



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

03 OCT 2016

CEPOD-PDC

MEMORANDUM FOR Commander, Alaska Engineer District (CEPOA-PM-C-PL/George Kalli), P.O. Box 6898 JBER, AK 99506-0898

SUBJECT: Review Plan Approval for the St. George Harbor Feasibility Report

1. References:

a. Engineering Circular 1165-2-214, Civil Works Review, 15 December 2012.

b. Review Plan for the St. George Harbor Feasibility Report, Alaska District, U.S. Army Corps of Engineers (Enclosed).

2. This memorandum constitutes approval of the Review Plan for the St. George Harbor Feasibility Report, Alaska District, U.S. Army Corps of Engineers, which does not include a Type I Independent External Peer Review.

3. The approved Review Plan is subject to change as circumstances require, consistent with project development under the Project Management Business Process. Subsequent significant revisions to this Review Plan or its execution require my written approval.

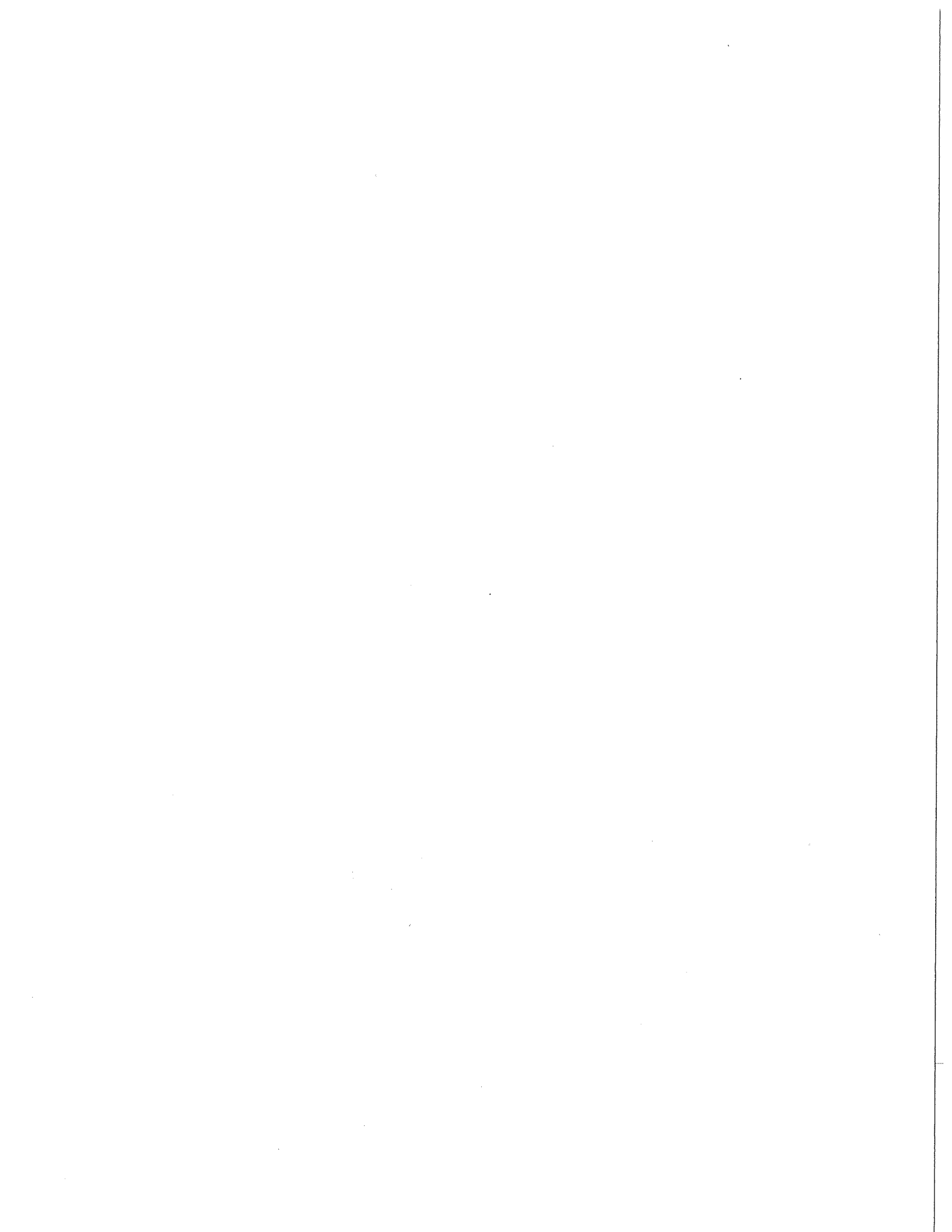
4. For further information or clarification about the review process, please contact the Alaska District, Small Boat Harbor Planning Sub-Center of Expertise at 907-753-5619.

5. POC is Mr. Russell Iwamura, Senior Economist, Civil Works Integration Division, at 808-835-4625 or email [Russell.K.Iwamura@usace.army.mil](mailto:Russell.K.Iwamura@usace.army.mil).

A handwritten signature in black ink, appearing to be "P. Andrysiak", written over the text of the fifth reference point.

Encl

PETER B. ANDRYSIK, P.E.  
Colonel, EN  
Commanding



# **REVIEW PLAN**

**St. George Harbor Feasibility Study**

**Alaska District**

**MSC Approval Date: 3 October 2016**  
**Last Revision Date: 2 November 2018**



**US Army Corps  
of Engineers®**

# REVIEW PLAN

## St. George Harbor Feasibility Study

### TABLE OF CONTENTS

1. PURPOSE AND REQUIREMENTS.....	1
2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION .....	1
3. STUDY INFORMATION .....	2
4. DISTRICT QUALITY CONTROL (DQC) .....	6
5. AGENCY TECHNICAL REVIEW (ATR).....	7
6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR) .....	10
7. POLICY AND LEGAL COMPLIANCE REVIEW .....	12
8. CIVIL WORKS ENGINEERING AND AGENCY TECHNICAL REVIEW MANDATORY CENTER OF EXPERTISE (MCX) REVIEW AND CERTIFICATION.....	13
9. MODEL CERTIFICATION AND APPROVAL.....	13
10. REVIEW SCHEDULES AND COSTS .....	14
11. PUBLIC PARTICIPATION .....	15
12. REVIEW PLAN APPROVAL AND UPDATES.....	15
13. REVIEW PLAN POINTS OF CONTACT.....	15
ATTACHMENT 1: TEAM ROSTERS.....	17
ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS .....	19
ATTACHMENT 3: REVIEW PLAN REVISIONS.....	21
ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS .....	20

## 1. PURPOSE AND REQUIREMENTS

**a. Purpose.** This Review Plan defines the scope and level of peer review for the St. George Harbor Feasibility Study.

### **b. References.**

- (1) Engineering Circular (EC) 1165-2-214, Civil Works Review Policy, 15 Dec 2012.
- (2) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011.
- (3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006.
- (4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007.
- (5) St. George Small Boat Harbor feasibility study Project Management Plan.
- (6) Alaska District (POA) Quality Management Plan, CEPOA-QMP-001, Jan 2010.
- (7) Pacific Ocean Division (POD) Quality Management Plan, Nov 2014.
- (8) Project Management Business Process (PMBP) Reference 8023G and ER 11-1-321, Change 1.
- (9) Water Resources Reform and Development Act (WRRDA) Section 1044, Independent Peer Review, Jan 2014.

**c. Requirements.** This review plan was developed in accordance with EC 1165-2-214, 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, decision documents are subject to cost engineering review and certification (per EC 1165-2-214), planning model certification/approval (per EC 1105-2-412), and Value Management Plan requirements in the PMBP REF 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 decision documents is typically either a Planning Center of

Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the decision document. The RMO for the peer review effort described in this Review Plan is the Deep Draft Navigation PCX (DDNPCX) in Mobile, AL.

The RMO will coordinate with the Civil Works Cost Engineering and Agency Technical Review Mandatory Center of Expertise (MCX) 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. Authority.** This feasibility study is being conducted under authority granted by Section 4010 of the Water Resources Development Act (WRDA) of 2007 which states: *“The Secretary shall conduct a study to determine the feasibility of providing navigation improvements at St. George Harbor, Alaska.”*

**b. Additional Study Guidelines.** The recommendation for the project is expected to utilize the authority of Section 2006 of WRDA 2007 – Remote and Subsistence Harbors, as modified by Section 2104 of the Water Resources Reform and Development Act (WRRDA) 2014 (33 USC § 2242). 33 U.S.C. § 2242 specifically states that in conducting a study of harbor and navigation improvements the Secretary may recommend a project without demonstrating that the improvements are justified solely by National Economic Development (NED) benefits, if the Secretary determines that the improvements meet the following criteria:

- The community to be served by the improvements is at least 70 miles from the nearest surface accessible commercial port and has no direct rail or highway link to another community served by a surface accessible port or harbor; or the improvements would be located in the State of Hawaii or Alaska, the Commonwealth of Puerto Rico, Guam, the Commonwealth of the Northern Mariana Islands, the United States Virgin Islands; or American Samoa;
- The harbor is economically critical such that over 80 percent of the goods transported through the harbor would be consumed within the region served by the harbor and navigation improvement; and
- The long-term viability of the community would be threatened without the harbor navigation improvement.

St. George appears to meet all the above criteria based on a preliminary review of the information.

While determining whether to recommend a project under the criteria above, the Secretary will consider the benefits of the project to the following:

- Public health and safety of the local community, including access to facilities designed to protect public health and safety;
- Access to natural resources for subsistence purposes;
- Local and regional economic opportunities;
- Welfare of the local population; and
- Social and cultural value to the community.

**c. Decision Document.** The decision documents for this study will be an integrated feasibility report and associated National Environmental Policy Act (NEPA) document. The primary objective for the study is to determine the feasibility of constructing navigation improvements that would promote increased and safer harbor usage at St. George. The feasibility study will be the basis for a Chief of Engineers Report that will be provided to Congress with a request for construction authorization.

At this time, the District assumes an Environmental Assessment (EA) will be prepared with the feasibility report. If an Environmental Impact Statement (EIS) is required, the Alaska District will update the review plan accordingly.

**d. Study/Project Description.** This is a single purpose small boat harbor study to determine the feasibility of providing navigation improvements to St. George, Alaska. The City of St. George is located on the northeast shore of St. George Island, the southern-most of five islands in the Pribilofs. It lies 47 miles south of the St. Paul Island, 750 air miles southwest of Anchorage and 250 miles northwest of Unalaska (Figure 1). The population of St. George is 92 according to the 2014 State demographer's estimate. The community of St. George lacks road access. St. George is only accessible by water and air.

Access to the community of St. George's harbor is hazardous and endangers mariners traversing through the entrance channel. The inner harbor also experiences a dangerous wave and seiche (periodic oscillation) condition which threatens and damages vessels while anchored and berthed at St. George.

Modification and/or realignment of the breakwaters, entrance channel, and inner harbor basin of the existing harbor were investigated for their ability to reduce wave overtopping of the main breakwater, and adverse wave and seiche conditions in the harbor. The use of offshore breakwaters to improve conditions were also investigated. Construction of a new harbor at an alternate locations was also considered. Navigation improvements would promote increased and safer harbor usage by fishing vessels and freight delivery.

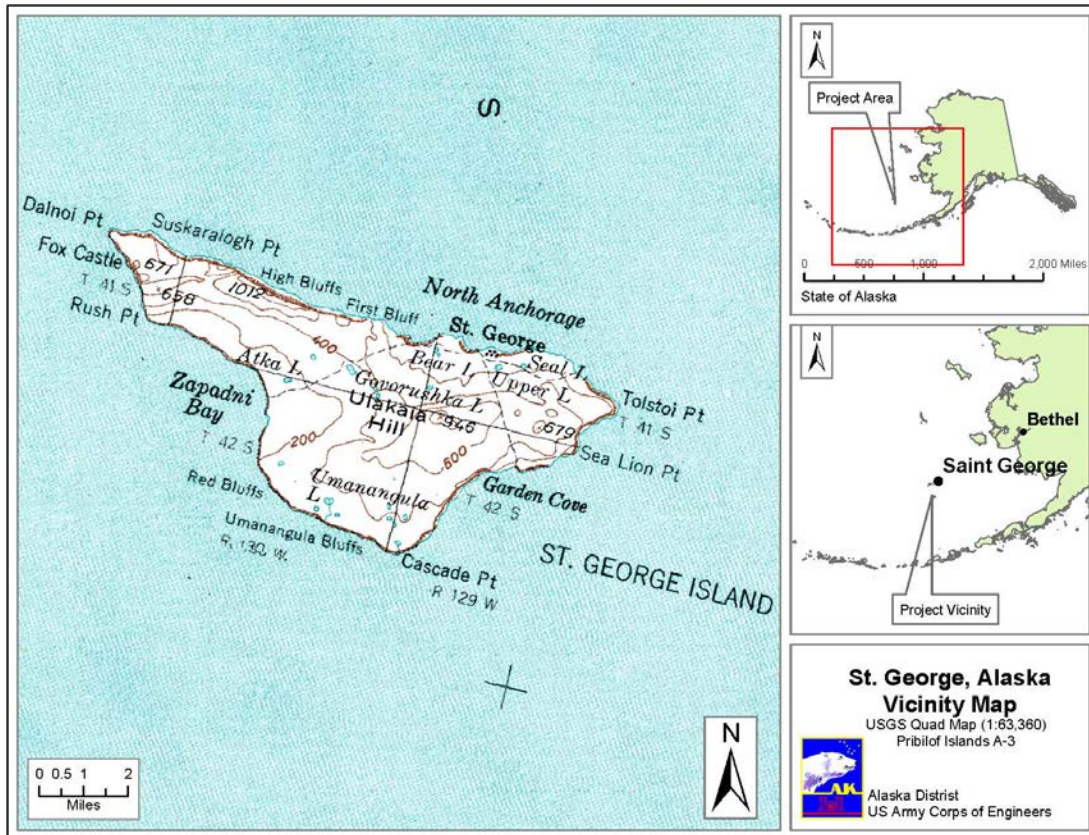


Figure 1: Study Area, St. George, Alaska

The City of Saint George is the local cost-share sponsor for the feasibility study. The State of Alaska has also provided financial and technical assistance to the community to help resolve their navigation issues. HDR, Inc., an architectural, engineering, and consulting firm, has been a subconsultant to the State of Alaska Department of Transportation & Public Facilities (AKDOT&PF) for much of the most recent efforts. At the initiation of this study, potential solutions were anticipated to cost approximately \$100 million.

In April 2018, a Tentatively Selected Plan (TSP) was confirmed by the Vertical Team. The TSP is for a new harbor located on the north side of the island adjacent to the City of St. George. The TSP consists of a 450-foot-wide by 550-foot-long mooring basin dredged to -20 feet Mean Lower Low Water (MLLW) protected by a 1,731-foot-long north breakwater and a 250-foot-long stub breakwater at the west edge of the basin (Figure 2). Primary armor stone on the north breakwater has a median weight of 10 tons. The basin connects to the Bering Sea with a 250-foot-wide navigation channel dredged to -25 feet MLLW. Inner harbor facilities include 2.6 acres of uplands area filled to +10 feet MLLW with a 300-foot-long pile supported dock and a concrete boat launch ramp to -5 feet MLLW for full tide launching access. The TSP is designed to support the subsistence vessel fleet; the fuel barge fleet; lash vessels and other cargo carrying



vessels; as well as approximately 85% of the existing crabber fleet. At the time of the TSP Milestone in April 2018, initial cost estimates of the TSP indicated a construction cost of \$101 million.



Figure 2 : Tentatively Selected Plan

**e. Factors Affecting the Scope and Level of Review.** This section discusses the factors affecting the risk informed decisions on the appropriate scope and level of review. Assumptions are as follows:

**(1) Is the project likely to involve a significant threat to human life/safety?**

No. Improved navigation access to St. George will provide safer access for longer periods of time than currently. A successful project will improve safety.

**(2) Are there significant environmental, economic, or social issues identified at this time?**

Despite the presence of significant biological and cultural resources located on St. George Island, a comprehensive coordination effort with National Marine Fisheries Service (NMFS), U.S. Environmental Protection Agency (USEPA), Alaska Department of Conservation (ADEC), and U.S. Fish and Wildlife Service (USFWS) has indicated that an EA will be sufficient for this project. Alaska District, biologists still require field

survey time at St. George Island to properly categorize biological diversity and existing underwater habitat conditions within the envisioned TSP footprint, as well as to confer with local, sentinel program marine mammal monitors regarding seasonal trends in abundance and habitat utilization. Additional regulatory agency coordination is required for the TSP. An Incidental Harassment Authorization that assesses and authorizes potential impacts to marine mammals as a function of underwater noise generated by the project must be obtained from the NMFS.

The TSP is located within the Seal Islands Historic District, which was designated as a National Historic Landmark (NHL) in 1962. The boundary of the NHL encloses the village of St. George and the proposed harbor location. Construction of a harbor on the north side of the island near the village of St. George will likely have an adverse effect requiring mitigation on at least two historic docks. Consultation was initiated with the Alaska State Historic Preservation Office (SHPO) and National Park Service – Alaska Region (NPS) on January 12, 2018. Once project funding has been secured and the harbor design finalized, the USACE will enter into a Memorandum of Agreement with the SHPO, NPS, City of St. George, and any other interested parties in order to determine appropriate mitigation for any adverse effects.

It is anticipated that NED benefits will not be sufficient to justify a project. If so, justification via the Remote and Subsistence Harbors authority will be pursued.

The local community feels very strongly that improved navigation improvements are imperative to the survival of their community. They are very opposed to pursuing any potential solutions that don't involve improving the existing harbor (i.e. relocation of community, development of alternate harbor site, etc.).

**(3) Is the project likely to have significant interagency interest?**

AKDOT&PF participated in the design of the existing harbor and is a technical consultant to the local sponsor for this study. Due to the concentration of biological resources on the island, resource agencies such as the USFWS and the NMFS will have an interest in this project. The level of interest is anticipated to be typical of navigation improvement projects. Coordination with these, and other, agencies has been initiated early in the study with their involvement in the January 2016 planning charette.

**(4) Is the project likely to contain influential scientific information or be a highly influential scientific assessment?**

There are no influential scientific information or assessments anticipated as part of this study.

**(5) Will the information in the decision document be based on novel methods, involve the use of innovative material or techniques, present complex**

**challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices?**

No. Design of navigation improvements at St. George will be based upon previously developed and utilized methods of analysis including numerical and physical modeling and interpretation of Wave Information Study (WIS) data.

**(6) Is the estimated final cost for the project over \$200 million?**

It is not likely that navigation improvements could exceed \$200 million. The initial estimate of the TSP is \$101 million.

**(7) Is there a request by the Governor of Alaska or an affected state for peer review by independent experts?**

Such a request is not anticipated for this project.

**(8) Is the project likely to involve significant public dispute as to the size, nature or effects of project?**

Being far from any population centers and media, it is anticipated that there will not be significant public dispute as to the size, nature or effects of the project. There could be public interest in the project due to the amount of public funds used to assist remote communities; however, such interest has not been expressed to date and should it occur it is not anticipated to be significant.

**(9) Are parts of the study likely to be challenging (e.g., technical, institutional, environmental, social, etc.)?**

The wave climate at some of the potential project sites is extreme. Uncertainties and risks will require careful identification and consideration. The wave climate combined with the extreme weather and remoteness of the site will make this a difficult and challenging project. However, Alaska District has experience in designing for similar conditions at nearby St. Paul Harbor. A design effort involving wave data collection, wave modeling, sediment transport modeling, and physical modeling will be completed to successfully design for the harsh conditions.

**f. In-Kind Contributions.** Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. The in-kind products and analyses to be provided by the non-Federal sponsor will be determined when we discuss study scope and budget with the City. It is anticipated that the in-kind contributions will consist of labor to gather and analyze needed data. In-kind contributions may also include:

- (1) Surveys and geotechnical engineering services;

- (2) Engineering services including modeling;
- (3) Economic analyses; and
- (4) Environmental resource surveys.

#### **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 Project Management Plan (PMP). POA shall manage DQC. Documentation of DQC activities is required and should be in accordance with the POA Quality Manual and POD.

**a. Documentation of DQC.** Review comments, evaluations (responses to comments), and response/action taken (for each comment) from the DQC of the Feasibility Study will be developed in a spreadsheet format developed by POA, titled "POA Civil Works DQC Comments" or some comparable tool. That information will be provided to the ATR team prior to its review. The DQC Lead will prepare a study report checklist confirming that all the required elements of the report/document are complete, consistent, and technically sufficient to support the findings and recommendations.

**b. Required DQC Expertise.** The Alaska District DQC process requires that the DQC team be composed of appropriate personnel, including technical chiefs and persons not directly associated with the Project Delivery Team (PDT) in the detailed preparation of the document. The team will include the following chiefs: Planning, Environmental, and Hydraulics & Hydrology. DQC members should include, as a minimum, the following members: cost engineer (with expertise in estimating costs for breakwater projects), geotechnical specialist, hydraulic design engineer (with expertise in designing breakwaters), economist (with expertise in small boat harbor data gathering and analysis), real estate specialist, and an environmental specialist (with expertise in NEPA compliance and evaluation of impacts on marine species).

**c. Products to Undergo DQC.** At a minimum, DQC of the draft and final reports and associated appendices will be performed.

#### **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 POA

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. The POA/POD will not nominate candidates for the ATR team.

**a. Products to Undergo ATR.** ATR will be performed on the Draft Report (including NEPA and supporting documentation) and Final Report (including NEPA and supporting documentation).

**b. Required ATR Team Expertise.** Members of the ATR team will reflect expertise of PDT members. It is anticipated that the ATR team will consist of 5-8 persons, (depending upon actual availability of specific persons at the time of the review and how the MCX handles the cost engineering review). One reviewer can serve on the ATR team to cover more than one discipline, provided they have the appropriate expertise in their background. The ATR team members' expertise required for this study are provided below.

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 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 extensive experience in the Corps planning process and be knowledgeable of current Corps policies and guidance. He/she should be familiar with navigation projects, in particular small boat harbor projects involving the use of breakwaters and other energy reduction measures.
Economics	The economics reviewer should be experienced in economic evaluation of Civil Works small boat harbor navigation projects
Environmental Resources	The environmental reviewer should be experienced in coastal ecosystems.
Hydraulic (Coastal) Engineering	The hydraulic engineering reviewer will be an expert in the field of coastal hydraulics and have a thorough understanding of analyses of winds, waves, currents, hydrodynamic-salinity, small boat harbor design, and breakwater construction. A registered professional engineer is recommended.

<p style="text-align: center;">Geotechnical Engineering</p>	<p>The geotechnical engineering reviewer will be experienced in geotechnical investigation practices including soil classification, the design of breakwater foundations, and the classification of rip rap and core materials for suitability in use of breakwater construction. A registered professional engineer is recommended.</p>
<p style="text-align: center;">Cost Engineering</p>	<p>The cost engineering reviewer will be familiar with cost estimating using the Microcomputer Aided Cost Engineering System (MCACES) model and preparation of an MII Cost Estimate. The reviewer will be Certified Cost Technician, Certified Cost Consultant, or Certified Cost Engineer. Coordination with the Cost Engineering MCX will be required for their approval of the selected cost engineering reviewer and to obtain Cost Engineering MCX certification of the cost estimate.</p>
<p style="text-align: center;">Real Estate</p>	<p>The real estate reviewer will be experienced in Federal Civil Works real estate law, policy, and guidance, development of Real Estate Plans for Civil Works studies, particularly in regards to application of navigational servitude.</p>

Once identified, the ATR team members for this study will be included in Attachment 1.

**c. Documentation of ATR.** DrChecks 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 be 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, especially addressing incomplete or unclear information, comments may seek clarification in order to then assess whether further specific concerns may exist.

The ATR documentation in DrChecks 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 POA, RMO, POD, 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 DrChecks 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. It is applied in cases that meet certain criteria 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 1165-2-214, is made as to whether IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing 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 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) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-214.

- **Type II IEPR.** Type II IEPR, or Safety Assurance Review (SAR), are managed outside the USACE and are 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.** Prior to the TSP, it was determined via a risk-informed decision that Type I IEPR on the decision document will not be required because none of the triggers discussed in Section 3e are anticipated to be met. A IEPR waiver has been submitted for approval.

The proposed project does not meet the criteria for conducting Type II IEPR described in Paragraph 2 of Appendix D of EC 1165-2-214 because:

- The Federal action is not justified by life safety and failure of the project will not pose a significant threat to human life;
- The project does not involve the use of innovative materials or techniques where the engineering is based on novel methods, it does not present complex challenges for interpretations, does not contain precedent-setting methods or models, and does not present conclusions that are likely to change prevailing practices;



- The project design does not require redundancy, resiliency, or robustness; and
- The project does not have unique construction sequencing or a reduced or overlapping design construction schedule.

**b. Products to Undergo Type I IEPR.** Not Applicable.

**c. Required Type I IEPR Panel Expertise.** Not Applicable.

**d. Documentation of Type I IEPR.** Not Applicable.

## **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. CIVIL WORKS ENGINEERING AND AGENCY TECHNICAL REVIEW MANDATORY CENTER OF EXPERTISE (MCX) REVIEW AND CERTIFICATION**

All decision documents shall be coordinated with the MCX, located in the Walla Walla District. The MCX will assist in determining the expertise needed on the ATR team and in the development of the review charge(s). The MCX will also provide the Cost Engineering MCX certification. The RMO is responsible for coordination with the MCX.

## **9. MODEL CERTIFICATION AND APPROVAL**

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models, for the purposes of the EC, 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 use of a certified/approved planning model does not constitute technical review of the planning product. 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).

EC 1105-2-412 does not cover engineering models used in planning. 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 is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

**a. Planning Models.** The PDT will work with DDN-PCX on approval for a single-use spreadsheet model that will quantify expected benefits gained from navigation improvements. The model will be approved prior to use in identifying the tentatively selected plan.

**b. Engineering Models.** The following engineering models are anticipated to be used in the development of the decision document:

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Approval Status
Micro-computer Aided Cost Engineering System (MCACES) 2nd Generation (MII)	The MCACES/MII construction cost estimating software, developed by Building Systems Design Inc., is a tool used by cost engineers to develop and prepare all Civil Works cost estimates. Using the features in this system, cost estimates are prepared uniformly allowing cost engineering throughout USACE to function as one virtual cost engineering team.	Cost Engineering MCX Required Model
STWAVE	STWAVE (Steady-state spectral WAVE) is a nearshore spectral wave model developed by the U.S. Army Engineer Research and Development Center (ERDC), Coastal and Hydraulics Laboratory (CHL). It will be used to simulate nearshore wave propagation and transformation including refraction, shoaling, breaking, and wind-wave generation.	Coastal Community of Practice (CoP) Preferred Model

## 10. REVIEW SCHEDULES AND COSTS

**a. ATR Schedule and Cost.** The ATR schedule and cost will be further identified after scoping with the sponsor, however, it is currently estimated that ATRs will be conducted on the draft and final reports. The ATR schedule will be determined after scoping with the sponsor. The total estimated cost for the ATRs is \$80,000.

**b. Type I IEPR Schedule and Cost.** Not Applicable.

**c. Model Certification/Approval Schedule and Cost.** The PDT will work with DDN-PCX on approval for a single-use spreadsheet model. The model will be approved prior to the Tentatively Selected Plan milestone meeting. The estimated schedule and cost for any necessary certification or approval of planning models will be included in this section once they are determined.

## **11. PUBLIC PARTICIPATION**

All future revisions to the Review Plan and any minor updates will be posted to the Alaska District webpage. Public review of the draft decision document will occur concurrently with ATR and vertical team review of the draft report. A public meeting will be conducted during the ATR and vertical team review. Comments received during the public comment period for the draft report will not be available to the ATR team as part of their review. Public comments will be reviewed, addressed, and incorporated as appropriate into the final draft report. The public, including scientific or professional societies, will not be asked to nominate potential peer reviewers. The final decision document will be available to the public on the Alaska District webpage.

## **12. REVIEW PLAN APPROVAL AND UPDATES**

The POD Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving POA, POD, RMO, 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. POA 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) should 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 Commander's approval memorandum, should be posted on POA's webpage. The latest Review Plan should also be provided to the RMO and POD.

## **13. REVIEW PLAN POINTS OF CONTACT**

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

- Plan Formulator (POA), George Kalli, (907) 753-2594, George.A.Kalli@usace.army.mil.
- PDT Project Manager (POA), Reese Brand Phillips, (907) 753-2539, Reese.B.Phillips@usace.army.mil.
- POD Senior Economist, Russell Iwamura, (808) 835-4625, Russell.K.Iwamura@usace.army.mil.

- DDNPCX Review Manager, Kimberly Otto, (251) 694-3842, Kimberly.P.Otto@usace.army.mil.

## ATTACHMENT 1: TEAM ROSTERS

### St. George Small Boat Harbor, St. George, Alaska Feasibility Report PDT

The St. George Small Boat Harbor Feasibility Project Delivery Team is comprised of the following individuals:

<b>Role</b>	<b>Name</b>	<b>Organization</b>
Project Manager	Reese Brand Phillips	CEPOA-PM-C
Plan Formulator	George Kalli	CEPOA-PM-C-PF
Mayor	Patrick Pletnikoff	City of St. George
Hydraulic Engineer	Nathan Epps	CEPOA-EC-G-HH
Economist	Brent Andrews	CEPOA-PM-C-EC
NEPA specialist	Mike Rouse	CEPOA-PM-C-ER
Cost Engineer	Karl Harvey	CEPOA-EN-CE
Realty Specialist	Ron Geen	CEPOA-PM-RE
Geotechnical Engineer	Coleman Chalup	CEPOA-EC-G-GM
Tribal Liaison	TBD	CEPOA-PM-C-ER
Attorney	Brandee Ketchun	CEPOA-OC
Construction	TBD	CEPOA-CO-SA-AR
Survey	TBD	CEPOA-EN-ES
Value Engineering Officer	Don Tybus	CEPOA-EC-CE
State of Alaska DOT&PF	Kirk Miller	AKDOT&PF

### St. George Small Boat Harbor, St. George, Alaska Feasibility Report DQC Team

The St. George Small Boat Harbor Feasibility Project District Quality Control Team is comprised of the following disciplines:

<b>Discipline</b>	<b>Organization</b>
Planning	CEPOA-PM-C-PF
Hydraulics& Hydrology	CEPOA-EC-G-HH
Environmental	CEPOA-PM-C-EC
Civil Works Editor	CEPOA-PM-C-ER
Economics	CEPOA-PM-C-EC

**St. George Small Boat Harbor, St. George, Alaska Feasibility Report ATR Team**

The St. George Small Boat Harbor Feasibility Project Delivery ATR Team is comprised of the following disciplines:

<b>Discipline</b>	<b>Organization</b>
SBH-PSCX Coordinator	SAJ
Economics	LRB
Planning	SAJ
Environmental/NEPA	SPK
Coastal Engineering	SAJ
Geotechnical	MVN
Cost Engineering (MCX)	NWW
Real Estate	NAB

**St. George Small Boat Harbor, St. George, Alaska Feasibility Report Vertical Team**

The St. George Small Boat Harbor Feasibility Project Delivery Vertical Team is comprised of the following individuals:

<b>Role</b>	<b>Name</b>
POA, Project Manager	Brand Phillips
POA, Technical Lead	George Kalli
POA, Chief of Planning	Cynthia Upah
POA, Chief of Civil Works	Bruce Sexauer
POA, Chief of Programs and Project Management	Randy Bowker
POD, Civil Works Planning Team Leader	Linda Hihara-Endo
POD, Senior Economist	Russell Iwamura
HQ POD RIT, Civil Works Deputy	Stephen Kopecky
HQ POD RIT, Civil Works Planner	Lauren Diaz

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

**COMPLETION OF AGENCY TECHNICAL REVIEW**

The Agency Technical Review (ATR) has been completed for the <type of product> for St. George Small Boat Harbor, St. George, Alaska. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-214. 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 U.S. Army Corps of Engineers policy. The ATR also assessed the District Quality Control (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 DrChecks<sup>sm</sup>.

SIGNATURE

\_\_\_\_\_  
Stacey Roth  
ATR Team Leader  
CESAJ-PD-PN

\_\_\_\_\_  
Date

SIGNATURE

\_\_\_\_\_  
Reese Brand Phillips  
Project Manager  
CEPOA-PM-C

\_\_\_\_\_  
Date

SIGNATURE

\_\_\_\_\_  
Name  
Architect Engineer Project Manager<sup>1</sup>  
Company, location

\_\_\_\_\_  
Date

SIGNATURE

\_\_\_\_\_  
Kim Otto  
Review Management Office Representative  
CESAM-PD-D

\_\_\_\_\_  
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

\_\_\_\_\_  
Jim Jeffords  
Chief, Engineering Division  
CEPOA-EN

\_\_\_\_\_  
Date

*SIGNATURE*

\_\_\_\_\_  
Bruce Sexauer  
Chief, Planning Division  
CEPOA-PM -C

\_\_\_\_\_  
Date

<sup>1</sup> Only needed if some portion of the ATR was contracted



**ATTACHMENT 3: REVIEW PLAN REVISIONS**

<b>Revision Date</b>	<b>Description of Change</b>	<b>Page / Paragraph Number</b>
2 Nov 18	Updates to reflect selection of Tentatively Selected Plan on north side of St. George Island	3d, pp 3 – 5; 3e pp 5 - 7
2 Nov 18	Updates to reflect decision about Type I IEPR	6a, p 12
2 Nov 18	Updated Points of Contact	13, p 15
2 Nov 18	Updated Team Roster information	Attachment 1
2 Nov 18	Updated ATR Team information	Attachement 2

#### ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
AFB	Alternative Formulation Briefing	NED	National Economic Development
ASA(CW)	Assistant Secretary of the Army for Civil Works	NER	National Ecosystem Restoration
ATR	Agency Technical Review	NEPA	National Environmental Policy Act
CSDR	Coastal Storm Damage Reduction	O&M	Operation and maintenance
DPR	Detailed Project Report	OMB	Office and Management and Budget
DQC	District Quality Control/Quality Assurance	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DX	Directory of Expertise	OEO	Outside Eligible Organization
EA	Environmental Assessment	OSE	Other Social Effects
EC	Engineer Circular	PCX	Planning Center of Expertise
EIS	Environmental Impact Statement	PDT	Project Delivery Team
EO	Executive Order	PAC	Post Authorization Change
ER	Ecosystem Restoration	PMP	Project Management Plan
FDR	Flood Damage Reduction	PL	Public Law
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
Home District/MSD	The District or MSD responsible for the preparation of the decision document	RMC	Risk Management Center
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMO	Review Management Organization
IEPR	Independent External Peer Review	RTS	Regional Technical Specialist
ITR	Independent Technical Review	SAR	Safety Assurance Review
LRR	Limited Reevaluation Report	USACE	U.S. Army Corps of Engineers

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
MSC	Major Subordinate Command	WRDA	Water Resources Development Act