dated 31 January 2010.
2. The review was performed by Bernard E. Moseby, Technical Director, DDNPCX.
3. The DDNPCX recommends approval of the RP by the Major Subordinate Command (MSC) Commander. Upon approval please provide a copy of the approved RP, a copy of the MSC Commander Approval memorandum and a link to where the RP is posted on the District website.
4. Thank you for the opportunity to assist in the preparation of the RP. Please coordinate any Review Management or Technical Assistance efforts with Mr. Bernard E. Moseby, Technical Chief, DDNPCX, at (251) 694-3884.

A handwritten signature in black ink, appearing to read "Bernard E. Moseby", written over a horizontal line.

BERNARD E. MOSEBY  
Technical Chief, DDNPCX

Encls

CF:  
CESPN-PM-A/PANICCIA  
CESPN-PM-A/ARAKAKI  
CESAD-PD-S/PAYNE  
CESAD-PD-S/SMALL  
CESAD-PD-S/STRATTON

# REVIEW PLAN

## OAKLAND HARBOR DEEPENING, 50-FOOT ALAMEDA COUNTY, CALIFORNIA DECISION & IMPLEMENTATION WORK PRODUCTS

San Francisco District



**South Pacific Division Approval Date:** 18 December 2012  
**Last Revision Date:** 13 December 2012



US Army Corps  
of Engineers ®

**REVIEW PLAN**

**OAKLAND HARBOR DEEPENING, 50-FOOT  
ALAMEDA COUNTY, CALIFORNIA  
DECISION & IMPLEMENTATION WORK PRODUCTS**

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## **1. PURPOSE AND REQUIREMENTS**

### **a. Purpose.**

This Review Plan defines the scope and level of quality management activities for decision and implementation work products needed to complete the Oakland Harbor Deepening, 50-foot, Alameda County, California, navigation project. Specifically, this Review Plan describes the level of review required for the work products specified in section 4.

### **b. References.**

- (1) Engineer Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010
- (2) Engineer Regulation (ER) 1110-2-1150, Engineering and Design for Civil Works Projects, 31 Aug 1999
- (3) ER 1110-1-12, Engineering and Design Quality Management, 21 Jul 2006
- (4) ER 415-1-11, Biddability, Constructability, and Operability, 1 September 1994
- (5) Water Resources Development Act (WRDA) 1999, Section 101(a)(7), Public Law 106-53,
- (6) CESP-D-R 1110-1-8, Quality Management Plan; 30 December 2002
- (7) Project Management Plan (PMP) for the Oakland Harbor Deepening, 50-foot, Alameda County, CA, dated: To Be Determined

### **c. Requirements.**

This Review Plan was developed in accordance with EC 1165-2-209, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement, and rehabilitation (OMRR&R). The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review.

## **2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION**

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for decision documents is the appropriate Planning Center of Expertise (PCX), which for this project would be the Deep Draft Navigation PCX, located in the South Atlantic Division (SAD) of the Corps. The RMO for implementation documents is typically the Risk Management Center (RMC), but this function is sometimes designated to the Major Subordinate Command (MSC, i.e. the South Pacific Division). Since this review plan contains both decision and implementation work products, the appropriate RMO will be determined by the South Pacific Division District Support Team. However, both the Deep Draft Navigation PCX and the South Pacific Division RMC will be consulted in the development of this review plan.

The RMO will coordinate with the Cost Engineering Mandatory Center of Expertise (MCX). They will perform the ATR review of the project cost estimate.

### 3. PROJECT DESCRIPTION

#### a. Project Authority.

Construction of the Oakland Harbor Deepening, 50-foot, Project was authorized by Section 101(a)(7) of the Water Resources Development Act of 1999, Public Law 106-53.

#### b. Location and Description.

The project is located in the eastern central portion of San Francisco Bay, Alameda County, California and is shown in Figure 1. The project consists of general navigation features, beneficial use of dredged materials, and the associated lands, easements, rights-of-way, relocations, deep draft utility relocations, or removals needed to construct the project. The general navigation features consist of the following six items:

- (1) Deepening the entrance channel, Outer Harbor channel, Outer Harbor turning basin, Inner Harbor channel, and Inner Harbor turning basin to -50 feet mean lower low water (MLLW) plus up to 2 feet over-depth;
- (2) Widening the entrance channel (on the south side), the Outer Harbor turning basin, (from a diameter of approximately 1,480 feet to a diameter of approximately 1,650 feet), the Outer Harbor channel (to accommodate the widening of the turning basin), and the Inner Harbor turning basin (from a diameter of approximately 1200 feet to a diameter of approximately 1500 feet);
- (3) Widening and straightening the Inner Harbor channel from approximately station 40+00 to station 135+00;
- (4) Modifications to the sewer pipeline known as the "U.S. Navy sewer line";
- (5) Construction of a containment dike between the Middle Harbor Enhancement Area (MHEA) and the Inner Harbor Channel and the completion of construction of the MHEA so that the MHEA is functioning biologically, hydrologically and morphologically in accordance with the performance criteria mutually agreed upon in writing by the Project Delivery Team (PDT), Resource Agencies, and Stakeholders; and
- (6) Construction of bulkheads adjacent to the proposed Inner Harbor turning basin in the City of Alameda and along the waterfront of the former Navy Fleet and Industrial Supply Center Annex.

The beneficial use of dredged material consisted of placement at the Hamilton Wetlands Restoration Project (HWRP) and Montezuma Wetlands Restoration Project (MWRP) sites, as well as the MHEA. Figure 2 shows the boundary of the MHEA within the project area.

The project is approximately 95% to 98% complete (on a cost basis). All of the general navigation features have been constructed and the beneficial use of dredged material by placement in HWRP and MWRP has been completed. The only remaining items to complete the project include a reshaping contract for the MHEA, a contract for planting eelgrass at MHEA, field verification of the previous hydrodynamic modeling used in designing the MHEA, and annual monitoring reports for the MHEA. All of these tasks are required as part of the resource agencies agreements for the project.

Additionally, the total project cost limit established by Section 902 of WRDA 1986 most likely will be exceeded by some nominal amount. A post authorization decision document will be produced and routed through the vertical team to raise the authorized cost limit in order to complete the project.

c. Project Delivery Team.

The PDT is comprised of individuals directly involved in the development of the decision and implementation documents. Individual contact information and disciplines are presented in Attachment 1.



**Figure 1. The Oakland Harbor 50-foot Project**

d. Vertical Team.

The Vertical Team includes the management of the San Francisco District, the District Support Team (DST) of the South Pacific Division, and the Regional Integration Team (RIT), HQUSACE staff. Specific points of contact for the Vertical Team can be found in Attachment 1.

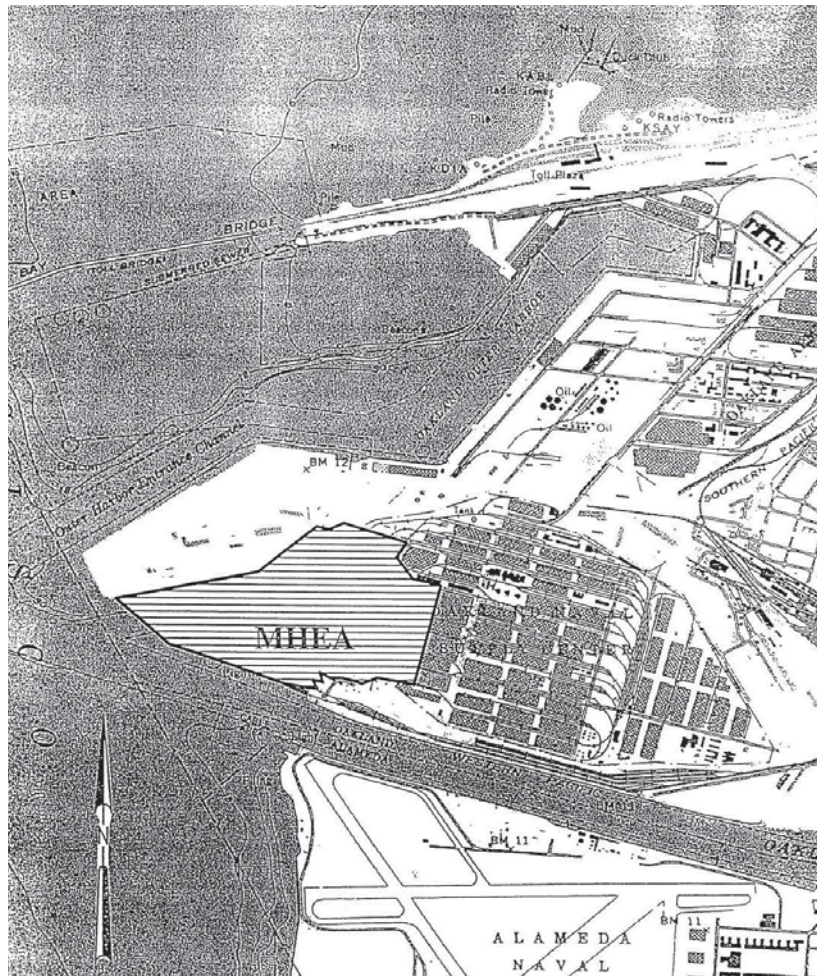
e. Model Certification.

This review plan includes both decision and implementation work products and therefore may require both planning models and engineering models. Planning models are defined as any models and analytical tools that planners use to define water resources management problems and opportunities, to formulate potential alternatives to address the problems and take advantage of the opportunities, to evaluate potential effects of alternatives and to support decision-making. It includes all models used for planning, regardless of their scope or source. The computational models to be employed for this project are expected to be limited to spreadsheet models. Model certification and approval for all planning models will be coordinated through the Deep Draft Navigation PCX as needed.



A standardized certification process for engineering models, similar to the planning model certification, has not yet been established by the Corps Engineering Community of Practice (CoP). No engineering models will be needed to produce the plans and specifications to finish the underwater reshaping work or the eelgrass plantings. However the hydrodynamic modeling done in designing the MHEA will have to be verified by field measurements. The models used during this process included both Corps and non-Corps models. Presently, the PDT will follow the guidance given in CESP-D-RGM-2007-006: “Until such time that a USACE certification process is enacted for HH&C software, first choice for use in our studies shall be Corps developed software – as they are public domain, readily available, have good documentation and technical support, Corps and many local sponsor technical staff are very familiar with these software, etc.”, to the greatest extent practicable. Using Corps models will not require any additional certification, as they are already accepted by the Engineering CoP. All non-standard, non-Corps models will be vetted through the vertical team and coordinated through the USACE RMO as needed.

Previous hydrodynamic modeling for the MHEA used legacy Corps approved or developed models (RMA2, Ref/Dif, SED2D, and RMA4) and one specialized model (COASTOX). The previous hydrodynamic modeling will be verified by field measurements and additional modeling efforts are not anticipated at this time. Should additional modeling be required, then the current suite of Corps models (ADCIRC, ADH, CMS, etc.) will be considered first. If a specialized model is required, then it will be vetted through the vertical team and coordinated through the USACE RMO as stated above.



**Figure 2. The Middle Harbor Enhancement Area (MHEA)**

#### **4. WORK PRODUCTS**

There are only five remaining work products for the Oakland Harbor Deepening, 50-foot, Alameda County, California, navigation project:

- Post authorization decision document to raise the authorized cost limit;
- Plans & Specifications (P&S) for continuing construction of the underwater reshaping of the MHEA (second contract);
- P&S for eelgrass planting of the MHEA
- Field verification report of the hydrodynamic modeling for the MHEA
- Annual MHEA monitoring reports

#### **5. DISTRICT QUALITY CONTROL AND BCOES**

Intra-District reviews will consist of DQC activities and Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) activities. DQC activities consist of Quality Checks and Reviews, supervisory reviews, PDT reviews, including input from the non-Federal sponsor. BCOES reviews will be performed on implementation-contract documents.

##### **a. Management of DQC.**

The DQC will be managed by the San Francisco District in accordance with Major Subordinate Command (MSC) and District Quality Management Plans. All work products will undergo DQC and these DQC efforts will include the necessary expertise to address compliance with applicable Corps policy. This review process will be properly documented and a certification sheet (see example in Attachment 2) will be issued separately for each work product.

##### **b. Management of BCOES.**

BCOES review is defined as a process that ensures that biddability, constructability, operability, environmental, and sustainability issues are properly considered in contract documents. A BCOES review is performed after the ATR for the scheduled work product reviews and is typically reviewed by the Construction Branch personnel from the District that will be responsible for administering the construction contracts associated with the project.

Biddability and constructability are defined as the ease with which a designed project can be built, as well as the ease with which the contract documents can be understood, bid, administered, and executed within the timeframe of the contract duration. Operability refers to the ease with which a project can be operated and maintained. Environmental review addresses the protection of air, water, land, animals, plants, and other natural resources from the effects or impacts of construction and operation of the project. Sustainability refers to the completed project's ability to maintain itself functionally, and thereby minimize future O&M financial obligation to the fullest extent possible, and still be environmentally compliant.

c. Communication of BCOES.

The communication plan for the BCOES is as follows:

1. The BCOES review team will use DrChecks to document the BCOES process.
2. The Project Engineer, or their designee, shall deliver the P&S to the BCOES review team for their review.
3. The Project Engineer, or their designee, shall inform the BCOES review team when all responses to their comments have been entered into DrChecks and request that the team backcheck their comments.
4. The BCOES review team backchecks their comments in DrChecks. The BCOES backcheck ensures that the comments made during the review have been incorporated or were addressed to the reviewers' satisfaction. Typically, the backcheck will be conducted on the final documents by the original reviewer or someone within their division. The comments incorporated by the customer may be closed by the PM. The backcheck process is managed by the Project Engineer, or their designee to ensure that any BCOES comments and resolutions that were contrary to any previous ATR comments and resolutions have been identified and a consensus for the final resolution has been determined and agreed upon by all review participants. A backcheck must be completed prior to final BCOES Certification.
5. Reviewers may "agree to disagree" with any comment response and initiate the resolution process. The Project Engineer, or their designee, will resolve all disputes by working with the PDT, BCOES review team, and the Section Chiefs of the affected disciplines.
6. BCOES certification is conducted upon completion of the BCOES review.

d. Certification of BCOES.

The BCOES certification is a memorandum as required by Reference (4) that attests to the completion of the BCOES review process. The BCOES certification is to be signed by the Chief of Engineering, Chief of Planning, and the Chief of Construction. Certification is predicated on a final, satisfactory backcheck of the complete contract package. The BCOES POC ensures that all comments made in all phases of the design have been appropriately resolved and documented in DrChecks prior to certification, the report throughout the report approval process. An interim certification will be provided

## **6. AGENCY TECHNICAL REVIEW MANAGEMENT**

The ATR for the Oakland Harbor Deepening, 50-foot, Project will be managed by the RMO. Contact information is provided in Attachment 1 of this Review Plan. A list of ATR reviewers describing qualifications and years of relevant experience will be provided in Attachment 1 upon conferring with the RMO and updated as new ATR reviewers are selected.

a. Risk Informed Decisions for ATR.

Following the questions and guidance given in Section 15b of EC 1165-2-209 a risk informed decision has been made that all remaining work products, except for the annual MHEA monitoring reports, will undergo ATR. It is felt that the annual MHEA monitoring reports do not need ATR, as the answer to all

of the questions given in Section 15b of EC 1165-2-209 are “No”, except for question (3) and (7). The reports may make recommendations (question 3), but they will be of low-risk and will not affect the navigation performance of the project. Non-performance of the annual reports (question 7) will have little to no consequences to the navigation performance of the project.

b. Project Risks and Challenges.

As the project is approximately 95% to 98% complete, there are few risks and challenges to its completion. However, there may be challenges with the completion of the field verification report of the hydrodynamic modeling for the MHEA. This work product is required for environmental compliance, but the extent of its scope has not yet been agreed upon between the PDT and resource agencies. Agreement will be required on criteria for successful model verification and next steps should the model not pass this criteria.

c. Agency Technical Review Team (ATRT) and Disciplines.

The ATRT will be comprised of individuals that have not been involved in the development of the decision and implementation documents and will be chosen based on expertise, experience, and skills. The members will roughly mirror the composition of the PDT, and come from outside of the San Francisco District, with the ATR Lead being assigned from outside the South Pacific Division. The ATRT will vary in number and composition depending on the work product being reviewed; it is anticipated that the team will require a maximum of six reviewers per work product.

The ATRT will review the Post authorization decision document and all plans and specifications. When reviewing these work products, the ATRT should verify that they are sufficiently detailed for each technical specialty. In this way, the criteria that were used, the critical assumptions which were made, and the analytical methods that were used will be evident for purposed review and historical documentation. Verify that it contains summaries of important calculation results and selected example calculations for all critical elements.

The table below lists the primary disciplines of expertise and experience needed for the ATR.

Discipline	Experience Needed for Review
Plan Formulation/Policy	Plan formulation for navigation and multi-purpose projects, familiarity with Corps civil works planning policies, processes, and procedures, specifically including the “Planning Guidance Notebook” (ER-1105-100) and the Water Resources Council’s Principals and Guidelines.
Civil Design	Civil engineer with experience in channel modification and design, port and harbor engineering, and aquatic ecosystem restoration techniques.
Cost Engineering	Cost estimating review will be conducted by the Civil Works Cost Engineering Mandatory Center of Expertise at the Walla Walla District.

Discipline	Experience Needed for Review
Economics	Experience with and understanding of USACE policies and procedures for navigation benefit-cost analysis. Experience in the use of spreadsheet models and other programs, and an understanding of risk and uncertainty principles in the context of navigation.
Environmental Resources	Integration of environmental evaluation and compliance requirements pursuant to the “Procedures for Implementing NEPA” (ER 200-2-2), national environmental statutes, applicable executive orders, and other Federal planning requirements, into the planning of Civil Works projects. Experience with ESA, fishery resources, riparian habitat, HTRW, and dredged material management.
Geotechnical Engineering	Geotechnical engineer familiar with soil sampling and laboratory testing, slope stability, consolidation, and a number of other closely associated technical subjects related to marine construction.
Coastal Engineering	Engineer/modeler familiar with a variety of legacy Corps and non-Corps models for waves (Ref/Dif), currents/tidal/water quality/circulation (RMA2 & RMA4), and sediment transport (SED2D ), as well as the current suite of Corps models (ADCIRC, ADH, CMS, STWAVE, etc.); field data collection; analytic methods of analysis; and other technical subjects related to port and harbor engineering.
Construction Management	Engineer with construction management experience in navigation projects, vertical datums compliance to meet Corps standards (EM 1110-2-6056) and hydrographic surveying (EM 1110-2-1003), ecosystem restoration techniques, sampling and laboratory testing, ESA, fishery resources, dredged material management and a number of other closely associated technical subjects for construction and for making professional determinations based on experience.

d. Communication of ATR.

The communication plan for the ATR is as follows:

1. The team will use DrChecks to document the ATR process. The San Francisco District DrChecks representative will facilitate the creation of a project portfolio in the system to allow access by all PDT and ATRT members. An electronic version of the document, appendices, and any significant and relevant public comments shall be posted in PDF or Word format at: <https://safe.amrdec.army.mil/SAFE2/> at least one business day prior to the start of the comment period.
2. The PDT shall send the ATR Team Leader one hard copy (with color pages as applicable) of the document and appendices for each ATRT member such that the copies are received at least one business day prior to the start of the comment period.

3. At the discretion of the ATRT, the PDT shall host an ATR kick-off meeting virtually, or on-site, to orient the ATRT during the first week of the comment period. If funds are not available for an on-site meeting, the PDT shall provide a presentation about the project, including photos of the site, for the team.
4. The project planner or engineer shall inform the ATR Team Leader when all responses have been entered into DrChecks and conduct a briefing to summarize comment responses to highlight any areas of disagreement.
5. A revised electronic version of the report and appendices with comments incorporated shall be posted at <ftp://ftp.usace.army.mil/usace/> for use during back checking of the comments.
6. Team members shall contact ATR members or leader as appropriate to seek clarification of a comment's intent or provide clarification of information in the report. Discussions shall occur outside of DrChecks but a summary of discussions may be provided in the system.
7. Reviewers will be encouraged to contact PDT members directly via email or phone to clarify any confusion. DrChecks shall not be used to post questions needed for clarification.
8. The ATR Team Leader and the project planner will prepare a memo certifying that ATR has been completed and all technical issues have been resolved.

e. Funding of ATR.

1. The Project Manager (PM) shall provide labor funding by cross charge labor codes. Funding for travel, if needed, will be provided through government order. The PM will work with the ATR Team Leader to ensure that adequate funding is available and is commensurate with the level of review needed. The current cost estimate for ATR reviews varies depending on the work product, with an estimated range from \$15,000 to \$60,000. Any funding shortages will be negotiated on a case-by-case basis and in advance of a negative charge occurring.
2. The ATR Team Leader shall provide organization codes for each team member and a responsible financial point of contact (CEFMS responsible employee) for creation of labor codes.
3. Reviewers shall monitor individual labor code balances and alert the PM to any possible funding shortages.

f. Timing and Schedule.

1. Throughout the development of the implementation documents, the team will conduct seamless review to ensure timeliness and quality of the work product.
2. ATRs will be conducted on the final draft versions of the work products; and if changes are made to the final draft version, those changes will be reviewed in the final version of the document.
3. At the discretion of the PDT, a "page-turn" session may be held by the PDT to review the draft version to ensure consistency across the disciplines and resolve any issues prior to the start of ATR. Writer/editor services will be performed on the draft prior to ATR as well.

4. The ATR process for all work products will follow timelines and milestones given in the project's P2 schedule. The P2 schedule will be kept current and updated at least annually. Actual dates will be scheduled once the period of review draws closer. All products produced for these milestones will be reviewed, including those produced as in-kind services by the non-Federal sponsor (should that be applicable to this project), and products developed by contractors.

g. ATR Review Responsibilities.

1. ATRT responsibilities are as follows:
  - a. Reviewers shall review the work products to confirm that work was done in accordance with established professional principles, practices, codes, and criteria and for compliance with laws and policy. Comments on the report shall be submitted into DrChecks.
  - b. Reviewers shall pay particular attention to one's discipline but may also comment on other aspects as appropriate. Reviewers that do not have any significant comments pertaining to their assigned discipline shall provide a comment stating this fact.
  - c. Grammatical and editorial comments shall not be submitted into DrChecks. Comments should be submitted to the ATR Team Leader via electronic mail using tracked changes feature in the Word document or as a hard copy mark-up. The ATR Team Leader shall provide these comments to the Project Planner.
  - d. Review comments shall contain these four principal elements:
    - i. a clear statement of the concern
    - ii. the basis for the concern
    - iii. the significance of the concern
    - iv. specific actions needed to resolve the comment
  - e. The "Critical" comment flag in DrChecks shall not be used unless the comment is discussed with the ATR Team Leader and/or the Project Planner or Engineer first.
2. PDT Team responsibilities are as follows:
  - a. The team shall review comments provided by the ATRT in DrChecks and provide responses to each comment using "*Concur*", "*Non-Concur*", or "*For Information Only*". *Concur* responses shall state what action was taken and provide revised text from the report if applicable. *Non-Concur* responses shall state the basis for the disagreement or clarification of the concern and suggest actions to negotiate the closure of the comment.
  - b. Team members shall contact the PDT and ATRT managers to discuss any "Non-Concur" responses prior to submission.

h. ATR Resolution of Disputes.

1. Reviewers shall back check PDT responses to the review comments and either close the comment or attempt to resolve any disagreements. Conference calls shall be used to resolve any conflicting comments and responses.
2. Reviewers may "agree to disagree" with any comment response and initiate the resolution process. If reviewer and responder cannot resolve a comment, it should be brought to the attention of the ATR Team Leader and, if not resolved by the ATR Team Leader, it should be brought to the attention of the Engineering Chief who will need to sign the certification. ATRT members shall keep the ATR Team Leader informed of problematic comments. The vertical team will be informed of any policy variations or other issues that may cause concern during a HQUSACE review.

i. Certification of ATR.

To fully document the ATR process, a statement of technical review will be prepared. A statement or review completion will be signed by the ATR Team Leader and the District's Engineering and Technical Services Division Chief once all issues raised by the reviewers have been addressed to the review team's satisfaction and the final version is ready for submission. Indication of this concurrence will be documented by the signing of a certification statement by the MSC's Chief of Business Technology Division (Attachment 3). A summary report of all comments and responses will follow the statement and accompany the report throughout the report approval process. An interim certification will be provided by the ATR Team Leader to indicate concurrence with the report to date until the final certification is performed when the work product is considered final.

## **7. INDEPENDENT EXTERNAL PEER REVIEW (IEPR) MANAGEMENT**

A Type I IEPR is not required for the post authorization decision document because this document is only for increasing the authorized costs to finish the remaining 2% to 5% of the project, the project is already built and cannot be de-constructed, and it does not trigger any of the four criteria for a mandatory Type I IEPR: significant threat to human life, total (remaining) cost greater than forty-five million dollars, requested by the Governor, or requested by the DCW or Chief of Engineers.

A Type II IEPR (SAR) is not required for the Oakland Harbor Deepening, 50-foot, project because it is not a hurricane and storm risk management or flood risk management project, and non-performance of the project does not present a significant threat to human life. Therefore, IEPR will not be conducted on the project and is not included in this Review Plan.

## **8. POLICY AND LEGAL COMPLIANCE REVIEW**

Policy and legal compliance review are usually only conducted on decision documents, and the subsequent implementation documents are based on these policy and legally compliant documents. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the home MSC Commander. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods, compliance with the authorized project, and the presentation of findings in decision documents.

The post authorization decision document will undergo policy and legal review at the San Francisco District, prior to its submission to the vertical team.

## **9. PUBLIC AND AGENCY REVIEW**

There have been numerous public and agencies reviews of various work products over the life of this project. With the project being nearly complete, future public and agency review will be limited to issues for completion of the MHEA through the Habitat Technical Advisory Committee (TAC). At present, there are no scheduled meetings for the TAC.



## 10. REVIEW SCHEDULES AND COSTS

### a. DQC Schedule and Cost.

All work products identified in Section 4 of this Review Plan will undergo DQC. Seamless DQC review will be conducted on each work product as it progresses and is finished. Costs for the DQC for each work product will be presented in scopes of services for each discipline and included in the annually updated PMP.

### b. ATR Schedule and Cost.

<b>Task</b>	<b>Estimated Cost</b>	<b>Due Date</b>
Post authorization decision document	To Be Determined	To Be Determined
P&S for the underwater reshaping	To Be Determined	To Be Determined
Field verification report of the hydrodynamic modeling for the MHEA	To Be Determined	To Be Determined
P&S for eelgrass planting	To Be Determined	To Be Determined

## 11. REVIEW PLAN APPROVAL AND UPDATES

The San Francisco District requests that the South Pacific Division Commander endorse the above recommendations and approve this Review Plan as described in Appendix B, Section 6, of EC 1165-2-209.

The Review Plan is a living document and may change as the project progresses. The San Francisco District is responsible for keeping the Review Plan up to date. Future minor changes to the Review Plan will be documented in Attachment 5. Significant changes to the Review Plan (such as changes to the scope and/or level of review) will be re-approved by the South Pacific Division Commander following the process used for initially approving the plan.

## 12. POINTS OF CONTACT

Questions about this Review Plan may be directed to Craig Conner (415-503-6903; [Craig.s.Conner@usace.army.mil](mailto:Craig.s.Conner@usace.army.mil)) or the Project Manager Al Paniccia (415-503-6735; [Al.Paniccia@usace.army.mil](mailto:Al.Paniccia@usace.army.mil)).

## ATTACHMENT 1: TEAM ROSTERS

### PROJECT DELIVERY TEAM

Name	Discipline	Phone	Email
Mark Bierman	Economics	(415) 503-6830	<a href="mailto:Mark.D.Bierman@usace.army.mil">Mark.D.Bierman@usace.army.mil</a>
David Doak	Civil Design	(415) 503-6730	<a href="mailto:David.V.Doak@usace.army.mil">David.V.Doak@usace.army.mil</a>
Eric Jolliffe	Environmental	(415) 503-6869	<a href="mailto:Eric.F.Jolliffe@usace.army.mil">Eric.F.Jolliffe@usace.army.mil</a>
Nick Malasavage	Geotechnical Engineering	(415) 503-6915	<a href="mailto:Nicholas.E.Malasavage@usace.army.mil">Nicholas.E.Malasavage@usace.army.mil</a>
Lisa Andes	Water Resources	(415) 503-6810	<a href="mailto:Lisa.C.Andes@usace.army.mil">Lisa.C.Andes@usace.army.mil</a>
Craig Conner	Plan Formulation	(415) 503-6903	<a href="mailto:Craig.S.Conner@usace.army.mil">Craig.S.Conner@usace.army.mil</a>
York So	Cost Engineering	(415) 503-6878	<a href="mailto:York.J.So@usace.army.mil">York.J.So@usace.army.mil</a>
Al Paniccia	Project Management	(415) 503-6735	<a href="mailto:Al.Paniccia@usace.army.mil">Al.Paniccia@usace.army.mil</a>

### AGENCY TECHNICAL REVIEW TEAM

Name	Discipline	Phone	Email
To Be Determined	ATR Team Leader/Plan Formulation		
To Be Determined	Civil Design		
To Be Determined	Economics		
To Be Determined	Environmental Resources		
To Be Determined	Cost Engineering		
To Be Determined	Geotechnical Engineering		

### VERTICAL TEAM

Name	Discipline	Phone	Email
Paul Devitt	District Support Team	(415) 503-6558	<a href="mailto:Paul.A.Devitt@usace.army.mil">Paul.A.Devitt@usace.army.mil</a>
Pauline Acosta	Regional Integration Team	(202) 761-4085	<a href="mailto:Pauline.M.Acosta@usace.army.mil">Pauline.M.Acosta@usace.army.mil</a>
Bernard Moseby	DDN-PCX	(251) 694-3884	<a href="mailto:Bernard.E.Moseby@usace.army.mil">Bernard.E.Moseby@usace.army.mil</a>
Boniface Bigornia	South Pacific Division Business Technical Division	(415) 503-6567	<a href="mailto:Boniface.G.Bigornia@usace.army.mil">Boniface.G.Bigornia@usace.army.mil</a>

**ATTACHMENT 2: SAMPLE DQC CERTIFICATION SHEET**

**DISTRICT QUALITY CONTROL CERTIFICATION  
COMPLETION OF QUALITY CONTROL ACTIVITIES**

The District has completed the (*insert work product here*) for the Oakland Harbor Deepening, 50-foot, navigation project.

Certification is hereby given that all quality control activities appropriate to the level of risk and complexity inherent in the product have been completed.

**GENERAL FINDINGS**

Compliance with clearly established policy principles and procedures, utilizing clearly justified and valid assumptions, has been verified. This includes assumptions; methods, procedures and materials used in analyses; alternatives evaluated; the appropriateness of data used and level of data obtained; and the reasonableness of the results. The undersigned recommends certification of the quality control process for this product.

\_\_\_\_\_  
[Name of DQC member]  
[Position Title]  
[Office Symbol]

\_\_\_\_\_

Date

**ATTACHMENT 3: SAMPLE ATR CERTIFICATION SHEET**

**STATEMENT OF TECHNICAL REVIEW  
COMPLETION OF AGENCY TECHNICAL REVIEW**

The San Francisco District has completed the review of the *(insert work product here)* for the Oakland Harbor Deepening, 50-foot, navigation project. Notice is hereby given that an agency technical review (ATR) that is appropriate to the level of risk and complexity inherent in the project has been conducted as defined in the Review Plan. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level obtained; and reasonableness of the result, including whether the product meets the customer's needs consistent with law and existing Corps policy. All comments resulting from the ATR have been resolved.

\_\_\_\_\_  
[Name]  
ATR Team Leader  
[Office Symbol or AE Firm]

\_\_\_\_\_  
Date

\_\_\_\_\_  
Lyn Gillespie, P.E.  
Chief, Engineering & Technical Services Division  
CESPN-ET

\_\_\_\_\_  
Date

**CERTIFICATION OF AGENCY TECHNICAL REVIEW**

A summary of all comments and responses is attached. Significant concerns and the explanation of the resolution are as follows:

*(Describe the major technical concerns, possible impact and resolution)*

As noted above, all concerns resulting from the independent technical review of the project have been fully resolved.

\_\_\_\_\_  
Clyde Y. Okazaki, P.E.  
Chief, Business Technology Division  
CESPD-RBT

\_\_\_\_\_  
Date

## ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

<u>Term</u>	<u>Definition</u>
ATR	Agency Technical Review
ATRTR	Agency Technical Review Team
BCOES	Biddability, Constructability, Operability, Environmental, and Sustainability
CoP	Community of Practice
DDR	Design Documentation Report
DQC	District Quality Control/Quality Assurance
DST	District Support Team
DX	Directory of Expertise
EC	Engineer Circular
ESA	Endangered Species Act
HQUSACE	Headquarters, U.S. Army Corps of Engineers
HTRW	Hazardous, Toxic, or Radioactive Waste
HWRP	Hamilton Wetlands Restoration Project
IEPR	Independent External Peer Review
LERR	Lands, Easements, Rights of Way, and Relocations
MHEA	Middle Harbor Enhancement Area
MLLW	Mean Lower Low Water
MSC	Major Subordinate Command
MWRP	Montezuma Wetlands Restoration Project
NEPA	National Environmental Policy Act
OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
PCX	Planning Center of eXpertise
PDT	Project Delivery Team
PL	Public Law
PM	Project Manager
PMP	Project Management Plan
P&S	Plans and Specifications
RIT	Regional Integration Team
RMC	Risk Management Center
RMO	Review Management Organization
SAR	Safety Assurance Review
TAC	Technical Advisory Committee
USACE	U.S. Army Corps of Engineers
WRDA	Water Resources Development Act

## ATTACHMENT 5: SUMMARY OF CHANGES TO THE REVIEW PLAN

This page will document all of the minor changes that were made to the Review Plan after its approval by the South Pacific Division Commander.

Date	Description of Changes