



US Army Corps  
of Engineers  
Baltimore District



Maryland Port  
Administration

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# **Baltimore Harbor Anchorages and Channels, Maryland**

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*Integrated Feasibility Report and  
Environmental Impact Statement*

*Technical Appendices*

**APPENDIX A - PROJECT MANAGEMENT PLAN**

**March 1997**

**BALTIMORE HARBOR ANCHORAGES AND  
CHANNELS, MARYLAND AND VIRGINIA**

**INTEGRATED FEASIBILITY REPORT AND  
ENVIRONMENTAL IMPACT STATEMENT**

**MARCH 1997**

**APPENDIX A**

**PROJECT MANAGEMENT PLAN**

**BALTIMORE HARBOR ANCHORAGES AND CHANNELS  
MARYLAND AND VIRGINIA**

**PROJECT MANAGEMENT PLAN**

**March 1997**

BALTIMORE HARBOR ANCHORAGES AND CHANNELS  
MARYLAND AND VIRGINIA

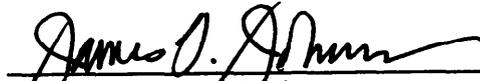
PROJECT MANAGEMENT PLAN

This plan has been prepared in accordance with the guidance provided in ER 5-7-1, 30 September 1992, Project Management.

PRESENTED FOR APPROVAL BY:

  
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Claire D. O'Neill, Project Manager 10 March 97  
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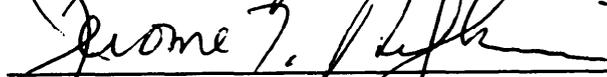
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MARYLAND AND VIRGINIA**

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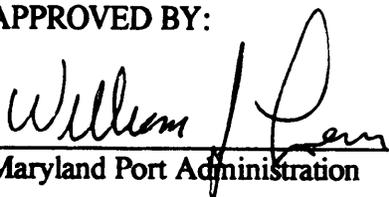


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10 March 1997

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**BALTIMORE HARBOR ANCHORAGES AND CHANNELS  
MARYLAND AND VIRGINIA**

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# **PROJECT MANAGEMENT PLAN**

## **BALTIMORE HARBOR ANCHORAGES AND CHANNELS Maryland and Virginia**

**March 1997**

### **1. INTRODUCTION**

This project management plan (PMP) provides an overview of the process that will be used to implement the authorized plan for the Baltimore Harbor Anchorages and Channels project. The project management plan covers activities to be accomplished during the preconstruction engineering and design (PED) and the construction phases of the project by the Baltimore District Corps of Engineers and the Maryland Port Administration (MPA), the project's non-Federal sponsor.

The plan was developed in accordance with ER 5-7-1, Project Management, with input from Baltimore District technical elements and MPA. The body of the project management plan summarizes the scope, schedule, budget, and responsibilities for actions to be accomplished. Appendices A-D to this plan present the organizational structure; the project schedule showing primary tasks and responsibilities; the project budget with planned fiscal year allocations; and an index of where the plan addresses the 21 elements required by ER 5-7-1.

The project management plan is a management tool to help the Baltimore District and the non-Federal sponsor manage and accomplish project activities. It provides summary information to Corps and sponsor decision-makers for use in strategic planning and issue resolution, and generally defines the working relationship between the organizations. It also outlines the project goals, schedule, and budget as a framework within which the project team defines and accomplishes their actions. It serves as a guide for monitoring project progress, planning future actions, and identifying and resolving issues in a timely manner. This draft project management plan has been reviewed by the Baltimore District, North Atlantic Division, Office of the Chief of Engineers, and the non-Federal sponsor. After public review of the draft feasibility report, the plan will be finalized, approved by the Baltimore District's Project Review Board, endorsed by the non-Federal sponsor, and forwarded to Corps' Headquarters as part of the final feasibility report. When the feasibility report is approved, the schedule in this project management plan becomes the baseline from which project implementation is measured.

The project management plan is a living document, and will be revised as needed by the Corps and the non-Federal sponsor to accommodate changes in project implementation created by progress, changes in policy, and other events. All significant plan revisions will be coordinated with Baltimore District elements and the MPA. Concurrence from the Baltimore District's Project Review Board and the MPA will be obtained prior to implementation of significant changes. Changes to the authorized project cost and approved schedule for major milestones will be approved by Corps' Headquarters and MPA.

## **2. PROJECT AUTHORIZATION**

The planning studies for the Baltimore Harbor Anchorages and Channels project were conducted in response to a June 23, 1988 Senate Committee resolution. The resolution states the following:

*RESOLVED BY THE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS OF THE UNITED STATES SENATE, that the Board of Engineers for Rivers and Harbors is hereby requested to review the reports of the Chief of Engineers on Baltimore Harbor and channels, Maryland, and Virginia, contained in House Documents Number 94-181, 94th Congress, 1st Session, and Number 86, 85th Congress, 1st Session, and prior reports, with a view to determining if further improvements for navigation, including anchorages and branch channels, are advisable at this time.*

Following completion of the reconnaissance report in April 1992, the Baltimore District Corps of Engineers and the Maryland Port Administration undertook a \$2.84-million cost-shared feasibility study. This study has culminated in a March 1997 final feasibility report recommending several improvements to the Baltimore Harbor navigation system, outlined below. This report, including the appropriate environmental documentation, is expected to be forwarded to the U.S. Congress in 1997 for future project authorization.

## **3. PROJECT DESCRIPTION**

During the feasibility study, various structural and non-structural measures were examined, including construction of sea islands, various types of single-point and multi-point moorings, channel modifications, and implementation of a vessel traffic management system. Based on a preliminary evaluation of the anchorages and branch channels, several of these alternatives were selected for further evaluation. Subsequently, based on an evaluation of benefits and costs, some of these alternatives were then grouped together into six plans to identify a plan of improvement that contributes the most net benefits to the Nation.

The recommended plan (#5 of the six plans investigated) for the Baltimore Harbor Anchorages and Channels project includes the following components:

- Deepening and widening a portion of Anchorage #3 to 2,200 feet by 2,200 feet, by 42 feet deep;
- Deepening and widening a portion of Anchorage #4 to 1,800 feet by 1,800 feet, by 42 feet deep;
- Widening the East Dundalk Channel to 400 feet, plus the bends and entrances;
- Widening the Seagirt-Dundalk Connecting Channel to 500 feet;
- Widening the West Dundalk Channel to 500 feet, plus the bends and entrances;
- Providing cutoff angles at the intersection of the West Dundalk Channel and the main shipping channel;

- Providing cutoff angles at the intersection of the Connecting Channel and the west side of Dundalk Marine Terminal;
- Constructing a new channel at South Locust Point in the area of the remnant Produce Wharf Channel;
- Constructing a 50-foot deep turning basin (1,200 feet by 1,200 feet) near the head of the Fort McHenry Channel;
- Deauthorizing of Anchorage #1;
- Placement of the dredged material at the-Hart-Miller Island placement site; and
- Federal assumption of the maintenance of the existing State channels at Dundalk, Seagirt, and South Locust Point, exclusive of berthing areas.

It is anticipated that the engineering and design effort for the general navigation features will be accomplished by Baltimore District staff, with ship simulation design support from the Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi. It is anticipated that the Corps will issue one construction contract for the dredging of the anchorages and channels. MPA will accomplish all design, construction and any associated contracts for the dredged material placement sites.

The recommended plan currently has an estimated fully funded cost of \$27.2 million (including future price escalation factors), a benefit-cost ratio of 5.6, and net annual benefits of \$9.8 million (not including costs for placement site development). The total project cost estimate, which includes the \$2.1-million cost for placement site development, is \$29.3 million. The Federal share, roughly 75 percent, for the general navigation features is estimated at \$20.2 million. The non-Federal sponsor's share of the general navigation features is estimated at \$7.0 million. The non-Federal 10-percent post-construction share is estimated at \$2,720,000; with an LERRD credit of \$2,065,000, this share is reduced to \$655,000. Project implementation is expected to take roughly four years, beginning with the Division Engineer's Notice issued in April 1997, and ending with completion of physical construction in April 2001. Upon completion of the project, the Corps of Engineers will operate and maintain the general navigation features at Federal expense.

#### **4. SCOPE OF WORK**

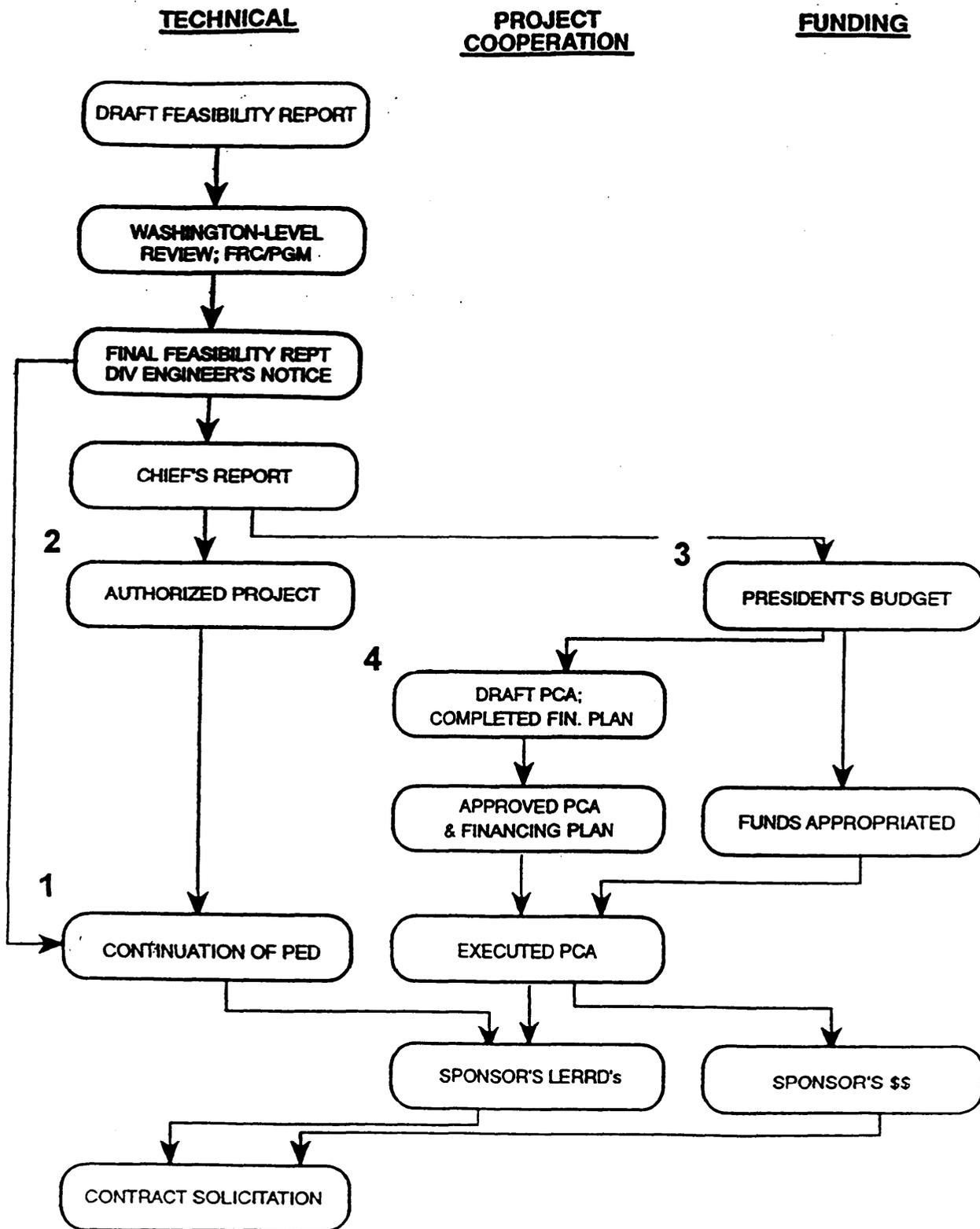
##### **4.1 OVERVIEW OF PROJECT IMPLEMENTATION PROCESS**

Project implementation will proceed in two phases: preconstruction engineering and design (PED) and construction. The flow chart in Figure 1 illustrates the interrelationship of the primary Federal actions leading to the start of physical construction.

The PED phase consists of concurrent actions on the four elements which must be accomplished prior to the start of project construction: (1) detailed design for the selected plan, including further design, plans and specifications, updated benefits and costs, and updated environmental compliance; (2) project authorization by Congress and the non-Federal sponsor; (3) funds for construction included in the Federal and non-Federal budgets; and (4) negotiation of the project cooperation agreement (PCA).

FIGURE A-1

PROJECT IMPLEMENTATION FLOWCHART



PED can begin when the feasibility report is approved by the issuance of the Division Engineer's Notice, if Federal funds have been appropriated for the PED phase and a PED agreement has been executed with the non-Federal sponsor. The PED agreement is the legal mechanism which provides for the cost-sharing of PED at the time of the work effort. The overall project cost-sharing percentage (roughly 75 percent Federal and 25 percent non-Federal) is directly applicable to the PED costs. The PED agreement is scheduled for execution in April 1997, concurrent with the release of the Division Engineer's Notice. It is expected that the PED phase will be initiated in May 1997, after formal approval of the feasibility report. PED is expected to last 24 months, with completion in April 1999, upon approval of the design memorandum and the plans and specifications.

The construction phase consists of five mostly sequential actions: (1) planning, engineering and design actions which continue beyond the first set of plans and specifications and through physical construction; (2) appropriation of Federal and non-Federal funds for construction; (3) signing of the project cooperation agreement; (4) physical construction of the project; and (5) close-out activities. The construction phase begins when the first set of plans and specifications is approved, the project has been authorized by Congress, and Federal construction funds have been appropriated. The project moves into the operation and maintenance phase when physical construction is complete, and the construction phase is ended when the fiscal close-out is complete.

Sections 4.2 and 4.3 below summarize the primary products and actions which will be completed during PED and construction for the Baltimore Harbor Anchorages and Channels project. For accounting and administrative purposes, tasks are categorized by cost subaccount. The primary organization responsible for accomplishing each task is also identified. The organization identified for each task is the office responsible for successfully completing that action or product, including obtaining support actions from and coordinating with other offices. Further descriptions of the relationships and responsibilities between the Corps of Engineers and the non-Federal sponsor, as well as between the District project management office and technical offices are included in Chapter 8 of this project management plan. Appendix A to the plan shows the organizations involved (the organizational breakdown structure), along with an abbreviation key. The Gantt chart in Appendix B to this plan lists the primary tasks to be accomplished (the work breakdown structure), the lead organization responsible for completing each task (the responsibility assignment matrix), and the current schedule for completing these tasks.

## **4.2 PRECONSTRUCTION ENGINEERING AND DESIGN PHASE**

The main products and actions of the PED phase for the Baltimore Harbor Anchorages and Channels project are described below. It is expected that the PED phase will be initiated in May 1997, after formal approval of the feasibility report with the Division Engineer's notice and execution of the PED agreement by both the Baltimore District and the non-Federal sponsor, MPA. PED is scheduled to extend approximately two years with completion in April 1999, with approval of the design memorandum and the plans and specifications.

There is a potential that preparation of design memorandum and follow-on NEPA documents may not be required. This determination will be made based upon review of the feasibility report and the outcome of the PED design work. However, since it is likely that these two products will be needed, they have been included in the schedule and estimated costs.

#### **4.2.1 PED Life-Cycle Project Management (PP-C; PP-P)**

The project manager in Programs and Project Management Division will be responsible for the life-cycle project management process, consisting of overall management of project scope, schedule, budget, and quality, as well as providing the primary point of contact with the non-Federal sponsor. Actions include: (1) monitor all activities and specifically, the project performance relative to the project's detailed schedule and scheduled obligations and expenditures; (2) prepare Federal budget requests in coordination with Civil Programs Branch; (3) facilitate actions to resolve potential or existing issues; (4) prepare monthly reporting materials to Corps' North Atlantic Division; (5) report project progress at District Project Review Board meetings; (6) coordinate with other Corps elements and the non-Federal sponsor; and (7) develop and monitor the project schedule, with input from the technical elements and the Maryland Port Administration. The Civil Programs Branch will provide guidance and assistance for these actions, as appropriate.

#### **4.2.2 Engineering Management (OP)**

The technical manager in Operations Division will be responsible for management of the technical work, coordination for detailed design studies, the design memorandum, the plans and specifications, construction contract documents, and public involvement. Actions include: (1) task scheduling and control; (2) task budget preparation and control; (3) quality assurance and quality control; (4) procurement and management of work by the Corps of Engineers' Waterways Experiment Station and any A/E contractors; (5) coordination with the project team, project manager, and non-Federal sponsor; (6) pertinent correspondence; (7) attendance at project meetings; and (8) technical presentations.

#### **4.2.3 Public Involvement and Coordination (PP-C; PAO; OP; PL; MPA)**

The project manager in Programs and Project Management Division oversees public involvement and coordination activities. Decisions and actions will be made jointly by the Baltimore District and the non-Federal sponsor, and closely coordinated by the two organizations. All public inquiries and news media requests for information will either be directed to, or cleared through, the Baltimore District's Public Affairs Office. The coordination and technical work will be managed and accomplished by Operations Division and the Maryland Port Administration, with support from Planning Division and involvement and coordination with Public Affairs Office. Actions will include: (1) conduct of public meetings, if needed, to provide information to interested groups; (2) project status newsletters, if needed; (3) Federal, state and local agency coordination of environmental documents; (4) informational presentations to interest groups; (5) responses to technical and policy inquiries regarding the project; (6) coordination with technical staff of non-Federal sponsor; and (7) preparation of public involvement materials regarding the project.

#### **4.2.4 Project Authorization (HQ; MPA)**

The feasibility report will serve as the project decision document which supports project authorization. Once the feasibility report is approved, the Corps of Engineers' Headquarters in Washington, D.C. is responsible for obtaining Federal authorization for project construction through its inclusion by the U.S. Congress in a future Water Resources Development Act (WRDA). The authorizing legislation is typically prepared by Congress in even years (e.g., 1996). For optimum implementation, the current schedule assumes construction authorization in a Water Resources Development Act of 1998. Actions include: (1) preparation of the Chief of Engineers report; (2) approval by the Office of Management and Budget; and (3) inclusion in the Corps' submittal for a 1998 WRDA.

The Maryland Port Administration (MPA) as non-Federal sponsor is responsible for obtaining State of Maryland approval for their role in project construction and providing the dredged material placement site. Actions must occur in a timely manner to maintain the project schedule and include: (1) preparation of any environmental compliance documentation; (2) receipt of all necessary permits; (3) receipt of necessary financing; and (4) construction of placement site. As of March 1997, many of these actions have already taken place, with the expansion of Hart-Miller Island underway. MPA fully expects capacity to be available at Hart-Miller Island at the time of the construction dredging from the Baltimore Harbor Anchorages and Channels project.

#### **4.2.5 PED Funding (PP-C; PP-P; HQ)**

The project manager and Civil Programs Branch in Programs and Project Management Division are responsible for identifying and obtaining Federal and non-Federal funding for the PED phase. During PED, the funding of the technical work will be in accordance with the PED agreement executed by the Corps of Engineers and the non-Federal sponsor. The overall project cost-sharing percentage (roughly 75 percent Federal and 25 percent non-Federal) is directly applicable to the PED costs. The current estimate of the PED cost is \$900,000, of which the non-Federal sponsor would be responsible for \$225,000.

Federal PED funding of \$150,000 has already been provided in the FY 1997 budget. Future funding is expected to be budgeted by the Administration. The non-Federal sponsor is aware of its requirements for PED and is taking appropriate budget actions to ensure the availability of the necessary funding. Additionally, during PED, MPA must fund their design and construction actions for the dredged material placement site.

#### **4.2.6 Financing Plan (PL; MPA)**

Planning Division is responsible for obtaining the non-Federal sponsor's financing plan and coordinating Headquarters approval of the document. Actions include: (1) review of final project cost estimates to ensure proper cost allocation and cost-sharing apportionment; (2) review of the sponsor's financing plan for viability and compliance with applicable Corps of Engineers regulations regarding cost-sharing; (3) coordination with Headquarters for comments and approval; (4) analysis of the non-Federal sponsor's financial plan; (5) assistance to the non-Federal sponsor

with any revisions; and (6) obtaining the final financing plan and statement of financial capability from the non-Federal sponsor.

The Maryland Port Administration is responsible for providing the financing plan and financial capability statement. Actions include: (1) preparation of the letter of intent; (2) preparation of the statement of financial capability; and (3) preparation of the financing plan which documents that adequate non-Federal funding is available to accomplish the project.

#### **4.2.7 Project Cooperation Agreement (PP-C, RE, OC, OP, MPA)**

The feasibility report will serve as the project decision document which supports the project cooperation agreement (PCA). The project manager in Programs and Project Management Division oversees actions to prepare, negotiate, and execute the PCA. The PCA is jointly developed by the Baltimore District and the non-Federal sponsor.

The coordination and technical work will be managed and accomplished by Real Estate Division with coordination and input from the Maryland Port Administration (including their General Counsel) and the Baltimore District's Office of Counsel and Operations Division. Actions will include: (1) review and updating the draft PCA; (2) obtaining technical input, as necessary; (3) coordination of the PCA with non-Federal sponsor's project manager and counsel; (4) negotiation of any modifications with the non-Federal sponsor; (5) preparation and coordination of modifications and the final PCA with Office of Counsel and Headquarters; (6) review of the final PCA for policy consistency and legal sufficiency; and (7) arrangement of PCA execution between Assistant Secretary of the Army for Civil Works and the non-Federal sponsor.

#### **4.2.8 Technical Review Conferences (OP)**

The technical manager in Operations Division will be responsible for accomplishing the design coordination and technical resolution meetings with the Corps' North Atlantic Division (NAD) and Headquarters (HQ) which ensure early coordination in the approval process for the design memorandum and plans and specifications. Participation by the non-Federal sponsor is encouraged. Two meetings are expected: (1) the general design conference (E1) held shortly after initiation of PED to coordinate technical design issues prior to initiation of detailed design work; and (2) a technical resolution conference held midway through the design effort to review ship simulation results and design criteria and assumptions prior to the development of final designs. Actions include: (1) scheduling meetings; (2) coordinating Baltimore District and MPA input; and (3) documenting results and agreements.

#### **4.2.9 Value Engineering (VE, OP)**

Federal law mandates effective use of value engineering (VE) by all Federal agencies to establish realistic budgets, to identify and remove nonessential costs, and to improve the quality of acquisitions. By delegation, Corps policy requires that VE studies be performed for the designs of all construction projects with a current working estimate of \$2.0 million or more. Further the policy states that smaller projects should be studied when determined to be cost-effective. Based

upon that criteria, the design of this project will be studied using VE methodology. Performance of the VE study will be accomplished in a closely coordinated partnership among the project manager, the design manager, the designer, and the value engineer, following approval of the feasibility report. Based on the expected activities during the preconstruction engineering and design, the optimum time to perform the VE study is after completion of the geotechnical drilling activities.

#### **4.2.10 Dredged Material Placement Site (MPA)**

The Maryland Port Administration (MPA) as the non-Federal sponsor will accomplish all actions to provide and prepare the dredge material placement sites for use for project construction and future maintenance. MPA will closely coordinate actions, especially design review, Section 404 permits, and environmental compliance documents, with the project and technical managers to ensure that use of the chosen site complies with Corps requirements. MPA actions must occur during PED in order for the sites to be available when the construction contract is advertised. Actions include, but are not limited to: (1) acquisition, (2) design, (3) site modifications, (4) relocations, (5) environmental and cultural resource compliance, (6) permits, and (7) public involvement.

#### **4.2.11 Detailed Design (OP; EN; PL; and RE)**

Detailed design work will gather any additional information required and finalize design of the selected plan. Ship simulations will be required for design of the branch channels, because new channels and corner cut-offs are involved in the project. Ship simulations are used to improve the safety of channel design; however, no simulation will be conducted for the anchorage and turning basin. Detailed design actions consist of all investigations which support the design memorandum, follow-on NEPA documentation, and plans and specifications.

**4.2.11.a Engineering Analysis (OP).** Operations Division will be responsible for engineering work associated with the general navigation features, as well as sediment testing and evaluations. Operations Division will: (1) provide all necessary surveying and mapping of the anchorages, channels, and turning basin at the start of design; (2) direct and conduct technical work to develop and prepare designs for the anchorages, channels, and turning basin, including participation in ship simulation work by WES; (3) determine shoaling rates and initial and maintenance dredging requirements; (4) calculate dredging quantities; (5) conduct Section 404 testing and evaluation of the sediments, if necessary; (6) review the MPA plan for monitoring water quality during dredge placement activities; (7) incorporate non-Federal sponsor input, value engineering study recommendations, and input from Headquarters; (8) obtain guidance from the Corps' North Atlantic Division and Headquarters for resolution of design issues; and (9) provide input to the schedule of construction activities.

The Corps' Waterways Experiment Station will conduct the ship simulations with involvement from Baltimore District, MPA, and the Association of Maryland Pilots.

Geotechnical and Water Resources Branch in Engineering Division will conduct subsurface exploration and geotechnical testing of sediments for the general navigation features (e.g., the

turning basin). They will also review geotechnical aspects of the design of general navigation features.

Hazardous, Toxic and Radiological Waste (HTRW) Branch in Engineering Division will review any HTRW aspects of follow-on NEPA or other environmental compliance documentation.

Hydrology and Hydraulics Section in Engineering Division will review the hydrodynamic aspects of the design of the general navigation features, including participation in the WES ship simulation studies.

Cost Engineering Branch in Engineering Division will: (1) provide cost input to project design considerations, such as cost comparisons; (2) develop initial and final cost estimates with contingencies of initial construction, as well as average annual maintenance cost estimates for finalized design; (3) provide input to annual Federal budget process; and (4) prepare a narrative report of cost estimate.

Design Management Branch in Engineering Division will provide supervisory and administrative support services to Engineering Division tasks.

The Maryland Port Administration will accomplish all design work necessary for the modifications to the dredged material placement sites. At this time, no further Baltimore District review of the placement site design is anticipated. However, if further review is necessary, the design coordination required to ensure the site(s) meet Federal engineering and environmental compliance (including groundwater issues), will be accomplished using funds in the contingency subaccount.

**4.2.11.b Economic Analysis (PL-P).** Corps guidance requires that during preconstruction engineering and design, the approved project benefit analyses are to be updated every three years through submission of a limited reevaluation report. Since award of the construction contract (December 1999) is expected to occur in less than three years of the March 1997 feasibility report, no limited reevaluation report is planned. However, should a design memorandum be required, it will include an updated benefit analysis. Regardless, the feasibility study's economic analyses will be reviewed by Planning Division during the preconstruction engineering and design phase. This review will include updating the project's benefit-cost ratio. The updated costs will be provided by Cost Engineering Branch.

**4.2.11.c Environmental Compliance (PL-P).** Planning Division is responsible for keeping environmental compliance current as detailed design progresses, including preparation and coordination of any follow-on National Environmental Policy Act (NEPA) and Section 404/401 documents required to address new information or design changes during PED. The compliance review will cover Federal agency responsibilities associated with the construction of the general navigation features and the project's use of the sponsor-provided dredged material disposal sites. The non-Federal sponsor is responsible for providing any information and obtaining permits and compliance approval for the placement sites.

Based upon the feasibility study findings that there are no HTRW sites and no adverse fish and wildlife effects related to the project, no further actions are planned for these subject areas, except for review of new information for consistency with current compliance documentation. If a follow-on environmental assessment is needed, it will be prepared as a stand-alone document, separate from the design memorandum.

Baltimore District actions include: (1) evaluate refinements or changes to the proposed project during PED for adequacy of existing NEPA and Section 404/401 documentation; (2) prepare follow-on NEPA document and updated Section 404 evaluation and 401 certification, if necessary; (3) accomplish and coordinate public review, if necessary; (4) coordinate with pertinent Federal, State, and local agencies, as well as the non-Federal sponsor; (5) coordinate with the non-Federal sponsor and Operations Division's Regulatory Branch to facilitate any Section 404 permit actions required for the placement sites.

Currently, the project team anticipates that there is a low likelihood of design changes or changes to environmental conditions which would require additional analyses or investigations. This conclusion is based on the use of Hart-Miller Island as the placement site. Should the placement site be changed in the future, then additional environmental analyses may be required for this project.

The Maryland Port Administration actions include: (1) coordinate information and actions regarding dredged material placement site with Planning Division and Operations Division (Section 404); and (2) accomplish all environmental compliance for placement sites so that sites are available for project use prior to advertisement of the project construction contract.

**4.2.11.d Cultural Resources Compliance (PL-P).** Planning Division is responsible for keeping Federal cultural resources compliance current as detailed design progresses, to address new information or design changes during preconstruction engineering and design (PED). The compliance review will cover Federal agency responsibilities associated with the construction of the general navigation features and the project's use of the sponsor-provided dredged material disposal sites. The non-Federal sponsor is responsible for providing any information and obtaining compliance approval for the placement sites.

Based upon the feasibility study findings that there are no cultural resources affected by the general navigation features project, no further actions are planned, except for review of new information for consistency with current compliance documentation. However, if follow-on cultural resources compliance work is needed for the placement site, it will be prepared by the non-Federal sponsor and coordinated for Section 106 compliance by the Baltimore District.

Baltimore District actions include: (1) evaluate refinements or changes to the proposed project during PED for adequacy of existing cultural resources compliance documentation; (2) prepare follow-on actions, if necessary; (3) coordinate with the non-Federal sponsor regarding the placement sites; and (4) coordinate with pertinent Federal and state agencies, as needed.

The Maryland Port Administration actions include: (1) coordinate information and actions regarding dredged material placement site with Planning Division; and (2) accomplish all cultural resources compliance for placement sites so that sites are available for project use prior to advertisement of the project construction contract.

**4.2.11.e Real Estate (RE-C).** Real Estate Division is responsible for keeping real estate aspects of the project current as detailed design progresses. Because both the general navigation features and the dredged material placement sites are under Federal navigational servitude, no ownership interests are required for the project and no real estate activities related to acquisition or rights-of-entry are planned.

#### **4.2.12 Environmental Assessment (PL)**

Planning Division is responsible for accomplishing follow-on NEPA compliance, if needed to address new information or design changes during PED. If a follow-on environmental assessment is needed, it will be prepared separate from the design memorandum and be coordinated for public and agency review as a stand-alone document. Planning Division will: (1) accomplish all actions required to prepare the NEPA document; (2) conduct public and agency coordination; and (3) complete the NEPA process and compliance actions. MPA is responsible for providing any information and compliance approval regarding the dredged material placement sites.

#### **4.2.13 Design Memorandum (OP; EN; PL)**

The feasibility report will serve as the project decision document which supports project authorization and the project cooperation agreement. However, a design memorandum may be prepared to document technical information for the detailed design of the recommended plan which has not been included in the feasibility report. The decision whether to complete a design memorandum will depend on the level of design changes during preconstruction engineering and design; this decision will be coordinated with and concurred in by the Corps' North Atlantic Division.

If a design memorandum is prepared, it is expected to primarily consist of the results of the ship simulations, subsurface exploration, geotechnical testing of the sediments, and an update of the project's economics, including the benefit-cost ratio. As a technical document, the design memorandum will be reviewed and approved within the Baltimore District, in accordance with the technical review policy. Should a design memorandum be required, the technical manager in Operations Division is responsible for: (1) coordinating and obtaining input from other District offices, MPA, and the Corps' Waterways Experiment Station; (2) preparing the report; and (3) coordinating the review and approval process. If a design memorandum is required, Engineering and Planning Divisions will contribute the pertinent documentation of their technical analyses, as well as participate in the technical review.

#### **4.2.14 Plans and Specifications (OP; EN; PL; RE)**

Plans and specifications suitable as biddable contract documents will be prepared which includes all the general navigation features of the project – Anchorages #3 and #4, South Locust Point branch channel, Seagirt/Dundalk branch channels, and the turning basin. The draft plans and specifications will be provided to the non-Federal sponsor for review and comment prior to proceeding to finalization. To shorten amount of review and approval time in the project schedule, the plans and specifications will be transmitted with the design memorandum for concurrent review and approval, if a design memorandum is required.

The technical manager in Operations Division will be responsible for preparation and coordination of the approval of the plans and specifications of the general navigation features, with assistance from Engineering Division and coordination with Planning Division, Real Estate Division, and the non-Federal sponsor.

Operations Division will: (1) prepare the plans and specifications for the general navigation features; (2) incorporate results of detailed design investigations; (3) calculate final dredged material quantities for initial construction; (4) coordinate review and incorporate comments from the project team, the Corps' technical review process, and the non-Federal sponsor; (5) conduct biddability, constructability and operability (BCO) review and obtain certification; and (6) coordinate final approval and signing of the plans and specifications.

Planning Division will review the plans and specifications for consistency with environmental compliance documentation. Real Estate Division will review the plans and specifications to confirm there are no real estate requirements included. Cost Engineering Branch in Engineering Division will prepare cost estimates for the 95-percent and final plans and specifications. Automation Technical Management Section in Engineering Division will edit and coordinate Division 1 through 16 specifications, and assemble the plans and specifications package. Engineering Division will review the plans and specifications for technical adequacy.

#### **4.2.15 Construction Contract Document (OP; CT; EN; OC)**

One construction contract document will be prepared for the project. This document includes dredging and dredged material placement for all the general navigation features of the project – Anchorages #3 and #4, South Locust Point branch channel, Seagirt/Dundalk branch channels, and the turning basin. The acquisition plan is described later in Section 4.3.6. of this plan. The contract actions during the preconstruction engineering and design phase will consist of all actions to prepare, review, and approve the contract document up to the start of the advertisement process.

The technical manager in Operations Division will be responsible for seeing that actions to accomplish preparation and approval of the contract documents are completed prior to the scheduled advertisement date. Operations Division will provide the plans and specifications and respond to any technical issues. Cost Engineering Branch in Engineering Division will provide the government cost estimate. Contracting Division will: (1) provide the contract clauses; (2) prepare

the contract document; (3) coordinate review and approval of the contract by Office of Counsel; and (4) prepare the text of the Commerce Business Daily announcement.

#### **4.2.16 Permits (OP; PL; MPA)**

The technical manager in Operations Division oversees permitting and compliance activities required for dredging of the general navigation features and use of the dredged disposal placement sites for the Federal project. All permits must be obtained before the construction contract is advertised.

Planning Division will complete NEPA, Section 404, and Section 401 requirements for the Federal project dredging and placement actions. Regulatory Branch in Operations Division is responsible for issuing any pertinent Department of Army permits, including Section 404, required for MPA's development and use of the dredged material placement sites. Planning Division will obtain all other permits and approvals for the Federal action. MPA is responsible for obtaining all permits and compliance approvals regarding the dredged material placement sites. If necessary, any required review of the placement site permits by the Baltimore District technical divisions will be accomplished with contingency funds.

#### **4.2.17 Contingencies - Preconstruction Engineering and Design (PP-C)**

Project contingencies during the preconstruction engineering and design phase will be managed by the project manager in Programs and Project Management Division.

### **4.3 CONSTRUCTION PHASE**

The main products and actions of the construction phase for the Baltimore Harbor Anchorages and Channels project are described below. It is expected that the construction phase will be initiated in October 1999, after receipt of Federal funds for construction and execution of the project cooperation agreement. Construction-phase actions are expected to last 24 months and will end in September 2001 with the fiscal close-out and final reporting in the life-cycle reporting system.

The Baltimore District will construct the general navigation features through a single dredging contract. The work is expected to occur over two dredging seasons, due to the amount of material and volume limitations of the placement site. The Maryland Port Administration will provide and operate the dredged material placement site, including monitoring of discharge and groundwater water quality.

#### **4.3.1 Construction Life-Cycle Project Management (PP-C)**

The project manager in Programs and Project Management Division will be responsible for the life-cycle project management process, consisting of overall management of project scope, schedule, budget, and quality, as well as providing the primary point of contact with the non-Federal sponsor. Actions include: (1) monitor all activities and specifically, the project performance relative to the

project's detailed schedule and scheduled obligations and expenditures; (2) prepare Federal budget requests in coordination with Civil Programs Branch; (3) facilitate actions to resolve potential or existing issues; (4) prepare monthly reporting materials to Corps' North Atlantic Division; (5) report project progress at District Project Review Board meetings; (6) coordinate with other Corps elements and the non-Federal sponsor; (7) develop and monitor the project schedule, with input from the technical elements; and (8) coordinate project close-out actions.

#### **4.3.2 Construction Management (OP)**

The technical manager in Operations Division will be responsible for (1) management of the technical work and document approval coordination related to construction activities, including construction contract documents; (2) facilitation of the contract award; (3) physical construction; and (4) environmental compliance and permits. Actions include: (1) providing OP input to the project schedule and budget; (2) monitoring OP tasks and costs; (3) quality assurance and quality control; (4) procurement and management of work by construction contractor; (5) coordination with project team, project manager, and non-Federal sponsor; (6) preparation of pertinent correspondence; (7) attendance at meetings; and (8) presentations.

#### **4.3.3 Public Involvement (PP-C; PAO; MPA)**

The project manager in Programs and Project Management Division oversees public involvement and coordination activities. Decisions and actions will be made jointly by the Baltimore District and the non-Federal sponsor, and closely coordinated by the two organizations. All public inquiries and news media requests for information will either be directed to, or cleared through, the Baltimore District's Public Affairs Office. The coordination and technical work will be managed and accomplished by Operations Division and the Maryland Port Administration, with support from Planning Division and involvement and coordination with Public Affairs Office. Actions will include: (1) attendance at public meetings; (2) Federal, state and local agency coordination, as needed; (3) informational presentations to interest groups; (4) responses to technical and policy inquiries regarding the project; (5) coordination with technical staff of non-Federal sponsor; (6) preparation of public involvement materials regarding the project; and (7) preparation for any ceremonies for PCA signing, groundbreaking, and dedication.

#### **4.3.4 Construction Funding (PP-C; PP-P; HQ; MPA)**

The project manager and Civil Programs Branch in Programs and Project Management Division are responsible for identifying and obtaining Federal and non-Federal funding for the construction phase. In order to have a construction start in Fiscal Year 2000, the request for Federal construction funding will be initiated in 1998, at the start of the FY 2000 budget process. The project manager will closely coordinate with Civil Programs Branch to request construction funds in a timely fashion.

During the preconstruction engineering design phase, the Maryland Port Administration will set up its financing for its share of the project construction costs. This financing must be in place and ready for usage by the execution of the project cooperation agreement. Additionally, MPA must

fund their acquisition, design and construction actions for the dredged material placement sites such that the site is in place by the time of the construction contract award.

#### **4.3.5 Real Estate (RE; MPA)**

Real Estate Division is responsible for keeping real estate aspects of the project current as the construction phase progresses. Because of Federal navigational servitude, no real estate activities related to acquisition or rights-of-entry are planned. However, Real Estate Division will evaluate other aspects of the sponsor's responsibilities for lands, easements, rights-of-way, relocations, and dredged material placement (LERRD), and coordinate with MPA and the project team as needed.

The Maryland Port Administration is responsible for providing a usable dredged material placement site. Prior to the advertisement of the construction contract, MPA will certify that the placement sites are available for use by the Corps for the project.

#### **4.3.6 Construction Contract Advertising and Award (OP; CT; EN)**

One contract document will be prepared for the construction of all of the general navigation features of the project. The work will be advertised as a firm fixed price contract with unit prices for the dredge material quantities.

Construction-phase contract actions will consist of all actions to advertise and award the contract. The contract can be advertised when the following actions are complete: (1) PCA execution; (2) Federal and non-Federal construction funds received; (3) dredged material placement site available for project use; and (4) all permits and compliance actions complete. During the advertisement period, Operations Division will initiate any necessary contract amendments, and Engineering Division will prepare the government estimate. Following the advertisement period, bids will be opened and, if appropriate in comparison with the government estimate, a contract will be awarded to the qualified low bidder. Prior to contract award, a pre-award survey of the apparent low bidder will be performed to assess qualifications. The successful bidder will not begin actual site work until a notice-to-proceed is issued by the Contracting Officer. The Contracting Officer shall be a duly appointed and authorized individual from the Baltimore District's Contracting Division who has the required training, experience, and warrant of authority. The Contracting Officer shall have the final authority on all contractual matters.

Upon issuance of the notice-to-proceed, the contract will be administered by the Operations Division. Modifications to the contract will be processed according to the Federal Acquisition Regulations (FAR), Defense Federal Acquisition Regulations (DFAR), Army Federal Acquisition Regulations (AFAR), Engineering Federal Acquisition Regulations (EFAR), other pertinent regulations, and Baltimore District policies and procedures. Changes will be coordinated with the non-Federal sponsor, but the final decision will rest with the Contracting Officer.

The technical manager in Operations Division will be responsible for seeing that actions to accomplish contract advertisement and award are completed as scheduled. Operations Division will respond to any technical issues and conduct the pre-award survey.

Contracting Division is responsible for accomplishing the advertisement and award process. Actions include: (1) reproduction of the plans and specifications; (2) advertise contract; (3) respond to questions; (4) finalize the contract and other documents; (5) coordinate review and approval of the contract by Office of Counsel; (6) award contract; and (7) issue the notice-to-proceed.

In Engineering Division, Cost Engineering Branch will provide support regarding the government estimate. Automation Technical Management Section in Design Branch will assist in the advertising and award process.

#### **4.3.7 Construction Activities (OP; MPA)**

Operations Division will be responsible for the accomplishment of all physical construction activities, as well as coordinating with the non-Federal sponsor and other District elements to resolve issues related to physical construction. Actions include: (1) administration and management of the dredging contract; (2) before- and after-dredging bathymetric surveys to measure contractor progress; prepare after dredging drawings; (3) inspection of the construction contractor and their activities; (4) coordination to resolve construction problems with appropriate District elements, the non-Federal sponsor, and the contractor; (5) preparation of periodic field reports; and (6) preparation of contract close-out documents.

No hazardous, toxic, and radiological waste (HTRW) has been identified as being associated with the project; however, Operations Division and the contractor will be responsible for following the appropriate state and Federal laws, as well as Corps of Engineers guidance, should any HTRW be encountered during construction. The project manager will immediately notify the non-Federal sponsor upon obtaining knowledge of the presence of HTRW on the project site. Likewise, the sponsor shall immediately notify the Baltimore District upon receiving information that indicates or reveals the presence of HTRW on the project site.

The Maryland Port Administration is responsible for monitoring water quality of the discharge and groundwater at the dredged material placement site during construction, and maintaining permit compliance.

#### **4.3.8 Engineering and Design During Construction (OP; EN; VE)**

Operations Division, with assistance as needed from Engineering Division, will be responsible for any further engineering work associated with the general navigation features which is required during the construction phase. Actions include: (1) responding to engineering issues during construction; (2) performing site visits with construction management personnel and contractor to further clarify design intent and assist in implementation of designed features; (3) providing technical guidance to resolve issues related to changed field conditions; (4) calculating final annual maintenance dredging requirements; and (5) providing plan for incorporating operation and maintenance of the project with other Baltimore Harbor operation and maintenance activities.

The District Value Engineer (VE), in coordination with Operations Division, Engineering Division, and the non-Federal sponsor, will evaluate and respond to contractor-raised value engineering study recommendations. VE work during construction is funded from the realized cost savings, and is not part of project costs.

Engineering Division elements will assist as needed. Cost Engineering Branch will provide the government cost estimate for contract modifications, as well as provide final operation and maintenance dredging estimates, input to budget updates, and prepare final M-CACES code of accounts estimate for project close-out actions.

#### **4.3.9 Planning During Construction (PL)**

Planning Division is responsible for providing continued technical assistance as needed during construction to keep project economics and environmental and cultural compliance current. To that end, Planning Division will: (1) maintain information on economic feasibility of the project; (2) monitor and update commodity, vessel, and trade route trends; (3) update benefits and costs, as needed; (4) review final costs to ensure proper cost allocation and apportionment; (5) update project benefit-cost ratio for Federal budget submissions; (6) update the National Economic Development (NED) benefit analysis, as needed; and (7) participate in public involvement as needed.

Planning Division is responsible for keeping environmental and cultural resource compliance current as construction progresses. Actions include: (1) participate in field inspections for environmental and cultural aspects; (2) evaluate construction actions for adequacy of existing NEPA, Section 404, and cultural documentation; (3) update NEPA and Section 404/401 documents required to address new information or design changes during construction; (4) coordinate with pertinent Federal, State, and local agencies, as well as the non-Federal sponsor and other District elements; and (5) participate in public involvement, as needed.

#### **4.3.10 Project Completion (PP-C; OP)**

The project manager in Programs and Project Management Division, is responsible for managing and coordinating actions to formally complete the project. Support will be provided from Operations Division, Contracting Division, Civil Programs Branch, Resource Management Office, other District elements, and the non-Federal sponsor.

The Operations Division will be responsible for certifying to the project manager the project is physically complete. The project manager shall in turn notify the Maryland Port Administration that the project is physically complete and that Federal operation and maintenance responsibilities have begun.

The project manager, in coordination with other District elements, will be responsible for: (1) confirming final project costs and cost-sharing allocations; (2) completing fiscal close-out documents; and (3) having the final audit performed and the project certified as fiscally complete.

#### **4.3.11 Ceremonies (PP-C; PAO; MPA)**

Ceremonies executing the project cooperation agreement, as well as initiating or concluding the construction contracts will be held at the discretion of the non-Federal sponsor. If ceremonies are held, the project manager and the Corps' Public Affairs Office will coordinate with and assist the non-Federal sponsor in preparing for and conducting such ceremonies. Members of the project team will be invited to and provide pertinent assistance with project ceremonies, as appropriate.

#### **4.3.12 Contingencies - Construction (PP-C)**

Project contingencies during the construction phase will be managed by the project manager in Programs and Project Management Division.

### **5. SCHEDULE**

This project management plan reflects the Baltimore District's capability to perform the identified tasks. The milestone schedule assumes that sufficient Federal and non-Federal funds are provided in FY 1997 and subsequent years as required to effectively accomplish the work.

The Gantt chart included in Appendix B to this project management plan presents the tasks, responsible organizations, and schedules for the primary actions required for project implementation during the preconstruction engineering and design and construction phases. The organization shown for each task is the technical office responsible for successfully completing that action or product, including obtaining support actions from and coordinating with other offices. When the final feasibility report is approved, this schedule becomes the baseline from which project implementation is measured in the Corps' management system.

The Maryland Port Administration (MPA) and the Port of Baltimore maritime community have requested that the project improvements be constructed as soon as possible. The MPA has indicated that it will be ready to sign the project cooperation agreement, provide the non-Federal payments, and make the dredged material placement site available to accept material in accordance with an initial dredging in late 1999.

The Baltimore District has developed a schedule which provides sufficient durations and float time to accomplish the required actions within a reasonable timeframe. The resulting schedule provides for initiation of physical construction in Federal Fiscal Year 2000. At this time, the schedule is limited by the expected project authorization in 1998, and the follow-on receipt of construction funds in Federal Fiscal Year 2000.

The major PED and construction milestones are shown in Table A-1. A detailed schedule is provided in Appendix B to this project management plan.

**TABLE A-1**

**MAJOR MILESTONES**

**PRECONSTRUCTION ENGINEERING AND DESIGN  
and  
CONSTRUCTION PHASES**

**BALTIMORE HARBOR ANCHORAGES AND CHANNELS PROJECT, MD AND VA**

FY 97	Apr 97	Execute Agreement For PED Phase
	May 97	Initiate PED Phase
	May 97	Begin Simulation And Design Work
FY 98	Sep 98	NEPA and Permit Compliance Complete
	Sep 98	Draft Design Memorandum Completed
FY 99	Oct 98	Project Authorization in WRDA '98
	Jan 99	Approval of Design Memorandum
	Feb 99	Draft Plans and Specifications Completed
	Apr 99	Final Plans and Specifications Completed
	May 99	Submittal of Project Cooperation Agreement (PCA) Package
	Sep 99	Approval of PCA and Financing Plan
FY 00	Oct 99	Receive Construction Funds
	Oct 99	Sign PCA
	Nov 99	Advertise Construction Contract
	Dec 99	Award Construction Contract
	Jan 00	Notice-to-Proceed to Contractor
FY 01	Apr 01	Accept Physical Construction
	Sep 01	Project Closeout

**NOTES:**

Schedule reflects the assumption that the Assistant Secretary of the Army (Civil Works) will forward the project's initial construction funding request to the Office of Management and Budget in late summer 1998.

## **6. BUDGET AND COST ESTIMATE**

### **6.1 OVERVIEW OF BUDGET AND COST-SHARING**

A summary budget is presented in Appendix C. The budget allocates planned expenditures by Federal fiscal year for the preconstruction engineering and design (PED) and construction phases of the project. This budget uses the M-CACES project cost estimate from the feasibility report. Project construction costs were estimated by Cost Estimating Branch; costs for the Corps' PED- and construction-phase activities were provided by each performing organization; and costs associated with the dredge material placement sites were provided by MPA. These costs will be updated and revised during the PED and construction phases, based on plans and specifications information, review and input from the non-Federal sponsor, and actual construction costs.

The cost-sharing provisions for PED and construction costs will be detailed in the PED and project cooperation agreements, respectively. In general, the funding of PED and construction of the general navigation features for the Baltimore Harbor Anchorages and Channels project is cost-shared at roughly 75 percent Federal, 25 percent non-Federal. Additionally, the sponsor will provide another 10 percent of project costs after construction, to be paid over a period not to exceed 30 years, with this share reduced by their credit for lands, easements, rights-of-way, relocations, and disposal areas.

The 25-percent non-Federal share is paid in cash during the preconstruction engineering and design and construction phases, as called for in the agreements governing those phases. Upon completion of the project, the non-Federal sponsor can receive a credit for the value of the allowed lands, easements, rights-of-way, relocations, and dredged material placement sites (LERRD) to apply towards the post-construction 10-percent non-Federal share.

Since the Maryland Port Administration has designated Hart-Miller Island as the placement site for the Anchorages dredged material and this facility was constructed prior to the 1996 Water Resources Development Act, all actions related to the LERRD's required for project construction are a non-Federal responsibility and are not cost-shared. The costs for LERRD are included in the total cost of the project, except that no cost (or associated credits) is included for real estate interests or rights in lands which are under Federal navigational servitude. The anchorages and channels are under navigational servitude; therefore, no costs (or credits) for acquisition of lands, easements or rights-of-way for the dredged area is included in the project cost estimate.

However, the cost of providing a placement area for the dredged material is included in the total project cost estimate. Since Hart-Miller Island was acquired in the 1970's and has been since credited on other Corps projects, the cost for acquisition of the proposed placement site at Hart-Miller Island is not included in the cost estimate. However, a proportionate share of the costs to modify the placement site for the additional volume of material is included in the estimate. The share associated with the placement of material from the Baltimore Harbor Anchorages and Channels project is estimated at \$2,065,000. Thus, this amount is included in the overall project cost, and is expected to be the non-Federal sponsor's credit towards their post-construction 10-

percent payback. Given a 10-percent construction cost share of \$2,720,000 and the credit of \$2,065,000, the Maryland Port Administration's payback amounts to \$655,000, which will be paid over a period of time not to exceed 30 years.

## **6.2 PRECONSTRUCTION ENGINEERING AND DESIGN PHASE**

The cost of the preconstruction engineering and design (PED) effort is currently estimated at \$900,000. The PED agreement is the legal mechanism which outlines the cost-sharing of PED at the time of the work effort. The overall project cost-sharing percentage (roughly 75 percent Federal and 25 percent non-Federal) is directly applicable to the PED costs. Accordingly, the PED cost will be split \$675,000 from Federal funds and \$225,000 from non-Federal funds. The Maryland Port Administration's costs to coordinate the PED effort are included in the overall project costs, via the PED Coordination Team provision of the PED agreement. The sponsor's costs are currently estimated at \$55,000.

A summary of the PED cost estimate is noted in Table A-2.

## **6.3 CONSTRUCTION PHASE**

During the construction phase, both Federal and non-Federal funds must be available to the Baltimore District prior to initiation of the actions for which they are required. The total fully funded cost of project construction is estimated at \$29,265,000 (including the cost to modify the dredged material placement site; costs are at October 1996 price levels). This will be cost-shared at roughly 75-percent Federal and 25-percent non-Federal shares. Upon execution of the project cooperation agreement, a portion of the non-Federal share (\$6,987,000) will be provided each year in proportion with the Federal funds, and the expected construction-phase spending. Of the \$29.3-million project total cost, \$555,000 is estimated for the construction contract and management to be performed by the Corps.

The Maryland Port Administration's cost for dredged material placement site modifications and relocations comprises \$2,065,000 of the \$29.3-million construction cost. This will not be cost-shared with the Federal government. The necessary sponsor expenditures will occur prior to the signing of the project cooperation agreement, in order to have the placement site available prior to advertisement of the construction contract. These expenditures will be credited to the sponsor's 10-percent post-construction share after completion of project construction.

TABLE A-2

**BALTIMORE HARBOR ANCHORAGES AND CHANNELS, MD AND VA  
PRECONSTRUCTION ENGINEERING AND DESIGN COST ESTIMATE**

OFFICE/TASK	TOTAL ESTIMATED COST *	PERCENT OF TOTAL	FISCAL YEAR DISTRIBUTION		
			FY 1997	FY 1998	FY 1999
<b>Contracting Division</b>					
Contract Preparations	\$2,000		\$0	\$0	\$2,000
<u>Printing of Plans and Specifications</u>	<u>\$10,000</u>		<u>\$0</u>	<u>\$0</u>	<u>\$10,000</u>
Total - Contracting	\$12,000	1.3%	\$0	\$0	\$12,000
<b>Engineering Division</b>					
Technical Management	\$13,400		\$2,000	\$7,300	\$4,100
Hydrology and Hydraulics	\$12,200		\$400	\$9,800	\$2,000
Geotechnical Analyses- Drilling	\$78,000		\$78,000	\$0	\$0
Dams and Investigations	\$8,800		\$400	\$4,700	\$3,700
HTRW - Testing/Compliance Review	\$2,000		\$1,000	\$1,000	\$0
Technical Support (Specs)	\$4,300		\$0	\$0	\$4,300
<u>Cost Estimating</u>	<u>\$14,000</u>		<u>\$0</u>	<u>\$9,100</u>	<u>\$4,900</u>
Total - Engineering	\$132,700	14.7%	\$81,800	\$31,900	\$19,000
<b>Operations Division</b>					
Technical Management	\$57,600		\$8,200	\$35,000	\$14,400
Design/Review Conferences	\$4,500		\$2,200	\$2,300	\$0
Value Engineering	\$4,800		\$0	\$4,800	\$0
Design Memorandum					
Detailed Surveys	\$10,000		\$10,000	\$0	\$0
Drawings and Quantities	\$4,100		\$4,100	\$0	\$0
Ship Simulation Studies	\$125,000		\$50,000	\$75,000	\$0
Anchorages Design	\$7,200		\$0	\$7,200	\$0
Shoaling/O&M Requirements	\$4,800		\$0	\$4,800	\$0
DM Preparation	\$21,600		\$0	\$21,600	\$0
Plans and Specifications					
Plans and Specs	\$6,700		\$0	\$5,000	\$1,700
Surveys	\$20,000		\$0	\$10,000	\$10,000
Drawings and Quantities	\$8,200		\$0	\$4,100	\$4,100
Contingencies	\$19,800		\$0	\$10,000	\$9,800
<u>Contract Advertisement</u>	<u>\$4,000</u>		<u>\$0</u>	<u>\$0</u>	<u>\$4,000</u>
Total - Operations Division	\$298,300	33.1%	\$74,500	\$179,800	\$44,000
<b>Planning Division</b>					
Technical Management	\$14,000		\$4,000	\$8,000	\$2,000
Economic Analysis	\$69,000		\$10,000	\$45,000	\$14,000
<u>Environmental Compliance</u>	<u>\$21,200</u>		<u>\$10,000</u>	<u>\$3,200</u>	<u>\$8,000</u>
Total - Planning Division	\$104,200	11.6%	\$24,000	\$56,200	\$24,000
<b>Programs and Project Management Division</b>					
Program Management	\$23,000		\$5,000	\$12,000	\$6,000
<u>Project Management</u>	<u>\$72,000</u>		<u>\$9,700</u>	<u>\$40,000</u>	<u>\$22,300</u>
Total - PPMD	\$95,000	10.6%	\$14,700	\$52,000	\$28,300
<b>Real Estate Division</b>					
Real Estate Actions	\$600		\$0	\$600	\$0
<u>PCA Actions</u>	<u>\$1,800</u>		<u>\$0</u>	<u>\$0</u>	<u>\$1,800</u>
Total - Real Estate	\$2,400	0.3%	\$0	\$600	\$1,800
<b>Value Engineering</b>					
District Value Engineer	\$2,900		\$0	\$2,700	\$200
Contract Administration	\$2,000		\$0	\$2,000	\$0
Contractor/OVEST Team	\$30,000		\$0	\$30,000	\$0
District Team Input	\$9,500		\$0	\$9,500	\$0
Total - Value Engineering	\$44,400	4.9%	\$0	\$44,200	\$200
<b>Sponsor PED Coordination</b>	\$55,000	6.1%	\$5,000	\$35,000	\$15,000
<b>Contingencies</b>	\$156,000	17.3%	\$0	\$50,300	\$105,700
<b>Total Required</b>	<b>\$900,000</b>	<b>100.0%</b>	<b>\$200,000</b>	<b>\$450,000</b>	<b>\$250,000</b>

## NOTES:

\* October 1996 values.

## **7. LOCAL COOPERATION**

### **7.1 PROJECT PARTNERSHIP**

This project will be structured and pursued with the Maryland Port Administration (MPA) as a true partner with the Corps of Engineers in the endeavor. The roles and levels of participation of the Corps of Engineers and the Maryland Port Administration as the non-Federal sponsor, are outlined in this project management plan and the project cooperation agreement. The rights and obligations of both parties are the same as in a partnership. Each party is obligated to ensure that the other is fully informed of all decision-making processes and that both parties have agreed to the decision, within the guidelines of their respective rules and regulations. Each party has the right to receive the decision-making documents prior to the decision and to voice their opinion before the decision is made. Dealings between the parties shall be founded on a good faith effort, with the successful completion of the project being the guiding principle.

### **7.2 PROJECT COOPERATION AGREEMENT**

The successful completion of a project requires timely and effective communications between the Corps of Engineers, representing the Federal government, and the Maryland Port Administration, the non-Federal sponsor. The project cooperation agreement (PCA) is the vehicle by which both parties, through a binding contractual document, ratify their mutual agreement concerning project responsibilities and obligations. A draft PCA is thoroughly coordinated before the final PCA is executed. Real Estate Division staff from the Baltimore District will prepare and negotiate the PCA, with assistance from the project manager. The project manager is responsible for preparing the necessary transmittal documents for processing the PCA to the Corps' North Atlantic Division and Headquarters offices. The formal PCA is expected to be signed by the Executive Director of the Maryland Port Administration and the Assistant Secretary of the Army for Civil Works. The PCA must be executed prior to advertisement of the project construction contract.

The PCA defines the responsibilities and obligations of the Federal and non-Federal partners for the full spectrum of the project. The PCA will define the project features to be constructed, expected costs, the cost-sharing requirements, and the non-Federal sponsor's payment plan. It will identify the non-Federal sponsor's requirements for lands, easements, rights-of-way, relocations, and dredged material placement sites (LERRD); and will explain the sponsor's receipt of financial credit for applicable LERRD towards the sponsor's share of project costs. The PCA will define Federal and non-Federal responsibilities should hazardous, toxic and radiological waste be encountered. The PCA will identify accounting and audit requirements. It will outline: (1) project management procedures, including Corps of Engineers' and Maryland Port Administration's points of contact; (2) record-keeping and reporting; (3) approval process for modifications to planned actions, construction, schedules, costs, etc.; and (4) dispute resolution. The PCA will identify Federal and non-Federal responsibilities for future operation and maintenance for the project.

### **7.3 PUBLIC AFFAIRS MANAGEMENT**

Keeping the public and special interest groups, particularly the Port of Baltimore maritime community and environmental regulatory agencies, informed of the planning and progress of the project is important to the success of the project. The MPA shall be responsible for information dissemination and coordination with the public, as deemed appropriate. The Baltimore District will fully support and participate in any public information programs desired. The information program will be jointly developed by the Baltimore District and MPA.

All public inquiries and news media request for information regarding this project will either be directed to, or cleared through, the Baltimore District's Public Affairs Office. The non-Federal sponsor has a role to ensure that accurate, and timely information is provided to the media.

## **8. MANAGEMENT PLANS**

### **8.1 INTRODUCTION**

This section describes the organizational structure, responsibilities, and methods used to manage and control costs, schedules and technical performance in implementing the project. It addresses documentation, levels of management responsibilities, sponsor contacts and responsibilities, procedures, and systems used to manage the project in accordance with ER 5-7-1, Project Management.

### **8.2 MANAGEMENT STRUCTURE AND RESPONSIBILITIES**

The Baltimore District's project management structure and its attendant roles and responsibilities, encompass corporate, project and task level monitoring and control with a goal of producing a quality product in a timely and cost-effective manner.

#### **8.2.1 Executive Committee**

The overall corporate management of the project is the responsibility of the Executive Committee which will be comprised of the Baltimore District Engineer, the Deputy District Engineer for Programs and Project Management, the Chief of Operations Division, the Executive Director of the Maryland Port Administration, and the manager, Harbor Development, Maryland Port Administration. The Executive Committee will meet periodically throughout project implementation to review project progress and finances, and to resolve significant issues, as the need arises.

### **8.2.2 Project Review Board**

It is the Project Review Board's responsibility to focus the attention of the Baltimore District's corporate leadership on the project. They are required to resolve major issues, concerns and problems brought before the board by the project manager, functional area, or local sponsor. The board's action upon the identified trends of the quality, scope, cost, budget, and schedule is critical to the District's ability to produce the project on time and within budget. At each meeting, the board is charged with reviewing and evaluating project execution and management. The Project Review Board is responsible for taking action on schedule and cost change requests (SACCR).

### **8.2.3 Project Manager**

The project manager provides macro-level management of the overall project and is the primary Baltimore District point of contact with the non-Federal sponsor. The project manager serves as project leader, responsible for managing the project parameters of funds, budgets, schedules, scope, and quality. The project manager oversees execution of the overall project consistent with corporate commitments, and provides management continuity throughout the project implementation, from preparation of the project design through construction and project turnover to the operation and maintenance phase.

The project manager is responsible for upward reporting to the Project Review Board and for preparation of required life-cycle project management reports. In addition, the project manager's responsibilities include the monitoring of project schedules and finances, processing of schedule and cost change requests, management of contingencies, preparation and review of budget documents, development and processing of the project cooperation agreement, and identification of problems and issues. The project manager has the responsibility and authority to challenge the technical issues when necessary. The project manager facilitates resolution of project-related issues, and is the non-Federal sponsor's primary interface for project issues.

### **8.2.4 Technical Managers**

The development of a timely, quality product within the established task budget is the responsibility of the technical manager for each task and ultimately, the project manager. In addition, the individual District elements supporting that task are responsible for scope of work preparation, contract negotiation, and performance of any work to be completed by consultants or other Federal agencies. The technical managers are responsible for the content and quality of their technical product. They have responsibility for the total development, scheduling, managing, authorization of work and progress updating of their technical product.

Technical managers are responsible for controlling costs with regard to contractors, in-house technical staff, and management within their technical fields. Technical managers are responsible for managing work products with the established budget, as defined in the project management plan. If additional funds are required, they must be requested and approved by the project manager, and must be fully justified, for reasons such as a change of project scope.

Technical managers are responsible for the quality and timeliness of products within their technical fields. Technical managers monitor the schedule, identify problems which could lead to schedule delays, and take corrective actions to minimize schedule impacts. Technical managers keep the project manager aware of the status of technical products, and inform the project manager when schedule changes are unavoidable. The technical managers are responsible to initiate schedule and cost change requests (SACCR's) that affect their portion of the project. They are responsible for keeping the project manager advised of the progress of technical products at regular intervals during the project. Technical managers surface issues and problems at the earliest opportunity and serve as the point of contact with all parties interested in technical issues.

### **8.2.5 Project Team**

The project team is responsible for accomplishment of the project tasks in accordance with the project management plan and appropriate Federal and State guidance and regulations, providing quality actions and products within budget and on schedule. The study team will regularly meet to coordinate on study progress, interim findings, schedule and financial status, resolution of project issues, and all matters related to implementation and completion of the project

The project team is composed of representatives from the Baltimore District's Operations Division, Engineering Division, Planning Division, Real Estate Division, Contracting Division, Office of Counsel, Resource Management Office, Civil Programs Branch in the Programs and Project Management Division, and other elements as needed. The Corps' Waterways Experiment Station and any District contractor are included in the project team. In addition, representatives of the Maryland Port Administration, including but not limited to a project manager, and the Association of Maryland Pilots are also part of the team.

Roles and responsibilities are described in Chapter 4 of this project management plan, and except where noted otherwise, follow the Baltimore District's responsibility matrices for the preconstruction engineering and design and construction phases. Specific task responsibilities are noted on the project schedule in Appendix B.

### **8.2.6 Non-Federal Sponsor**

The Maryland Port Administration serves as the non-Federal sponsor and participates as a partner with the Baltimore District in implementation and operation of the project. The non-Federal sponsor is responsible for managing and accomplishing the portions of the project assigned to them, to produce quality products and actions within budget and on schedule. They are responsible for employing a consistent set of project management standards acceptable to the Federal government. Through their appointed project coordinator, they participate in preparing the project management plan, approve schedule and cost change requests, and review decision documents and construction contracts before award. The non-Federal sponsor is also responsible for surfacing problems and issues at the earliest opportunity, and to initiate schedule and cost change requests for their portion of the project. The sponsor will be responsible for having representatives at appropriate working meetings and meetings with agencies and officials.

Effective and timely communications between the Baltimore District and the non-Federal sponsor must be recognized as a key ingredient to the successful completion of the project within the established parameters of this project management plan. The Baltimore District's project manager shall be responsible for keeping the MPA coordinator informed of project progress and funding status. The MPA coordinator shall inform the Corps' project manager of events or actions evolving within the sponsor's arena which would affect or impact the project.

### **8.2.7 Contracting Officer**

The Contracting Officer is the only individual authorized to contractually obligate the United States of America. All Corps Contracting Officers are warranted with authority to enter into contracts for as much as unlimited amounts.

As the business agent for the Federal government, the Contracting Officer, with input from technical personnel, District Counsel, auditors, and the Maryland Port Administration, makes decisions regarding acquisition strategy, source selection, and contract award. Certain business decisions are the sole responsibility of the Contracting Officer, and in this regard, the Contracting Officer has the final word on all contractual matters.

### **8.2.8 Deputy for Small Business**

All proposed contracts are reviewed by the Deputy for Small Business for consideration for exclusive award to small, small and disadvantaged, and minority businesses under any number of government-wide mandatory programs. Once such a review is completed, a recommendation is made to the Contracting Officer and the final decision becomes part of the acquisition plan.

## **8.3 RESOURCE ALLOCATION**

The tasks and schedule for implementing the project, as well as the responsible and supporting organizations are identified in Sections 4.2 and 4.3 of this project management plan, as well as in the responsibility assignment matrix of the project schedule in Appendix B to this plan. The level of effort and personnel required is reflected in the cost estimates provided by the various District elements and reflected in the project budget in the plan's Appendix C. The Corps of Engineers and the non-Federal sponsor are both responsible for ensuring their organization has sufficient resources, in both time and personnel, to accomplish the required tasks. Baltimore District capability is provided through inclusion of this project in the annual Federal budget and manpower allocations. Each technical manager and District element will manage and allocate their resources as needed to accomplish this and other projects.

## **8.4 SCHEDULE CONTROL**

The project manager will monitor and control the overall project schedule through use of the work breakdown structure, responsibility assignment matrix, and schedule included in Appendix B to this

plan. This overall schedule tracks the major products, actions, Corps management milestones, and key decision points required to implement the project. The sponsor will be included in major decision points and milestones.

Each task identified in the overall project work breakdown structure is the responsibility of the organization to which it is assigned. The technical managers of those organizations will develop detailed work breakdown structures and schedules for their tasks and use those detailed schedules to monitor and control their products and actions.

The project manager is responsible for authorizing work and managing the overall project schedule. Should schedule slippages occur for individual tasks, the project manager will work with the technical managers and non-Federal sponsor to identify ways to regain key milestone execution and the overall project schedule. If significant changes to project tasks and schedules are required, the project manager will recommend a course of action and process approvals through the Project Review Board and the non-Federal sponsor. Changes to significant Corps management milestones must be approved by the Corps of Engineers' Headquarters through the processing of a schedule and cost change request.

The project manager is responsible for updating the project schedule, in accordance with the project management plan and the project cooperation agreement, as necessary to manage the project. The forecast schedule shown in the life-cycle reporting system will be used to show schedule progress and updated at least every other month. The technical managers and non-Federal sponsor are responsible for updating their detailed schedules, as well as providing progress information on their portions of the project as called for by the project manager.

## **8.5 COST CONTROL**

### **8.5.1 Annual Obligations and Expenditures**

The project manager will monitor and control project funds through the use of the project schedule in Appendix B, the project budget in Appendix C, and the annual schedule of obligations and expenditures prepared by the project manager each Federal fiscal year.

Monthly planned obligations and expenditures are allocated in the obligations and expenditures schedule as needed to track funds for each major project task using the chart of accounts work codes. The project manager will review actual obligations and expenditures from the Baltimore District's finance and accounting system each month to monitor and verify the charges. The sponsor will be included in major decision points and milestones.

Task-specific tracking of funds and expenditures, as well as staying within budget, is the responsibility of the organization to which the task or subtask is assigned. The technical managers of those organizations will develop detailed obligations and expenditures schedules at the staff and support organization levels, and use those detailed schedules to monitor and control their actions, funding and expenditures. The technical managers and the local sponsor are responsible for

verifying and updating their cost information monthly. They will inform the project manager of anticipated shortfalls or overages with sufficient lead time to take corrective actions, and provide information to the project manager as needed.

The project manager is responsible for authorizing work and managing the overall project budget. Should funding and expenditure needs or slippages occur for individual tasks, the project manager will work with the technical managers and non-Federal sponsor to identify ways to either regain or adjust the obligations and expenditures schedule. If significant changes to the project funding or schedule of obligations and expenditures are required, the project manager will recommend a course of action and process approvals through the Project Review Board and the non-Federal sponsor. Significant changes must be approved by the Corps of Engineers' Headquarters through the processing of a schedule and cost change request and reprogramming requests, if needed.

Project contingencies are developed and assigned to each task through a risk analysis method. The project manager will allocate contingencies in accordance with procedures and authorities outlined in ER 5-7-1, Project Management.

### **8.5.2 Total Project Cost**

The project manager, in coordination with the Civil Programs Branch, is responsible for monitoring and updating the total project costs. Comparison of the baseline and current cost estimates will be used to measure the project's success and District performance. The cost estimate is composed of all costs to complete the work, regardless of funding source or funds type. The cost estimate will be in code of accounts format. The current estimate will be maintained and adjusted throughout the life of the project.

The forecast project costs shown on the project executive summary in the life-cycle reporting system will be used to show anticipated project costs and updates at least every other month.

### **8.5.3 Audit Procedures**

Audit procedures for the project will be defined in the project cooperation agreement. The District and the sponsor will keep books, records, documents, and other records pertaining to cost and expenses incurred to execute the project in such detail as will properly and accurately reflect the total project cost. All parties will maintain such books, records, documents, and other evidence for inspection and audit by authorized representatives from the other parties to the project. Audit procedures will be in accordance with:

- ER 1165-2-131, "Project Cooperation Agreements for New Start Construction Projects;"
- OMB Circular No. A-128, Subject: "Audits of State and Local Governments;"
- OMB Circular No. A-87, Subject: "Cost Principles for State and Local Government;" and
- Federal Acquisition Regulations (FAR) Part 31, "Contract Cost Principles and Procedures."

The Corps of Engineers will conduct at least yearly an audit of the sponsor's records for the project, as is appropriate, to ascertain the allowability, reasonableness, and allocability of costs for

inclusion as credit against the non-Federal share of the project cost. The sponsor shall submit, three months after the end of their fiscal year, such records as they deem necessary for the District to do the audit.

## **8.6 REPORTING**

Project management reports serve to focus management attention on project delivery and the activities necessary to complete the project within the specified scope, cost and time constraints. Along with the project network schedule, the reports represent a summation of the data necessary to assess the status of project activities, identify trends and issues, forecast changes to project schedule and cost, and monitor the accomplishment of project activities.

### **8.6.1 Project Manager Reporting**

The project manager will submit monthly status reports on the project through the project executive summary in the life-cycle reporting system to the Baltimore District's Project Review Board, the North Atlantic Division, and Corps Headquarters. The project manager also is responsible for initiating, gathering data for, coordinating, and preparing the following, as necessary:

- Contingency management report;
- Project schedule and cost change requests (SACCR);
- Sponsor's escrow account balance report; and
- Audit reports.

After receiving input from the technical managers and the non-Federal sponsor, the project manager shall finalize the reports identified above as necessary to manage the project on a daily basis. The project manager will present these reports to the Project Review Board as necessary. The escrow account balance report will be supported by a monthly bank statement which will be kept on file in the District.

The District, through the project manager, will provide the non-Federal sponsor with progress updates quarterly during the preconstruction engineering and design phase. During the construction phase, updates will be provided monthly. Updates will be accomplished primarily by telephone between the project manager and the designated points of contact. At the convenience of the Maryland Port Administration, periodic office visits will be made by the project manager to provide progress updates.

The project manager may schedule or request project team meetings as appropriate, with attendance by non-Federal sponsor. The non-Federal sponsor may request additional meetings with the Corps of Engineers project team, as desired, by contacting the project manager.

### **8.6.2 Technical Manager Reporting**

The technical managers are responsible for participating in the initiation and updating of all reports related to their technical products. They will report progress on the project schedule and cost as called for by the project manager. They will inform the project manager of problems and issues at the earliest opportunity. Technical managers will initiate schedule and cost change requests for their technical area, as necessary.

### **8.6.3 Non-Federal Sponsor Reporting**

The Maryland Port Administration as non-Federal sponsor is responsible for participating in the initiation and updating of all reports. They will report progress and costs as called for by the project manager. They will inform the project manager of problems and issues at the earliest opportunity. They will initiate schedule and cost change requests as necessary. They will work with the project manager and Federal auditors to produce the escrow and audit reports.

## **8.7 TOTAL QUALITY MANAGEMENT**

It is the policy of the Corps of Engineers to deliver quality engineering, design, and construction services and products to customers on schedule and within project scope and budget. The Baltimore District will employ the quality management process in place in the District, as well as the technical and policy review process recently implemented Corps-wide.

### **8.7.1 Preconstruction and Construction Documents**

Preconstruction and construction documents, including interim study results, design memorandum, environmental assessment, plans and specifications, and contract documents, will be prepared by the project team with the understanding that the products must meet Corps of Engineer standards and policies. The documents are reviewed by the project team, including the non-Federal sponsor, for consistency with project goals. During the review and approval process, documents are reviewed as appropriate by the Baltimore District, North Atlantic Division, and Headquarters and the non-Federal sponsor for consistency with the project cooperation agreement and Corps, Federal and state laws and policies. Operations Division performs quality control checks of the plans and specifications in the biddability, constructability, and operability review process. The contract documents are further reviewed by Office of Counsel and Contracting Division prior to award of any construction contract.

### **8.7.2 Construction**

Construction quality control will be provided by a contractor quality control organization as required by the standard provisions of each construction contract. Additional quality assurance reviews and checks will be performed by Operations Division. Additionally, the non-Federal sponsor may submit quality review comments. The Contracting Officer will consider and include in the contract, as appropriate, these review comments.

### **8.7.3 Project Issues**

When necessary, the project team will be assembled to examine project issues and produce a Baltimore District position consistent with Corps, Federal and state policies. The District position will be fully developed and recorded through the use of position papers, as applicable, and coordinated for concurrence and approval as appropriate with the non-Federal sponsor, the Baltimore District's Project Review Board, the Executive Committee, the North Atlantic Division, and Corps Headquarters.

## **8.8 CHANGE CONTROL**

### **8.8.1 General**

The project management plan is a living document, and will be revised as needed by the Corps and the non-Federal sponsor to accommodate changes in project implementation created by progress, new information, changes in policy, and other occurrences.

Requests for changes in project scope, schedule, costs, or budget can be made by the project team, the non-Federal sponsor, contractors, regulatory agencies, the Corps of Engineers, and Congress. Requests for significant changes must be submitted in writing. The project manager, through consultation with technical staff, will respond to change requests by identifying technical comments, funding, and schedule impacts that will result from the change. If the change is warranted, the project manager, in coordination with the non-Federal sponsors, will adjust the schedule and will seek additional funding, as necessary.

Revisions to the project management plan will be coordinated with Baltimore District elements and the Maryland Port Administration. Concurrence from the Baltimore District Project Review Board and MPA will be obtained prior to implementation of significant changes. Changes to the authorized project cost and approved schedule for major milestones will be approved by Corps Headquarters and MPA.

The principal vehicle for formal request and approval of significant project changes will be a schedule and cost change request (SACCR). The project manager will process the request for action and approval to the appropriate level. The project manager will keep a sequentially numbered, dated and accurate record of all project schedule and cost change requests. The project manager will keep further written notes, memoranda, and phone conversation logs on a daily basis.

### **8.8.2 Schedule Change Control**

The project schedule includes key Corps management milestones, which will be utilized by the project manager to analyze the need to change or update the project schedule. The project manager will forecast the need for a change against a milestone at the earliest opportunity in the project

executive summary in the life-cycle reporting system. Changes to significant Corps management milestones must be approved with a schedule and cost change request.

### **8.8.3 Cost Change Control**

The project is subject to statutory and regulatory limitations. The project manager will monitor the project cost against these limits during the life of the project. The project cost is summarized in the baseline and current approved estimates. The project cost will also be monitored against the baseline estimate which will serve to indicate the amount of cost growth that the project is experiencing. The project manager will report approved and forecast project costs on the project executive summary in the life-cycle reporting system. Changes to project costs must be approved with a schedule and cost change request. If project costs exceed the authorized Section 902 limit, a post-authorization change must be approved and the project authorization limit increased by Congress.

### **8.8.4 Budget Change Control**

Using the schedule and cost change procedures outlined above, the project manager will review and modify the project budget as may be required for the welfare of the project. The project manager will work through Civil Programs Branch to prepare budget testimony and to change the Federal and non-Federal budgets. In accordance with the project cooperation agreement, budget changes will be coordinated with the sponsor. All changes to the budget will be documented and retained on file.

### **8.8.5 Contract Modifications**

Contract changes or modifications will be enacted as directed by the Federal Acquisition Regulations (FAR), Defense Federal Acquisition Regulations (DFAR), Army Federal Acquisition Regulations (AFAR), Engineering Federal Acquisition Regulations (EFAR), other pertinent regulations, Baltimore District policies and procedures, and the terms of the contract between the Federal government and the contractor. Modifications will be coordinated with the non-Federal sponsor and approved by the Contracting Officer and the project manager.

## **8.9 SAFETY PLAN**

The Baltimore District Safety and Occupational Health Office is on the project team and will provide assistance in performing various types of safety reviews, identification of required safety and health training requirements, coordinating safety and health requirements with the non-Federal sponsor as needed, and ensuring that the contractor and sponsor personnel on site comply with all safety and occupational health rules, regulations, and directives on this project.

All personnel engaged in work on this project shall comply with the Corps of Engineers' Safety and Health Requirements Manual, EM 385-1-1, as revised; Occupational Safety and Health Act (OSHA) standards; and all other nationally recognized consensus standards of such organizations as

National Fire Protection Association (NFPA), the National Electric Code (NEC), and the Environmental Protection Agency (EPA). If a conflict exists between the Corps of Engineers' safety and health requirements manual and any other recognized standard, the most stringent requirement will be met.

An appropriate activity hazard analysis will be made by the appropriate technical manager for each phase of the project. The analysis shall include descriptions of the potential hazards and the proposed methods and procedures for accomplishing the activity in a safe manner. The Baltimore District's Safety and Occupational Health Office will review safety and health plans for accuracy, completeness, and overall compliance with applicable standards.

### **8.10 SECURITY PLAN**

The Baltimore Harbor Anchorages and Channels project is a dredging project and, as such, has no classified project features. No classified information will be generated or used in the course of this project. Contract government estimates will be controlled as "For Official Use Only" until after award of the contract or modification for which the estimate was prepared. Certain estimates and other budgetary information prepared for use with this project will not be subject to release under the Freedom of Information Act. The Baltimore District's Office of Counsel will make the final determination on the release of any information requested under the Freedom of Information Act. All other information relating to this project is not to be safeguarded in any particular manner and is not intended to be withheld from public use or dissemination.

## PMP APPENDIX A

### ORGANIZATIONAL BREAKDOWN STRUCTURE

<u>RESOURCE NAME</u>	<u>ABBREVIATION</u>
<u>Washington Level</u> U.S. Congress	CONG
<u>Department of the Army</u> Secretary of the Army Asst. Secretary of the Army (Civil Works) Corps of Engineers, Headquarters (Civil Works) Corps of Engineers, North Atlantic Division	DA SEC ARMY ASA(CW) HQ; USACE; CECW CENAD; NAD
<u>Corps of Engineers' Waterways Experiment Station</u>	CEWES; WES
<u>Baltimore District</u> District Engineer Deputy District Engineer for Programs and Project Management	CENAB; NAB DE DD-P
Construction Division Construction Service Branch Construction Management Section	CO CO-S CO-SC
Contracting Division A/E Acquisition Branch Contracts and Procurement Branch	CT CT-A CT-C
Engineering Division Cost Engineering Branch Design Branch Technical Support Section Design Management Branch Civil Works Section Geotechnical and Water Resources Branch Dams and Embankments Section Geology and Investigations Section Hydrology and Hydraulics Section HTRW Branch	EN EN-C EN-D EN-DT EN-M EN-MC EN-G EN-GD EN-GG EN-GH EN-H
Information Management Office	IM

## ORGANIZATIONAL BREAKDOWN STRUCTURE

<u>RESOURCE NAME</u>	<u>ABBREVIATION</u>
Office of Counsel	OC
Operations Division	OP
Operations Technical Support Branch	OP-T
Regulatory Branch	OP-R
Planning Division	PL
Civil Project Development Branch	PL-P
Programs and Project Management Division	PP
Civil Programs Branch	PP-P
Civil Project Management Branch	PP-C
Public Affairs Office	PA
Real Estate Division	RE
Civil Projects Support Branch	RE-C
Resource Management Office	RM
Safety and Occupational Health Office	SA
Value Engineering	VE
<u>Contracted Resources</u>	
Architect-Engineer Contracts	A/E
Construction Contracts	Const
<u>Maryland Port Administration</u>	MPA
Executive Director	MPA-ED
General Counsel	MPA-GC
Public Information	MPA-PI
Harbor Development	MPA-HD
Engineering	MPA-EN
Real Estate	MPA-RE
Construction	MPA-CO
Association of Maryland Pilots	AMP
PED Matrix	

**PMP APPENDIX B**

**PROJECT SCHEDULE**

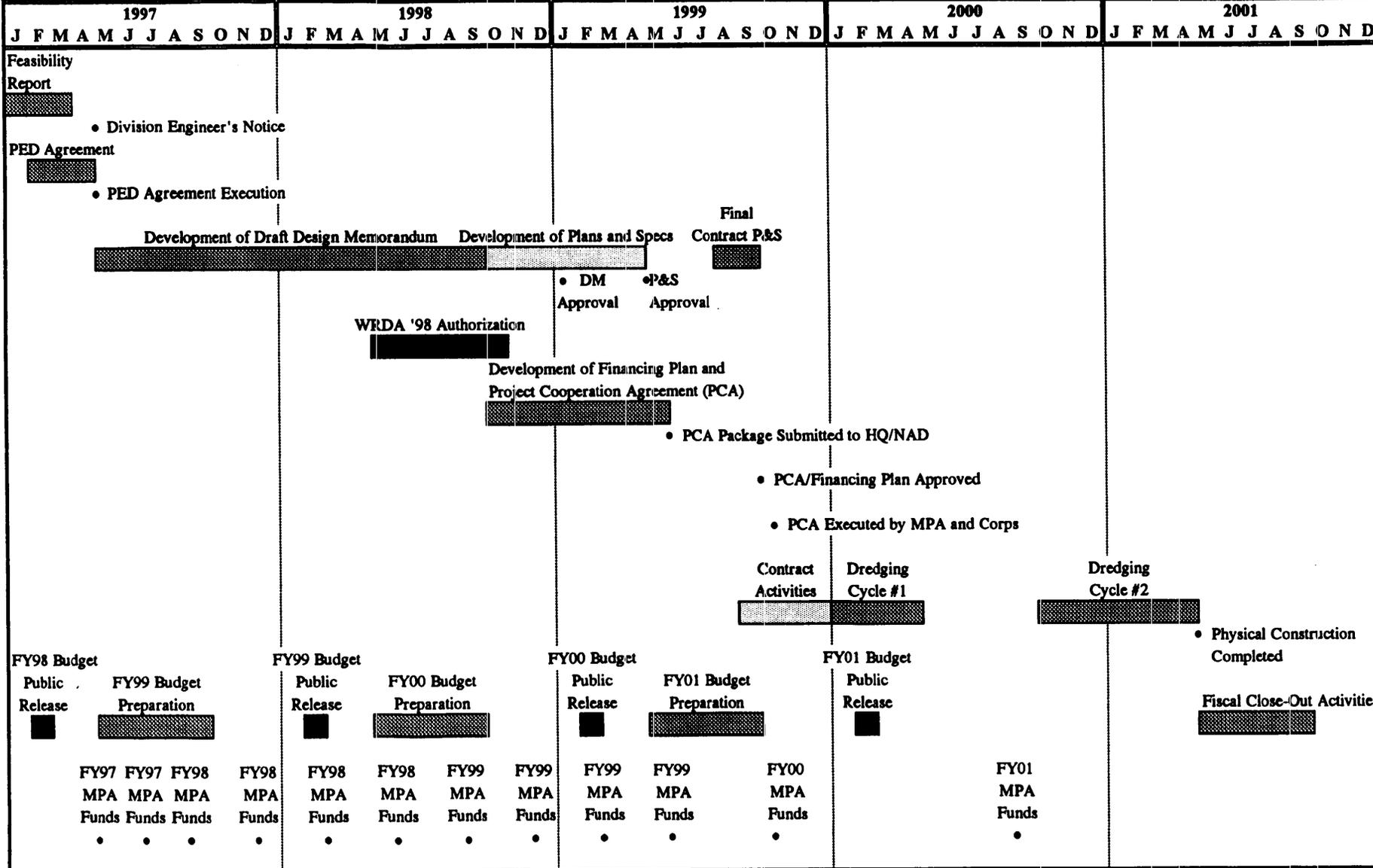
**with**

**WORK BREAKDOWN STRUCTURE**

**and**

**RESPONSIBILITY ASSIGNMENT MATRIX**

# BALTIMORE HARBOR ANCHORAGES AND CHANNELS, MD AND VA SUMMARY OF PROJECT SCHEDULE



A-B-1











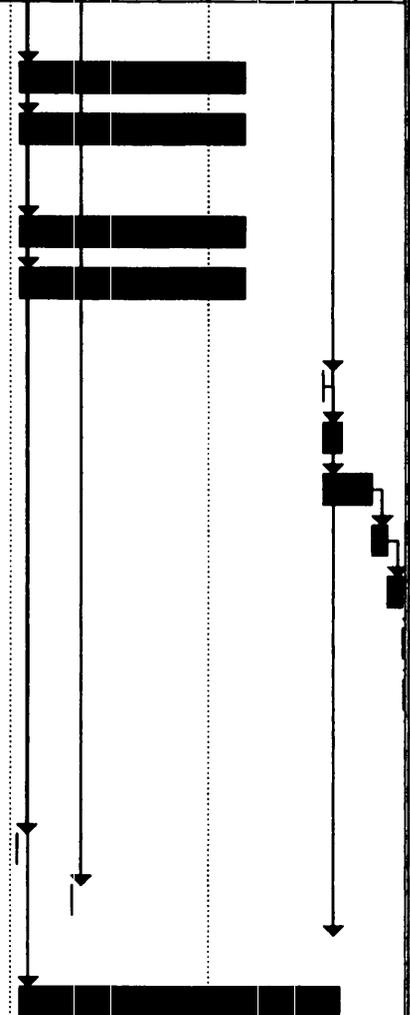






# BALTIMORE HARBOR ANCHORAGES AND CHANNELS, MD AND VA

ID	Task Name	Duration	Start	Finish	Resource	1997				1998				1999				2000				2001			
						Q1	Q2	Q3	Q4																
195	Engineering During Construction	300d	10/18/99	12/8/00																					
196	Design Analyses/Review/VE	60w	10/18/99	12/8/00	OP																				
197	Cost Estimate for Modifications	60w	10/18/99	12/8/00	EN-C																				
198	Planning During Construction	300d	10/18/99	12/8/00																					
199	Environmental Compliance Updates	60w	10/18/99	12/8/00	PL-P																				
200	Economic Updates	60w	10/18/99	12/8/00	PL																				
201	Project Completion	110d	5/1/01	10/1/01																					
202	Transfer Project to O&M	1d	5/1/01	5/1/01	PP-C																				
203	Physical Close-Out Documents	5w	5/1/01	6/4/01	OP																				
204	Contractor Close-Out Documents	13.4w	5/1/01	8/1/01	PP-C																				
205	Audit	4w	8/2/01	8/29/01	RMO																				
206	Final Adjustments to MPA Account	4w	8/30/01	9/26/01	PP-C																				
207	Compute MPA 10-Percent Payment	1d	9/27/01	9/27/01	PP-C																				
208	Compute Length of O&M Payment	1d	9/28/01	9/28/01	PP-C																				
209	Fiscal Close-Out Complete	1d	10/1/01	10/1/01	PP-C																				
210	Ceremonies	406d	10/13/99	5/2/01																					
211	PCA Signing	1d	10/13/99	10/13/99	PP-C,MPA																				
212	Groundbreaking	1d	1/24/00	1/24/00	PP-C,MPA																				
213	Dedication	1d	5/2/01	5/2/01	PP-C,MPA																				
214	Contingencies	85w	10/18/99	6/1/01	PP-C																				



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**PMP APPENDIX C**

**PROJECT BUDGET**

**BALTIMORE HARBOR ANCHORAGES AND CHANNELS, MD AND VA  
PRECONSTRUCTION ENGINEERING AND DESIGN COST ESTIMATE**

OFFICE/TASK	TOTAL ESTIMATED COST *	PERCENT OF TOTAL	FISCAL YEAR DISTRIBUTION		
			FY 1997	FY 1998	FY 1999
<b>Contracting Division</b>					
Contract Preparations	\$2,000		\$0	\$0	\$2,000
<u>Printing of Plans and Specifications</u>	<u>\$10,000</u>		<u>\$0</u>	<u>\$0</u>	<u>\$10,000</u>
Total - Contracting	\$12,000	1.3%	\$0	\$0	\$12,000
<b>Engineering Division</b>					
Technical Management	\$13,400		\$2,000	\$7,300	\$4,100
Hydrology and Hydraulics	\$12,200		\$400	\$9,800	\$2,000
Geotechnical Analyses- Drilling	\$78,000		\$78,000	\$0	\$0
Dams and Investigations	\$8,800		\$400	\$4,700	\$3,700
HTRW - Testing/Compliance Review	\$2,000		\$1,000	\$1,000	\$0
Technical Support (Specs)	\$4,300		\$0	\$0	\$4,300
<u>Cost Estimating</u>	<u>\$14,000</u>		<u>\$0</u>	<u>\$9,100</u>	<u>\$4,900</u>
Total - Engineering	\$132,700	14.7%	\$81,800	\$31,900	\$19,000
<b>Operations Division</b>					
Technical Management	\$57,600		\$8,200	\$35,000	\$14,400
Design/Review Conferences	\$4,500		\$2,200	\$2,300	\$0
Value Engineering	\$4,800		\$0	\$4,800	\$0
Design Memorandum					
Detailed Surveys	\$10,000		\$10,000	\$0	\$0
Drawings and Quantities	\$4,100		\$4,100	\$0	\$0
Ship Simulation Studies	\$125,000		\$50,000	\$75,000	\$0
Anchorage Design	\$7,200		\$0	\$7,200	\$0
Shoaling/O&M Requirements	\$4,800		\$0	\$4,800	\$0
DM Preparation	\$21,600		\$0	\$21,600	\$0
Plans and Specifications					
Plans and Specs	\$6,700		\$0	\$5,000	\$1,700
Surveys	\$20,000		\$0	\$10,000	\$10,000
Drawings and Quantities	\$8,200		\$0	\$4,100	\$4,100
Contingencies	\$19,800		\$0	\$10,000	\$9,800
<u>Contract Advertisement</u>	<u>\$4,000</u>		<u>\$0</u>	<u>\$0</u>	<u>\$4,000</u>
Total - Operations Division	\$298,300	33.1%	\$74,500	\$179,800	\$44,000
<b>Planning Division</b>					
Technical Management	\$14,000		\$4,000	\$8,000	\$2,000
Economic Analysis	\$69,000		\$10,000	\$45,000	\$14,000
<u>Environmental Compliance</u>	<u>\$21,200</u>		<u>\$10,000</u>	<u>\$3,200</u>	<u>\$8,000</u>
Total - Planning Division	\$104,200	11.6%	\$24,000	\$56,200	\$24,000
<b>Programs and Project Management Division</b>					
Program Management	\$23,000		\$5,000	\$12,000	\$6,000
<u>Project Management</u>	<u>\$72,000</u>		<u>\$9,700</u>	<u>\$40,000</u>	<u>\$22,300</u>
Total - PPM	\$95,000	10.6%	\$14,700	\$52,000	\$28,300
<b>Real Estate Division</b>					
Real Estate Actions	\$600		\$0	\$600	\$0
PCA Actions	\$1,800		\$0	\$0	\$1,800
Total - Real Estate	\$2,400	0.3%	\$0	\$600	\$1,800
<b>Value Engineering</b>					
District Value Engineer	\$2,900		\$0	\$2,700	\$200
Contract Administration	\$2,000		\$0	\$2,000	\$0
Contractor/OVEST Team	\$30,000		\$0	\$30,000	\$0
<u>District Team Input</u>	<u>\$9,500</u>		<u>\$0</u>	<u>\$9,500</u>	<u>\$0</u>
Total - Value Engineering	\$44,400	4.9%	\$0	\$44,200	\$200
<b>Sponsor PED Coordination</b>	\$55,000	6.1%	\$5,000	\$35,000	\$15,000
<b>Contingencies</b>	\$156,000	17.3%	\$0	\$50,300	\$105,700
<b>Total Required</b>	<b>\$900,000</b>	<b>100.0%</b>	<b>\$200,000</b>	<b>\$450,000</b>	<b>\$250,000</b>

**NOTES:**

\* October 1996 values.

**BALTIMORE HARBOR ANCHORAGES AND CHANNELS, MD AND VA  
PROJECT COST ESTIMATE \***

<u>FEATURE</u>	<u>SUBACCOUNT</u>	<u>DESCRIPTION</u>	<u>FULLY FUNDED ESTIMATE</u>
12	Navigation Ports and Harbors		
	02 Harbors		
	01 Mobilization, Demobilization, and Preparatory Work		\$2,492,000
15	Mechanical Dredging		
	02-AA East Dundalk Channel		\$383,000
	02-BB Seagirt/Connecting Channel and West Dundalk Channel		\$2,166,000
	02-CC South Locust Point		\$1,653,000
	02-DD Cutoff Angle		\$1,047,000
	02-EE Anchorage #3 Modification		\$8,246,000
	02-FF Anchorage #4 Modification		\$7,919,000
	02-GG Turning Basin		\$1,709,000
	Subtotal -- Subaccount 15		\$23,123,000
	20 Dredged Material Placement Area		
	02 Site Work **		\$2,065,000
30	Planning, Engineering, and Design		\$1,030,000
31	Construction Management		\$555,000
<b>Total Project Cost</b>			<b>\$29,265,000</b>

**NOTES:**

\* Fully funded values as calculated in October 1996.

\*\* Portion of Hart-Miller Island dike-raising associated with the Anchorages project.

## PMP APPENDIX D

### INDEX OF PMP ELEMENTS

The Corps of Engineers project management regulation, ER 5-7-1, identifies 21 elements that can have a significant impact on cost, schedule, and quality of projects and should be addressed in project management plans. The index below shows where these elements are addressed in the PMP.

<u>ELEMENT</u>	<u>PMP LOCATION</u>
1. Scope of Work .....	Sections 3; 4
2. Work Breakdown Structure .....	Appendix B
3. Organizational Breakdown Structure .....	Appendix A
4. Responsibility Assignment Matrix .....	Section 4; Appendices A and B
5. Schedules.....	Section 5; Appendix B
6. Budgets and Cost Estimates .....	Section 6; Appendix C
7. Current Benefits Plan .....	Sections 4.2.11.b; 4.3.9
8. Resource Allocation Plan.....	Sections 4; 8.3; Appendices A,B, and C
9. Local Cooperation Plan.....	Section 7
10. Acquisition Plan .....	Sections 4.2.15; 4.3.6
11. Real Estate .....	Sections 3; 4.2.11.e; 4.3.5; 6
12. Total Quality Management Plan.....	Section 8.7
13. Value Engineering Plan.....	Sections 4.2.9; 4.3.8
14. Safety Plan.....	Section 8.9
15. Security Plan .....	Section 8.10
16. Cultural Resource Plan .....	Sections 4.2.11.d; 4.3.9
17. Environmental Plan .....	Sections 4.2.11.c; 4.2.12; 4.2.16; 4.3.9

<u>ELEMENT</u>	<u>PMP LOCATION</u>
18. Management Control Plan.....	Section 8
19. Reporting Requirements .....	Section 8.6
20. Change Control Plan .....	Section 8.8
21. PMP Appendix.....	Appendices A - D