



REPLY TO
ATTENTION OF

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

CEPOD-PDC

17 MAY/2013

MEMORANDUM FOR COMMANDER ALASKA ENGINEER DISTRICT (CEPOA-PM-C-PL/BRUCE SEXAUER), P.O. BOX 6898, JBER, AK 99506-0898

SUBJECT: Review Plan Approval for the Port Lions Harbor, Port Lions, Alaska, Limited Reevaluation Report.

1. References:

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

b. Review Plan for the Port Lions Harbor, Port Lions, Alaska, Limited Reevaluation Report, Alaska District, U.S. Army Corps of Engineers.

2. IAW reference 1.a., the enclosed Review Plan (reference 1.b.) was coordinated with the Small Boat Harbor Planning Sub-Center of Expertise (SBH-PSCX) in the Pacific Ocean Division, which is the lead office to execute this Review Plan. For further information, contact the SBH-PSCX at 808-835-4621. The Review Plan does not include a Type I or Type II 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 significant revisions to this Review Plan or its execution will require new written approval from this office.

4. POC for this memorandum is Mr. Russell Iwamura, Senior Economist, Civil Works Integration Division, 808-835-4625, or email, Russell.K.Iwamura@usace.army.mil.

Encl

GREGORY J. GUNTER
COL, EN
Acting Commander

REVIEW PLAN

PORT LIONS HARBOR, PORT LIONS, ALASKA Limited Reevaluation Report

Alaska District

MSC Approval Date: 17 May 2013
Last Revision Date: None



**US Army Corps
of Engineers®**

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REVIEW PLAN

**PORT LIONS HARBOR, PORT LIONS, ALASKA
LIMITED REEVALUATION REPORT**

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the Port Lions navigation improvements, Port Lions, Alaska, Limited Reevaluation Report (LRR).

This Review Plan was developed using the Pacific Ocean Division (POD) version of the U.S. Army Corps of Engineers (USACE) National Planning Center of Expertise (PCX) Review Plan template dated 1 November 2012.

b. References.

- (1) Engineer Circular (EC) 1165-2-214, Civil Works Review, 15 December 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 H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 November 2007.
- (5) Port Lions Navigation Improvements, Project Management Plan.
- (6) POD Quality Management Plan, December 2010.
- (7) Alaska District Quality Management Plan, CEPOA-QMP-001, January 2010.
- (8) Pacific Ocean Division (POD) Quality Management Plan, December 2010.

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, LRRs are subject to cost engineering review and certification (per EC 1165-2-209) and planning model certification/approval (per EC 1105-2-412) and the Value Management Plan requirements in the Project Management Business Process (PMBP) Reference 8023G and 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 can be a PCX, the Risk Management Center (RMC), or POD depending on the purpose of the document. The RMO for the peer review effort described in this Review Plan is

the Small Boat Harbor Planning Sub-Center of Expertise (SBH-PSCX) located in the Alaska District (Anchorage, Alaska) of the Pacific Ocean Division of the Corps of Engineers.

The SBH-PSCX will coordinate with the Civil Works Cost Engineering and ATR 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. The authority for the feasibility study was the “Rivers and Harbors in Alaska” study resolution adopted by the U.S. House of Representatives Committee on Public Works on December 2, 1970. The project was authorized for construction in Section 1001 (2) of the Water Resources Development Act (WRDA) of 2007. The Secretary of the Army supports the authorization, and plans to implement the project through the normal budget process at the appropriate time, considering national priorities and the availability of funds.

b. LRR. The LRR is documenting the change in design, cost and economics of the project. A value engineering exercise identified a less expensive plan could provide the same level of benefits for the project. With the new plan being very similar to those previously formulated, and that the new plan is smaller in size and cost, an LRR was determined to be the appropriate approach. Approval of the LRR will be by POD.

c. Project Sponsor. The non-Federal sponsor has been identified as the Alaska Department of Transportation and Public Facilities (ADOT&PF).

d. Study/Project Description. Port Lions is located in Settler Cove on the north coast of Kodiak Island, 247 air miles southwest of Anchorage. The present navigation features consist of 221-meter (725-foot) long breakwater, perpendicular to the western shore of Settler Cove, and 52-meter (170-foot) long stub breakwater situated on the south side of the main breakwater. The breakwaters enclose a mooring basin of about two hectares (five acres); with water depths ranging from approximately -14 feet mean lower low water (MLLW) to -19 feet MLLW. Entrance channel dredging was performed around the east side of the main breakwater to provide water depths of 4.3 meters (-14 feet) MLLW.

Due to the increase in demand for moorage facilities a float system was installed that extended beyond the protection zone of the main breakwater. This extension exposed the floats and moored vessels to excessive wave energy. Damage to the float system is most prevalent on the outer portions of the three main floats. According to local harbor officials, wave heights of three to five feet have been observed within the harbor limits. Additional protective structures are needed to provide wave protection for the moorage area and to reduce damages to the vessels and the mooring system. Also, additional vessels may desire to use the harbor.

The recommended plan consists of a single rubblemound breakwater 1,360 feet in length. The breakwater would protect the design fleet from northeast and southwest waves. Through a value engineering exercise, a new plan was developed that would significantly decrease the costs of the

project. The new plan would include a breakwater of about 700 feet in length and require no dredging. See figures below.

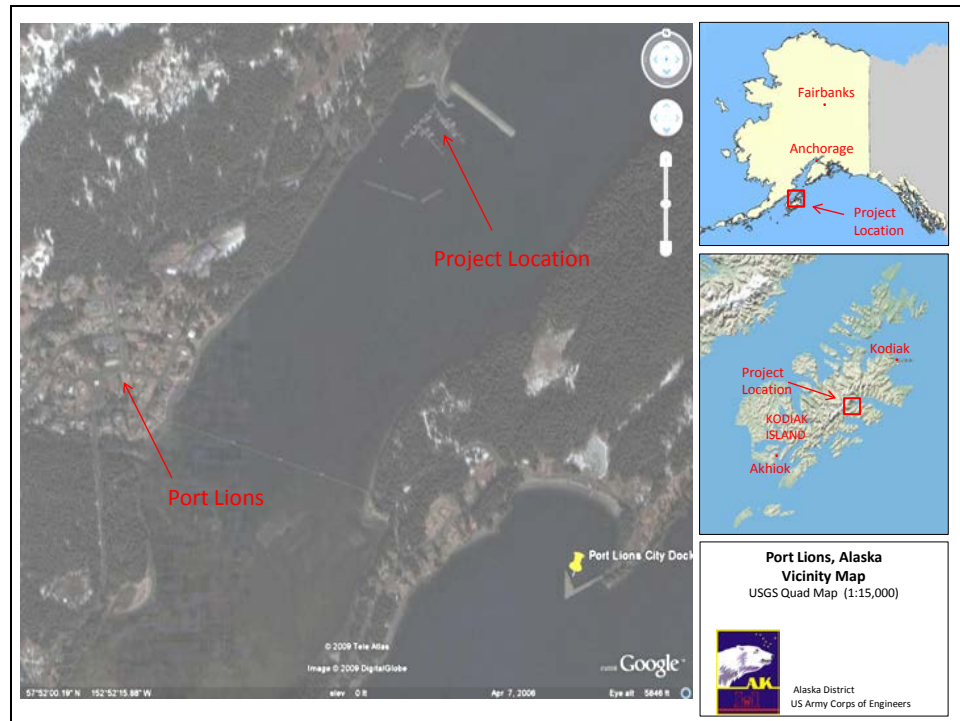


Figure 1: Port Lions Project Location

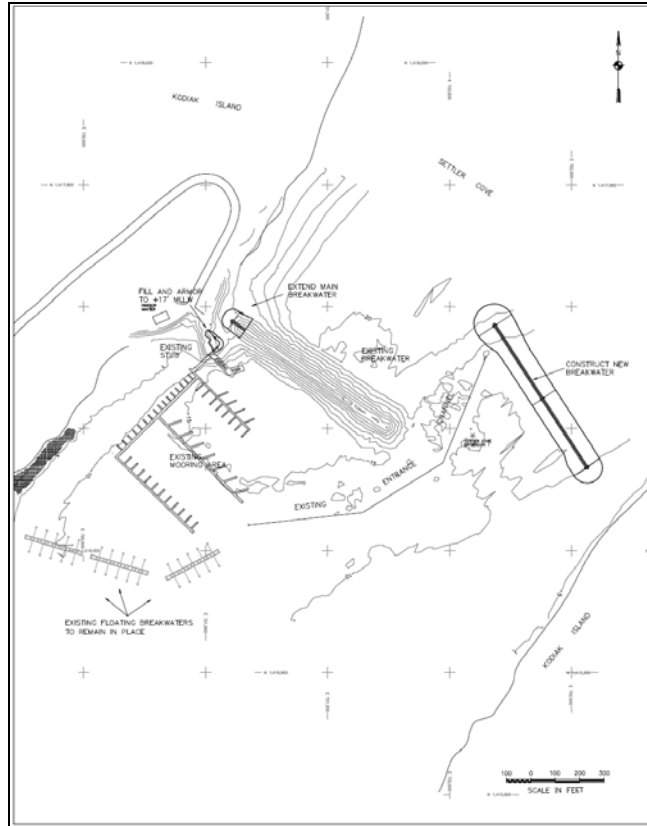


Figure 2: New Proposed Plan

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

- The project does not involve a significant threat to human life/safety and it will likely provide some incidental safety benefits in the form of Harbor of Refuge. The Chief of Engineering Division concurs that there are no life safety issue expected with this project.
- The estimated project cost is less than \$45 million.
- There are no significant environmental issues. The LRR environmental considerations are based upon an EA and FONSI already approved and signed for the project and that the new project is essentially one of the various alternatives analyzed in the approved report/EA.
- The information in the LRR will likely not 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.

- The project report is not likely to contain influential scientific information or be a highly influential scientific assessment.
- There is no request by the Governor of Alaska or an affected state for peer review by independent experts.

f. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR, though for this LRR, there are no in-kind services being provided.

4. DISTRICT QUALITY CONTROL (DQC)

All 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 Quality Manual of POA and POD.

a. Documentation of DQC. Documentation of DQC activities is required and should be in accordance with the Quality Management Plans of the Alaska District and POD.

b. Products to Undergo DQC. All documents, including cost estimates, are to be prepared in accordance with the Alaska District Quality Management Plan.

c. Required DQC Expertise. The following expertise is needed for DQC. Once identified, the DQC team members for this study and a brief description of their credentials will be added in Attachment 1.

DQC reviewers should have a minimum of 4 years experience in developing Small Boat Harbors.

Table 1: DQC Expertise

DQC Team Members/Disciplines	Expertise Required
DQC Lead	The DQC lead should be a senior professional with extensive experience in preparing Civil Works documents and conducting DQC. The lead should also have the necessary skills and experience to lead a team through the DQC process. The DQC 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 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 breakwater and other 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 will be experienced in coastal ecosystems, the influence of construction of breakwaters and other energy attenuation measures on aquatic plants and species and the National Environmental Policy Act (NEPA) process and analysis procedures. The reviewer should also be experienced in cultural and tribal aspects of Corps navigation projects.
Hydraulic 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.
Cost Engineering	The cost engineering reviewer will be familiar with cost estimating for small boat harbor projects 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.

5. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all 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 SBH-PSCX 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.

a. Products to Undergo ATR. The LRR with its updated economics and cost estimate are the products to undergo review.

b. Required ATR Team Expertise. The following ATR expertise is required for this project. Where possible ATR team members will address multiple disciplines and emphasis.

The SBH-PSCX, as the RMO, will identify the final make-up of the ATR team and identify the ATR team lead in coordination with the Project Manager (PM), vertical team, and other appropriate centers of expertise. The ATR team members for this study and a brief description of their credentials are in Attachment 1.

The purpose of the ATR is to ensure the work product is consistent with established guidance, procedures, criteria, and policy. Members of the ATR team will be from outside the Alaska District, with the ATR Lead from outside POD. 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 Cost Engineering MCX handles as part of the ATR. One reviewer can serve on the ATR team to cover more than one discipline, provided they have the appropriate expertise in their background.

Table 2: 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 documents and conducting ATRs. 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 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 will be experienced in coastal ecosystems, the influence of construction of breakwaters and other energy attenuation measures on aquatic plants and species and NEPA process and analysis procedures. The reviewer should also be experienced in cultural and tribal aspects of Corps navigation projects.
Hydraulic 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.
Cost Engineering	The cost engineering reviewer will be familiar with cost

	<p>estimating using the MCACES MII 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>
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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 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 DrCheckssm will include the text of each ATR concern, the Project Delivery Team (PDT) response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes POA, SBH-PSCX, 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 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 documents under certain circumstances. IEPR is the most independent level of review, and 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 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 by an Outside Eligible Organization (OEO) external to 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 Reviews (SAR), are managed by the RMC 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. Since the LRR is not a decision document and based on the characteristics of the project detailed in paragraph 3.c., conducting a Type I or Type II IEPR is not required.

b. Products to Undergo Type I or Type II IEPR. Not Applicable

c. Required Type I or Type II IEPR Panel Expertise. Not Applicable

d. Documentation of Type I or Type II 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 USACE policies, particularly policies on analytical methods and the presentation of findings in LRRs.

8. COST ENGINEERING AND ATR MANDATORY CENTER OF EXPERTISE (MCX) REVIEW AND CERTIFICATION

All LRRs shall be coordinated with the Cost Engineering and ATR MCX, located in the Walla Walla District. The MCX will assist in determining the expertise needed on the ATR team and Type I IEPR team (if required) and in the development of the review charge(s). The MCX will also provide the Cost Engineering Certification. The SBH-PSCX is responsible for coordination with the Cost Engineering MCX.

9. MODEL CERTIFICATION AND APPROVAL

a. Planning Models. 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).

The following planning models are anticipated to be used in the development of the decision document:

- At this time, no planning models have been identified for use in this study.

b. Engineering Models. 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 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 a model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

The following engineering models are anticipated to be used in the development of the LRR:

Table 3. Engineering Models and Approval Status

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Approval Status
Microcomputer Aided Cost Engineering System (MCACES) 2 nd Generation (MII)	The MCACES MII construction cost estimating software is a tool used by cost engineers to develop and prepare all USACE 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

10. REVIEW SCHEDULES AND COSTS

a. 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 ATRs of the various documents are scheduled as follows:

- At this time, the ATR of the LRR will occur during the 3rd Qtr 2013 at the earliest
- Estimated cost: \$25,000.

b. Type I or Type II IEPR Schedule and Cost. Not Applicable.

c. Model Certification/Approval Schedule and Cost. Not Applicable. No planning models have been identified for use in this study.

11. PUBLIC PARTICIPATION

No public participation is anticipated at this time. If future investigations identify information or issues necessitating public involvement then a public information meeting will be held.

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, SBH-PSCX, and HQUSACE members) as to the appropriate scope and level of review for the LRR. 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) 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 Commander's approval memorandum, will be posted on the POA webpage. The latest Review Plan should also be provided to the SBH-PSCX, 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:

Alaska District

Mr. Bruce R. Sexauer
Project Manager (Chief of Planning)
U.S. Army Corp of Engineers, Alaska District
2204 3rd Street
Elmendorf AFB, AK 99506
Telephone: (907) 753-5619

Pacific Ocean Division

Mr. Russell Iwamura
U.S. Army Corps of Engineers, Pacific Ocean Division
Building 525
Ft. Shafter, HI 96858-5440
Telephone: (808) 835-4625

Review Management Organization:

Small Boat Harbor Center of Expertise
Dr. Linda Hihara-Endo
U.S. Army Corps of Engineers, Pacific Ocean Division
Building 525
Ft. Shafter, HI 96858-5440
Telephone: (808) 835-4621

ATTACHMENT 1: TEAM ROSTERS

Table 4: Project Delivery Team

Team Member	Discipline	Office
Bruce Sexauer	Plan Formulation/Project Management	Alaska District
Mike Salyer	Environmental Resources	Alaska District
Emily Morrison	Economics	Alaska District
Alan Jeffries	Hydraulics/Hydrology/Coastal Engineering	Alaska District
Al Arruda	Cost Engineering	Alaska District
Rob Stoltzman	Office of Counsel	Alaska District
Don Tybus	Value Engineering Officer	Alaska District

Table 5: DQC Review Team

Office (Alaska District)	Discipline
CEPOA-PM-C-PL	Plan Formulation
CEPOA-PM-C-PL	Economics
CEPOA-EN-G-ER	Environmental Resource
CEPOA-EN-CW-HH	Hydraulics/Hydrology/Coastal Engineering
CEPOA-EN-CE	Cost Engineering

Table 6: ATR Review Team

The ATR Review team has the demonstrated expertise for review of the Port Lions LRR.

Discipline	Office	Description of Credentials
ATR Lead	CENWS-EN-HH-HE-CU	The ATR Lead started with USACE in the Portland District in 2004. He has been at the Seattle District since 2006 and is presently the Coastal Engineering Unit lead within the Hydraulic Engineering Section. His coastal engineering experience includes preparing decision documents for Civil Works coastal storm damage reduction, navigation improvement projects, as well as preparing design documentation reports for Operations and Maintenance activities on coastal navigation structures. Project examples include coastal navigation structure rehabilitation, deep and shallow draft navigation channel improvement, dredge material management, beach nourishment, dune restoration, and coastal/estuarine ecosystem restoration. These projects consist of coastal infrastructure located on the Oregon and Washington coast, including the Mouth of the

		<p>Columbia River, Willapa Bay, Grays Harbor, Quillayute River, the Strait of Juan de Fuca, and Puget Sound. The ATR Lead also provides technical oversight for environmental remediation projects on a number of Environmental Protection Agency, Region 10 Superfund Sites and Formerly Used Defense Sites (FUDS) located within Puget Sound. The ATR Lead has published peer reviewed journal manuscripts and conference papers in the field of coastal engineering. The ATR Lead has served as technical reviewer or review lead for several Corps ATRs for Portland, Alaska, and Honolulu Districts.</p>
<p>Plan Formulation</p>	<p>CENWS-PM-PL</p>	<p>The Plan Formulator on the review team has worked in Seattle District for 25 years; three years in Real Estate, 12 years as a Project Manager/Planning, and 10 years as a senior plan formulator. During that time, the Plan Formulator also served as Chief, Plan Formulation Section and as the General Investigation Program manager. The Plan Formulator currently serves as a Planning Lead at the Seattle District (NWS) of the Army Corps of Engineers. The Plan Formulator holds a Bachelor of Science degree in biology and botany from the University of Washington, Seattle, WA, and attended 2 years as a graduate student in planning through the geography department at Western Washington University, Bellingham, WA. The Plan Formulator has completed all required Planning courses through the Corps, and has completed the Leadership Development Program in Seattle District. As a senior plan formulator for the Seattle District, the Plan Formulator was the lead planner on reconnaissance and feasibility studies for ecosystem restoration (Lake Washington GI), storm damage prevention (Elliott Bay Seawall GI), Flood Risk Management (FRM) (Skagit River GI), as well as hydropower, water supply, and recreation projects. The Plan Formulator has also served as planner on Operations funded projects (Mud Mt. Dam Fish Passage, Albeni Falls Fish Passage). The Plan Formulator has constructed projects for FRM (Cedar River Section 205) and ecosystem restoration (Lake</p>

		Washington Ship Canal Smolt Flumes Section 1135). The Plan Formulator has worked on Continuing Authorities Program (CAP), Planning Assistance to States (PAS), and General Investigation studies and has experience conducting ATRs.
Economics	CELRB-PM-PB	<p>-B.A. Economics – Canisuis College</p> <p>-M.A. Economics – SUNY At Buffalo</p> <p>-Over 30 years of experience in economics</p> <p>-Has performed and been a team member on a number of Section 107 economic evaluations. Was a major team player in the following Section 107 evaluations: Cooley Canal Section 107-1995, Buffalo Inner Harbor-2005. Was the team leader on the following section 107s; Rochester Harbor section 107-2003; Olcott Harbor Reevaluation-Section 107- 2006, Two Harbors Minnesota, 2007 and is currently involved in an Ogdensburg Harbor, New York section 107.</p> <p>- Analyses have involved developing surveys for dock owners, and charter fishing operators to generate willingness to pay values and charter fishing operating budgets. Analyses have developed the full range of Associated Costs needed to make the project fully operational (from parking lots, to floating docks, gasoline docks, winter storage facilities, roadways, signage, etc.).</p>
Environmental Resources	CENWS-EN-ER	<p>-B.A. Geography and Economics (double major) from University of California, Los Angeles.</p> <p>-Masters of Arts in Geography from University of Washington.</p> <p>-The Environmental Resources reviewer joined the Corps of Engineers in 1983 and serves as a Senior Biologist in the Seattle District Environmental and Cultural Resources Branch. The Environmental Resources reviewer has been involved in technical studies and all facets of NEPA compliance including cultural and tribal aspects for numerous Corps Civil Works (CAP, GI, CG, and Operations) and Military Projects.</p>
Hydraulic Engineering	CEPOH-EC-T	<p>-B.S. Ocean Engineering from Florida Institute of Technology in 1989.</p> <p>-Masters of Ocean Engineering from Texas A&M in 1994 in association with the USACE</p>

		<p>Coastal Engineering Education Program.</p> <p>-The Hydraulic Engineering reviewer worked in the Jacksonville District from 1989 to 2003 in the Coastal/Navigation Section of Planning Division. The Hydraulic Engineering reviewer is currently the senior coastal engineer at Honolulu District. The Hydraulic Engineering reviewer works in the Engineering and Construction Division, focusing on design and construction of shore protection and navigation projects. The Hydraulic Engineering reviewer currently serves on the Committee on Tidal Hydraulics and the Coastal Working Group – Executive Committee</p>
<p>Cost Engineering</p>	<p>Contractor</p>	<ul style="list-style-type: none"> - B.S.C.E. from University of Idaho in 1963. - Certified Professional Estimator and a Corps of Engineers Certified Cost Engineer with extensive MCACES MII model experience. - Registered professional engineer in the state of Washington. - Member of American Society of Professional Estimators. - has over 40 years of construction cost estimating experience including 13 years estimating for small business heavy construction and specialty contractors. From 1989 to retirement at the end of 2004, the Cost Engineering reviewer served as the Division cost engineer for USACE’s, Northwestern Division (NWD). At NWD the Cost Engineering reviewer was responsible for coordination and oversight of the five NWD District cost estimating organizations located at Seattle, WA, Portland, OR, Walla Walla, WA, Omaha, NE and Kansas City, MO. NWD administered an annual billion dollars plus budget for engineering and construction of military, heavy civil works, dredging, O&M and HTRW projects throughout the region. - From 2005 to Present the Cost Engineering reviewer as a Managing Member of Construction Estimating Services LLC, has performed consultant construction estimating. Also the Cost Engineering reviewer, as a re-hired annuitant for the Corps of Engineers, has performed ATR and other cost engineering services.

**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 Limited Reevaluation Report for Port Lions Harbor. 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 US 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 DrCheckssm.

David R. Michalsen
ATR Team Leader
CENWS-EN-HH-HE-CU

Date

Bruce R. Sexauer
Project Manager
CEPOA-PM-C-PL

Date

Name
Architect Engineer Project Manager¹
Company, location

Date

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.

_____	_____
<u><i>Name</i></u>	Date
Chief, Engineering Division	
<u><i>Office Symbol</i></u>	

_____	_____
<u><i>Name</i></u>	Date
Chief, Planning Division	
<u><i>Office Symbol</i></u>	

¹ Only needed if some portion of the ATR was contracted

ATTACHMENT 3: REVIEW PLAN REVISIONS

Table 7: Review Plan Revisions

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

Table 8: Standard Acronyms and Abbreviations

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