



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, U.S. ARMY CORPS OF ENGINEERS
FORT SHAFTER, HAWAII 96858-5440

CEPOD-PDC

2 November 2012

MEMORANDUM FOR COMMANDER HONOLULU ENGINEER DISTRICT (CEPOH-PP-C/CINDY BARGER), BUILDING 230, FORT SHAFTER, HI 96858-5440

SUBJECT: Review Plan Approval for the Matafao Continuing Authorities Program (CAP) Section 103 Feasibility Report, Island of Tutuila, American Samoa, Shore Protection Project,

1. References:

a. Engineering Circular 1165-2-209, Civil Works Review Policy, 31 January 2010, and Change 1, 31 January 2012.

b. Policy Memorandum #1, HQ USACE, CECW-P, 19 January 2011, subject: Continuing Authority Program Planning Process Improvements.


c. Review Plan for the Matafao Section 103 Feasibility Report, Island of Tutuila, American Samoa, Honolulu District, U.S. Army Corps of Engineers, 2 November 2012.

2. The enclosed Review Plan (reference 1.c.) for the Matafao, American Samoa, shore protection project was prepared IAW references 1.a. and 1.b. The Pacific Ocean Division Civil Works Division is the lead office to execute this Review Plan. This Plan does include Type I Independent External Peer Review.

3. I approve this Review Plan. It 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. The point of contact for this memorandum is Mr. Russell Iwamura, Senior Economist, Civil Works Integration Division, at 808-835-4625 or email Russell.K.Iwamura@usace.army.mil.

Encl


GREGORY J. GUNTER
Colonel, EN
Acting Commander

REVIEW PLAN

MATAFAO SHORE PROTECTION PROJECT
ISLAND OF TUTUILA, AMERICAN SAMOA

Feasibility Study
Continuing Authorities Program (CAP)
Section 103 of the Rivers and Harbors Act of 1962

U.S. Army Corps of Engineers, Honolulu District



Matafao Shore

MSC Approval Date: 2 November 2012

Last Revision Date: 2 November 2012



US Army Corps
of Engineers®

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REVIEW PLAN

MATAFAO SHORE PROTECTION PROJECT
ISLAND OF TUTUILA, AMERICAN SAMOA

Feasibility Study

Continuing Authorities Program (CAP)
Section 103 of the Rivers and Harbors Act of 1962

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This review plan defines the scope and level of peer review for the Matafao Shore Protection Project, Island of Tutuila, American Samoa, Feasibility Study, Continuing Authorities Program (CAP), Section 103 of the Rivers and Harbors Act of 1962, Project decision document.

Section 103 of the Rivers and Harbors Act of 1962, as amended, is one of the legislative authorities within the CAP under which the Secretary of the Army, acting through the Chief of Engineers, is authorized to plan, design, and implement certain types of water resources projects without additional project specific congressional authorization. CAP projects are water resource related projects of smaller scope, cost, and complexity than typical U.S. Army Corps of Engineers (USACE) Civil Works projects which require specific authorization by Congress. Under the delegated authority of Section 103, USACE is authorized to plan, design, and construct small shore and beach restoration and protection projects without project specific congressional authorization.

This review plan was developed using the National Planning Center of Expertise (PCX) review plan template dated 15 June 2011.

b. References.

- (1) Engineer Circular (EC) 1165-2-209, Civil Works Review Policy, 31 January 2010 and Change 1, 31 January 2012.
- (2) EC 1105-2-412, Assuring Quality of Planning Models, 31 March 2011.
- (3) Engineer Regulation (ER) 1110-1-12, Quality Management, 30 September 2006.
- (4) ER 1105-2-100, Planning Guidance Notebook, Appendix F, Continuing Authorities Program, Amendment #2, 31 January 2007.
- (5) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 November 2007.
- (6) Director of Civil Works Policy Memorandum #1, CAP Planning Process Improvements, 19 January 2011.
- (7) Matafao Shore Protection Project, American Samoa, Project Management Plan (PMP) dated 12 April 2012.
- (8) USACE Pacific Ocean Division (POD) Quality Management Plan, December 2010.
- (9) USACE Honolulu District (POH) Civil Works Review Policy (ISO CEPOH-C_12203), 1 November 2010.

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. In addition to these levels of review, CAP decision documents are subject to cost engineering review and certification (per EC 1165-2-209), and the Director of Civil Works' Policy Memorandum #1, and the Value Management Plan requirements in the Project Management Business Process (PMBP) Reference 8023G and the ER 11-1-321, Change 1.

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 the peer review effort described in this review plan is POD. POD will coordinate and approve the review plan and manage the Agency Technical Review.

The RMO will coordinate with the Cost Engineering Directory of Expertise (DX) as needed to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules and contingencies.

3. STUDY INFORMATION

a. Decision Document. The Matafao Shore Protection Project, Island of Tutuila, American Samoa decision document will be prepared in accordance with ER 1105-2-100, Appendix F. The approval level of the decision document (if policy compliant) is POD. An integrated feasibility report and Environmental Assessment (EA) will be developed for the project.

b. Study/Project Description.

Location: The existing project is located within Pago Pago Bay on the island of Tutuila, American Samoa (Figure 1).

Project Sponsor: The non-Federal sponsor is American Samoa Government Department of Education.

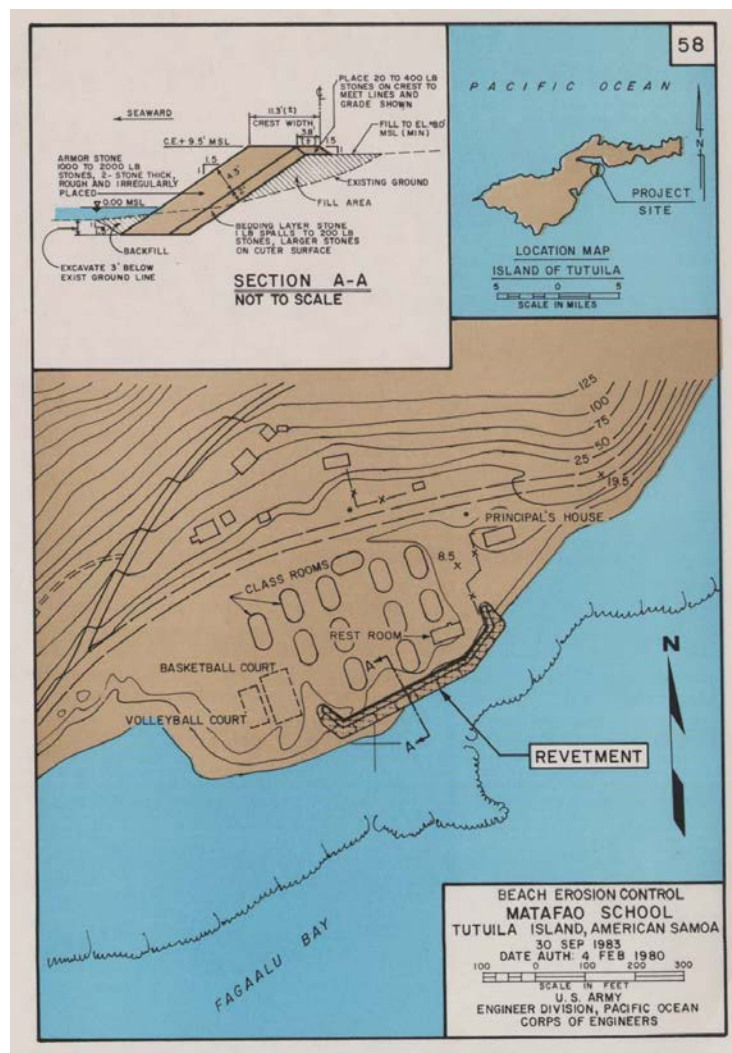
Background: In 1984, USACE constructed a shore protection project in the project area under Section 14 of the Flood Control Act of 1946. The purpose of the project was to stop shoreline erosion that was threatening Matafao School. Since 1984, additional structures have been constructed in Matafao to either side of the federal project. These structures are threatened by shoreline erosion and damages from coastal storms. In addition, the structures behind the federal project, while no longer threatened by shoreline erosion, still experience damages from coastal storms. The American Samoa Government Department of Education requested USACE

assistance to modify the existing structure to provide for improved coastal storm damage reduction at the existing federal project and along the shoreline adjacent to the federal project. Figure 2 provides an aerial image of the structures currently at risk.

Problems: Matafao School is vulnerable to inundation and wave damages from elevated water levels during storm events. The shoreline adjacent to the western end of the existing federal project is eroding and will experience continued erosion during future large wave events. The key problems for the study include:

- Reoccurring inundation and wave damages to school property and facilities, and
- Continued erosion of shoreline adjacent to the western end of the existing federal project.

Figure 1: Matafao Project Location Map



Alternatives: In addition to the no action alternative, the Project Delivery Team (PDT) has formulated the following alternative plans and is comparing and evaluating these plans to identify a Tentatively Selected Plan:

- Tribar revetment along unprotected sections of the shoreline with an elevated concrete rubble masonry (CRM) wall behind the existing federal project.
- Concrete capped sheet pile wall along the unprotected sections of the shoreline with an elevated CRM wall behind the existing federal project, and
- Armor stone revetment along the unprotected sections of the shoreline with an elevated CRM wall behind the existing federal project.

The estimated cost of construction for the alternatives ranges from \$2.2 - \$3 million.

Figure 2: Aerial Image of Project Location showing one of the alternatives to be considered in the feasibility phase of study



c. Factors Affecting the Scope and Level of Review. As a CAP project, the project risks are minimal. Environmental impacts are anticipated to be less than significant. Plan formulation is not expected to be challenging or novel. The project is not anticipated to require redundancy, resiliency and/or robustness, unique construction sequencing, or reduction in overlapping design construction schedules. There has been no request by the Governor for peer review by

independent experts, nor is there significant public dispute over any aspect of the proposed project. The primary concern for this project is storm damage reduction and potential life safety issues associated with flood risk management projects.

With the Matafao School and other structures occurring on the shoreline, there is a potential for life safety issues associated with coastal storm damage reduction. Consistent with the Director of Civil Works Policy Memorandum #1, Section 103 projects require an IEPR unless risk to life safety can be documented as minimal. The PDT is assuming that an IEPR will be required for this project.

Consistent with EC 1165-2-209, Mr. Todd Barnes, POH Chief of Engineering and Construction, concurs with the assessment that there are potential life safety issues at this stage in plan formulation. If life safety issues are minimized during the formulation of the Tentatively Selected Plan (TSP), the assessment will be reviewed by the POH Chief of Engineering and Construction. If appropriate, POH will request an exemption from IEPR consistent with EC 1165-2-209.

d. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as work-in-kind services are subject to DQC, ATR, and IEPR. There are no in-kind services being proposed by the non-Federal sponsor for this project.

4. DISTRICT QUALITY CONTROL (DQC)

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the PMP. POH shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manuals of POH and POD.

a. Documentation of DQC. Consistent with the POH Quality Manual, DQC will be documented using the POH DQC review table. When all comments have been addressed and back checked, the DQC lead will sign a DQC certification in compliance with the POH Quality Manual. The DQC comments and responses will be provided for the ATR team at each review.

b. Products to Undergo DQC. The following products will be subject to DQC:

- (1) Draft and final integrated feasibility report/EA.
- (2) All technical reports and appendices developed in support of the integrated feasibility study/EA.
- (3) The draft and final EA decision.

c. Required DQC Expertise. The following expertise is needed for DQC:

- CSDR plan formulation.
- Coastal engineering with expertise in tropical hurricane and pacific storms.
- Cost Engineer.
- Economist.
- Geotechnical Engineer.
- Environmental specialist with expertise in Civil Works environmental compliance, including National Environmental Policy Act (NEPA), Clean Water Act (CWA) Section 404(b)(1) alternatives analysis, and Endangered Species Act (ESA) and Essential Fish Habitat (EFH) consultations.

5. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.). The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with published USACE guidance, and that the document explains the analyses and results in a reasonably clear manner for the public and decision makers. ATR is managed within USACE by the designated RMO, and is conducted by a qualified team from outside POH that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. The ATR team lead will be from outside POD.

a. Products to Undergo ATR. Because this project is limited in scope and complexity, the PDT anticipates an ATR is only needed for the feasibility/report and EA. The following products will be subject to ATR:

- (1) Integrated feasibility report/EA.
- (2) All technical reports and appendices developed in support of the integrated feasibility study/EA.

b. Required ATR Team Expertise. The following ATR expertise is required for this project. Because the project is small, where possible ATR team members will address multiple disciplines and emphasis. POD will identify the final make-up of the ATR team and identify the ATR team leader in consultation with the Project Manager (PM), vertical team and other appropriate centers of expertise. Once identified, the ATR team members and a brief description of their credentials will be added to Attachment 1.

Table 1: ATR Required Expertise

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents and conducting an ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The ATR lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc).
Planning	The planning reviewer should be a senior water resources planner with experience in coastal storm damage reduction projects.
Economics	The economic reviewer should be a senior economist with experience in coastal storm damage reduction projects.
Environmental Resources	The environmental reviewer should be a senior environmental specialist with experience in coastal storm damage reduction projects, Civil Works environmental compliance, including NEPA, CWA Section 404(b) (1) alternatives analysis, and ESA and Essential Fish Habitat (EFH) consultations. POH anticipates that the project may affect but is not likely to adversely affect ESA species or designated EFH.
Coastal Engineering	Coastal engineering reviewer should be a senior coastal engineer with expertise in tropical hurricane and pacific storms.
Geotechnical Engineering	Geotechnical engineering reviewer should be a senior geotechnical engineer with expertise in CSDR projects including CRM and sheet pile shore protection.
Cost Engineering	The cost engineering reviewer should be a senior cost engineer with expertise in coastal storm damage reduction and CAP projects.
Real Estate	The real estate reviewer should be a senior real estate specialist with expertise in coastal storm damage reduction and CAP projects. Real estate issues are not complex and are expected to be relatively straight forward.

c. Documentation of ATR. DrCheckssm review software will be used to document all ATR comments, responses, and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

- (1) The review concern – identify the product’s information deficiency or incorrect application of policy, guidance, or procedures;

- (2) The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not been properly followed;
- (3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and
- (4) The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations where information is incomplete or unclear, comments may seek clarification in order to then assess whether further specific concerns may exist.

The ATR documentation in DrCheckssm will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes POH, POD, and possibly the CSDR-PCX and HQUSACE), and the agreed upon resolution. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in either ER 1110-1-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrCheckssm with a notation that the concern has been elevated to the vertical team for resolution.

At the conclusion of each ATR effort, the ATR team will prepare a Review Report summarizing the review. Review Reports will be considered an integral part of the ATR documentation and shall:

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement

of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed, based on work reviewed to date, for the draft report, and final report. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

IEPR may be required for decision documents under certain circumstances. IEPR is the most independent level of review and is applied where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. A risk-informed decision, as described in EC 1165-2-209, is made to assess whether an IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines. The IEPR panel will represent a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR:

- **Type I IEPR.** Type I IEPR reviews are managed outside the USACE by an Outside Eligible Organization (OEO) and are conducted on project studies. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review (SAR)) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-209.
- **Type II IEPR.** Type II IEPR, or SAR, is managed outside by the Risk Management Center (RMC) and is conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. Type II IEPR panels will conduct reviews of the design and construction activities prior to initiation of physical construction and, until construction activities are completed, periodically thereafter on a regular schedule. The reviews shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.

a. Decision on IEPR. As a CSDR project, there is a potential for life safety issues related to storm damage reduction projects with the school and other structures in close proximity to the shoreline. Consistent with the Director of Civil Works Policy Memorandum #1 dated 19 January 2011; Section 103 studies have the potential for life safety issues and require a Type I IEPR. As the tentatively selected plan is formulated, POH may determine that life safety issues are minimal. In this event, POD will coordinate with POD and the CSDR PCX and seek an appropriate waiver from the IEPR.

The project is not anticipated to require an Environmental Impact Statement (EIS) and will not produce influential scientific information. There have been no requests for an IEPR from a head of a Federal or state agency charged with reviewing the project. There are no innovative materials or techniques proposed. The project design will not require redundancy, resiliency, and/or robustness. The project does not have unique construction sequencing or a reduced or overlapping design construction schedule.

Since the project is a CSDR project, a Type II IEPR is anticipated on the design and construction of this project. Safety Assurance will also be addressed during the Type I IEPR per Paragraph 2.c. (3) of Appendix D of EC 1165-2-209.

b. Products to Undergo Type I IEPR. The draft integrated feasibility study/EA and draft EA decision and supporting technical documentation will undergo a Type I IEPR. The IEPR will be scheduled with the public review of the report.

c. Required Type I IEPR Panel Expertise. The following IEPR expertise is required for this project. Because the project is small, where possible IEPR panel members will address multiple disciplines and emphasis. POD will identify the final make-up of expertise required for the IEPR team in consultation with the PM, vertical team and other appropriate centers of expertise. Once identified, the IEPR panel members and a brief description of their credentials will be added to Attachment 1.

Table 2: IEPR Required Expertise

IEPR Panel Members/Disciplines	Expertise Required
Economics	The Economics Panel Member should be a senior economist with experience in coastal storm damage reduction projects.
Environmental	The Environmental Panel Member should have experience in NEPA, CWA Section 404(b) (1) alternatives analysis; and ESA/EFH. POH anticipates that the project may affect but is not likely to adversely affect ESA species or designated EFH.
Engineering	The Engineering Panel Member should have experience in coastal engineering in Pacific tropical systems and knowledge of coastal storm damage reduction measures.

d. Documentation of Type I IEPR. The IEPR panel will be selected and managed by an OEO per EC 1165-2-209, Appendix D. Panel comments will be compiled by the OEO and should address the adequacy and acceptability of the economic, engineering, and environmental methods, models, and analyses used. IEPR comments should generally include the same four key parts as described for ATR comments in Section 5.c above. The OEO will prepare a final Review Report that will accompany the publication of the final decision document and shall:

- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions; and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

The final Review Report will be submitted by the OEO no later than 60 days following the close of the public comment period for the draft decision document. USACE shall consider all recommendations contained in the Review Report and prepare a written response for all recommendations adopted or not adopted. The final decision document will summarize the Review Report and USACE response. The Review Report and USACE response will be made available to the public, including through electronic means on the internet.

7. POLICY AND LEGAL COMPLIANCE REVIEW

All decision documents will be reviewed throughout the study process for their compliance with law and policy. 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 POD Commander. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.

8. COST ENGINEERING DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION

For CAP projects, ATR of the costs may be conducted by pre-certified district cost personnel within the region or by the Walla Walla Cost DX. The pre-certified list of cost personnel has been established and is maintained by the Cost DX at: <https://kme.usace.army.mil/EC/cost/CostAttr/default.aspx>. The cost ATR member will coordinate with the Cost DX for execution of cost ATR and cost certification. The Cost DX will be responsible for final cost certification and may be delegated at the discretion of the Cost DX.

9. MODEL CERTIFICATION AND APPROVAL

a. Planning Models. The approval of planning models under EC 1105-2-412 is not required for CAP projects. The POD Commander is responsible for assuring models for all planning activities are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. 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. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

A site specific model will be used for economic analysis. The site specific economic model will be reviewed as part of the DQC and ATR. The following planning model is anticipated to be used in the development of the decision document:

Table 3: Planning Model and Certification/Approval Status

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Certification / Approval Status
Matafao Site Specific Economic Spreadsheet model	A customized, excel spreadsheet model will be developed specifically for Section 103s that will focus on with- and without-project coastal storm damage reduction. Building the frequency-damage relationship for the buildings and coastline impacts of a suite of various storm intensities will be the primary function of the model. It will be calibrated with historical damages where data exists. In addition to this customized spread sheet model, Institute of Water Resources (IWR) Plan Annualizer in the IWR Planning Suite is the certified model that will be used to compute average annual values of cost and benefits, discount future values to present values, compute interest during construction and perform other basic arithmetic functions. The requirement for risk analysis will be met using Monte-Carlo analysis software, either @Risk (Palisade.com) or Crystal Ball (oracle.com).	Approval concurrent with ATR.

It is anticipated that compensatory mitigation will not be required for this project. Therefore no ecosystem output model or evaluation will be needed.

b. Engineering Model. The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies, and these models should be used whenever appropriate. The selection and application of the model and the input and output data are still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

The following engineering model is anticipated to be used in the development of the decision document:

Table 4: Engineering Model and Approval Status

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Approval Status
CEDAS (Coastal Engineering and Design Analysis System)	CEDAS (Coastal Engineering and Design Analysis System) software package will be used for this project. CEDAS was developed by USACE Engineering Research and Development Center (ERDC) Coastal and Hydraulics Laboratory (CHL). CEDAS solves coastal engineering equations based upon known input conditions. For this project, the CEDAS will be used to determine the anticipated runup and inundation levels based upon the design water levels obtained from a prior ERDC study in American Samoa.	ERDC CHL Preferred Model

10. REVIEW SCHEDULES AND COSTS

a. DQC Schedule and Cost. The DQC for this study will be accomplished in accordance with the cost and schedule in the PMP. As of the approval date of this Review Plan, the DQC is scheduled as follows:

- Draft report review: April 2014.
- Estimated Cost: \$10,000.

b. ATR Schedule and Cost. The ATR for this study will be accomplished in accordance with the cost and schedule in the PMP. As of the approval date of this Review Plan, the ATR is scheduled as follows:

- Draft report review: June 2014.
- Estimated Cost: \$20,000.

c. Type I IEPR Schedule and Cost. The IEPR for this study will be accomplished in accordance with the cost and schedule in the PMP. As of the approval date of this Review Plan, the IEPR is scheduled as follows:

- Draft report review: September 2014.
- Estimated Contract Cost - \$75,000.

Pursuant to Section 2034 of the Water Resources Development Act (WRDA) of 2007, this amount is 100% federally funded.

- Estimated Cost of District and CSDR PCX Coordination of the IEPR: \$40,000.

This estimate was developed using the Type I IEPR Standard Operating Procedure table provided by the PCXs. This amount is cost-shared between USACE and the non-Federal Sponsor.

d. Model Certification/Approval Schedule and Cost. There is no cost for this item as model certification or approval is not required. The study specific economic model will be reviewed current with the ATR.

11. PUBLIC PARTICIPATION

A Public Involvement Plan (PIP) will be developed for the feasibility study to guide the public participation process. Small group meetings with key stakeholders and resource agencies will be conducted to collect specific information relevant to study goals and objectives and provide information to key stakeholders and interest groups relevant to the study goals and objectives. A public scoping meeting will be held prior to the development of the Draft Feasibility Report/EA. A public meeting will be held to seek input on the draft report.

State and Federal resource agencies may be invited to participate in the study covered by this review plan as partner agencies or as technical members of the PDT, as appropriate. Agencies with regulatory review responsibilities will be contacted for coordination as required by applicable laws and procedures. The ATR team will be provided copies of public and agency comments.

12. REVIEW PLAN APPROVAL AND UPDATES

The POD Commander is responsible for approving this Review Plan. The POD Commander's approval reflects vertical team input (involving POH, POD, CSDR-PCX, and HQUSACE members) as to the appropriate scope and level of review for the decision document. Like the PMP, the Review Plan is a living document and may change as the study progresses. POH is responsible for keeping the Review Plan up to date. Minor changes to the review plan since the last POD Commander approval are documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) will be re-approved by the POD Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the POD Commander's approval memorandum, will be posted on the POH webpage. The latest Review Plan will also be provided to POD and the CSDR-PCX.

13. REVIEW PLAN POINTS OF CONTACT

Public questions and/or comments on this review plan can be directed to the following points of contact:

Honolulu District

Ms. Deborah A. Solis
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Review Management Organization/Pacific Ocean Division

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**ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR
DECISION DOCUMENTS**

COMPLETION OF AGENCY TECHNICAL REVIEW

The ATR has been completed for the <type of product> for <project name and location>. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-209. 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 results, including whether the product meets the customer's needs consistent with law and existing USACE policy. The ATR also assessed the DQC documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrCheckssm.

SIGNATURE

Name

ATR Team Leader

Office Symbol/Company

Date

SIGNATURE

Name

Project Manager

Office Symbol

Date

SIGNATURE

Name

Architect Engineer Project Manager¹

Company, location

Date

SIGNATURE

Name

Review Management Office Representative

Office Symbol

Date

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: *Describe the major technical concerns and their resolution.*

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

SIGNATURE

Name

Chief, Engineering Division

Office Symbol

Date

SIGNATURE

Name

Chief, Planning Division

Office Symbol

Date

¹ Only needed if some portion of the ATR was contracted.

ATTACHMENT 3: REVIEW PLAN REVISIONS

Table 9: Review Plan Revisions

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

Table 10: Standard Acronyms and Abbreviations

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
AFB	Alternative Formulation Briefing	NEPA	National Environmental Policy Act
ASA(CW)	Assistant Secretary of the Army for Civil Works	O&M	Operation and maintenance
ATR	Agency Technical Review	OMB	Office and Management and Budget
CSDR	Coastal Storm Damage Reduction	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DPR	Detailed Project Report	OEO	Outside Eligible Organization
DQC	District Quality Control/Quality Assurance	OSE	Other Social Effects
DX	Directory of Expertise	PAC	Post Authorization Change
EA	Environmental Assessment	PCX	Planning Center of Expertise
EC	Engineer Circular	PDT	Project Delivery Team
EIS	Environmental Impact Statement	PMP	Project Management Plan
EO	Executive Order	PL	Public Law
ER	Engineer Regulation	POD	U.S. Army Corps of Engineers, Pacific Ocean Division
FDR	Flood Damage Reduction	POH	U.S. Army Corps of Engineers, Honolulu District
FEMA	Federal Emergency Management Agency	QMP	Quality Management Plan
FRM	Flood Risk Management	QA	Quality Assurance
FSM	Feasibility Scoping Meeting	QC	Quality Control
GRR	General Reevaluation Report	RED	Regional Economic Development
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMC	Risk Management Center
IEPR	Independent External Peer Review	RMO	Review Management Organization
ITR	Independent Technical Review	RTS	Regional Technical Specialist
LRR	Limited Reevaluation Report	SAR	Safety Assurance Review
MSC	Major Subordinate Command	USACE	U.S. Army Corps of Engineers
NED	National Economic Development	WRDA	Water Resources Development Act
NER	National Ecosystem Restoration		