

U.S. COAST GUARD

CONFIGURATION MANAGEMENT PLAN (CMP)

for the

**PORTS AND WATERWAYS SAFETY SYSTEM
(PAWSS) PROJECT**

PREPARED BY: _____
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EXECUTIVE SUMMARY

The Configuration Management Plan (CMP) provides configuration management instructions and guidance for the Vessel Traffic Service (VTS) system of the Ports and Waterways Safety System (PAWSS) project. The CMP describes in detail the duties of the Configuration Control Board (CCB). The VTS System Integration Contractor (SIC) will provide its own configuration management system to work in conjunction with the Coast Guard's CCB. All changes to configuration items during the course of the system incremental builds will be approved by the Coast Guard.

The design of PAWSS VTS system will be based on existing commercial off-the-shelf (COTS) VTS systems. Product substitution will be used when required, particularly for obsolete components. This will result in different versions of similar components existing in the system. However, a goal of the Coast Guard is to minimize the number of versions in the system. For this reason, proposed substitutions will be managed as engineering changes through the configuration change process. A Configuration Status Accounting System will be used to track configuration information for the system.

**PORTS AND WATERWAYS SAFETY SYSTEM
CONFIGURATION MANAGEMENT PLAN**

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Chapter 1 INTRODUCTION

A. BACKGROUND

1. KEY FEATURES AND SUBSYSTEMS

The Vessel Traffic Service (VTS) system of the Ports and Waterways Safety System (PAWSS) project is a national transportation system that collects, processes, and disseminates information on the marine operating environment and maritime vessel traffic in major U.S. ports and waterways. The PAWSS project mission is implemented by monitoring and assessing vessel movements within Vessel Traffic Service Area (VTSA), exchanging information regarding vessel movements with vessel- and shore-based personnel, and where situations warrant, providing advisories to vessel masters. Other Coast Guard missions are supported through the exchange of information with appropriate Coast Guard units.

The VTS system at each port consists of a Vessel Traffic Center (VTC) that receives vessel movement data from the Automatic Identification System (AIS), surveillance sensors, other sources, or directly from vessels. Meteorological and hydrographic data is also received at the VTC. Automatic data processing equipment is used to provide operators with decision support in accomplishing the PAWSS project mission.

The VTS system is planned to operate in the port of New Orleans and other ports as determined by the Coast Guard.

The VTS system includes three system segments:

- (1) Operational Segment
- (2) Facilities Segment
- (3) Support Segment

The Operational Segment provides the functionality used by the VTC watchstander and vessel master in daily operations. This includes the following functional areas: AIS, surveillance, operational data processing/decision support (communications, analysis, recording and reporting), and human-system interface (HSI). This segment also includes all systems providing communications between the VTC and remote sites, between VTS system and vessels, and between VTS system and other external users and systems.

The Facilities Segment consists of port facilities including the VTCs, communication sites, and remote sensor sites.

The Support Segment is composed of system administration and maintenance, and software development and maintenance for integration of COTS and new technology.

2. EFFECT ON EXISTING SYSTEMS

The PAWSS VTS system will be designed to run in parallel with existing VTS equipment in the port. This will ensure that there will be no loss of continuity in VTS operations. The two systems will be run in parallel until the PAWSS VTS system is verified and accepted by the Coast Guard.

3. UNIQUE CHARACTERISTICS

The design of PAWSS VTS system will be based on existing commercial off-the-shelf (COTS) VTS systems. Product substitution will be used when required, particularly for obsolete components. This will result in different versions of similar components existing in the system. However, a goal of the Coast Guard is to minimize the number of versions in the system. For this reason, proposed substitutions will be managed as engineering changes through the configuration change process.

The systems may contain different functions as a result of unique characteristics of a port and as required by partnership arrangements with the stakeholders (i.e., VTS maritime users, industry, and the public) in each port.

Engineering Change Proposals (ECPs) will be processed for changes to each particular baselined configuration. Task Orders and ECPs will be utilized to initiate enhancements. Baseline approvals will be separately processed and approved by the Configuration Control Board (CCB), chaired by the Project Manager. Task Orders and contract modifications for changes will be processed through the PAWSS Project Contracting Officer.

Configuration changes, whether for COTS components or other components, will be tracked in a configuration database. This configuration database is commonly referred to as a Configuration Status Accounting System. A Configuration Status Accounting System provides the ability to monitor, track, and account for the total system and subsystem configurations.

Hardware and software ECPs will be processed in a similar manner. The most significant difference between hardware and software ECPs is that software ECPs will additionally require

the submittal of a Version Description Document (VDD), as well as any other required documentation such as Specification Change Notices (SCNs).

PAWSS project documents produced by the Coast Guard will be controlled through version control. The individual responsible for the production of the document will ensure that draft and final versions have a date and time header inscribed in the upper right hand corner of every page, using six point type. This will ensure configuration control and easy identification of different versions.

PAWSS project documents produced by both the Coast Guard, the System Integration Contractor (SIC), or other program elements, will be filed and stored in the PAWSS project document center. This includes technical data. It is indeterminate at this time as to where the PAWSS project document center will be located, but it will probably be located at Coast Guard Headquarters. Documents will be cataloged by title, date of document, and Contract Data Requirements List (CDRL) number (if applicable).

After the acquisition phase of the PAWSS Project, the configuration management will move from G-AVT. G-MOV is responsible for operation and maintenance support, including configuration management. The ILSP describes the various options available at that time and the impacts of partnership arrangements within various ports. The results of these decisions will dictate where the configuration management of the system will reside at that phase of the program.

B. PROJECT PHASING AND CONFIGURATION MANAGEMENT MILESTONES

A configuration management milestone chart is provided in Appendix C.

C. SPECIAL FEATURES

An incremental build strategy with emphasis on technology insertion was chosen as the risk management approach. It emphasizes incremental development and fielding to reduce time to deliver new functionality to the user, while not sacrificing quality or incurring unreasonable program risk or cost.

PAWSS project first port, New Orleans (NOLA), is defined by the Operational Requirement Document (ORD), Statement of Work (SOW), and System Specifications which incorporate inputs

on requirements sought from VTS maritime users, industry, and the public.

At KDP4 (after the VTS system has undergone Development Test and Evaluation (DT&E) and Operational Test and Evaluation (OT&E) in NOLA) the decision will be made on which follow on ports will receive PAWSS VTSSs.

The SIC will maintain the Configuration Status Accounting System; the Coast Guard will have access to this system. The configuration support managers will provide oversight as explained in paragraph 2.A.1.b.

Chapter 2 ORGANIZATION

A. CONFIGURATION MANAGEMENT WITHIN THE ORGANIZATION

1. CONFIGURATION CONTROL BOARD

The PAWSS Project will utilize a CCB to evaluate proposed changes to the system. Four key members of the CCB are presented here.

a. PAWSS Project Manager

The Project Manager, G-AVT, is responsible for project acquisition, direction, and management from project start up through the Production/Deployment Phase and serves as the CCB Chair. The Project Manager coordinates the overall project acquisition, phasing, expenditures, management, technical, administrative, logistics, and other aspects of the program. The Project Manager is responsible for acquiring a system that meets requirements, schedule, and cost and specifying program supportability.

b. Configuration Support Manager

The Project Manager designates a Configuration Support Manager who will carry out functions and duties related to configuration management for the Project Manager as directed. The Configuration Support Manager is G-AVT-3. The Configuration Support Manager's functions include, but are not limited to:

- (1) Configuration Change Review Team Leader
- (2) Recorder for the CCB (described later)
- (3) Drafting CMP and updates
- (4) Participating in design reviews and configuration audits
- (5) Advisor to project on configuration management related issues
- (6) Oversight of Configuration Status Accounting System activity

c. PAWSS Project Sponsor

The PAWSS Project Sponsor's representative, G-MOV, validates requirements and ensures that operational objectives are met. The Project Sponsor is a permanent member of the CCB, and will review proposed changes from the perspective of meeting operational and mission

requirements in the most effective and efficient manner.

d. PAWSS Technical Managers

The PAWSS Project Technical Managers, G-SCE and G-SCT, are responsible for ensuring that the project's technical and engineering aspects are adequately met. The Technical Managers are permanent members of the CCB, and will review proposed changes from the perspective of technical adequacy, feasibility, and supportability.

2. CONFIGURATION CHANGE REVIEW TEAM

The Configuration Change Review Team (CCRT) will provide a preliminary review of all proposed changes in support of the CCB. The members of the CCRT are presented in Appendix D.

The PAWSS Project Technical Leader, G-AVT-3, will function as the CCRT leader. The leader's responsibilities include the screening, analysis, review, implementation, documentation, and resource evaluation areas to support configuration management which include:

- (1) tracking ECPs
- (2) maintaining system documentation
- (3) maintaining system archives
- (4) developing and publishing implementing documentation such as field change bulletins
- (5) performing other administrative functions necessary to ensure that the full and current status of the Product Configuration is always documented and available to cognizant users
- (6) participating in configuration reviews (e.g., Functional and Physical Configuration Audits)
- (7) analyzing and reviewing SIC configuration management efforts and deliverables
- (8) participating in ECP and waiver and deviation reviews
- (9) reviewing and monitoring the SIC Configuration Status Accounting System
- (10) eventual assumption of the major portions of the configuration management process transitioning from the SIC to the United States Coast Guard
- (11) maintaining and updating the Configuration Status Accounting System database
- (12) maintaining records of changes and change proposals
- (13) maintenance of documentation for installed configurations

3. SYSTEM INTEGRATION CONTRACTOR

The System Integration Contractor (SIC) for the PAWSS Project will collect and deliver configuration management data to the Coast Guard as specified in the SOW or Task Order. The SIC will document configuration data in a Configuration Status Accounting System database, which will be maintained by the SIC and validated by the Coast Guard.

4. CONTRACTING OFFICE

Information flowing to and from the Coast Guard and the SIC will be processed through the Coast Guard PAWSS Project Contracting Officer (G-ACS-4). Task Orders or contract modifications will be used for tasking the SIC.

5. CONTRACT ADMINISTRATION

The Coast Guard will, upon contract award or thereafter, name representatives with titles such as Project Officer, Contracting Officer's Technical Representative(s) (COTR(s)). These individuals will function as liaisons between the Coast Guard and the SIC to facilitate communications and functions between the two organizations. Some of the functions of these individuals, if appointed, will include monitoring the configuration management effort and review of proposed engineering changes, deviations, and waivers.

B. CONFIGURATION CONTROL BOARD

Permanent and Ad Hoc members of the CCB are presented in Appendix D.

Permanent Members will initial the CCB Directive indicating their recommendation for concurrence or nonconcurrence. Permanent Members will be designated by their offices.

Ad Hoc Members may attend CCB meetings upon invitation for relevant business, but will not initial the CCB Directive. Ad Hoc Members will be designated by their offices.

The CCB will be chaired by G-AVT, the Project Manager. The Project Manager may delegate the function of chair of the CCB to the Project Deputy, G-AVTd, during periods of absence or as deemed appropriate. The function of Chair of the PAWSS Project CCB will transition to the Project Sponsor's Representative, G-MOV, at the end of the SIC contract.

C. CHANGE PROPOSAL APPROVAL AUTHORITY

Class I ECPs are those that impact the form, fit, function or safety of the system or a CI. Configuration changes affecting the Mission Need Statement are considered Class I Level 1 changes that must be approved by the Department of Transportation (DOT) Acquisition Executive (TAE). Configuration changes affecting the ORD are considered Class I Level 2 changes that must be approved by the Commandant (G-CCS). The above Class I changes will be evaluated by the CCB prior to forwarding to the appropriate authority with recommendation(s). These changes may not be implemented until the change is approved by the appropriate authority and the affected document(s) revised and approved. For this reason, configuration change proposal pricing data should be good for at least 60 to 90 days (to accommodate documentation change approvals as well as to implement approved configuration changes).

All other Class I changes are approved by the Chair of the CCB. This includes all Class I ECPs and all major or critical deviations and waivers, other than the two exceptions noted above.

Class II ECPs are those of a routine nature having no impact to form, fit, function, or safety, and not affecting interchangeability, substitutability or replaceability of CIs, or when repairable, their subassemblies and parts. Class II ECPs can also be a substitution of parts or material which do not have a functional, logistics, or reliability impact, or changes in documentation only (e.g., correction of errors, addition of clarifying notes or views, addition, deletion, or correction of non-executable comment lines-of-code to software). Class II ECPs do not typically affect the product baseline. The CCRT will study all proposed changes to determine if the proper class has been denoted. If an ECP is deemed a Class II change, and it will have no significant cost, technical, or other impact, the CCRT may concur or nonconcur on the ECP as appropriate. If there is any question on cost, technical, or other aspects of a Class II ECP, the CCRT will forward the proposed change to the CCB for disposition. The CCRT will concur or nonconcur on minor deviations and waivers following the same procedures.

The CCRT concurs or nonconcur on changes deemed to be Class II changes and minor deviations and waivers, as outlined in Chapter 4 of this CMP. All requests for changes will be reviewed for cost impact/ affordability. The CCRT will sign the ECPs or the deviation/waiver forms to indicate their decision, then pass the forms to the Contract Administration

Office. The Contract Administration Office will also sign the forms and then forward them to the SIC along with tasking or modification for favorable decisions. Negative decisions may be appealed. Appeals will be submitted to the CCRT for final determination.

A summary of Change Approval Authority is presented in the following table:

Table 1 - Change Approval Authority

<u>TYPE OF CHANGE</u>	<u>APPROVAL AUTHORITY</u>
Engineering Change Proposals	
Class I*	CCB
Class II**	CCRT
Deviations	
critical***	CCB
major***	CCB
minor**	CCRT
Waivers	
critical***	CCB
major***	CCB
minor**	CCRT
Specification Change Notices	Processed with associated change proposal

* Except changes affecting the MNS which can only be approved by the DOT Acquisition Executive and changes affecting the ORD which can only be approved by the Commandant (G-CCS).

** The CCRT will concur or nonconcur on Class II ECPs and minor deviations and waivers. The CCRT will refer any Class II ECPs or minor deviations and waivers that have significant technical, cost, or other impact to the CCB for disposition.

*** Critical and major deviations and waivers will normally be reviewed and approved or disapproved by a desk top/route sheet CCB review. If circumstances warrant, they will be processed through the complete CCB process.

Chapter 3 BASELINE IDENTIFICATION

A. FUNCTIONAL CONFIGURATION DOCUMENTATION

The Functional Configuration Documentation is the Functional Baseline plus approved changes. The Functional Baseline for the VTS system consists of:

- (1) Mission Need Statement for PAWSS Project (Revised), Sept 1997.
- (2) Operational Requirements Document for PAWSS Project, Aug 1997.
- (3) System Specification for PAWSS Project, Sept 1997

B. ALLOCATED CONFIGURATION DOCUMENTATION

The Allocated Configuration Documentation is the Allocated Baseline plus approved changes. The Allocated Baseline is the formal definition of the system, including its subsystems, components, and equipment, and defines the performance requirements of the Functional Baseline.

1. **SALIENT FEATURES.** The salient features of the Allocated Configuration Documentation include:

a. Configuration Item Characteristics

A Configuration Item (CI) is an aggregation of hardware or software that satisfies an end use function and is designated by the Coast Guard for separate configuration management. Hardware CIs (HWCIs) are material items differing widely in complexity, size, and kind. For VTS system hardware, these will normally be end items (e.g., camera, transceiver, monitor, touch pad, radio). Computer Software CIs (CSCIs) are those computer software modules which satisfy an end use function and which are designated for configuration management by the Coast Guard. CSCIs may vary widely in complexity, size, and type. The list of HWCIs and CSCIs for VTS system will be identified by the SIC.

b. Physical Characteristics

The Allocated Configuration Documentation is to be determined by the SIC's design. The Allocated Configuration Documentation consists of specific VTS system documentation plus the CI's documentation which constitutes the allocated baseline (ABL) plus all

approved changes to the ABL. The ABL is a formal definition of the system, including its sub-systems, components, and equipment, and defines the performance requirements of the functional configuration baseline.

c. Tests Required for Achievement of Functional Characteristics

- (1) Developmental Test and Evaluation (DT&E)
- (2) Operational Test and Evaluation (OT&E)
- (3) Independent Verification and Validation (IV&V)

2. DOCUMENTATION

The Allocated Baseline will consist of all the documents comprising the Functional Configuration Documentation/Functional Baseline plus additional program documents, specifications, and equipment which further define the system. The Allocated Baseline will thus include any element specifications for and under the three system segments; i.e., operational, facilities, and support. Additionally, the Project Manager may require other program documentation and any equipment deemed to be configuration significant at that point in the program. This may also include software documentation and Coast Guard project documentation. The exact composition of the documents and any equipment comprising the Allocated Baseline will be determined as the system design evolves, and this section will be updated to reflect more definitive information at each update to this CMP.

At a minimum, the Allocated Baseline will thus consist of all documentation from the Functional Configuration documentation/Functional Baseline plus any design documents or specifications deemed configuration worthy as required by SOW or Task Order.

C. PRODUCT CONFIGURATION DOCUMENTATION

The Product Configuration Documentation is the Product Baseline plus all approved changes. Product Baseline will be established following the Functional Configuration Audit (FCA), and the Physical Configuration Audit (PCA). The Product Configuration Documentation will include the Allocated Configuration Documentation and the Product Baseline, plus any additions and changes. In addition, the Product Configuration Documentation will consist of the system documentation to include drawings, specifications, and design documents.

Product Baseline thus will consist of all of the

documentation from the Functional Baseline/Functional Configuration Documentation and Allocated Baseline/Allocated Configuration Documentation plus all documentation (both hardware and software related), equipment, and production relevant components (both SIC furnished and Government furnished). The Product Baseline will consist of design documents developed for and under the three system segments; i.e., operational, facilities, and support as required by SOW or Task Order such as

- (a) Interface Control Documents
- (b) Engineering Drawings

Additionally, the Product Baseline will consist of other program documents and equipment deemed to be configuration significant at that point in the program. This may also include software documentation and project documentation. The exact composition of the documents and equipment comprising the Product Baseline will be determined as the system design evolves, and this section will be updated to reflect more definitive information at each update to this CMP.

Chapter 4 CONFIGURATION CONTROL

A. CCB RESPONSIBILITIES AND MEETING PROCEDURES

1. CCB FUNCTIONS

The CCB will provide the sole means of authorizing and releasing the technical description of the VTS system in the form of progressive configuration baselines and subsequent changes thereto. The responsibilities of the board will include baseline approval and change control.

a. Baseline Approval

The CCB will review and approve the succession of configuration baselines through the Product Baseline. Baselines or changes will be documented according to the requirements in the SOW for the PAWSS SIC.

b. Change Control

The CCB will act upon all Class I ECPs and all critical and major deviations and waivers (except changes affecting the MNS or ORD). This effort will include the review of proposed changes and rendering of decisions concerning the disposition of all proposed departures from approved configuration baselines. Additionally, the CCB will review all proposed changes affecting the MNS or ORD, and make comments and recommendations to higher authority for final approval or disapproval.

c. Change Approval

The implementation schedule and retrofit planning will also be reviewed to ensure planning, manpower, and funding is identified to implement any changes. Changes will be reviewed and subject to funding/implementation scheduling approval. ECPs, deviations or waivers may not be implemented without CCB or CCRT approval. In addition, Class I ECPs or critical or major deviations or waivers will require contractual tasking or modification.

4. CCB RESPONSIBILITIES

The CCB will have representation from affected areas including, but not limited to: hardware, software, systems engineering, quality, contracts, navigation, logistics, facilities, user representatives, and test and evaluation.

a. **Chair/Deputy Chair**

The CCB Chair will preside at all meetings of the CCB and will make the final decision on baseline approval and engineering changes based on CCB recommendations. The Chair of the CCB may delegate approval authority to the Deputy Chair during periods of absence or as deemed appropriate.

b. **Configuration Control Board Members**

CCB members will review proposed changes on behalf of the functional area(s) they represent. The permanent members will recommend concurrence/nonconcurrency based upon a thorough examination of the technical, logistic, and programmatic considerations of the proposed baseline or change.

c. **Ad Hoc Members**

Ad Hoc members will provide technical expertise as requested by the Chair to supplement specific agenda items.

d. **Recorder**

The Configuration Support Manager functions as Recorder for the CCB, and provides administrative support and maintains the records of the CCB.

CCB Recorder responsibilities include the following:

- (1) Coordination of the evaluation and processing of change proposals.
- (2) Recording, duplication, managing, and expediting the distribution of change proposals for review by members and advisors.
- (3) Consolidation of comments.
- (4) Recording proceedings and administrative processing of approved changes.
- (5) Assistance to CCB Chair in setting up meetings, and other related duties, as assigned.
- (6) Maintenance of CCB files not located with the Project Configuration Management Point Of Contact.
- (7) Providing applicable documents to the Configuration Management Point Of Contact.
- (8) Ensuring members have copies of proposed changes.
- (9) Assisting in update of the CMP.

5. **CCB MEETING PROCEDURES**

a. **CCB Agenda**

CCB Meeting announcements, agenda, and copies of proposed changes will be forwarded by the CCB Chair to CCB Members no later than one week prior to scheduling of the CCB (emergency ECPs excepted). The CCRT will present a summary report to the CCB of all CCRT and change activity occurring since the last convening of the CCB. The remainder of the agenda for the CCB meetings will be determined by the quantity and significance of changes to be reviewed, and at the discretion of the CCB Chair.

b. **Concurrence/nonconcurrence**

The following discussion is relative to the concurrence or nonconcurrence by CCB members to individual proposed changes. This is not the same as approval/disapproval. The Chair makes the final decision for Class I ECPs and critical and major deviations or waivers, except for proposed changes affecting the MNS which must be approved by the Department of Transportation Acquisition Executive or the ORD which must be approved by the Commandant (G-CCS).

The permanent members of the CCB will recommend concurrence or nonoccurrence on proposed Engineering Changes. The CCB Chair renders a final decision, which is approval or disapproval. Nonconcurrences of ECPs and deviations and waivers by CCB members will be carefully weighed by the CCB Chair.

The CCB Chair may recommend postponement of final determination of a change based on nonconcurrence, or the CCB Chair may recommend further study to include prototyping, cost analysis, technical research, or logistical analysis. Reasons for deferral or nonconcurrence can also include lack of demonstration of implementation planning or lack of identification of funding for implementation or support. Any nonconcurrences will be noted in the CCB minutes.

The permanent members of the CCB will initial the CCB Directive indicating their recommendation for concurrence/ nonconcurrence. Signing or initialing the CCB Directive to concur indicates that the signer acknowledges that proper implementation planning and funding has been identified to implement a change.

c. **Approval/disapproval**

After the concurrence/nonconcurrence process is completed, the CCB Chair will decide whether to approve or disapprove a proposed change, by signing a CCB Directive (Appendix H), and the ECP. After the decision is rendered, the CCB Directive and the ECP will be forwarded by the CCB Chair to the PAWSS Project Contracting Officer, G-ACS-4. The Contracting Office will notify the SIC of the decision, and provide tasking, change order, or modification as appropriate.

d. Dissenting views/appeals

Should a CCB decision be considered unsatisfactory by a user/member, the decision may be appealed. The dissenting opinion or any appeals must be documented and submitted to the CCB Chair. The CCB Chair may recommend further review or render a final decision.

e. Minutes

Minutes of CCB Meetings will be maintained by the CCB Recorder. Minutes will summarize the proceedings and record the action taken on changes.

f. Configuration Control Board Records

The CCB decision on change proposals and baselines will be documented through the CCB Directive, the ECP and the deviation/waiver form. The CCB Directive constitutes the formal record of the CCB recommendations to concur, nonconcur, or take other action. The CCB Chair will sign the CCB Directive to indicate approval, disapproval, or other action. This directive will then be forwarded to the contracting officer. When properly endorsed by the contracting officer, it provides authority for implementation of the change, subject to contractual tasking or modification.

B. CHANGE CONTROL PROCESS AND PROCEDURES

Configuration Control will be accomplished through the evaluation, coordination, and disposition of all proposed changes to an established baseline. Proposed changes to VTS system configurations will be considered only if they offer clear benefit to the Government in the form of correction of deficiencies, including those related to safety, improvement of performance, or savings in costs or resources. The objectives of the change control process include:

- (1) Necessary changes only
- (2) Configuration control and the preservation of standard configurations
- (3) Tracking of configurations through the configuration control process and the Configuration Status Accounting System database
- (4) Facilitate testing and integration
- (5) Coordination of technical, support, and financial impact assessments
- (6) Effective planning and implementation of approved engineering changes for the retrofit of equipment, Logistics resources, and data
- (7) Minimization of life cycle support costs
- (8) No unauthorized changes
- (9) Contractual implementation coordination
- (10) Reduction of proliferation of components

Changes to VTS system or the individual components proposed by the SIC or others must be processed through the Change Proposal process. Changes can be classified as ECPs, deviations and waivers, or Specification Change Notices. Change requests from the SIC will be submitted as specified in the contract. Change requests from Government entities may be submitted directly to the Configuration Management Point Of Contact (G-AVT-3).

1. INITIATION OF CHANGE PROPOSALS

Change Proposals may be initiated by any user/project participant or the SIC. The initial report should describe the problem or need for change and may or may not provide a solution. However, if there is a proposed fix or change, it should also be described. Any System Trouble Reports (STRs) will be submitted to the CCRT for problem verification/review.

2. RECEIPT OF CHANGE PROPOSALS

Change proposals from the SIC will be submitted as per the Contract requirements. Change proposals from entities other than the SIC may be submitted directly to the Configuration Management Point of Contact(G-AVT-3).

Original ECPs will be submitted as specified in the SIC's ECP form. Requests for deviations or waivers will be submitted on deviation/waiver form. STRs or Specification Change Notices will be submitted with the ECP when applicable.

3. TRACKING AND DISTRIBUTION OF CHANGE PROPOSALS

The Configuration Support Manager will assign a control number to change proposals. Change control numbers will be assigned in sequence. Upon receipt of ECP forms and supporting documentation, the Configuration Management Point Of Contact (G-AVT-3) will expeditiously reproduce and distribute ECPs to the CCRT. Based on the review by the CCRT, the documents will be forwarded to the CCB for processing. The Configuration Support Manager will continue to monitor the status of the change proposal to final disposition and will also monitor the configuration status accounting system to see that approved changes are included. See Appendix J & K.

4. STAFF ANALYSIS PROCEDURES

The VTS system ECP Evaluation Form, Appendix F, and the VTS system ECP Review Form, Appendix G, will be completed for each ECP requiring CCB action (Class I ECPs). The CCB Recorder will consolidate all information presented by the CCRT and the change proposal originator, including the CCRT's recommendations, then duplicate the package and forward it to all members of the CCB. The CCB Recorder will ensure that documentation in the ECP package includes, at a minimum, an implementation (e.g., transition) plan, identification of funding, and a proposed schedule for implementation. Funding analyses are required to be submitted by the SIC as part of the ECP documentation package. Additionally, Government representatives are required as part of the change proposal review process to verify the accuracy of contractor cost estimates for changes. Government representatives will also ensure that funding for proposed changes is (or will be) available for implementation. Completed Evaluation and Review Forms will be maintained as part of the permanent record of the CCB.

5. APPROVAL PROCEDURES

The CCB Chair is the only authority that can approve Class I ECPs and critical and major deviations and waivers, with the exceptions as noted in Chapter 2, Section C. Formal CCB procedures will be expedited for emergency changes or on direction from the CCB Chair. For emergency ECPs, this will be accomplished by an emergency convening of the CCB by phone, fax, video conference, or other expeditious means. For emergency ECPs every attempt will be made to contact CCB members and any affected user(s). However, the CCB Chair is the ultimate authority and may approve an ECP without convening the CCB, if necessary. Critical and major deviations and waivers will normally be approved through a desk top/route sheet CCB review vice a full convening of the board. When circumstances warrant, a full convening of the

CCB will be utilized for critical and major deviations and waivers. This is at the discretion of the CCB Chair.

6. PROCEDURES FOR DISSEMINATING AND IMPLEMENTING THE RESULTS OF THE REVIEW

The CCB Chair will notify affected parties of the approval of Change Proposals by electronic mail or letter, as appropriate. Implementation procedures (e.g., schedule, who will complete the work, etc.) for the proposed change will have been considered as part of the Change Proposal review process, and the change will not be approved without due consideration of how the change will be implemented in existing and future systems. When necessary, an implementation plan will be developed. The government will analyze the cost of proposed changes to accurately identify and quantify the estimated costs of changes. Funding must be available or identified before a change will be approved.

If action is required by a contractor, the last step is the contractual notification allowing the change to be implemented. The notification of change approval, along with any implementation planning information and required funding documentation (e.g., funded Procurement Request and cost estimate sheets), will be forwarded from the CCB Chair to the Coast Guard Contracting Office, G-ACS-4. The Coast Guard Contracting Office, G-ACS-4 is then responsible for any contractual modifications or other actions required so that the SIC may implement the change. No action toward implementation may be taken before a change is formally approved and tasking or modification completed.

The Coast Guard will follow procedures for collection and reporting of information as required under OMB Circular A-131.

C. ECP -- PRIORITIES, PROCESSING TIME, AND SPECIAL NOTES

ECPs will be prioritized by the CCRT, with recommendations from the ECP originator, as emergency, urgent, or routine. The CCRT will also review and prioritize associated ECP documentation submitted with ECPs such as Notices of Revision (NORs), Specification Change Notices (SCNs), and Design Change Notices (DCNs), as required by the contract. The need for SCNs will also be identified by the CCRT and prepared by the ECP originator. The target for decision on Class I ECPs will be the following:

- | | |
|--------------|---------------------------|
| a. Emergency | 7 calendar days (or less) |
| b. Urgent | 21 calendar days |
| c. Routine | 45 calendar days |

It should be noted that the "Class" of an ECP is different than it's "Priority". ECPs are "Classed" as either "Class I" or "Class II" based on the degree of change imparted to a CI. The "Priority" of an ECP refers to the urgency surrounding the impact of approval/non-approval of the proposed change.

1. EMERGENCY ECPs

Emergency ECPs are those that: (1) affect security, (2) correct a hazardous condition that could result in fatal or serious injury to personnel or in extensive damage or destruction to equipment or the environment, or (3) seriously affect the ability of the Coast Guard to perform it's mission(s).

2. URGENT ECPs

Urgent ECPs are those that: (1) if not accomplished expeditiously may seriously compromise mission effectiveness, (2) correct a potentially hazardous condition, the existence of which would result in injury to personnel or damage to equipment or the environment, (3) meet significant contractual requirements (e.g., when lead time will necessitate slipping approved integration/deployment schedules), (4) affect an interface change which, if delayed, would cause a schedule slippage or increase cost, or (5) affect net life cycle cost savings to the Government through value engineering, or through other cost reduction efforts where expedited processing of the change will be a major factor in realizing lower costs.

3. ROUTINE ECPs

Routine priority will be assigned to ECPs when emergency or urgent priorities do not apply.

D. REQUESTS FOR DEVIATIONS AND WAIVERS

Deviations and waivers are methods for the contractor to request Government approval to depart from the currently approved configuration identification on a temporary basis for justifiable reasons. These requests are limited to a specified time period (deviation) or quantity (waiver) of items.

1. REQUEST FOR DEVIATION

Deviations refer to a known departure from requirements

(temporarily) for items manufactured for acceptance by the Government or before construction takes place. Deviations may be classed as critical, major, or minor depending on the degree of impact to the component. Critical or major deviations usually have an impact on safety or performance, whereas minor deviations normally have little or no impact. Processing times will normally be 7 days for critical, 21 days for major, and 45 days for minor deviations. They normally will be processed through a desk top/route sheet convening of the CCB. If circumstances warrant, a full convening of the CCB will be required. Minor deviations will be reviewed and either concurred or nonconcurred on by the CCRT. If circumstances warrant, minor deviations will be referred to the CCB. Where it is determined that a change should be permanent, a Class I or II ECP must be processed. If a deviation is recurring, a Class I or II ECP may be required, and this must be addressed between the Government and the SIC. No critical or major deviations may be implemented without approval by the CCB and tasking or modification completed. No minor deviations may be implemented without approval by the CCRT and tasking or modification completed.

2. REQUEST FOR WAIVER

Waivers refer to a known departure from requirements for CIs offered for acceptance by the Government or while construction is in progress. Waivers usually apply to a known quantity of components. Waivers may be classified as minor, major, or critical depending on the degree of impact to the component. Major and critical waivers usually have an impact on safety or performance, whereas minor waivers normally have little or no impact. Waivers refer to items which, through errors in the manufacturing process do not conform to the configuration identification. Processing times will normally be 7 days for critical, 21 days for major, and 45 days for minor waivers. Major and critical waivers normally will be processed through a desk top/route sheet convening of the CCB. Minor waivers will be reviewed and either concurred or nonconcurred on by the CCRT. If circumstances warrant, minor waivers will be referred to the CCB. If a waiver is recurring, a Class I or II ECP may be required, and this must be addressed between the Government and the SIC. No critical or major waivers may be implemented without concurrence by the CCB and tasking or modification completed. No minor waivers may be implemented without concurrence by the CCRT and tasking or modification completed.

E. CONTRACTOR DESIGN RELEASE

The term "Contractor Design Release" when applied to the

PAWSS Project is interpreted to refer to the definition of "Engineering Release". This is defined as "An action whereby configuration documentation or an item is officially made available for it's intended use". The contractor will have authority to release the design after baselines are defined by the Coast Guard for documentation and for CIs.

F. SYSTEM TROUBLE REPORTS

The STR form will be used by government personnel using the system to document systemic problems which may be caused by software, hardware, or documentation. It will be used as the primary problem reporting system utilized in the PAWSS Project. The STR form tracks actions taken from initial trouble report to final resolution. STRs will be submitted to the Configuration Management Point Of Contact. The STR form is shown in Appendix I.

STRs are not to be used for routine maintenance or for preventive maintenance; their use is intended for systemic problems or problematic system performance issues such as software glitches, intermittent hardware problems, or errors in documentation. When resolution of a STR requires a change in the system's configuration, standard ECP submittal procedures from the SI contract apply.

The local VTC must also follow standard Casualty Reporting procedures. A Casualty Report is a message report of an equipment malfunction or deficiency that affects mission readiness. An exception to this requirement would be, if lengthy routine maintenance is being performed (equipment is otherwise operational), a Casualty Report is not required, however, sending a Casualty Report will notify all concerned of the required maintenance action.

G. SPECIFICATION CHANGE NOTICE

A Specification Change Notice provides changes to the text of a specification. Once approved, the Specification Change Notice may be used to transmit and record changes to maintain current versions of the specification and to provide an audit trail for configuration control.

Chapter 5 INTERFACE MANAGEMENT

A. RESPONSIBILITY

The SIC for PAWSS project has the responsibility for the interface management of Government Furnished Equipment and Government Furnished Information (GFI), if any, for the PAWSS Project in accordance with the PAWSS Contract and standards for documentation and architecture. GFE and GFI are identified in the SOW for the PAWSS SIC and in the Task Orders. The contractor may request GFE/GFI from the Project Manager who will evaluate the availability and the benefit to the government of providing the GFE/GFI. Deviations from interfaces after Product Baseline will require Change Proposal processing, approval, and tasking or modification in accordance with this CMP and the contract.

B. INTERFACE CONTROL WORKING GROUP

The Interface Control Working Group (ICWG) will be chaired by the PAWSS Project Technical Leader, G-AVT-3, or a designated representative. Members include: G-MOV, G-SCE, G-SCC, G-SIA, G-SCT, MLC Atlantic and Pacific, SE, and SIC. Proposed Ad Hoc members include FEDSIM and other Coast Guard and contractor entities as appropriate. The Chair has responsibility for delineating procedures for the ICWG. The function of the ICWG is to promote Interface Control, review Interface Control concerns, discuss Interface Control problems, report on Interface Control status, make recommendations for the resolution of Interface Control concerns, and establish and approve standards. The procedures to facilitate Interface Control Requirements are detailed in the SIC Contract. They will be further delineated in the ICWG Charter, to be published by the Project Manager, G-AVT after consultation with ICWG members.

C. INTERFACE CONTROL DOCUMENTATION

VTs system will have both internal and external interfaces. Interface Control Documentation (ICD) requirements are listed in the SOW. In brief, they include the preparation of the documents, as specified in the SOW: ICD, Interface Requirements Specification (IRS), Interface Design Description (IDD).

The Contractor will design the interfaces between HWCIs and between external equipment and HWCIs. The Contractor will prepare the ICD defining the interfaces between the

components. The Contractor will control the interfaces between CSCIs and document the approach in the IRS. The Contractor will document the CSCI interfaces in the IDD.

Chapter 6 CONFIGURATION TRACEABILITY

The Coast Guard will conduct Functional and Physical Configuration Audits to verify configuration traceability and accuracy. The SIC will assist in these audits as requested by the Coast Guard. The Coast Guard has also contracted for Independent Verification and Validation. The IV&V contractor will review configuration traceability for software on behalf of the Coast Guard. The contractor will implement and maintain configuration status accounting procedures and the data will be verified as part of the audit.

Chapter 7 CONFIGURATION STATUS ACCOUNTING

A. SYSTEM INTEGRATION CONTRACTOR

The SIC will maintain a Configuration Status Accounting system of government approved CIs and documents within the PAWSS program. The configuration states Accounting System maintained by the SIC will eventually transition to the Coast Guard or another contractor.

B. CONFIGURATION SUPPORT MANAGER

The Configuration Support Manager will have access to the Configuration Status Accounting System to monitor the Configuration Status Accounting products and related deliverables from the SIC.

Chapter 8 DESIGN REVIEWS AND AUDITS

A. DESIGN BRIEFINGS

Design briefings for the PAWSS Project will be conducted at Coast Guard Headquarters and at the SIC's facility, at the Coast Guard's discretion. The Coast Guard is responsible for presenting any design policy revisions, reviewing the SIC's design, directing changes to design, and approving or disapproving basic Project design/execution.

B. DESIGN REVIEWS

The PAWSS VTS system is a modified COTS system. The contractor will conduct Critical Design Reviews and System Design Reviews to demonstrate to the government the performance characteristics of the CIs, optimization, completeness, cost effectiveness, and risk associated with the system and segment design and any unique functions for each port.

C. AUDITS

Configuration Audits are comparisons of an item's actual functional and physical characteristics with those specified in the current baselines. Functional Configuration Audit and Physical Configuration Audit will be held to verify configuration control.

It is expected that G-AVT will be responsible for conducting audits during the system acquisition phase, while G-MOV will be the responsible party during the operational phase.

D. CONFIGURATION REVIEWS

Coast Guard Configuration Reviews other than those described in parts B and C, above, will be held on an "as required" basis at the SIC's facility until the Coast Guard is satisfied that configuration control has been established. The procedures that the SIC proposes for their own internal Configuration Reviews will be delineated in their CMP, which is a deliverable item to the Coast Guard.

Chapter 9 SUBCONTRACTOR/VENDOR CONTROL

The SIC is responsible for ensuring that subcontractor/vendor controls are adequate for the overall VTS system configuration. System compliance will be verified through test, inspection, or other means as specified in the PAWSS contract. The SIC is responsible for verifying that the equipment procured from vendors is compliant with established system configuration baselines.

Appendix A - Configuration Management Reference Documents

The following documents are applicable to the extent implemented by the SOW and Task Order:

COMDTINST 4130.6, Configuration Management, 21 Sep 95

COMDTINST M4150.2D, Systems Acquisition Manual, 27 Dec 94

COMDTINST M10550.25, Electronics Manual, 05 Jun 89

Engineering Drawings

Interface Control Document

Interface Design Document

Interface Requirement Specification

Mission Need Statement for PAWSS Project (Revised), Sep. 1997.

Operational Requirements Document for PAWSS Project, Aug. 1997

System Specification for the PAWSS Project, Sep. 1997

Test and Evaluation Master Plan, 1997

PAWSS Project Transition Plan (to be developed)

Appendix F: Engineering Change Proposal Evaluation

Appendix G: Change Proposal Review

Appendix H: Configuration Control Board Directive

Appendix I: System Trouble Report

Appendix J: Class I Engineering Change Proposal and Critical and Major Deviation and Waiver Approval Cycle

Appendix K: Class II Engineering Change Proposal and Minor Deviation and Waiver Concurrence Cycle

Appendix B - PAWSS Project Acronym List

AIS	Automatic Identification System
AP	Acquisition Plan
CCB	Configuration Control Board
CCRT	Configuration Change Review Team
CDRL	Contract Data Requirements List
CGARC	Coast Guard Acquisition Review Council
CI	Configuration Item
CMP	Configuration Management Plan
COTR	Contracting Officers Technical Representative
COTS	Commercial Off The Shelf
CSCI	Computer Software Configuration Item
DOT	Department of Transportation
DSC	Digital Select Calling
DT&E	Development Test and Evaluation
ECP	Engineering Change Proposal
GFE	Government Furnished Equipment
GOTS	Government Off The Shelf
HSI	Human System Interface
HWCI	Hardware Configuration Item
ICD	Interface Control Document
IDD	Interface Design Document
ILS	Integrated Logistics Support
IOC	Initial Operating Capability
IRS	Interface Requirements Specification
IV&V	Independent Verification and Validation
KDP	Key Decision Point
MNS	Mission Needs Statement
NOLA	Port of New Orleans, LA
ORD	Operational Requirements Document
OT&E	Operational Test and Evaluation
PAWSS	Ports and Waterways Safety System
PCA	Physical Configuration Audit
RFP	Request For Proposal
SAM	Systems Acquisition Manual
SCN	Specification Change Notice
SE	System Engineer
SIC	System Integration Contractor
SOW	Statement of Work
STR	System Trouble Report
USCG	United States Coast Guard
VDD	Version Description Document
VTC	Vessel Traffic Center
VTS	Vessel Traffic Service
VTSA	Vessel Traffic Service Area

Appendix C - Configuration Management Milestone Chart

During the Full Scale Development phase between KDP 3 and KDP 4, the PAWSS project will select one vendor for design, integration, testing, and installation of the first VTS System in New Orleans. Upon successful completion of Operational Test and Evaluation (OT&E), Transportation Systems Acquisition Review Council (TSARC) approval will be sought at KDP 4 to install VTS systems in other U.S. ports. The major activities to be performed during the Full Scale Development Phase and their schedule includes:

KDP 2/3	4QFY97
Release RFP for System Integration Contractor (SIC)	1QFY98
Functional Baseline	1QFY98
Release RFP for Transponders	1QFY98
Communication Coverage Update	1QFY98
Award SIC contract	3QFY98
Establish System Baseline	4QFY98
Begin Installation of Initial System and Automated Identification System (AIS) Testing	4QFY98
Design/Construction-Facilities	4QFY98
Begin Installation of System in Vessel Traffic Center (VTC)	2QFY99
Allocated Baseline	2QFY98
FCA and PCA	2QFY99
Begin Installation of Remaining Sensors	3QFY99
System Improvement Phase I	3QFY99
DT&E/System Acceptance	4QFY99
OT&E	4QFY99
Product Baseline	1QFY00
Initial Operating Capability (IOC)	1QFY00
Complete Port Discussions	1QFY00
KDP 4	2QFY00
Environmental Planning	FY01

A description of the Key Events is as follows:

- 1. System Installation and AIS Testing.** The VTS SIC will install their system architecture at Gretna Light in New Orleans including integration of radar sensors. The system will be tested for technical acceptance (limited DT) to assure it meets the contract requirements. Following acceptance, we will test the system's ability to accommodate a large number of AIS contacts in ship-to-shore and ship-to-ship information exchange and to gather data to assist the Program Sponsor to determine staffing standards for this new mode of AIS watchstanding. In order to complete this testing, the Coast Guard will upgrade the Very High Frequency (VHF)

communications along the river to DSC/AIS. We plan to lease this capability from a private contractor. The Coast Guard will also procure up to 100 transponders to place onboard of voluntary test participants. Such participants shall be required to comply with applicable licensing rules and/or regulations.

2. Design/Construction of Facilities. Based on their system architecture, the SIC will design a layout for the Vessel Traffic Center (VTC) as well as any facility modifications needed at Gretna and Governor Nichols lights. Construction of the buildout of the VTC is expected to be completed by the building owner. The SIC would be responsible for any facility modifications at the lights.

3. Installation Of The System In The VTC. Following build-out of the VTC by the building owner and acceptance testing of their core system, the SIC will install their suite of equipment to provide all the essential elements of the VTS system to meet the Coast Guard's requirements. They will upgrade the radars at Gretna and Govern Nichols Lights, test the equipment, and turn the system over to the Coast Guard.

4. Installation Of Remaining Sensors. The SIC will design the installation, complete any construction necessary and install all equipment for additional sensors to provide surveillance of critical areas on the river. Upon installation, they will be integrated into the system in the VTC and turned over to the Coast Guard for acceptance.

5. System Improvement Phase I. Based on the results of the AIS testing, the SIC will proceed with the first incremental improvement to their system.

6. Developmental Testing and Evaluation (DT&E)/System Acceptance. The SIC will complete limited DT&E on the integration of their Commercial Off-The-Shelf (COTS) for system acceptance. This will begin with the system installation in Gretna Light, followed by installation in the VTC in FY99. This will be followed by the integration of the remaining sensors along the river as well as the system improvement developments in FY99/00.

7. Operational Testing And Evaluation (OT&E). OT&E will begin after the initial installation of the SIC's system in the VTC. The VTC configuration will have all the essential elements necessary to test the capabilities of the system to determine acceptance for use in other ports. The testing will be a joint effort of the Program Sponsor's organization and local port representatives.

8. **Initial Operating Capability (IOC).** After 4 to 6 months of operations including OT&E, the system will achieve IOC.

9. **Complete Port Discussions.** The Program Sponsor will complete discussions with local port stakeholders in prospective new VTS ports as well as those in ports with an existing VTS. This will form the basis for partnerships in each port and of which ports are to receive a PAWSS based VTS.

10. **Environmental Planning.** Planning (to anticipate, account for and document the potential environmental benefits of the VTS system and the potential costs of environmental compliance requirements) will be performed as the PAWSS project is expanded beyond the New Orleans area to other ports. This will begin as additional ports are identified and extend into the Full Scale Production Phase. The environmental planning efforts will be approached in a programmatic fashion to cover the full PAWSS life cycle; including design, installation, operation and ultimate disposal. Disposition of the equipment and assets being replaced or upgraded by the PAWSS project may also be covered, as appropriate. Environmental planning efforts will identify and focus on both: (1) the most important environmental effects of the PAWSS project and (2) those environmental compliance requirements that will have the most bearing on the design, installation, operation and disposal of the system. The assessment of the importance of the environmental effects and compliance requirements, as well as the USCG intended treatment of those effects (if necessary), will be documented and coordinated with other appropriate government agencies and interested parties. Environmental planning efforts will be performed in accordance with COMDTINST M16475.1B, National Environmental Policy Act (NEPA) Implementing Procedures.

**Appendix D - PAWSS Project Configuration Control Board and
Configuration Change Review Team Membership**

PAWSS Project Configuration Control Board Membership

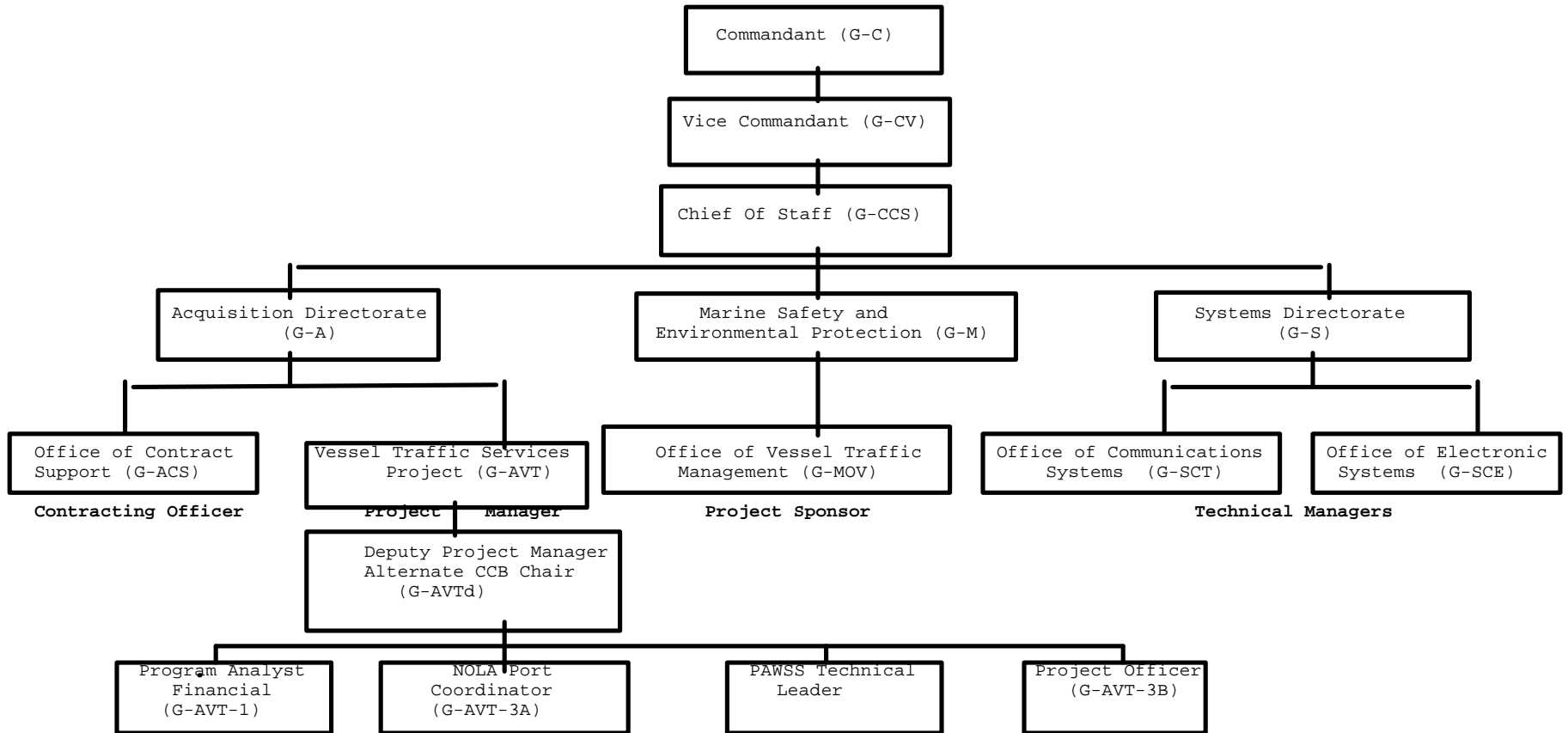
<u>Functional Area</u>	<u>Responsibility</u>
G-AVT Project Manager Member*	Chair/Permanent
G-AVTd Deputy Project Manager	Deputy Chair/ Permanent Member
G-MOV Project Sponsor's Representative	Permanent Member
G-SCE Technical Support	Permanent Member
G-SCT Technical Support	Permanent Member
G-ACS-4 Contracting Support	Permanent Member
G-SLP Logistics Management	Permanent Member
G-LPL Legal	Permanent Member
G-A-3 Quality Assurance	Ad Hoc Member
G-WKS Safety	Ad Hoc Member
G-A-2 Acquisition Technical Support	Ad Hoc Member
G-SEC Civil Engineering	Ad Hoc Member
G-WR-2 Work Force Planning	Ad Hoc Member
G-WTT Training and Performance Consulting	Ad Hoc Member
G-SIA Office of Architecture and Planning	Ad Hoc Member
Independent Verification and Validation Contractor	Ad Hoc Member
System Engineer	Ad Hoc Member
System Integration Contractor	Ad Hoc Member
Various VTS system Contractors	Ad Hoc Member
VTS System User(s)	Ad Hoc Member
Configuration Support Manager	Recorder

* The Project Manager has responsibility for the decision.

PAWSS Project Configuration Change Review Team Membership

<u>Functional Area</u>	<u>Responsibility</u>
G-AVT-3 Project Technical Leader	Chair
G-MOV Technical Support	Member
G-SCE Technical Support	Member
G-SCT Technical Support	Member
G-ACS-4 Contracting Support	Advisor
G-SLP Logistics Management	Advisor
G-LPL Legal	Advisor

Appendix E - Port and Waterways Safety System Project Organization



Appendix F - Engineering Change Proposal Evaluation

1. Ship/System/Equipment	2. Change Title
3. ECP Control Number	4. Originator's ECP No.
5. ECP Originator Activity/Code	6. ECP Priority

NOTE: PROVIDE EXPLANATION AND SPECIFIC DETAILS UNDER REMARKS

A. Technical: Does the ECP affect the following?	YES	NO
1. Design	___	___
2. Performance	___	___
3. Reliability and Maintainability	___	___
4. Operational Effectiveness	___	___
5. Interoperability/Interchangeability	___	___
6. Human Engineering	___	___
7. Survivability	___	___
8. Electromagnetic Characteristics	___	___
9. Safety	___	___
10. Space	___	___
11. Weight/Moment	___	___
12. Power	___	___
13. Cooling	___	___
14. System or Equipment Interfaces	___	___
15. Testing/Proofing	___	___
16. Age Dependency	___	___
17. Other	___	___
B. Integrated Logistics Support (ILS): Does the ECP impact the following?		
1. Logistics Support Analysis (LSA)	___	___
2. Maintenance Planning		
a. Level of Repair Analysis (LORA)	___	___
b. Maintenance Plan (MP)	___	___
c. Planned Maintenance System (PMS)	___	___
c. Other _____	___	___
3. Supply Support		

a.	Program Support Data (PSD)	___	___
b.	Provisioning Technical Documentation (PTD)	___	___
c.	Coordinated Shipboard Allowance List (COSAL)	___	___
d.	Coordinated Shore-based Allowance List (COSBAL)	___	___
e.	Allowance Parts List (APL)	___	___
f.	Allowance Equipage List (AEL)	___	___
g.	Operating Space Items (OSIs)	___	___
h.	Maintenance Assistance Modules (MAMs)	___	___
i.	Material Support Date (MSD)	___	___
j.	Installation and Checkout (I&C) Spares	___	___
k.	National Stock Number (NSN)	___	___
l.	Other _____	___	___
4.	Support and Test Equipment		
a.	General Purpose Electronic Test Equipment (GPETE) Requirements List	___	___
b.	General Purpose Tools	___	___
c.	General Purpose Test Equipment	___	___
d.	Special Purpose Electronic Test Equipment (SPETE) Requirements List	___	___
e.	Special Purpose Tools	___	___
f.	Special Purpose Test Equipment	___	___
g.	Calibration Standards	___	___
h.	Automatic Test Equipment/Test Program Sets	___	___
i.	Other _____	___	___
5.	Logistic Technical Data		
a.	Integrated Logistics Support Plan (ILSP)	___	___
b.	Life Cycle Support Plan(s)	___	___
c.	Specifications	___	___
d.	Interface Requirements Specification (IRS)	___	___
e.	Interface Control Drawings (ICD)	___	___
f.	Selected Record Drawings (SRD)	___	___
g.	Wiring Tables	___	___
h.	Index of Technical Publications (ITP)	___	___
i.	Technical Manuals	___	___

j.	Test Plans	___	___
k.	Test Procedures	___	___
l.	Operating Procedures	___	___
m.	System Level Drawings	___	___
n.	Equipment Level Drawings	___	___
o.	Ships Systems Manuals/Ships Information Books	___	___
p.	Ships Drawing Index (SDI)	___	___
q.	Training Aid Booklets (TABs)	___	___
r.	Other _____	___	___
6.	Computer Resources Support		
a.	Software Development Plan (SDP)	___	___
b.	System/Subsystem Design Description (SSDD)	___	___
c.	Software Design Description (SDD)	___	___
d.	Software Requirements Specification (SRS)	___	___
e.	Software Quality Program Plan (SQPP)	___	___
f.	Software User Manual (SUM)	___	___
g.	Computer Operation Manual (COM)	___	___
h.	Computer Programming Manual (CPM)	___	___
i.	Software Test Plan (STP)	___	___
j.	Software Product Specification (SPS)	___	___
k.	CASE and other Software Tools	___	___
l.	Computer Resources Life Cycle Mgt Plan (CRLCMP)	___	___
m.	Software	___	___
n.	Firmware	___	___
o.	Other _____	___	___
7.	Training		
a.	Training Plan	___	___
b.	Initial Training	___	___
c.	Training Devices/Trainers	___	___
d.	Training Aids/Simulators	___	___
e.	Instructor Handbook	___	___
f.	Factory Training	___	___
g.	Master Training List (MTL)	___	___
h.	Training Allowance Billets (TABs)	___	___

i. Support Allowance Billets (SABs)	___	___
j. Technical Training Equipment	___	___
k. Other _____	___	___
8. Facilities		
a. Facility Documentation	___	___
b. As-Built Drawings	___	___
c. Other _____	___	___
9. Manpower and Personnel		
a. Ship or Shore Manning Documents	___	___
b. Billet Requirements	___	___
c. Other _____	___	___
10. Packaging, Handling, Storage and Transportation		
a. Hazardous and Flammable Material	___	___
b. Electrostatic Discharge (ESD) Sensitive Material	___	___
c. Storage/Stowage	___	___
d. Special Handling Procedures	___	___
e. Special Packaging Procedures	___	___
f. Other _____	___	___
C. Configuration Item (CI) Identification	YES	NO
1. Has (have) affected CI(s) been clearly identified?	___	___
2. Has affected CI identification documentation been identified for update?	___	___
D. Financial	YES	NO
1. Are program funds available?	___	___
2. Will the change result in an overall program cost reduction?	___	___
3. Is life cycle cost affected?	___	___
E. Other		
1. Does the ECP affect schedule?	___	___
2. Has the impact of not approving the ECP been considered?	___	___
3. Is review by another CCB required?	___	___
4. Have related changes been considered?	___	___
5. Is this change compatible with existing systems?	___	___
6. Is GFE affected?	___	___

7. Has necessary coordination been accomplished?

Signature of Evaluator and Date _____

Appendix G - Change Proposal Review

1. Ship/System/Equipment	2. Change Title
3. Review Activity/Code	4. Change Proposal Control No.
5. Comments:	

6. Recommendation:

Approve as is

Approve with the Following Changes:

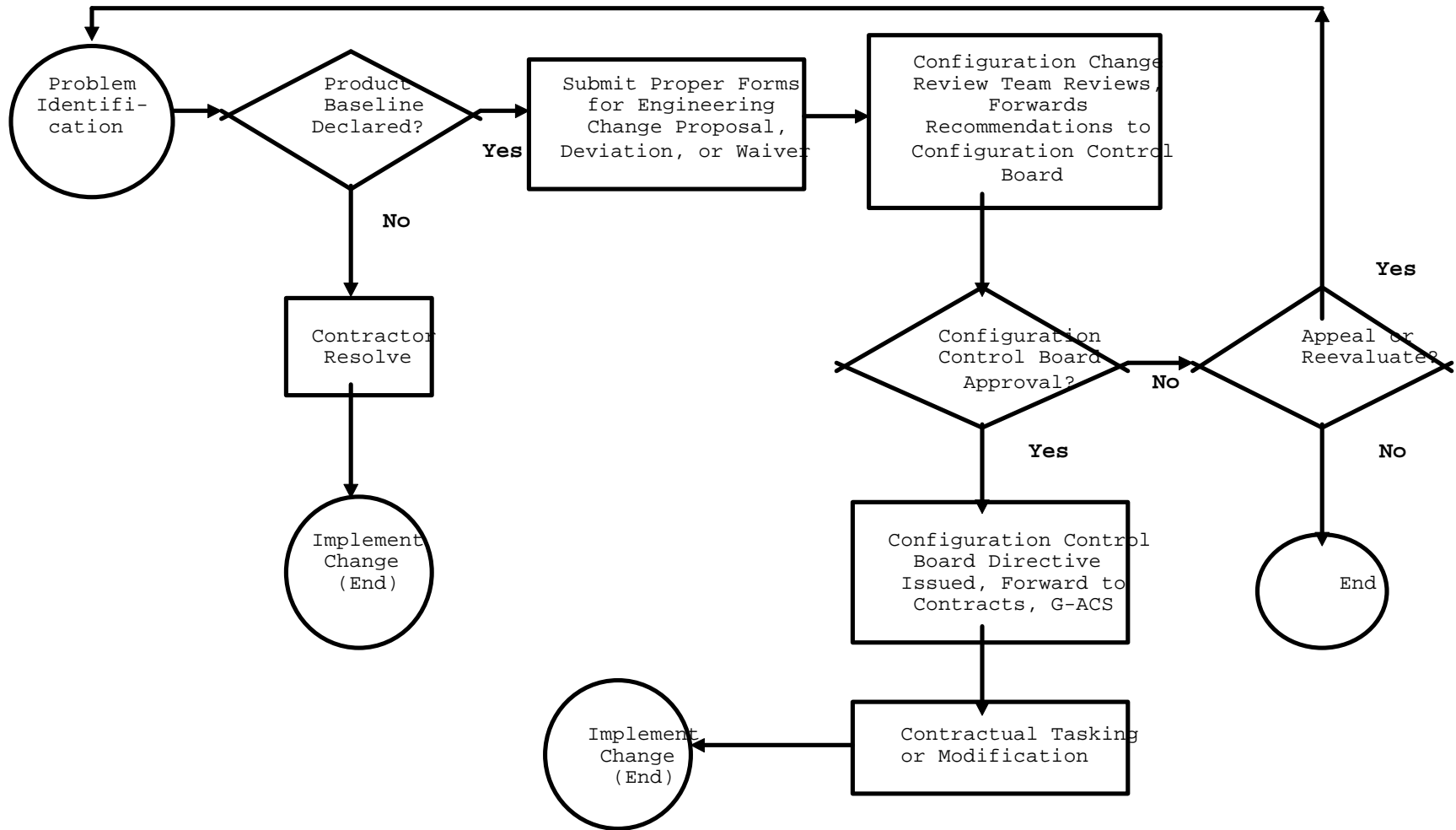
Disapprove for the Following Reasons:

Signature of Reviewer and Date _____

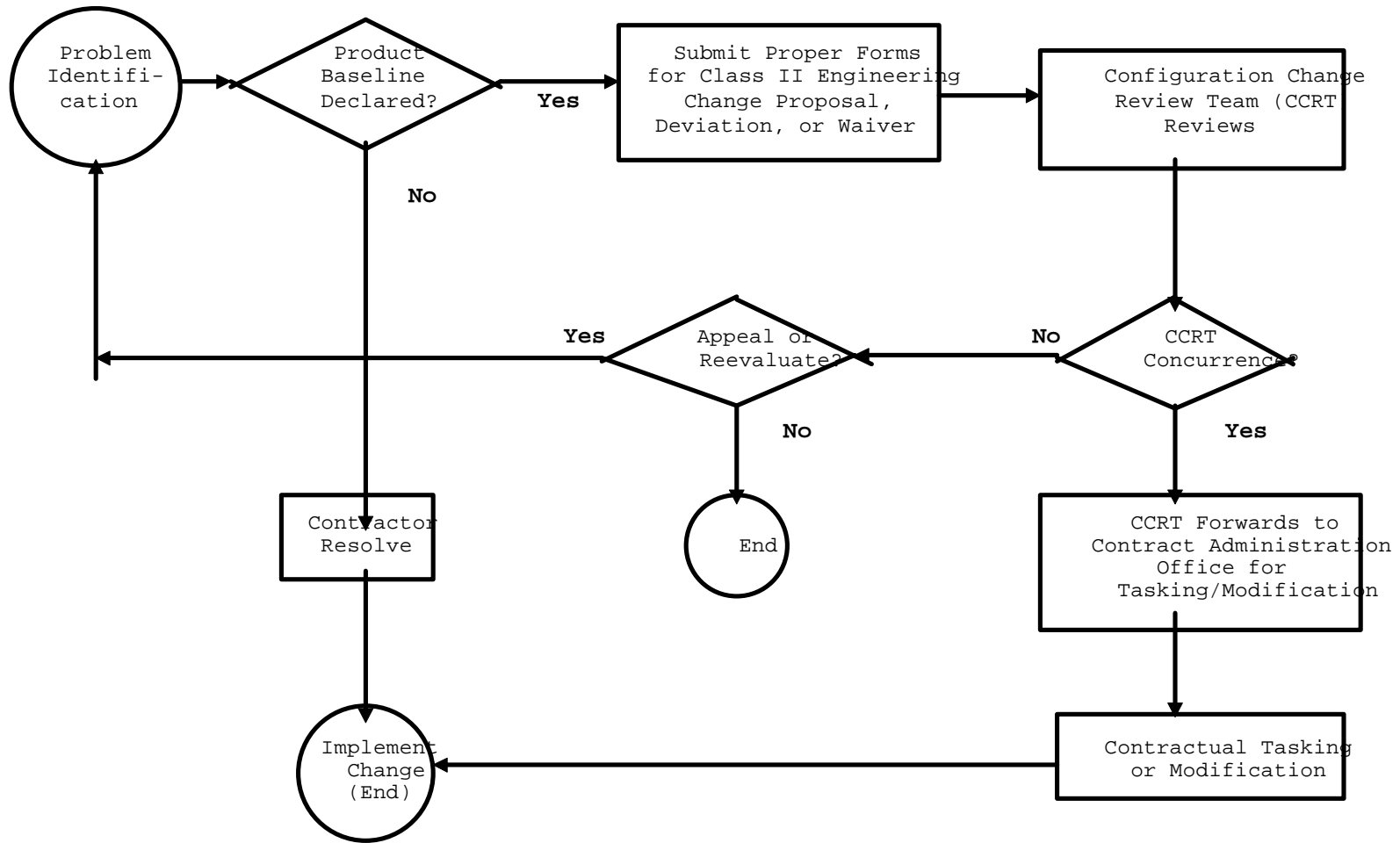
Appendix H - Configuration Control Board Directive

CONFIGURATION CONTROL BOARD DIRECTIVE (CCBD)						
PROGRAM		CM CONTROL NUMBER				
ECP TITLE		PRIORITY <input type="checkbox"/> EMERGENCY <input type="checkbox"/> URGENT <input type="checkbox"/> ROUTINE			ECP NUMBER	
ECP ABSTRACT						
IMPLEMENTATION PLAN <input type="checkbox"/> COMPLETED <input type="checkbox"/> NOT COMPLETED <input type="checkbox"/> NOT APPLICABLE		FUNDING <input type="checkbox"/> IDENTIFIED <input type="checkbox"/> NOT IDENTIFIED <input type="checkbox"/> NOT APPLICABLE		ECP EVALUATION FORM <input type="checkbox"/> COMPLETED <input type="checkbox"/> NOT COMPLETED <input type="checkbox"/> NOT APPLICABLE		
RECOMMENDED POSITION OF STAFF BASED ON ANALYSIS OF PROPOSED CHANGE						
<input type="checkbox"/> APPROVE <input type="checkbox"/> OTHER (<i>Explain</i>) _____ <input type="checkbox"/> DISAPPROVE STAFF REMARKS _____ _____						
CCB MEMBERS WILL CONCUR OR NON-CONCUR BY COMPLETING THE FOLLOWING SECTION (<i>Attach any comments</i>)						
CCB MEMBER NAME & OFFICE SYMBOL		INITIAL	DATE	CONCUR	NON-CONCUR	OTHER (<i>e.g. Abstain</i>)
CCB CHAIR DECISION						
<input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED <input type="checkbox"/> APPROVAL RECOMMENDED SUBJECT TO: <input type="checkbox"/> LVL-1 <input type="checkbox"/> LVL-2 FINAL APPROVAL <input type="checkbox"/> DEFERRED (<i>State Reason</i>) _____ <input type="checkbox"/> OTHER DECISION (<i>Explain</i>) _____ _____						
DIRECTION						
<input type="checkbox"/> DEFERRED TO CCB MEETING OF: _____ <input type="checkbox"/> IMPLEMENT ECP (<i>Enter Comments and Effective Date</i>) _____ _____ <input type="checkbox"/> KO NEGOTIATE WITH CONTRACTOR & PREPARE CONTRACT MOD. <input type="checkbox"/> KO PREPARE LETTER OF REJECTION <input type="checkbox"/> FORWARD LVL-1 or LVL-2 ECP TO HIGHER AUTHORITY <input type="checkbox"/> OTHER (<i>Explain</i>) _____ COMMENTS _____ _____						
SIGNATURE OF CCB CHAIR					DATE	

Appendix J - Class I Engineering Change Proposal and Critical and Major Deviation and Waiver Approval Cycle



**Appendix K - Class II Engineering Change Proposal and Minor Deviation and Waiver
Concurrence Cycle**



Appendix L - Configuration Control Board Charter Memorandum



Memorandum

Subject: CONFIGURATION CONTROL BOARD CHARTER:
PORTS AND WATERWAYS SAFETY SYSTEM
(PAWSS)

Date: 4130

From: Chief of Staff

Reply to G-AVT-3B
Attn. of: CDR Keane
7-1541

To: Distribution

Ref: (a) COMDTINST 4130.6 (series), Coast Guard Configuration
Management
(b) COMDTINST M4150.2 (series), Systems Acquisition Manual

1. Purpose. In accordance with reference (a) and (b) this charter establishes the Configuration Control Board (CCB) for the Ports and Waterways Safety System (PAWSS) Project. This designation is effective immediately and shall remain in effect until modified or canceled.

2. Background. The PAWSS project CCB shall provide technical and administrative direction and oversight to identify and document functional and physical characteristics of the PAWSS project, control changes to those characteristics, and report/record change processing implementation.

3. Project Objectives. The (PAWSS) project is a program to provide Vessel Traffic Services (VTS) to facilitate the safe and efficient transit of vessel traffic to prevent collisions, rammings, groundings, and environmental damage associated with these accidents.

4. Charter.

- a. Description. The PAWSS Project CCB is the Coast Guard decision making authority for baseline approval, final review, and disposition of all Class I (affecting safety, form, fit, function, or logistics support structure) Engineering Change Proposals (except changes affecting the Mission Need Statement and Operational Requirements Document), and all critical and major waivers and deviations. The decision of the board shall represent an optimal approach to acceptable, life cycle costs. The complete procedures of the CCB are in the PAWSS

Configuration Management Plan (CMP).

b. PAWSS CCB Membership. The CCB shall consist of:

<u>FUNCTIONAL AREA</u>	<u>RESPONSIBILITY</u>
G-AVT Project Manager	Chair/Permanent Member
G-AVTd Deputy Project Manger	Deputy Chair/ Permanent Member
G-MOV Project Sponsor	Permanent Member
G-SCE Technical Support	Permanent Member
G-SCT Technical Support	Permanent Member
G-ACS-4 Contracting Support	Permanent Member
G-SLP Logistics Management	Permanent Member
G-LPL Legal	Permanent Member
G-A-3 Quality Assurance	Ad Hoc Member
G-WKS Safety	Ad Hoc Member
G-A-2 Acquisition Technical Support	Ad Hoc Member
G-SEC Civil Engineering	Ad Hoc Member
G-WR-2 Work Force Planning	Ad Hoc Member
G-WTT Training and Performance Consulting	Ad Hoc Member
G-SIA Office of Architecture and Planning	Ad Hoc Member
G-AVT Staff	Recorder

The respective organizational entities shall empower their CCB members to make configuration management decisions and recommendations which will become binding upon their organizations.

c. Authority. The CCB Chairperson is hereby granted the authority to approve/disapprove configuration changes in accordance with the PAWSS project CMP. Since the PAWSS project is a DOT level one major acquisition, the CCB chairperson shall refer any proposed configuration changes affecting the PAWSS project Operational Requirements Document (ORD) or the Mission Need Statement (MNS) to higher authority per reference (b) and the PAWSS CMP. In the absence of the Project Manager, the Deputy Project Manager will be appropriately designated by the Project Manger as the alternate CCB Chairperson.

5. Duties and Responsibilities. The CCB shall carry out the duties and responsibilities identified in references (a) and (b). The main CCB function is to ensure the PAWSS CMP addresses, as appropriate, all aspects of configuration management in accordance with reference (a).

6. Action. Offices represented on the PAWSS CCB shall designate one primary and one alternate representative. The designation shall be provided in writing to the PAWSS Project manger (G-AVT) no later than 30 days after this charter's effective date. All designated PAWSS CCB members shall comply with this charter.

DIST: G-AVT
G-MOV
G-SCT
G-SCE
G-ACS-4
G-WKS
G-LPL
G-WTT
G-A-2
G-A-3
G-SLP
G-SEC
G-WR-2
G-SIA

Appendix M - VALUE ENGINEERING REPORT

VALUE ENGINEERING REPORT

AGENCY _____

PART I

Name, Title, Address, and Telephone Number of
Agency Senior Official Responsible for the VE Program:

AGENCY VE EXPENDITURES (\$'s invested in VE in FY xx: \$_____

DOLLAR SHARE OF SAVINGS PROVIDED TO CONTRACTORS: \$_____

DOLLAR THRESHOLDS FOR EACH VE CATEGORY (if different from \$1 million):

TOTAL AGENCY NET LIFE-CYCLE COST SAVINGS ATTRIBUTABLE TO VE

A. Summary of Cost Savings and Avoidance Reported by Category (see B. below)

<u>COST SAVINGS</u>		<u>COST AVOIDANCE</u>		<u>TOTAL SAVINGS</u>		<u>GRAND TOTAL</u>
<u>IN-HOUSE</u>	<u>CONTRACTOR</u>	<u>IN-HOUSE</u>	<u>CONTRACTOR</u>	<u>IN-HOUSE</u>	<u>CONTRACTOR</u>	<u>IN-HOUSE & CONTRACTOR</u>
						<u>SAVINGS & AVOIDANCE</u>

B. Total Agency VE Net Life-Cycle Cost Savings and Cost Avoidance by Category

<u>COST SAVINGS</u>		<u>COST AVOIDANCE</u>		<u>TOTAL SAVINGS</u>		<u>GRAND TOTAL</u>
<u>IN-HOUSE</u>	<u>CONTRACTOR</u>	<u>IN-HOUSE</u>	<u>CONTRACTOR</u>	<u>IN-HOUSE</u>	<u>CONTRACTOR</u>	<u>IN-HOUSE & CONTRACTOR</u>
						<u>SAVINGS & AVOIDANCE</u>

C. Acquisition

D. Administrative

E. Other

- a.
- b.
- c.

F. Please describe the steps you have taken to validate the reported cost savings, whether through IG audit or other measures.

PART II

VE PROJECT DESCRIPTION

List the top 20 VE projects by name. Show the VE expenditures, VE savings, and VE cost avoidance. Describe any quality or other non-quantifiable improvements from VE.

<u>VE EXPENDITURES</u>		<u>COST SAVINGS</u>		<u>COST AVOIDANCE</u>	
<u>IN-HOUSE</u>	<u>CONTRACTOR</u>	<u>IN-HOUSE</u>	<u>CONTRACTOR</u>	<u>IN-HOUSE</u>	<u>CONTRACTOR</u>

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.
- 19.
- 20.

PART III

PROGRAM/PROJECT NAME:

1995 1996 1997 1998 1999 2000 2001

1. Cost Savings
2. Cost Avoidance
3. Dollar Share of Savings Provided to Contractors
4. VE Expenses Attributable to the Program/Project (including a pro rata share of Salary/Expenses)
5. For Programs/Projects not discussed in Part II of the report, please discuss what steps you have taken to validate the reported cost savings, whether through IG audits or other measures. Attach additional sheets if necessary.