NAVAL PERSONNEL RESEARCH AND DEVELOPMENT LABORATORY

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WRR 71-4

November 1970

DEVELOPMENT OF SHORE MANNING DOCUMENTS (SHMD's) USING THE OPERATIONAL AUDIT MEASUREMENT METHOD

Allen Byspiel

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DEVELOPMENT OF SHORE MANNING DOCUMENTS (SHMD's) USING THE OPERATIONAL AUDIT MEASUREMENT METHOD

Work Unit No.
(TDP P43.07X.B2b)

Allen Byspiel

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NAVAL PERSONNEL RESEARCH AND DEVELOPMENT LABORATORY
WASHINGTON, D. C. 20390

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FOREWORD

This project was accomplished in response to Technical Development Plan P43.07X, Manpower Effectiveness, subproject B2b. Shore Manning Documentation for Selected Shore Activities.

Appreciation is expressed for the close cooperation and assistance received from Office of the Chief of Naval Operations (OP-102C) in providing staff liaison for the Shore Manning Documentation Program and in providing work study teams to assist in the work measurement studies.

Appreciation also is expressed for the competent professionnal services provided by the Fleet Work Study Group, Atlantic and the Manpower Validation Survey Teams, Atlantic in conducting a work sampling study of NAS Saufley Field, and assisting in operational audit studies of NAS Ellyson Field, NAS Whiting Field, NAS Meridian and NAS Pensacola.

Acknowledgement is given to the U. S. Air Force Management Engineering Program for those portions of their published management engineering procedures which were utilized and made compatable with Navy manpower determination procedures.

SUBMITTED BY

H. Williams

Head, Shore Manpower Requirements and Criteria Branch

APPROVED BY

H. Ozkaptan

Director, Human Factors and Advanced Requirements Division

R. E. McCoy
Commander, U. S. Navy
Commanding Officer

E. M. Ramras
Technical Director

SUMMARY

Problem

The present procedures for determining and forecasting naval manpower requirements ashore are considered inadequate by both Navy and DOD manpower planning groups. Additionally, the normal method of changing billets is too slow and usually does not provide adequate objective justification to support the changes.

Objectives

The objectives of this research are:

a. To determine if the operational audit work measurement method (which is used by other military services and government agencies) can be employed to determine realistic qualitative/quantitative manpower requirements at the individual billet level for selected naval activities ashore.

b. To compare the operational audit method with other work measurement methods.

c. To document these manpower requirements through the use of Shore Manning Documents (SHMD's).

d. To test and evaluate the technical feasibility, military usefulness, and acceptability of using the operational audit method and shore manning documentation approach to determine precise qualitative/quantitative manpower requirements for naval activities ashore.

e. To provide manhour and workload data for use in manpower criteria development and in manpower allocation models.

Requirements and Background

The manpower requirements and allocation system which the Navy has been using for over 20 years is no longer adequate to support manpower requirements of the Department of the Navy and of the Department of Defense. Navy policy is to develop minimum manpower requirements to accomplish assigned missions with maximum essential effectiveness and

efficiency. Two approaches to that end have been initiated in the past.

In 1963 a functional approach to manpower determination was initiated with the implementation of the U. S. Navy Staffing Criteria Development Program for Naval Activities Ashore and Afloat. By mid 1966 an evaluation of the research effort to establish criteria for activities afloat disclosed several major problem areas.

As a result of this evaluation, the Chief of Naval Personnel was requested to undertake the development of a prototype Ship Manning Document which would be more useful and provide back-up to the Chief of Naval Operations in determining manpower requirements and preparing Manpower Authorization documents. Subsequently, the determination and justification of manpower requirements, and their translation into ship manning documents for Navy ships were well received at review levels within the Navy Department and the Department of Defense.

In February 1968, the Assistant Deputy Chief of Naval Operations (Manpower) directed that an Ad Hoc Advisory Group be formed to develop new approaches to the determination and justification of manpower requirements for Shore Activities. The Ad Hoc Advisory Group recommended that a Shore Manning Documentation project be initiated by the Naval Personnel Research and Development Laboratory patterned after the Ship Manning Documentation Program. This recommendation was approved by the ADCNO (Manpower), who requested the Chief of Naval Personnel to implement the recommendation. A plan was developed by NPRDL in May 1968 which was approved and included in Technical Development Plan 43-07X, Manpower Effectiveness, dated May 1968, as Subproject B2b, Staffing Criteria - Shore Manning Documentation for Naval Shore Activities.

Approach

In order to determine the optimal method of collecting data for later analysis and documentation of manpower requirements at Naval Shore Activities, an analytical review was conducted of the procedures and methodologies in use by the

various responsible elements of the Army, Air Force, Marine Corps and Navy, as well as the Federal Aviation Administration and private industry.

The operational audit measurement method was selected as the best technique to be used with limited manpower resources. Work sampling, time study, and time-motion study were ruled out as primary study methods since adequate personnel resources were not available. The basic procedures for conducting operational audit measurement studies are prescribed in the Handbook for Staffing Criteria Development for Activities Ashore, OPNAV PUBLICATION 01B1-P1. In the development of Shore Manning Documents, additional procedures were developed such as defining work elements down to the work center level - the lowest working level, developing new forms to document the work elements or tasks, the corresponding weekly manhours required and workload volumes generated, as well as the skill level required.

In development of Shore Manning Documents, the military and civilian work weeks were defined, cross utilization of personnel was effected at the division level or below, the civilian-military mix was considered, as were civilian ceilings, and fractional manpower requirements. Related data systems such as the 3M and RMS systems were studied, evaluated, and some of the historical workload data were used.

Conclusions

1. The operational audit method is an economical work measurement method which can accurately determine manpower requirements.

2. The Shore Manning Documentation approach using the operational audit work measurement method is acceptable at the activity, intermediate command, and CNO levels.

3. SHMD's provide manhour and workload data for use in manpower criteria development as well as for use in manpower prediction and allocation models.

4. There is a need for manpower criteria and/or mathematical models to make the Shore Manning Document for an activity into a dynamic tool which will enable manpower allocators to revise the number of billets in that activity readily based on adequate objective data.

Recommendations

1. Recommend that operational audit be used as the primary work measurement method for the Naval Shore Establishment, except for those activities or components which are included in the Defense Integrated Management Engineering System (DIMES), or other industrial engineering systems. (Pages 45-46)

2. Recommend that up to 10% of those activities which are measured by the operational audit method subsequently be measured by the work sampling method. (Pages 7, 45-46)

3. Recommend that staffing criteria be developed using the data collected from the five CNABATRA Naval Air Stations that were studied during the course of this project. These staffing criteria will enable manpower planners to readily change the number of billets in selected activities on an objective basis. (Pages 49-50)

4. Recommend that the development of Manpower Allocation Models be continued. (Pages 49-50)

5. Recommend that OPNAV PUBLICATION 01B1-P1, Handbook for Staffing Criteria Development for Activities Ashore be rewritten to include the expanded and new procedures presented in this report. Also recommend that the title of this publication be changed to Handbook for Determination and Documentation of Navy Manpower Requirements Ashore. (Pages 8, 19, and Appendix A)

REPORT USE AND EVALUATION

Feedback from consumers concerning the utilization of reports is a vital element in improving products so that they better respond to specific needs. To assist the Chief of Naval Personnel in future planning, it is requested that the use and evaluation form on the reverse of this page be completed and returned. The page is pre-addressed and franked: fold in thirds, seal with tape, and mail.

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TABLE OF CONTENTS

	Page
Foreword	ii
Summary	iii
Use and Evaluation Form	
List of Figures	ix
List of Tables	ix
I. INTRODUCTION	
A. Problem	1
B. Objectives	1
C. General Requirements and Guidance	1
D. Related Manpower Systems	2
1. Navy Staffing Criteria Development Program (Ashore and Afloat) - 1963	2
2. Ship Manning Document (SMD) Program - 1966	4
E. Requirement for Shore Manning Documentation Program	5
II. APPROACH	
A. Overview	7
B. Selection of Measurement Study Method	7
C. Operational Audit Measurement Method	8
D. Preliminary Phase	8
1. Organizational and Work Center Identification	9
2. Work Center Descriptions	13
3. Organizational-Functional Coding System	18
E. Study of Related Data Systems	20
F. Development of SHMD Format and Measurement Study forms	21
G. Measurement Study Phase	21

Page

1. Entrance Briefing (CO and Staff) . . . 21
2. Briefing of Key Department Personnel . 22
3. Review of Directives 22
4. Review of Organizational Structure and Identification of Work Centers . . . 22
5. Review of Standardized (Common) Work Center Descriptions 22
6. Manhours, Skill Levels, and Work Units 23
7. Watch Station Measurement 27
8. Work Units 27
9. Workload Indicators 31
10. Exit Briefing 32

H. Development of Shore Manning Document . . 32

1. Work Week, Military and Civilian . . . 32
2. Cross Utilization of Personnel . . . 35
3. Fractional Manpower 35
4. Civilian-Military Mix and Civilian Ceilings 37
5. SHMD Format 38

I. Review, Revision, and Promulgation of SHMD 38

III. DISCUSSION

A. Use of Operational Audit Method versus other Measurement Methods 45

1. Cost and Time Comparison 45
2. Comparative Accuracy 46

B. Work Center Approach 46
C. Shore Manning Document Use and Acceptability 47
D. Need for Criteria or Mathematical Model to make Shore Manning Documents Dynamic Tools 49

Page

IV. CONCLUSIONS 53

V. RECOMMENDATIONS 54

Bibliography 55

Appendix A Proposed Change 1 to OPNAV PUB 01B1-P1 with Proposed Appendix I thereto A-1
Appendix B SHMD for NAS, Saufley Field B-1
Appendix C Comparison Between Work Sampling and Operational Audit Measurement Studies of NAS, Saufley Field C-1
Distribution List . . . . . - -

LIST OF FIGURES

1. One Level Organization Chart (OPNAV Form 5312/2) 11
2. Example of Work Center Activity Structure . . . 15
3. General Organization of the Work Center Description 16
4. Example of Work Center Description (NAVPERSRANDLAB Test Form 82-2) 17
5. Work Center Task Analysis Form (NAVPERSRANDLAB Test Form 82-1) 25
6. Watch Station Requirements (NPRDL Test Form 82-3A) 28
7. Work Center Identification and Description Summary (NPRDL Test Form 82-6) 29
8. SHMD Work Center Manpower Requirements Page . . 40
9. SHMD Work Center Manpower Requirements Continuation Page 41
10. SHMD Work Center Explanatory Notes and Elements 42
11. Manpower Requirements Prior to and After Operational Audit Measurement Study 48
12. Pilot Training System, NAS Saufley Field . . . 51
13. Structure of Proposed Mathematical Common Manpower Model 52

LIST OF TABLES

1. Fractional Manpower Cutoffs 36

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I. INTRODUCTION

A. Problem

The present procedures used for determining and forecasting naval manpower requirements ashore are not considered adequate by Navy and DOD manpower planning groups. Additionally, the normal method of changing billets which is discussed below, is too slow and usually does not provide adequate objective justification to support the changes.

B. Objectives

The objectives of this research are:

1. To determine if the operational audit work measurement method (which is used by other military services and government agencies) can be employed to determine realistic qualitative/quantitative manpower requirements at the individual billet level for selected naval activities ashore.

2. To compare the operational audit method with other work measurement methods.

3. To document these manpower requirements through the use of Shore Manning Documents (SHMD's).

4. To test and evaluate the technical feasibility, military usefulness, and acceptability of using the operational audit work measurement method and shore manning documentation approach to determine precise qualitative/quantitative manpower requirements for naval activities ashore.

5. To provide manhour and workload data for use in manpower criteria development and in manpower allocation models.

C. General Requirements and Guidance

For over twenty years, the U. S. Navy has had a manpower allocation system in which manpower billet changes basically originate from the activity/unit level and are forwarded up

the chain of command and are evaluated at each level. Final evaluation and manpower allowance changes are made at the Assistant Deputy Chief of Naval Operations (Manpower) level. This historical method is no longer adequate to support manpower requirements of the Department of the Navy and the Department of Defense.

SECNAVINSTRUCTION 5310.2A[1] of February 26, 1964, Subject: Guidance for Manpower Progress Effectiveness, states:

> "Manpower is an increasingly significant resource in maintaining formidable naval power in a condition of immediate operational readiness . . . . It is desirable that the Department of the Navy intensify its efforts . . . to develop a more effective manpower utilization and productivity improvement program . . . ."

The U. S. Navy has a need to determine and document realistic qualitative/quantitative manpower requirements for all functions performed ashore. SECNAV INSTRUCTION 5310.2A[2] states:

> "It is the policy of the Department of the Navy to develop minimum manpower requirements necessary to accomplish assigned missions with maximum essential effectiveness and efficiency, afloat and ashore. Manpower authorizing documents will state those requirements necessary to accomplish adequately assigned operational and support missions."

D. Related Manpower Systems

1. Navy Staffing Criteria Development Program (Ashore and Afloat) - 1963

In 1963 a functional approach to manpower determination was initiated with the implementation of the U. S. Navy Staffing Criteria Development Program for Naval

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[1]SECNAV INSTRUCTION 5310.2A, 26 February 1964, Subj: Guidance for Manpower Program Effectiveness, para. 5.

[2]Ibid, para. 3 and 4.

activities ashore and afloat. SECNAV INSTRUCTION 5310.9[3] established responsibilities for the development and maintenance of Navy-wide functional staffing criteria (military and civilian) in accordance with the instructions and guidance provided in SECNAV INSTRUCTIONS 5430.59[4] and 5310.2A.

A very complete description of the research efforts during the early years of this program is contained in the Handbook for Staffing Criteria Development for Activities Ashore, Personnel Research Laboratory[5], December 1966, which was republished as OPNAV PUBLICATION 01B1-P1, January 1967. Staffing criteria developed by the Naval Personnel Research and Development Laboratory, and by Bureaus, Offices, and Systems Commands, following the techniques and procedures developed by NPRDL, are evaluated and approved by the Chief of Naval Operations and then are promulgated in two OPNAV INSTRUCTIONS, U. S. Navy Staffing Criteria Manual for Activities Ashore, OPNAVINST 5310.5A and U. S. Navy Staffing Criteria Manual for Activities Afloat, OPNAVINST 5310.6A. The criteria developed under this functional approach are published in the form of staffing tables which provide quantitative and qualitative criteria for varying workloads. The criteria are intended "for use as a guide in determining manpower requirements for, and in evaluating manpower utilization . . .".[6]

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[3]SECNAV INSTRUCTION 5310.9, 20 April 1964, Subj: Responsibilities for Development of Navy-wide Staffing Criteria.

[4]SECNAV INSTRUCTION 5430.59A, 20 October 1963, Subj: Review of Management of the Department of the Navy; implementation of

[5]Since renamed the Naval Personnel Research and Development Laboratory, (referred to as NPRDL), effective 10 December 1968, and organized as a command under the cognizance of the Bureau of Naval Personnel.

[6]OPNAV INSTRUCTION 5310.5A, 30 April 1965, U. S. Navy Staffing Criteria Manual for Activities Ashore, para. 1.

By FY-1967 research in support of the Staffing Criteria Program had progressed to the point where staffing tables had been developed covering all work functions and subfunctions performed on a total of 168 ships. Similarly staffing tables had been developed and promulgated for 35 functions and 240 subfunctions performed ashore. However, an evaluation of the research effort to establish criteria for activities afloat disclosed a number of problem areas. The functional standards, as promulgated, did not provide sufficient detailed justification of manpower requirements. While the appropriate allowance for an individual ship could be determined by reference to the criteria tables, allowance writers were required to select the appropriate workload indicator column for each of a hundred or more functions and subfunctions. In some instances the user could not be sure that he was selecting the correct column. More importantly, it was not possible to demonstrate that maximum cross utilization of available skills was being accomplished. As a result of this evaluation, the Chief of Naval Personnel was requested to undertake the development of a prototype Ship Manning Document which would be more useful and provide backup to the Chief of Naval Operations in determining manpower requirements and preparing Manpower Authorization documents. The DD-710 class destroyer was designated as the pilot study vehicle.[7]

2. Ship Manning Documentation Program (SMD) Program - 1966

Under the ship manning documentation approach, manpower requirements are based on the performance of work required to accomplish mission and tasks under a projected operational environment, required operational capabilities, and operational constraints. These capabilities and constraints are established by plans and policies of the Chief of Naval Operations, with full consideration being given to size and configuration of the ships and the cross-utilization of personnel to ensure more effective use of manpower. A Fleet Work Study Team consisting of 15 to 35 work study practitioners normally boards an operating ship for a period of two weeks.

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[7]CNO ltr OP-01B1D1 ser 12803 P10 of 8 Sept 1966, Subj: Staffing Criteria for DD-710 Class Destroyers.

The team works 24 hours a day and obtains from 250,000 to 500,000 work sampling observations. A Ship Manning Documentation Team of 3 to 6 men rides the ship for one week to obtain the required minimum watch station manning. This team later builds the Ship Manning Document for that ship.

The research project undertaken in 1966 to determine the minimum qualitative/quantitative manpower required to perform all assigned functions aboard the DD-710 (FRAM I) class destroyers, resulted in the development of the Prototype Ship Manning Document for that class of ship, which had been selected for the initial study. The resulting Ship Manning Document was promulgated by the Office of the Chief of Naval Operations in December 1967[8]. The procedures employed in the development of the prototype document have since been refined and tested successfully on over 20 other classes of Navy ships.

The determination and justification of manpower requirements, and their translation into ship manning documents for Navy ships has been well received at review levels within the Navy Department and the Department of Defense.

E. Requirement for Shore Manning Documentation Program

In February 1968, the Assistant Deputy Chief of Naval Operations (Manpower) directed that an Ad Hoc Advisory Group be formed to develop new approaches to the determination and justification of manpower requirements for Shore Activities[9]. This group consisted of representatives from OP-01B1, OP-100, BuPers-A3, and NPRDL, with Capt. E. C. Hipp, Jr. serving as Chairman. On 1 March 1968, the Ad Hoc Advisory Group reported its findings and recommendations to

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[8] As enclosure (1) to OPNAV letter OP-100C1 ser 15357 of 22 December 1967.

[9] ADCNO (Manpower) letter OP-10B1 Ser 10578 of 2 February 1968, Subj: Manpower Requirements Research for Activities Ashore.

the ADCNO (Manpower). It recommended that a Shore Manning Documentation project be initiated by the Naval Personnel Research and Development Laboratory patterned after the Ship Manning Documentation Program[10]. This recommendation was approved by the ADCNO (Manpower), who requested the Chief of Naval Personnel to develop an operational research plan to implement the recommendations of the Ad Hoc Advisory Group[11]. The Chief of Naval Personnel directed the Naval Personnel Research and Development Laboratory to develop and submit a Research Plan for Shore Manning Document Research[12]. A plan was developed by NPRDL which was approved and included in Technical Development Plan 43-07X, Manpower Effectiveness, dated May 1968, as Subproject B2b, Staffing Criteria - Shore Manning Documentation for Naval Shore Activities. Funding was provided as of 1 July 1968 when the project officially commenced. This project was funded under Advanced Development Objective (ADO) funds instead of Exploratory Research and Development funds since sufficient exploratory work had been accomplished in the development of functional Staffing Criteria for Activities Ashore and in the development of the concepts embodied in the Ship Manning Documentation project.

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[10]ADCNO (Manpower) letter OP-01B1D Ser 11024 P10 of 1 March 1968, Subj: Findings and Conclusions of Shore Manning Document Ad Hoc Advisory Group; report on.

[11]CNO letter OP-01B1D Ser 11638 P10 of 10 April 1968, Subj: Shore Manning Document Research Project; request for initiation of.

[12]CNP letter Pers-A312 Ser A31/90 of 17 April 1968, Subj: Shore Manning Document Research.

II. APPROACH

A. Overview

Under the shore manning documentation approach, manpower requirements are based on the performance of work required to accomplish assigned mission and tasks at specific or designated activities, under operational constraints established by plans and policies of the Chief of Naval Operations. Consideration is given to size and configuration of activities concerned, climatic conditions or geographical location, and the type of labor pool in the area. Emphasis is placed on the development of total manning requirements for all functions required to support the mission of the activity as a total entity. The time required to perform all required duties is computed and presented in the Shore Manning Document for the activity being studied.

B. Selection of Measurement Study Method

In order to determine the optimal method of collecting data for later analysis and documentation of manpower requirements at Naval Shore Activities, an analytical review was conducted of the procedures and methodologies in use by the various responsible elements of the Army, Air Force, Marine Corps and Navy. The procedures used by the Federal Aviation Administration and private industry were also analyzed. There were a multitude of approaches which have been designed as data collecting vehicles, and numerous procedures were considered in developing a system responsive to the assigned task of determining manpower requirements in the Naval Shore Establishment.

The operational audit method was selected as the best method to be used with limited manpower resources. Work sampling, time study, and time-motion study were ruled out as primary study methods since adequate personnel resources were not available. However, it is considered desirable to periodically conduct work sampling studies of activities where operational audits are or have been conducted in order to determine the accuracy of the operational audit.

C. Operational Audit Measurement Method

Operational audit is a method that successfully integrates any number of methods or techniques to accomplish a measurement study. It employes four primary techniques: Best judgment, historical experience, average good operator, and directed requirement. These techniques may be used separately or may be integrated into a systematic method for measuring work activity. The operational audit method may be used in any work situation when it is impractical or not feasible to conduct a study with a more objective work measurement method or technique, such as work sampling, time study, or methods-time measurement.

As with any of these methods and techniques, there are four phases, as defined in OPNAV PUB 01B1-P1, for developing staffing criteria. In the development of Shore Manning Documents, three of these stages are identical and one is comparable. The stages are:

	SHMD Development		Staffing Criteria Development[13]
1.	Preliminary Phase	1.	Preliminary Phase
2.	Measurement Phase	2.	Measurement Phase
3.	SHMD Computation	3.	Criteria Computation
4.	SHMD Review and Promulgation	4.	Criteria Promulgation and Maintenance

There are two additional phases once Shore Manning Documents have been developed. These are Criteria Development and Data Input to Model(s). These phases will be discussed in the Discussion Section of this report.

D. Preliminary Phase.

This phase covers the planning and organizing of the study phase which is the foundation on which the other steps are built. The types of activities

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[13]OPNAV PUB 01B1-P1, page 9.

and the individual activities to be studied must be selected. Then, the following data pertaining to each activity selected for study must be obtained, analyzed, and evaluated: mission statements, assigned tasks, operational constraints, organizational directives and functional statements from the activity as well as from its higher headquarters, the Manpower Listing (OPNAV Form 5320), the Manpower Authorizations (OPNAV Form 1000/2) for officers and for enlisted personnel, key position descriptions, facilities characteristics (Shore Data Book) and manhour and work output data provided from other systems such as the 3M (Maintenance and Material Management) System, DIMES (Defense Integrated Management Engineering System), and RMS (Resource Management System); also the latest work measurement, management, audit, and inspection reports. The current Logistics Support Requirements Report is a very useful document. It provides the missions, tasks, and functions for the activity including potential or contemplated changes in tasks, functions, and organization over an eight year planning period; activities and units providing and receiving support, operational and support required; loading plans, and projected manpower allowance lists.

1. Organizational and Work Center Identification

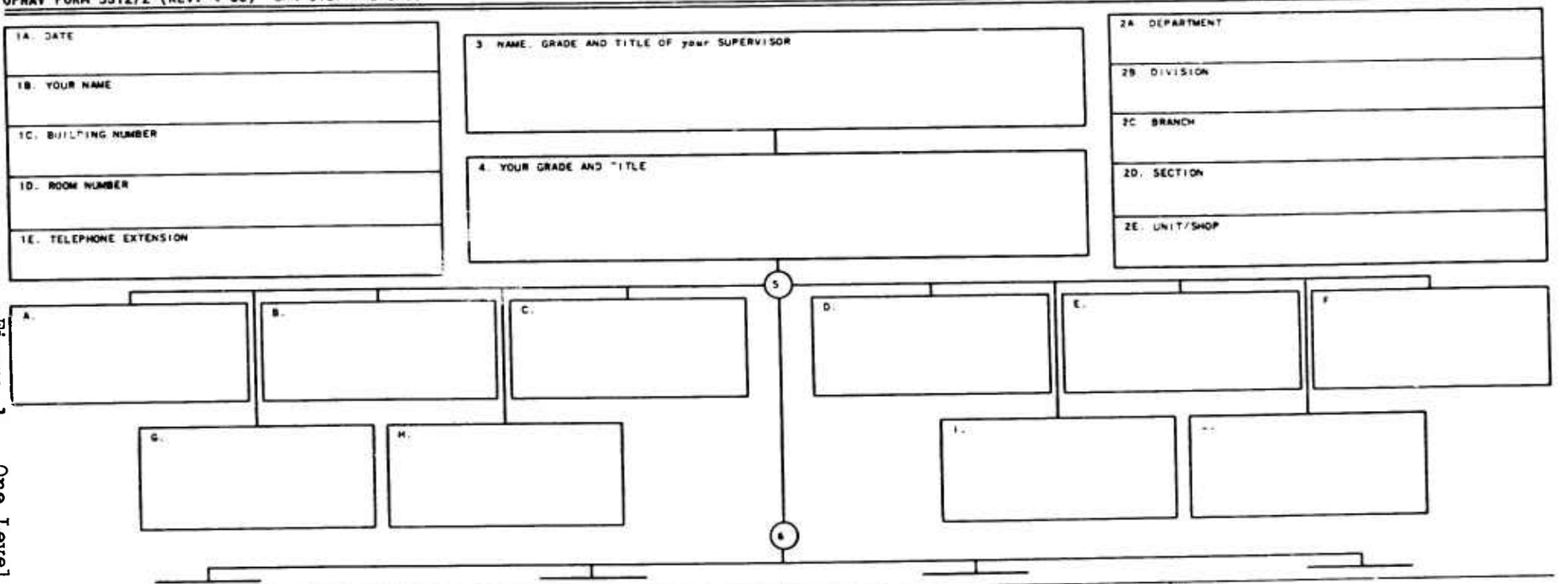
The organizational structure as indicated in the organizational instructions of the stations to be studied and the implied organizational structure in the Manpower Listings are entered on spread sheets in order to compare the organiaztional structures of the different stations for similarities and differences. Preliminary identification of work centers at the lowest possible level is made; this is necessary to identify comparable work centers since one desired by-product of these manpower studies is functional manpower criteria. If work centers are identified at the lowest organizational level, it is much easier to analyze comparable work centers. For example, in a large activity several work centers may be organized as sections of a branch while at a smaller activity the same work centers may be organized under a branch which no sections. Thus, a work center approach to measuring manpower requirements is more meaningful than an organizational approach.

A work center is defined as a grouping of personnel using similar machines, processes, methods, and operations, and

performing homogeneous type work, usually located in a centralized area. The term is used to identify a relatively small activity within a broad functional segment. Personnel within a work center perform work that basically contributes to the same end-product or result, and their duties are similar or closely related. A work center may be located at any organizational level. For example, a department head, his assistant (if any), and direct clerical support often may constitute a work center; if each of the divisions under that department have a supervisor then each division head usually would be a one man work center. Depending upon the complexity of its mission and functions, divisions are normally divided into branches, branches into sections, and sections sometimes into units. Work centers normally, but not necessarily, follow existing organization patterns. In many cases existing organizational segments are broken into two or more work centers; in some rarer instances, two or more existing organizational segments are combined into one work center. Defining the work centers is an important step, especially when staffing criteria is a desired by-product. Identifying work centers to the lowest level is very important to facilitate analyzing like work centers at different locations. Secondly, if there are different products or output, dividing organizational elements into work centers related to the output or products will aid in identifying the manpower requirements associated with the different products or output. When the on-site preliminary phase study is conducted, a One Level Organization Chart (OPNAV Form 5312/2) (See Figure 1) is given to each work center supervisor to complete. Instructions for filling out the form are given on the reverse side. This form when completed identifies the supervisor, his supervisor's name, grade and title, his subordinate organizations and personnel, and also where his work center fits within the total structure of the organization. It also has space for the supervisor's primary and collateral billet or position titles. This form assists the analysts in determining the actual organization which is sometimes at variance with the directed or standardized organizational structure.

ONE-LEVEL ORGANIZATION CHART
OPNAV FORM 5312/2 (REV. 4-66) S/N 0107-778-8100

Submit in duplicate.
See complete instructions on reverse side



A.	D.	G.	J.
B.	E.	H.	K.
C.	F.	I.	L.

7. BILLET/POSITION TITLES	% TIME SPENT IN EACH
A. PRIMARY	
B. COLLATERAL	
C. COLLATERAL	
D. COLLATERAL	
TOTAL	

Figure 1. One Level Organization Chart

INSTRUCTIONS FOR PREPARATION

A. A One-Level Organization Chart should be completed personally by each supervisor.

B. Blocks 1-4 — Complete as indicated. Use abbreviations when necessary.

C. Block 5 (A-J): Enter, in separate blocks, the name, designator grade/rating/rate and title of each person reporting directly to you only if that person has subordinate(s) reporting directly to him. Any person whose name appears in one of these blocks will also be preparing one of these One-Level Organization Charts.

D. Block 6 (A-L): Enter the name, designator grade rating rate and title of each person who reports directly to you but who does not have subordinate(s) reporting to him. Any person whose name appears in these spaces should not prepare a One-Level Organization Chart. NOTE: There are spaces for 12 employees in this section. List additional names on reverse of form and identify as "6M, N, O" etc.

E. Block 7 (A): Indicate title of job as shown in block 4 and percentage of time expended in this function.

Block 7 (B,C,D): List only those collateral duties which require a significant amount of time.

2. Work Center Description

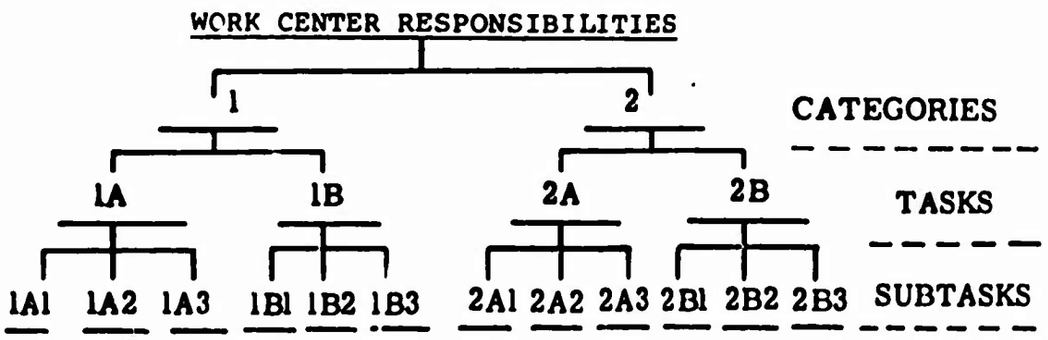
In any manpower determination or manpower criteria development process, defining the work centers for which manpower requirements or criteria are to be developed is a critical step. In the case of work center manning criteria, this definition and description process assumes added significance, because the criteria must be applicable at multiple locations and at various workload volumes. This is also true in the Shore Manning Documentation program if mathematical modeling techniques are used in which there is a common model structure. (This subject will be addressed later in this report). The work centers must, therefore, be defined in a manner that provides for relating the associated manpower cost with some workload index or factor and also, work that is not common to a given work center at all locations, should be treated as an additive. In order to meet these requirements it is necessary to analyze, in detail, the various work elements of the work center, determine which must be included in the description and categorize them in the manner that best accommodates measurement and computation.

The responsibilities of each work center are divided into categories, tasks, subtasks, and elements. A work category is a major subdivision of a work center description which represents a number of associated tasks; normally there will be two to eight work categories which normally also can be used as work elements with the work sampling measurement method. Tasks are constituent parts of categories. Subtasks are further subdivisions and/or tasks which they delineate. If even greater detail is required, subtasks can be fragmented into elements. Elements need not be separately identified in the definition, although many are used to describe a subtask.

The number of categories used depends on the scope and diversity of the work center's responsibilities. Each of the major internal variables identified must be treated as a separate category to insure sufficient data availability for developing an additive or a multivariate criterion in the event a single-factor manning relationship cannot be established.

Figure 2 is a condensed hypothetical example of a detailed analysis extending through basic motions, or therbligs. Although it is rarely necessary to use this amount of detail, the example illustrates that an analysis can be carried to the n^{th} degree, if necessary, with the relative value of each work category clearly evident from its position in the structure. With activities arrayed in such a manner, potential variables in the work center manpower cost can be isolated, and by analyzing subordinate tasks, possible causes can be identified. The net result is the list of potential and known variables that must be separately costed during the measurement phase to insure successful development of a work center manning criteria or common manpower model equation or manning module that can be applied at all locations that have been studied.

The Work Center Description is organized so that in effect, it becomes an explosion of the work center responsibilities into work categories, tasks and subtasks. This relationship is graphically portrayed below:



A Work Center Description should be prepared for each work center studied using NAVPERSRANDLAB Test Form 82-2 (until an OPNAV Form is published). See Figures 3 and 4 for examples of the general organization and an example of a Work Center Description. This form is used to identify the work center and its position in the organization. It includes a brief general functional statement for the work center which is a very broad or abstract statement which encompasses all the responsibilities of the work center.

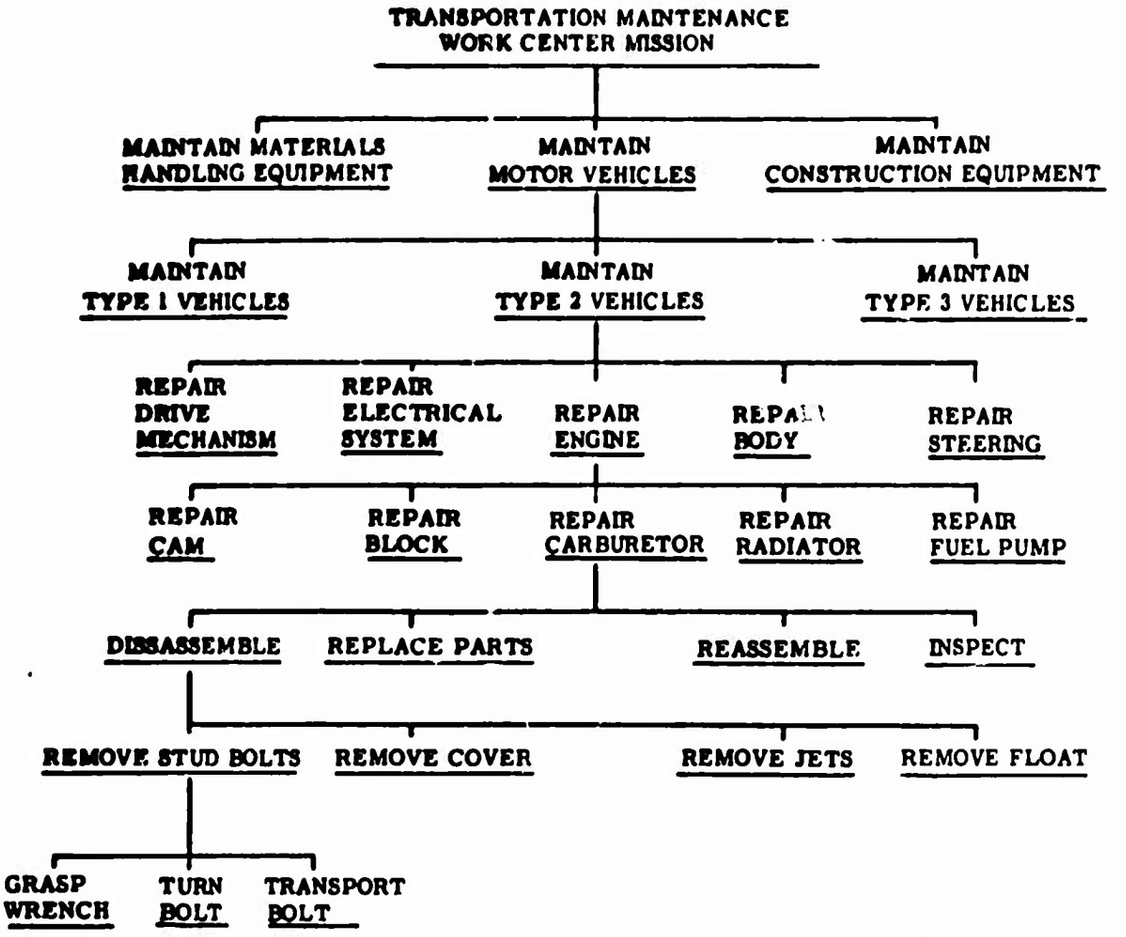


Figure 2. Work Center Activity Structure

(Source: AFM 25-5)

NAVPERSRANDLAB Test Form 82-2, Feb 1969

WORK CENTER DESCRIPTION

Date: _____

Station/Organization: _____

Department & Code: _____

Division & Code: _____

Branch & Code: _____

Section & Code: _____

General Functional Statement:

DESCRIPTION

1. CATEGORY TITLE.
   (General Category Description)

   a. TASK TITLE
      (Task Description)

      (1) SUBTASK TITLE
          (Subtask Description)
      (2)

   b.

2.

   a.

      (1)
      (2)

   b.

3.

   a.
   b.
   c.

AND SO FORTH . . . .

Figure 3. General Organization of the Work Center Definition.

Work Center Description
NAVPERSRANDLAB Test Form 82-2 (Feb 69)

WORK CENTER DESCRIPTION

Date: 20 Feb 1969

Station/Organization: NAS, Saufley Field, Pensacola, Florida

Department & Code: Air Operations Department - AO

Division & Code: Photographic Division - AOP

Branch & Code: _____

Section & Code: _____

General Functional Statement: Operates a Navy Class "F" (small, non-aviation) Photography Laboratory.

DESCRIPTION

1. Schedule

a. Schedules taking and processing of photography; includes preparation of Photographic Job Orders (NAVWEPS Form 3150/6) and logging orders.

b. Answers telephone requests for service and/or status of job orders.

c. Notifies requester when job is completed.

2. Black and White Photographs. Takes black and white photographs of:

a. Public Affairs requirements:

(1) Promotions of, awards and presentations to station personnel, Fleet Hometown news coverage, inspections, parades, visits of dignitaries, and other newsworthy events.

(2) "After Solo" photographs of pilot training students.

(3) NROTC and USNA Cadet Midshipmen.

(4) Station sports events coverage for station newspaper.

b. Personnel requirements:

(1) Identification and passport photographs for station military, dependents, and civilians.

(2) BUPERS required photographs.

//AND SO FORTH//

Figure 4. Example of Work Center Description

The various tasks of the work center are then carefully studied in order to determine what should be included in the work center definition, taking into account what the work center is accomplishing compared to what it should be accomplishing in accordance with the appropriate directives and operating procedures. The basic method of accomplishing this is by interviewing the work center supervisor to determine all the tasks that are accomplished. Also, any tasks that should be accomplished but which are not being done due to lack of personnel, equipment, or other reasons, are also identified. A comparison of what is required by directives to what is being done must be made by the analyst. At this stage it is sometimes possible to ascertain if some basic work simplification techniques or improved methods can be implemented. For example, can the time and distances involved in the flow of work be reduced; can better utilization of space, personnel, and equipment be achieved? Normally, no major changes in procedures or methods should be put into effect at this time.

Later, after all comparable work centers have been studied a common description to be used at all measurement points for each work center studied is developed. When justifiable variances to the common work center description exist, they should be documented on separate additive Work Center Description forms. In these cases, only the exceptions to the standard description will be reported on these additive Work Center Descriptions forms.

3. Organizational-Functional Coding System

After identifying the work centers, it was evident that a system for codifying these work centers was needed. A six digit alpha/numeric system was developed based on the functional alignment within departments. This system was developed for two reasons: First, to identify comparable work centers during the preliminary and measurement phases, SHMD development phase, and criteria development phase; secondly, to be used in future ADP produced Shore Manning Documents to insure a logical sequencing of work centers by the computer.

There is no Navy-wide coding system in existence which provides a logical sequencing of functions down to the lowest organizational level. The Resource Management System (RMS) has a coding system which normally only covers down to the division level and, infrequently, to the branch level; however it is not possible to modify this system on a Navy-wide basis. Another existing system is the functional coding found in the U. S. Navy Staffing Criteria Manual for Activities Ashore. This system codes manpower at the function, subfunction, and subfunction subdivision level. Although this later system could be modified to include several additional subordinate levels, it does not provide for organizational subdivisions.

The basis for the devised organizational-functional coding system consists of two letters which identify major organizational elements at the department level. The next organizational element below the department level, usually a division, is coded by adding a third letter to the basic two-letter code. This can be an arbitrary assignment providing there is no duplication of the third letter within a particular major organizational element. Progressively smaller elements (branches, sections, and units) are similarly coded by adding a fourth, fifth, or sixth letter, again avoiding duplication. Major organizational elements of most naval activities have been designated two-letter codes. Types of activities for which these two-letter codes have been devised include all the common functions at Naval Stations, Air Stations, and Bases, Supply Centers, Public Works Centers and Facilities, Communication Stations, Administrative Commands, and Ammunition Depots.

This organizational-functional coding system has been well received and is being used by the Navy Manpower Survey Support Activity and its teams which conduct manpower surveys of the Naval Shore Establishment.

This coding system is included as an appendix to this report and was accomplished so that it could be included as Appendix I to OPNAV PUB 01B1-P1.

E. Study of Related Data Systems

There are two pertinent data systems for shore activities with an aviation function which should be studied prior to conducting the on-site measurement study: The Maintenance Material and Management System (3M) and the Resource Management System (RMS).

The Naval Aviation Maintenance, Material and Management (3M) Manual prescribes procedures for the management of aircraft maintenance and material at organizational and intermediate levels of maintenance. It is the basic document and authority governing management of organizational and intermediate level aviation maintenance. It is designed to provide the management tools required for efficient and economical utilization of human and material resources in the performance of maintenance. The 3M system embraces two broad areas: (1) a Planned Maintenance System, and (2) a Maintenance Data Collection System. Maintenance Data Reporting (MDR) and Manhour Accounting (MHA) Reports from the latter system are obtained and analyzed so that the analysts scheduled to study the Aircraft Maintenance Department will have a better understanding of that major department of the station. The reports also provide historical data on the output of the aircraft maintenance work centers as well as the manhours reported to have been used.

The Resource Management System (RMS) is an information system used by the Navy to manage funds which have been allocated to it through the Planning, Programming, and Budgeting System of the Department of Defense. The RMS operates at five major levels, three of which are found at the station level: (1) responsibility center (i. e., NAS Saufley); (2) cost center (i. e., Medical and Dental Operations); and (3) sub-cost center (i. e., Radiology Services). Work units are also reported in the RMS. These are units of production measurement (work indicators) which are used to provide quantitative information about the work output of a sub-cost center. Some examples of work units are: the number of flying hours, legal cases, or work orders completed. NAVCOMPT Report 7000-9 relates work units produced by each sub-cost center to the cost of the inputs necessary to produce those work units. This data system and its reports were studied and were later used for historical workload volume for many work centers.

F. Development of SHMD Format and Measurement Study Forms

Meetings were held to determine the desired format of the prototype Shore Manning Document by representatives from OP-01B, OP-100, and NPRDL who developed a desired format for the prototype SHMD. Several forms for the on-site measurement study were developed by the NPRDL analysts. A standardized set of data collection documents was not required for the prototype document since it was desired that some experimentation be allowed in such a research project on the premise that new and simplified procedures might be realized. Each analyst had the responsibility to provide manhours and skill requirements at the billet and work center level. However, standardized forms and procedures were developed, after the study of the prototype station, which were used during the studies of the four other Naval Air Basic Training Command Stations.

G. Measurement Study Phase

During a two week period in October 1968, six analysts from NPRDL conducted an operational audit manpower measurement study of the nine departments of the prototype study site, NAS Saufley Field, Pensacola, Florida (Command and Special Staff, Administration, Supply, Medical, Dental, Training, Air Operations, Aircraft Maintenance, and Security). This study was basically conducted in accordance with OPNAV PUB 01B1-P1 with modifications and new techniques as described in this report.

During a measurement phase study, a review and appraisal of all work operations are made. Interviews and investigations are conducted, and all pertinent facts are analyzed and synthesized. The most economical and improved work study and work measurement methods and techniques are used to improve work methods and procedures, to measure performance, and to determine personnel required.

1. Entrance Briefing (CO and Staff)

An entrance (orientation) briefing is given to the Commanding Officer, Executive Officer and Department Heads by the Team Leader accompanied by the manpower team members. The purpose of the study and the procedures to be followed by the team members are given and explained. The Department Heads are requested to make pertinent directives and local operating

procedures available to the team member(s) studying their department. After this briefing, each team member is introduced to the head of the department to be studied. The team members then disperse and go to the appropriate department.

2. Briefing of Key Department Personnel

After the entrance briefing of the Commanding Officer and his staff, a briefing is set up by each department head for his officers, senior petty officers, and work center supervisors. After being introduced by the department head, the analyst briefs these personnel on the objectives and scope of the study, the work measurement method, any special operating procedures, and requests their cooperation in conducting the study.

3. Review of Directives

After this second briefing each analyst reviews the mission, tasks, operational capabilities, directives and operating procedures pertaining to the department and its subordinate components. These directives include those from higher headquarters, the local command, the department, and its organizational elements.

4. Review of Organizational Structure and Identification of Work Centers

Next, a review of the organization of each department is conducted, and the department is divided into work centers at the lowest identifiable level. Normally many work centers are found at lower organizational levels than those prescribed in directives. Sometimes there also will be valid organizational elements which are not included in the directives.

5. Review of Standardized (Common) Work Center Descriptions

If Work Center Descriptions (WCD's) have been developed during a prior preliminary study, they must be checked. Differences should be noted and commented upon. If WCD's have not previously been developed, they should be prepared at this time.

It is highly desirable for Work Center Descriptions to be developed during the preliminary phase study prior to

the measurement phase. However, sometimes this is not possible due to cost, distance, or other factors. In these cases, when there is no separate preliminary phase study, the preliminary study can be accomplished immediately prior to the measurement phase.

During this review, the Work Center Identification and Description Summary (See Figure 7) should be used to tie together all pertinent data about a work center.

6. Manhours, Skill Levels, and Work Units

The determination of the manhours and associated skills and skill levels needed to perform required work and the associated work units produced is the critical part of the measurement study. Manhours associated with each work category, task, subtask, or element identified in the work center description are collected and recorded. The average time it takes to perform each task and the corresponding frequency (daily, weekly, quarterly, etc.) of each task are determined by interviewing the work center supervisor. Other work center personnel also are interviewed in order to determine if there are variences in the data.

The Work Center Task Analysis form was developed by NPRDL analysts to facilitate the recording of data (See Figure 5). Sections 1 and 2 of the form provide for organizational data, Section 3 provides for a listing of the work categories, tasks, subtasks, or elements. These columns can be used one of two ways. If a Work Center Description (WCD) has been previously developed with the work elements, tasks, etc., having been numbered, then the numbers and a few key words can be entered on each line. However, if a WCD has not previously been developed, this space may be used to do so. A Watch/Work Code is put in Column A to indicate whether that work element is related to preventive, corrective or facility maintenance, administrative/support work, or military, operational or service watch. If there is an identifiable work unit associated with the work task, it is identified in Column B. The task frequency goes in Column C and the corresponding frequency conversion factor goes in Column E. The conversion factors which are used to convert the frequency of the occurrence to a weekly basis are provided in a table at the bottom of the form. The figures in this table are based on the fact that there are 365¼ days per year, 52.18 weeks per year, and that there are eight official holidays per year which means that there are 4.84 average work days in a five day week.

Column D, Units Per Frequency, is used to identify the whole number of occurrences per time period (Task Frequency - Column C) which expresses the frequency of the work category, task, or element. In Column C, the frequency used should reflect the expected natural rate of occurrences. For example, a task such as "Make telephone call" should be recorded to reflect the exact situation, i. e., 15 per day at 2 minutes each, and not one per day at 30 minutes. This allows valid comparisons of frequencies and unit times for the respective entries.

Column F, Frequency per week, is obtained by multiplying Columns D and E.

Either Column G: Manhours per Accomplishment, or Column H, Manhours per Unit, is completed next. Column G is used for entering the best estimate of the time required for one occurrence of the work element. Column H is used if there is a good estimate of the time required to complete one unit of output. The appropriate time is entered in Column G or H expressed as hours and/or decimal parts of a hour. There is a Time Conversion Table provided on the lower right cover of the Work Center Task Analysis Form.

Column I, Manhours per Week, is computed for each work element by multiplying Columns F and G or Columns D, E, and H as appropriate.

The minimum skill level required to perform each task is recorded in Column J. This level is determined by interviewing the supervisor and also by checking the Manual of Qualifications for Advancement in Rating, NAVPERS 18068, to insure that the proper skill level required is indicated.

To obtain the total quantitative/qualitative manpower requirement for each work center, the weekly manhours (from Column I) for each skill (rate and rating) are totaled and expressed to two decimal places. Sometimes the number of personnel required may be greater than the total measured manpower requirement due to different skills being required. Often fractional manpower requirements of the same skill required in several work centers within the same division can be combined. In developing Shore Manning Documents, cross utilization of skills is accomplished within the same division or lower organizational unit.

Figure 5. Work Center Task Analysis Form

...k Center Task Analysis
...ERSTANDLAB TEST FORM 82-1 (Feb 69)

1. Work Center and Code | Activity | Date

2. Department and Code | Division and Code | Branch and Code

3. TASKS - SUB-TASKS - ELEMENTS	A Watch/ Work Code	B Work Unit (If Identifiable)	C Task Frequency	D Units per Frequency	E Frequency Conversion Factor	F Frequency per Week (D x E)	G or H M/H per Accomplishment	M/H per Unit	I M/H per Week (F x G) or (D x E x H)	J Minimum Skill/Rate/ Rating/NEC etc. Required
TOTALS (Where Applicable)										

...T REQUIRED	ON BOARD	REQUIRED

Watch/Work Table

Symbol	Definition
PM	Preventive Maintenance
CM	Corrective Maintenance
FM	Facilities Maintenance
MW	Military Watches
OW	Operational Watches
SW	Service Watches
AD	Administrative/Support

Frequency Table

If the frequency of occurrence is:	Use Symbol	Conversion Factor
Daily for a 5-day week	D1	4.84
Daily for a 5½-day week	D2	5.34
Daily for a 6-day week	D3	5.84
Daily for a 6½-day week	D4	6.51
Daily for a 7-day week	D5	7.00
Weekly	W	1.00
Monthly	M0	.23
Quarterly	Q1	.08
Yearly	Y0	.02
Not applicable-activity not performed	NA	

Time Conversion Table

Seconds = Hours	Minutes = Hours	Minutes = Hours	Minutes = Hours
0	.000	11	.183
5	.001	12	.200
10	.003	13	.217
15	.004	14	.233
20	.006	15	.250
25	.007	16	.267
30	.008	17	.283
35	.010	18	.300
40	.011	19	.317
45	.013	20	.333
50	.014	21	.350
55	.015	22	.367
60	.017	23	.383
Minutes = Hours		24	.400
1	.017	25	.417
2	.033	26	.433
3	.050	27	.450
4	.067	28	.467
5	.083	29	.483
6	.100	30	.500
7	.117	31	.517
8	.133	32	.533
9	.150	33	.550
10	.167	34	.567
		35	.583
		36	.600
		37	.617
		38	.633
		39	.650
		40	.667
		41	.683
		42	.700
		43	.717
		44	.733
		45	.750
		46	.767
		47	.783
		48	.800
		49	.817
		50	.833
		51	.850
		52	.867
		53	.883
		54	.900
		55	.917
		56	.933
		57	.950
		58	.967
		59	.983
		60	1.000

INSTRUCTIONS FOR PREPARATION OF WORK ENTITY TASK ANALYSIS FORM (NAVPERSRANDCLAB TEST FORM 82-1)

A. GENERAL: This form is to be filled out at the time of the on-site data collection phase by the analyst.

B. SECTIONS 1 & 2: Complete as indicated.

SECTION 3: Tasks - Sub-Tasks - Elements. Describe in detail, in an orderly series of concise statements, the tasks, sub-tasks, and elements which comprise the workload for this work center.

Column A. Enter from the Watch/Work Table the appropriate symbol which identifies the type of work or watch described in the task, sub-task, or element. Refer to separate instructions for complete definitions of each of these codes.

Column B. If identifiable, list the work unit which best describes the listed task, sub-task, or element. A work unit is defined as an accountable and tangible expression of output or performance which can be identified and adequately described for the purpose of work measurement and/or cost accounting.

Column C. Enter the appropriate symbol, as given in the Frequency Table, which identifies the frequency of occurrence.

Column D. Enter the number of occurrences per task frequency. Enter the whole number occurrence per time period which expresses the actual task, sub-task, or element frequency.

Columns C & D (general): The frequency used should reflect the expected natural rate of occurrence. For example, a monthly task should be expressed as MO under column C "Task Frequency" and 1 under column D "Units per Frequency" (frequency occurrence). A quarterly report will be shown as QT under column "C" and 1 under column "D" whereas tasks performed at four random times throughout the year will be shown as YR under column "C" and 4 under column "D". Do not combine the natural task frequencies. For example, a task such as "make telephone call" should be recorded to reflect the exact mode, i.e. 15 per day at 2 minutes each (code D1 in column C, 15 in column D, and .033 in columns "G" or "H" as appropriate) NOT as one per day at a half-hour duration. This will allow valid comparisons of frequencies and unit times for the respective entries.

Column E. Enter the applicable conversion factor from those listed in the conversion factor table.

Column F. Compute this column by multiplying the entries in columns D and E.

Column G. Enter the best estimate of the time required for one occurrence of the task. (Refer to time conversion table). This column is used when the number of units of output is not known and a task of multifarious operations can only be summed in gross time requirements. When a distinct unit per time frequency is identifiable, use column H.

Column H. Enter the best estimate of the time required to complete one unit of output. (Refer to time conversion table).

Column I. Compute this column by multiplying the entries in columns F and G or D, E and H as appropriate.

Column J. Enter the minimum skill (rate, rating, NEC, etc) considered necessary to accomplish the stated task, sub-task or element.

The analyst completing the Task Analysis form also completes the Totals Authorized-On Board-Required Table on the lower left corner of the form. This table gives a ready summary of the number and skills of the personnel authorized or allowed, those on board, and the number required as determined from the study.

7. Watch Station Measurement

Every Naval activity has watches which have to be manned. At Naval shore activities, watches vary from Officer of the Day to Movie Watch. Sometimes the requirement for a position to be manned exceeds the productive work accomplished by the work center (for example, a large percentage of a firefighter's job consists of waiting to be called out for a fire). When watches are required, first a Work Center Task Analysis Form is completed. Then if the manhours are not sufficient to support the number of personnel required to man the work center or watch for the required number of hours, the Watch Station Requirements Form (NPRDL Test Form 82-3A) is completed. Figure 6 is an example of a completed form for the Perimeter Security Work Center of a Security Department.

8. Work Units

During the measurement phase several work output measures, in terms of work units produced, should be collected so that manhours can be associated with work unit output. Sometimes a work center has only one identifiable work output, sometimes there are several, and sometimes there are no directly related output measures. The related output measures are identified on the Work Center Task Analysis Form. When there either 3M or RMS work units are reported, these work units should be recorded. This permits comparison of the operational audit work unit data with the RMS or 3M historical data. Obtaining the same work units (or workload indicators) for the same work center at various locations is very important in comparing relative efficiency of the comparable work center, and, secondly it provides data from which work center manpower criteria can be developed. (This is known as the historical experience technique used to develop criteria from past performance data.) The data can be obtained from existing records or from a manhour accounting system established for the purpose. When reliable historical records are available which relate workload and manpower, criteria may be developed on the basis of relatively simple analysis. The historical records must be

WATCH STATION REQUIREMENTS

MANPOWER/BILLET TEST FORM 62-3A (Aug 69)

STATION/ORGANIZATION	WORK CENTER TITLE	WORK CENTER CODE
NAS, Shore Station, USA	Perimeter Security	SEPP

TITLE OF WATCH/WATCH POSITION	TYPE OF WATCH (CODED)	SHIFT HOURS	DAYS PER WEEK	NUMBER OF SHIFTS PER DAY & DURATION OF EACH	PERSONNEL REQUIRED ON EACH SHIFT	TOTAL WATCH HOUR REQUIREMENT PER WEEK	RATING/ RATE REQUIRED
EXAMPLE							
Main Gate Guard	MW	0800 - 0800	7 days	3 - 8 hour shifts	2	168 x 2 =336	PO 2
Station Roving Patrol	MW	1530 - 0730	5 days	2 - 8 hour shifts	2	80 x 2= 160	PO 3
	MW	0800 - 0800	2 days	3 - 8 hour shifts	2	48 x 2= 96	PO 3
						592	

WATCH CODES

OW = OPERATIONAL WATCH
MW = MILITARY WATCH
SW = SERVICE WATCH

Figure 6. Watch Station Requirements.

WORK CENTER IDENTIFICATION
AND DESCRIPTION SUMMARY
PRDL Test Form 82-6 (Jun 69)

WORK CENTER IDENTIFICATION AND DESCRIPTION SUMMARY

Work Center Title and Code: _____

Station/Organization: _____

Form prepared: a. By: _____ b. Date: _____

c. Work Study Team: _____

A. Organization	Present	Recommended
Department & Code	_____	_____
Division & Code	_____	_____
Branch & Code	_____	_____
Section & Code	_____	_____

B. Mode of Operation of Work Center

1. Hours per day: _____ 2. Days per week: _____

3. Describe number of shifts worked per day, personnel working other than normal duty day or shift (on a continuing basis); indicate directive which requires more than one shift (if verbal directive, indicate who directed); include number and types of equipment required or used (such as fork lifts, vehicles, etc.).

C. List of Pertinent Directives and Instructions (attach copies if available).

D. Physical Layout of Facility. Describe how the work center is located and its relationship to other work centers with which it interfaces; is the work center located in more than one area or building? Attach information (and any pertinent layout diagrams and maps).

E. Work Center Description (see Attachment #1).

F. Historical Workload Indicator Volume. Include data for last 12 months or 52 weeks, as appropriate. Attach data as Attachment #2.

G. Measurement Data. Attach measurement data forms as Attachment #3.

NOTE: There will normally be a number of attachments to this Summary. Attachment #1 will be the Work Center Description (PRDL Form 82-2). Attachment #2 will be Workload Indicators, Definitions, and Sources of Count (see reverse side of this form for the desired format). Attachment #3 will be the measurement data collected. Other attachments as necessary.

Figure 7. Work Center Identification and Description Summary

ATTACHMENT #3 to PRDL Test Form 82-6.

Workload Indicators, Definitions, and Sources of Count.

Workload Indicator #1:

W.I. #1 Definition:

Source of Count:

Point of Count:

EXAMPLE

Workload Indicator #2: Monthly Mission Aircraft Flying Hours

W.I. #2 Definition: The total number of flying hours logged monthly by mission aircraft; excludes mission support aircraft flying hours.

Source of Count: Monthly Aircraft Readiness and Flight Record (ASD 3), Flight Hours (FH) column sums for appropriate mission aircraft.
Point of Count: End of month.

Workload Indicator #3:

W.I. #3 Definition:

Source of Count:

Point of Count:

Workload Indicator #4:

W.I. #4 Definition:

Source of Count:

Point of Count:

Workload Indicator #5:

W.I. #5 Definition:

Source of Count:

Point of Count:

Figure 7. (Page 2 of 2)

evaluated before being used and a reasonable degree of confidence established in their validity.

9. Workload Indicators

Whenever possible, workload indicators also should be selected. A workload indicator is either: (1) an index or unit of measure which is consistently expressive of, or relatable to, the manpower required to accomplish the quantitatively and qualitatively defined responsibilities of a work center; or (2) an end-product or combination of end-products that are representative of the work performed in the work center. It may be either something physically produced in the work center or something that is external to, but served by, the work center. The latter type of workload indicator is often a better indicator since it is not subject to internal manipulation by work center personnel. For example, if there is a work unit of "work orders produced", the number of work orders is subject to manipulation if more than one job can be written on a work order; in this case, later local instructions may be given to write only one job on a work order, thus greatly increasing the work count. However, if there is an external indicator, the work count normally is not subject to manipulation.

One workload indicator often can be applicable to a number of work centers. For example, the number of aircraft flying hours can be used for most of the Aircraft Maintenance Department work centers since the greater the number of flying hours, the more aircraft maintenance can be expected to be required. Another broad workload indicator is station population, which can be defined as the number of officers, enlisted personnel, civilians, or total sum of these components, depending upon the situation. There are many personnel support work centers whose work is generated by the station or activity population, for example officer records, enlisted records, recreation services, etc.

These broad workload indicators are usually applicable to a great number of work centers which may have a wide variety of work units such as work orders processed, engines rebuilt, patients seen, legal cases processed, records processed, etc. However the determination of applicability of several workload indicators can not be made until the criteria development phase for several comparable activities. It is normally not advisable to tie the entire manpower requirement for a complex activity to only one workload indicator

such as students trained for a Naval Air Station whose primary mission is training pilots. If only one workload indicator is used and if there are major changes in methods or procedures in parts of the system, then the use of only one workload indicator would preclude modification in manpower requirements without changing the whole system. However, if there are several workload indicators which are used within a system, then it is easier to modify the manpower requirements system to reflect the changes in the system.

10. Exit Briefing

An informal exist briefing normally is given to the Commanding Officer after a measurement study is completed. Since the manpower requirements usually are not computed on-site, it is not possible to appraise the impact of the study until a later date.

H. Development of the Shore Manning Document

After completing the Measurement Phase, the manpower analysts return to their home station and commence the next phase, the development of the Shore Manning Document (SHMD) for the station that was studied. Each analyst has the responsibility for pricing out the work center manpower requirements at the individual billet level. Certain guide rules established by the CNO staff are taken into account such as military and civilian work week, use of civilians, etc.

1. Work Week, Military and Civilian

The military work week used includes allowances for training, leave, quarters (daily roll call), and service diversions. CNO policy[14] states that at CONUS activities and overseas bases where accompanying dependents are authorized, there will be a standard work week of 40 hours for all enlisted personnel including watch standers. "This work week is designed: (1) to support the varying workloads of military stations, administrative offices and technical/support activities;

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[14] DCNO (Manpower) ltr OP-100 Serial 10528 P10 of 22 Mar 1968, Subj: Navy Standard Work Week for Enlisted Personnel Ashore.

(2) to most closely approximate the associated work week of U. S. civilian enterprises and civil service personnel; and (3) to provide for reasonable work assignments permitting career enlisted personnel to enjoy normal family associations between tours of sea duty or tours where accompanying dependents are not authorized."

Based on CNO policy and guidance the following breakout of the military work week ashore was developed:

MILITARY STANDARD WORK WEEK ASHORE

WHERE ACCOMPANYING DEPENDENTS ARE AUTHORIZED

(Normal 5 Day Work Week)
Watch in Four

	Average Per Week
Leave Allowance	3.20 hours
Quarters	1.25 hours
Service Diversions	2.50 hours
Training	3.75 hours
Total Non-Available Time	10.70 hours
Work Balance Available for support, watches, maintenance, utilities tasks and administrative work	29.30 hours
TOTAL	40.00 hours

The civilian work week is a 40 hour work week based on Navy Civilian Personnel Instruction 610.1-2a. Analysis by the Office of Civilian Manpower Management (OCMM) of the non-productive time of Navy civilian personnel yields a 15.9% rate.[15]

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[15]OCMM ltr (OCMM 052.5) of 13 Dec 1968, Subj: Navy Standard Work Week for Civilian Personnel.

This is based on study which shows average annual rates of absence for civilians are as follows:

Annual Leave	7.5%
Sick Leave	3.7%
Other Leave and Absence*	1.1%
Holidays	3.1%
Training	.5%
Total	15.9%

Based on this data, the following standard work week for civilians was developed:

CIVILIAN STANDARD WORK WEEK ASHORE

(Normal 5 Day Work Week)

	Average Per Week
Leave and Absence Allowance*	6.16 hours
Training Allowance	.20 hours
Total Non-Available Time	6.36 hours
Work Balance Available for maintenance, administrative, operational, and support work	33.64 hours
TOTAL	40.00 hours

*Includes annual leave, sick leave, and other leave and absences which consists of all paid and unpaid absences not included in the annual and sick leave categories, such as jury duty, military leave, absence without leave, leave without pay, snow, fire drills, blood donations, chest X-rays, voting, etc.

Thus, the productive weekly manhours for military personnel are 29.30 and 33.64 for civilians. In a work center manned (or primarily manned) by military personnel, the total manpower requirement is obtained by dividing the total weekly productive manhour requirement by 29.30 man-hours per week. In a work center manned primarily by civilian personnel, a devisor of 33.64 is used.

2. Cross Utilization of Personnel

The work center manpower requirement is computed to whole and decimal parts by skill. The skill factors considered for the different types of labor are:

Labor Type	Skill Factors
Officer	Designator, Naval Officer Billet Code (NOBC), and grade
Enlisted	Rating, rate (grade) and Naval Enlisted Code (NEC)
Civilian	Civil Service Series and Grade

The mix of labor types and skill factors required must be analyzed very carefully. For example, the manpower requirement for a work center may be 3.2 billets; however the skill mix could require four billets (for example 1 LTJG-1300 designator, 1 GS-343-11, 1 YN2 and 1 SK3). In cases like this where the number of billets required is greater than the fractional manpower requirement, then efforts should be made to cross utilize the unused portion of that billet in another work center within the same section, branch or division of a department. In such cases, the billet is assigned to the work center with the greater fractional manpower requirement, and the appropriate number of manhours are shown, in each work center. The work center which does not receive the subject billet will have a notation indicating the work center from which the billet is being provided to support the manhours. The billet in the "parent" work center will have a notation indicating the other work center which that billet will also support.

3. Fractional Manpower

Work centers which have workloads that compute to other than whole man requirements pose a fractional manning problem when the fractional manpower requirement cannot be combined with other fractional requirements within the same functional or organizational areas. One approach used in the past was to select the 0.5 manpower requirement point. Any workload that earned at least one half of a billet when computed against the criteria or standard was awarded the next whole number without regard

to work center size. Those that earned less than one-half billet did not get the extra position. This was both unfair to the small work centers and was expensive to the Navy from an overall manning standpoint. One of the by-products of this research project is the development of a more equitable and realistic approach to this problem. Earned man-hour cutoff points have been established on the basis of the maximum desirable and/or permissible work overload per individual in the work center. Normally no overload is imposed on civilians. For military personnel a maximum individual overload is established at 10% of the average work week. This equates to a maximum of 4 hours a week overtime for individuals in work centers allowed less than 11 billets. As the number of billets increases above 10, a decrease in the maximum overload will result for each billet allowed. For example, when a work center is allowed 20 billets, the 10% overload factor equates to a maximum of 2.0 hours overtime per week for each individual.

Table 1 reflects the fractional manpower cutoff points that coincide with whole-man authorizations. For work centers allowed 10 or more, the cutoff point for any interval is the number of people allowed plus 0.99. For example, the cutoff point for a workload interval authorizing 15 people is 15.99.

TABLE 1

Fractional Manpower Cutoffs (using a 10% overload Factor)

Fractional Manpower Requirement	To 1.10	1.11 to 2.20	2.21 to 3.30	3.31 to 4.40	4.41 to 5.50	5.51 to 6.60
Billets Allowed	1	2	3	4	5	6

Fractional Manpower Requirement	6.61 to 7.70	7.71 to 8.80	8.81 to 9.90	9.91 to 10.99	11.00 to 11.99	12.00 to 12.99
Billets Allowed	7	8	9	10	11	12

4. Civilian-Military Mix and Civilian Ceilings

There are several Secretary of the Navy, OCMM (Office of Civilian Manpower Management), and the Bureau of Naval Personnel directives[16] which give guidance on the use of civilian versus military billets in the Navy and on civilian position management. One minor problem area found during the development of SHMD's was that civilian manpower ceilings were being lowered; thus, sometimes, military billets were recommended in order to meet the lowered civilian ceiling for an activity.

Civilian grades shown in the Work Center Manpower Requirements Section (Appendix B of a SHMD) are the grades determined by the local Civilian Personnel Office which services the activity.

5. SHMD Format

The Shore Manning Document consists of a foreword, ten sections, and two apprendices. The sections are:

SECTION

I.	Mission and tasks
II.	Operational capabilities
III.	Definitions of terms
IV.	Standard work week ashore (military and civilian)
V.	Doctrinal constraints
VI.	Summary of manning requirements
VII.	Officer billet summary
VIII.	Enlisted billet summary
IX.	Civilian billet summary
X.	Station characteristics

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[16]SECNAV INSTRUCTION 12000.18, Subj: Policy on high grade positions.
OCMM INSTRUCTION 12000.1, Civilian Manpower Directives System, Navy-wide application of
OCMM INSTRUCTION 12280.1, Subj: Program for Manpower Allocation
BUPERS INSTRUCTION 12000.7, 28 July 1967, Subj: Management of Civilian Positions

Appendix A consists of the Work Center Organizational Charts (by department). Appendix B consists of the Work Center Manpower Requirements pages. These pages which give the billet by billet requirements for an activity are the heart of the SHMD. See Figures 8 and 9 for the format of the SHMD Work Center Manpower Requirement page and continuation page. Explanatory notes and identification of the items and elements on these pages are given in Figure 10.

Appendix B to this report is the prototype SHMD (for NAS Saufley Field).

I. Review, Revision and Promulgation of SHMD

After a SHMD has been developed, several copies are made from the master copy and are forwarded for preliminary review and coordination to OPNAV (OP-102), Manpower Plans Division, and are then forwarded by OPNAV through the chain of command to the activity which was studied. The activity is given an opportunity to reclama the document if substantive documentation can be provided. If the activity cannot provide valid reclama and if its higher headquarters have no valid reclama or other data to provide, the SHMD is then reviewed by various OPNAV staff activities and promulgated by OP-10.

If the activity does provide reclama, it is forwarded up the chain of command to OPNAV. The reclama plus any evaluations provided by intermediate headquarters are reviewed and evaluated by the manpower analysts who had developed those parts of the SHMD. Some parts of a reclama are valid, some parts are questionable, and some parts are not valid nor supportable. After the reclama is evaluated, changes are made to the SHMD and a revised document is produced which is forwarded to OP-102. Two different routes can be taken. Either OPNAV can forward the revised SHMD down the chain of command to the activity or a small review team can be set up to visit the activity to discuss the manpower areas in question. Very often a team of two or

three manpower analysts can resolve the problems on-site face-to-face with the Commanding Officer and his staff. This technique has been found to be a very effective one. After the on-site review, the analysts prepare a second revision which is then forwarded to OP-102 for OPNAV coordination. After this document has been reviewed by OPNAV, it is printed and promulgated by OP-10. Then, the appropriate billet changes are made by OP-100 (Manpower Authorization and Allocation Branch) after coordination with the manpower sponsor. This completes the development and implementation of a Shore Manning Document. The need for tools to make a Shore Manning Document dynamic and reflect planned changesin the future will be discussed in the next major portion of this report.

SHORE MANNING DOCUMENT

Page

MARP CODE 5-01-2	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY: Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION									Average Weekly Workload	Total Man-hours Required	MANPOWER REQUIRED			
Dept	Div	Br.	Sect.	Work Center Title	Org-Funct. Code	Sub-cost Center Code	Type	Work Load Indicator or Work Unit			OFF	EM	CIV	TOTAL

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	RMS WORK VOLUM

Figure 8. SHMD Work Center Manpower Requirements Page.

SHORE MANNING DOCUMENT (Continuation Sheet) Page ·

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY: Naval Personnel Research and Development Laboratory

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS

Figure 9. SHMD Work Center Manpower Requirements Continuation Page.

SHORE MANNING DOCUMENT

Page B-1

MARP CODE (1)	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC (2)	PREPARED BY: Naval Personnel Research and Development Laboratory

(3) ORGANIZATIONAL IDENTIFICATION										MANPOWER REQUIRED			
Dept.	Div	Br.	Sect.	Work Center Title (4)	Org-Funct. Code (5)	Sub-cost Center Code (6)	(8)	Work Load Indicator or Work Unit (9)	Average Weekly Workload (10)	Total Man-hours Required	OFF	MIL	CIV	TOTAL

LINE NUMBER (11)	NO. (12)	YR. (12)	UIC (13)	COST/ SUB-COST CENTER (6)	COST ACC'T NUMBER (7)	BILLET/POSITION TITLE (14)	NOBC/ NEC (15)	SVC TYPE (16)	DESIG/ RATING/ SERIES (17)	PAY GRADE (18)	NO. (19)	PROD. TIME (20)	NON AVAIL TIME (21)	LABOR COST (22)	RMS WORK VOLUME (23)

IDENTIFICATION OF ELEMENTS AND EXPLANATORY NOTES.

1. Manpower Allocation Requirement Plan code.

2. Bureau Unit Identification Code.

3. The organizational identification data will normally be that which is used by the command or activity if it has an internal organizational coding system to the division or branch level. If it does not have or use a coding system, the codes developed by NAVPERSRANDLAB will be used.

4. The Work Center Title will often be the existing organizational title; however, work centers are often identified at a lower organizational level to enable better analysis of like activities across the Naval Shore Establishment.

5. Organizational - Functional Codes have been developed to show functional relationships within naval organization structure. These codes are used to identify and analyze naval manpower requirements across the Naval Shore Establishment.

6. Sub-cost Center Codes are designated in NAVCOMP Manual, Volume II, Chapter 4.

Figure 10 - SHMD Work Center Explanatory Notes and Elements

7. The Cost Account Number is a code which is used if there is no appropriate sub-cost center code or if additional differentation of an existing Sub-cost Center Code is needed. Cost Account Numbers may be locally developed. If a new or revised Sub-cost Center code has been published, the old code may be used in the Cost Account Number Column for cross-reference purposes.

8. When there is a Work Unit or a Work Load Indicator for a Work Center, a letter will be inserted in this column to indicate the type/source of the work unit or work load indicator. The code will be used to key input data into the Manpower Allocation Model. When there is an appropriate, meaningful NAVCOMPT RMS work unit, it will normally be used. See Table I, at the end of these notes, for the letters to be used.

9. The appropriate Work Unit or Work Load Indicator title will be entered in this block. When there is a reported NAVCOMPT RMS Work Unit, it will normally be used.

10. The Average Weekly Work Load will be the average weekly work volume corresponding to the Work Unit or Work Load Indicator in the preceeding block. When a command or activity has been studied by either a NAVPERSRANDLAB, Manpower Survey, or Fleet Work Study Team, the team will attempt to obtain data for a one year period (or a shorter period if there has been a change in operation or procedures during the previous 52 week or 12 month period). When accumulative data is reported by the month, the weekly volume is obtained by multiplying the monthly data by 0.23, since there are 4.35 weeks per month.

11. Line numbers may be used by the activity developing a SHMD.

12. The Month and Year Columns will be the effective date when there is an approved manpower change.

13. The UIC Code is the last three digits of the UIC.

14. The Billet/Position Title will be a descriptive title which will not exceed 23 digits (including spaces and punctuation). At a later date, a listing of standardized billet and position titles will be promulgated.

15. The appropriate NOBC for officers and NEC for enlisted personnel will be entered in this column when required.

16. Service Type Codes: O for Officer, W for Warrant Officers, E for Enlisted Personnel, and GS, WB, WF, etc. for the appropriate type of Civil Service Personnel.

17. The required Designator for officers, Rating for enlisted personnel, and Series for Civil Service personnel will be entered in this column.

18. Pay Grades.
Officers: 1 for ENS, 2 for LTJG, etc.
Warrant officers: 1 for WO1, 2 for CWO2, etc.
Enlisted Personnel: 1 for E-1 through 9 for E-9,
Civilian grades are the grades determined by the local Civilian Personnel Office which services the activity.

19. This column will have the number of billets required for that line entry.

20. The entry in this column will be the productive time measured by the preparing activity. The time may be expressed in tenths or hundredths of hours.

21. Non-available Time is a number of hours established by CNO.

22. Labor Cost determination will be entered at a later date.

44

23. The RMS Average Weekly Work Load Volume will be entered in this column. Also see Notes 9. and 10. When this column is completed, only the first billet in a Work Center need have the data recorded in this column.

TABLE I - Codes for Types of Work Units and Work Load Indicators.

WORK UNITS

R: NAVCOMPT Manual I (Resource Management System) designated Work Units.

M: 3M (Maintenance and Material Management) designated Work Units which are not covered by or are more detailed or appropriate than the NAVCOMPT Volume I Work Units.

W: Other Work Units or Multiple Work Units.

WORK LOAD INDICATORS

P: Population WLI's for designated populations such as: Officers, Enlisted, Military (officers and enlisted), Civilians for the command or activity including or excluding tenant personnel.

F: Aircraft Flying Hours (for designated aircraft).

A: Number of Aircraft (count of designated aircraft by type or types).

C: Collector - number of Department, Division, Branch, (or other organizational element) personnel.

III. DISCUSSION

A. Use of Operational Audit Method versus other Measurement Method

As with any measurement system, there are advantages and disadvantages to the operational audit measurement technique.

The advantages are: (1) It provides a systematic framework for using widely used techniques; and through this framework, promotes comprehensive coverage of work area and ensures uniformity of approach among analysts, (2) It permits manpower requirements and criteria to be established in a relatively short time and at considerable less cost than work sampling or time study, (3) It recognizes the usefulness of good historical data but also provides measurement techniques when such data are not available, (4) In contrast to work sampling and time study, some techniques of operational audit can be used without detailed observation of work center operations. However, sufficient on-site observation of work center should be made in order to become familiar with the operation of the work center.

The disadvantages of the operational audit techniques are: (1) The possibility of error increases for work centers which have irregular tasks for which there are no records of production, frequency of occurrence, or time required for accomplishment. In these cases the worker and/or analyst must estimate both the frequency of occurrence and the time value for them, (2) Important tasks or steps of an operation may be overlooked because the analyst is not familiar with the particular work area and the work center supervisor does not mention or place adequate emphasis on these tasks or steps, (3) Supervisors and workers may attempt to mislead the analyst.

1. Cost and Time Comparison

Two measurement studies were conducted consecutively at NAS Saufley Field. The first measurement study used 10 analysts for a 6 week period (60 man weeks) to conduct a work sampling study of most (not all) of the enlisted

positions and non-supervisory civilian positions. Positions filled by naval officers and civilians of comparable officer grade (GS-9) and above were not studied. Certain selected work centers such as the Structural Fire and Crash-Fire Work Centers where there is considerable delay (waiting) time were not studied.

The second study was operational audit measurement study by six analysts for a two week period (12 man weeks). This study covered all of the positions required within the Naval Air Station. Neither study included a measurement of the tenant flying training squadrons.

2. Comparative Accuracy

An analysis of the resulting billet requirements revealed that there was a difference of less than 5% in the manpower requirements between the two studies. A detailed analysis of the Aircraft Maintenance Department is given in Appendix C.

On the basis of this comparative analysis, it can be seen that comparative manpower requirements can be obtained by use of the operational audit method at considerable less cost (12 versus 60 man weeks).

B. Work Center Approach

The identification of parts of an organization down to the lowest working level and preparation of work center descriptions for those organizational elements is very effective. This work center approach facilitates the analyzing of like work centers at different locations. This enables comparisons to be made between like work centers with comparable task requirements at different work load levels. The identification and isolation of tasks which are not common and treating them as additive requirements is very important in order to have valid manpower criteria and computer manpower modules. Also, the dividing of organizational elements into work centers related to the output or products aids in identifying the manpower requirements associated with the different products or output.

C. Shore Manning Document Use and Acceptability

The concept of a Shore Manning Document to reflect all the required tasks of an activity and documentation of the related manpower requirements has been well received at the activity, intermediate headquarters level (CNABATRA for the five studies conducted at these Naval Air Basic Training Stations), and at CNO level. These manpower studies were the first ones conducted at these stations in which all the billets for the station were studied. Previous studies were normally limited to a function or one department. Considerable disparity was noted in the existing manpower allowances for comparable work centers and functions at the different stations. For example, within the Special Services Division of the Administration Department, some stations had double the number of billets for some work centers when the workload was comparable. Also, at some locations there were billets existing for a work center which another station also had but for which no billets were allowed on the second station's manpower allowance.

Since the five stations studied were under the same command, there should have been a more equitable distribution in the allocation of billets. However, so long as the Navy Manpower Allocation System works from the bottom up, disparities will occur.

Figure 11 portrays the manpower requirements as reflected on the 31 December 1968 Manpower Listings for the four comparable CNABATRA stations (Saufley, Ellyson, Whiting, and Meridian; Pensacola is not in the same population since it has numerous additional manpower requirements which the other four stations do not have). This figure also shows the manpower requirements developed by the SHMD documentation team, any reclama by the station concerned, and the revised SHMD manpower requirements.

The feasibility, military usefulness, and acceptability of the Shore Manning Document approach has been proven. The reclama and review procedure allows the activity and its higher headquarters to evaluate the original SHMD to determine if there are any responsibilities not provided for,

MANPOWER REQUIREMENTS PRIOR TO AND AFTER THE OPERATIONAL AUDIT MEASUREMENT STUDY

STATION	31 December 1968 Manpower Listing				Original SHMD				Station Reclama				Revised SHMD[1]			
	Off	EM	Civ	Total	Off	EM	Civ	Total	Off	EM	Civ	Total	Off	EM	Civ	Total
NAS, Saufley Field	51	440	168	659	48	459	142	649	(Not submitted)				45	488	137	670
NAS, Ellyson Field	48	581	76	705	45	561	72	678	50	645	85	780	47	578	77	702
NAS, Whiting Field	79	701	413	1193	67	813	380	1260	67	806	390	1262	65	788	382	1235
NAS, Meridian	74	570	306	950	72	706	309	1083	(Not submitted)				72	754	290	1116
Alpha Field (effective July 1970)				0	0	6	0	6	(Not submitted)				0	43	0	43

Note 1: The Revised SHMD's provide billets to the station for performance of all Intermediate Aircraft Maintenance, Supply, and Messman functions. When the SHMD's are implemented, the tenant VT-squadrons will no longer have a requirement to support the host station with personnel for these functions.

Figure 11. Manpower Requirements Prior to and After Operational Audit Measurement Study.

if the mixes of rates and ratings are appropriate, of if there are responsibilities and billets which should be transferred.

The Shore Manning Documents have been recognized as being good tools for describing requirements at one point in time. However, there is no provision within an SHMD for changing the billet requirements when there are planned workload or mission changes in future time periods.

D. Need for Criteria and Mathematical Models to make SHMD's Dynamic Tools

In order to make an SHMD a dynamic tool for use in planning and allocating Navy manpower, two different methodologies can be used: Criteria or mathematical models.

Criteria can be developed using the paired data of manpower requirements (to two decimal places) and workload volume for comparable work centers. Chapter IV of OPNAV PUB 01B1-P1 (pages 80 to 90) provides the procedures to be followed. Forms for use in developing models for each work center (referred to as "mini-models") are provided on proposed pages 90G through 90K (See Appendix A). Both linear and non-linear (hyperbolic, quadratic and exponential) statistical analysis and mini-model working forms are provided.[17]

These mini-models of work centers which are applicable to a number of different activities can be combined in an appropriate structure. See Figure 12 for an example of the basic structure of the basic system definition and structure of NAS, Saufley Field. Further analysis has been made down to the work center level; however, Figure 13 portrays proposed structure which would be common to four of the five Naval Air Stations under

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[17]These forms were developed by the Management Engineering Division, Directorate of Manpower and Organization, Headquarters, Military Airlift Command (MAC) based on standard statistical techniques.

CNABATRA (Chief of Naval Air Basic Training): Saufley, Ellyson, Whiting and Meridian. Also, approximately half of the manpower requirements for NAS, Pensacola could be developed by this common model. The structure can also be used for other Naval Air Stations by substituting the appropriate mission sub-system(s).

A Manpower Allocation Model (MAM)[18] has been developed by a Navy contractor. This model for selected naval training stations uses process analysis to examine the work flow of the organization being studied. It also provides the mathematical structure for the model based on linear programming techniques and is designed to determine the optimum/least cost manpower requirements. The man hours and work load data from Shore Manning Documents could possibly be used as one input to this allocation model.

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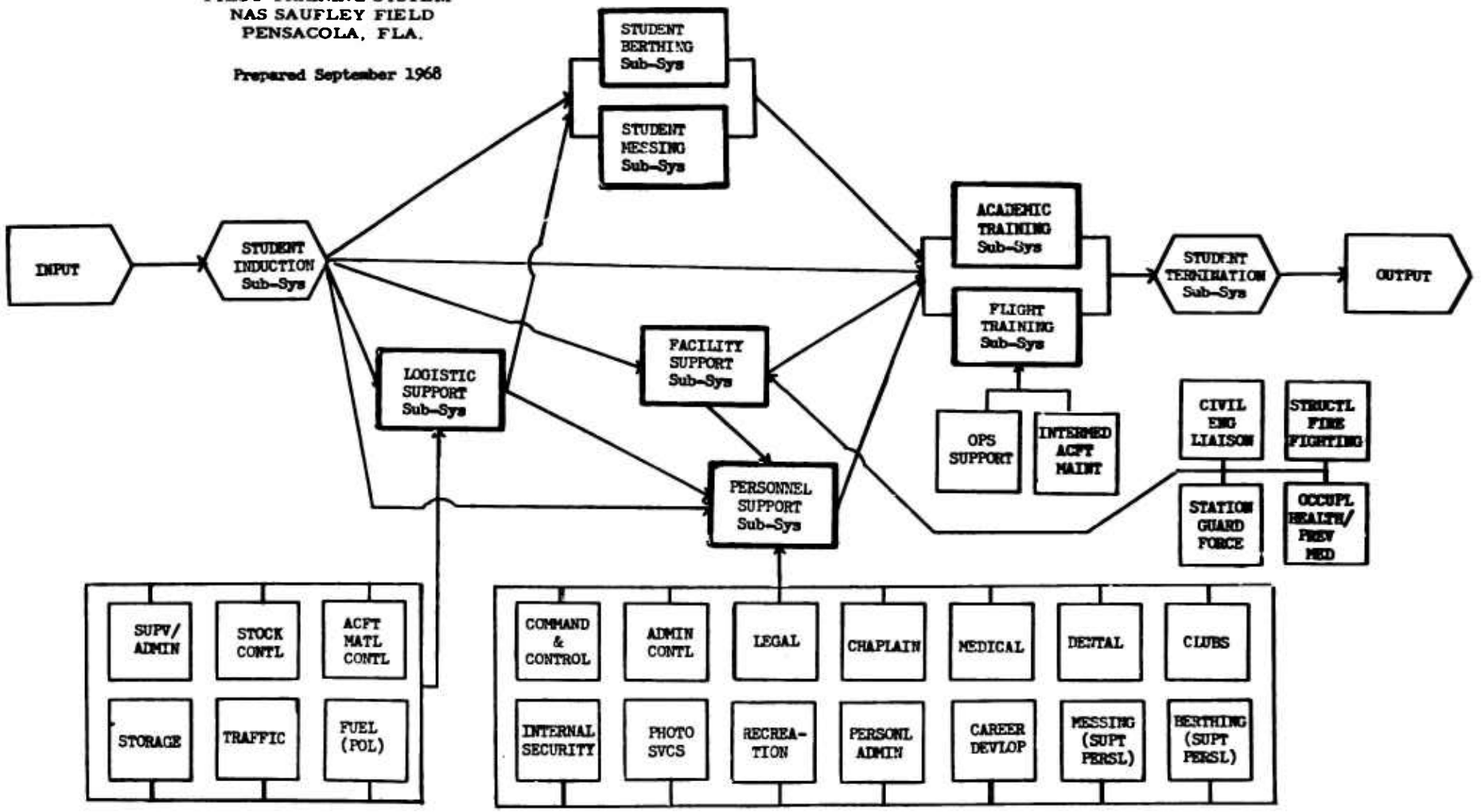
[18]Naval Air Training Command Manpower Allocation Model, Contract N00022-70-C-0048, Department of the Navy, Bureau of Naval Personnel, 15 June 1970, Mellonics Systems Development Division, Litton Systems, Inc.

Figure 12.

PILOT TRAINING SYSTEM
NAS SAUFLEY FIELD
PENSACOLA, FLA.

Prepared September 1968



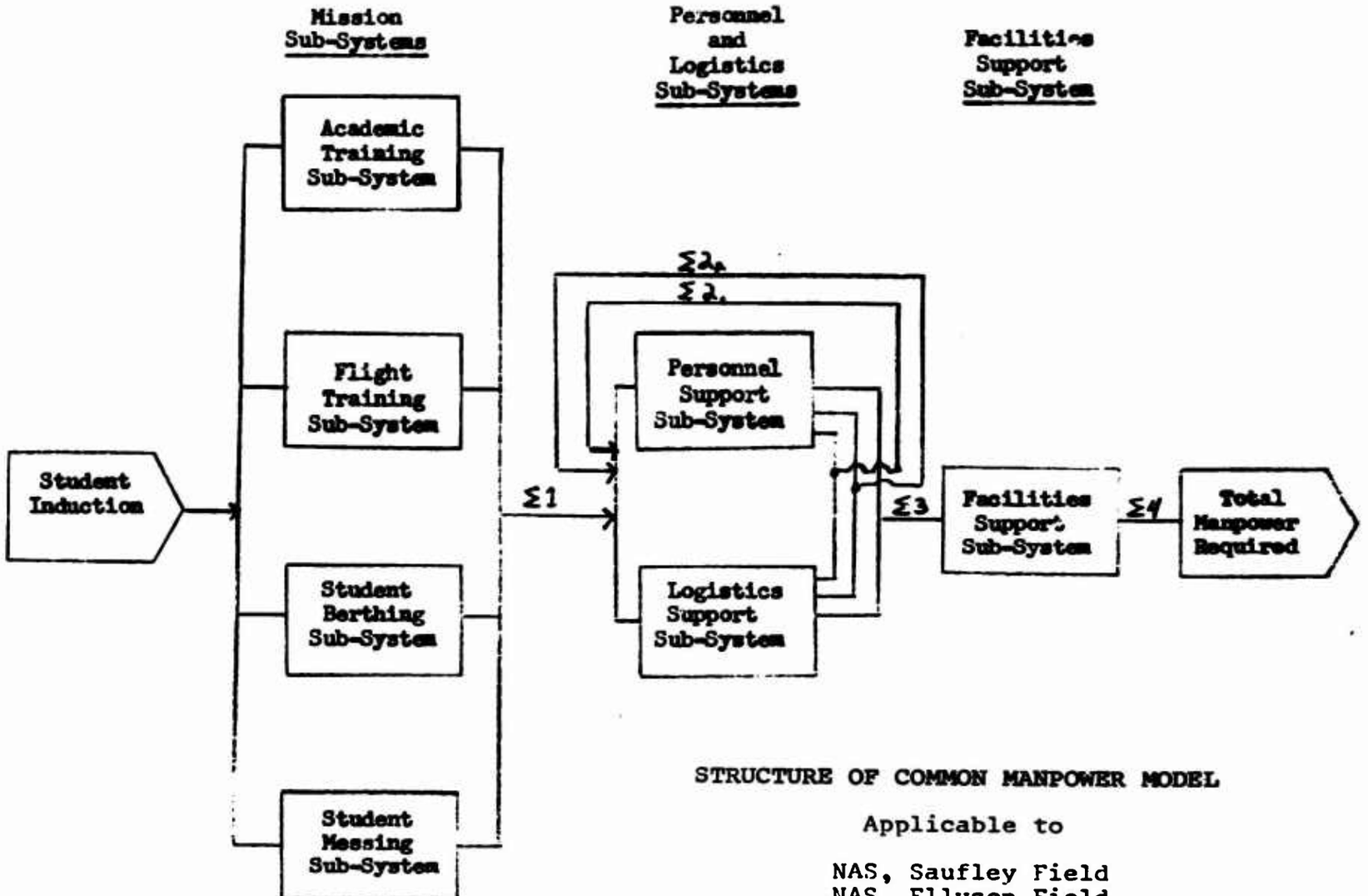


Figure 13. Structure of Proposed Mathematical Common Manpower Model

IV. CONCLUSIONS

1. The operational audit method is an economical work measurement method which can accurately determine manpower requirements.

2. The Shore Manning Documentation approach using the operational audit work measurement method is acceptable at the activity, intermediate command, and CNO levels.

3. SHMD's provide manhour and workload data for use in manpower criteria development as well as for use in manpower prediction and allocation models.

4. There is a need for manpower criteria and mathematical models to make the Shore Manning Document for an activity into a dynamic tool which will enable manpower allocators to revise the number of billets in that activity readily based on adequate objective data.

V. RECOMMENDATIONS

1. Recommend that operational audit be used as the primary work measurement method for the Naval Shore Establishment except for those activities or components which are included in the Defense Integrated Management Engineering System (DIMES), or other industrial engineering systems.

2. Recommend that up to 10% of those activities which are measured by the operational audit method subsequently be measured by the work sampling method.

3. Recommend that staffing criteria be developed using the data collected from the five CNABATRA Naval Air Stations that were studied during the course of this project. These staffing criteria will enable manpower planners to readily change the number of billets in selected activities on an objective basis.

4. Recommend that the development of Manpower Allocation Models be continued.

5. Recommend that OPNAV Publication 01B1-P1, Handbook for Staffing Criteria Development for Activities Ashore be rewritten to include the expanded and new procedures presented in this report. Also recommend that the title of this publication be changed to Handbook for Determination and Documentation of Navy Manpower Requirements Ashore.

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PROPOSED

CHANGE 1

to

OPNAV PUBLICATION 01B1-P1

HANDBOOK FOR STAFFING CRITERIA DEVELOPMENT

FOR ACTIVITIES ASHORE

NOTE: The pagination of this proposed change conforms to the numbering of the present publication.

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PREFACE

1. In August 1967, the Chief of Naval Operations, through the Chief of Naval Personnel, tasked the Naval Personnel Research and Development Laboratory to develop an Advanced Development Objective 43-07X: Manpower Productivity and Management.[1] In accordance with OPNAVINST 3910.4C[2] and NAVMATINST 3910.5A[3], a Technical Development Plan P43-07X was developed by the Naval Personnel Research and Development Laboratory, which was approved by the Chief of Naval Material on 28 February 1969.[4,5] This TDP[6] includes a subproject B.2.b., Staffing Criteria - Shore Manning Documentation for Naval Shore Activities. The mission of this subproject is:

"To develop shore manning documents staffing criteria for selected shore activities to test and evaluate the technical feasibility, military usefulness, and financial acceptability of using the methods, techniques, and shore manning documentation approach to determine precise qualitative/quantitative manpower requirements for naval activities ashore."[7]

2. The research and development effort in developing a methodology for producing Shore Manning Documents (SHMD's) officially commenced on 1 July 1968 by the Staffing Criteria, Ashore Branch of the Manpower Utilization Research Division, Personnel Systems Research Department of the Naval Personnel Research and Development Laboratory (NPRDL), Washington Navy Yard, D. C. Fleet Work Study Teams and Navy Manpower Validation Teams from NS, Norfolk assisted in collecting the data using the methodology and techniques developed by NPRDL. Shore Manning Documents (SHMD's) were then produced by NPRDL for the following Naval Air Stations (excluding

---

[1]Letter, Chief of Naval Operations (OP-701H), Advanced Development Objective 43-07X: Manpower Productivity and Management, 21 Aug 1967.

[2]OPNAVINST 3910.4C, Technical Development Plan (TDP), 12 May 67 w/Change 1.

[3]NAVMATINST 3910.5A, Procedures for Submitting TDPs (Technical Development Plans), TDP Revisions, Research and Technology Resumes, (DD Form 1498), 3 July 1967.

[4]Letter, Chief of Naval Material (MAT 0325F:HIM), 28 Feb 1969.

[5]NAVMATINST 3910.8, Technical Development Plans, Research and Technology Resumes; review and approval procedures for, 3 July 1967.

[6]Technical Development Plan P43-07X, Manpower Effectiveness, Bureau of Naval Personnel, Department of the Navy, Element Number 63707N, original issue May 1968, revised April 1969.

[7]Ibid, page 2.26.

tenant squadrons and other units) which are subordinate to the Chief of Naval Basic Air Training Command (CNABATRA): Saufley Field, Ellyson Field, Whiting Field, Meridian, and Pensacola.

3. The methodology developed for producing Shore Manning Documents used techniques previously proven by the U. S. Air Force, Federal Aviation Agency and industrial engineering techniques used in industry.[8] Existing Navy guidance and procedures were taken and expanded upon. The basic procedures in this Handbook have been amplified and supplemented. Change 1 to this Handbook includes these additions and changes in methodology. It provides new forms and detailed instructions for conducting operational analyses/audits of Naval Shore Activities. It also provides an organizational-functional coding system which is applicable to all major functions at Naval Air Stations as well as most functions in other naval activities. This 6 digit alpha-numeric coding system is to be used to identify work centers during the preliminary, measurement, and criteria/standards computation phases of Navy manpower studies, and also to insure a logical sequencing of work centers by computers in preparing and updating automated shore manning documents. This organizational-functional (O-F) coding system provides considerably greater detail than the Resources Management System (RMS) cost account codes. However, the O-F Codes can be combined to feed into the RMS Codes for cost accounting or other purposes.

4. The basic Handbook was originally developed in response to a request from the Naval Air and Naval Ordnance Systems Commands for a brief training course to assist their personnel in the development of staffing criteria; the Chief of Naval Operations requested the Chief of Naval Personnel to provide the training required. The Chief of Naval Personnel, in turn, directed the Personnel Research and Development Laboratory, Washington, to prepare and conduct the training course in accordance with specific requests from the Naval Air Systems Command. The Personnel Research and Development Laboratory, during the month of August 1966, conducted a three-day seminar on staffing criteria development for activities ashore. Since staffing criteria development is Navy-wide, arrangements were made for other Systems Commands and Navy organizations to participate in the seminar.

5. This Handbook, prepared by the Naval Personnel Research and Development Laboratory, presents the objectives, policies, responsibilities, and qualitative controls of the U. S. Navy Staffing Criteria Development Program for Activities Ashore, together with detailed procedures on how to develop staffing criteria by various methods and techniques. It is the fulfillment of a commitment to the participants in the seminar that the seminar outline would be expanded into a manual. Change 1 to this Handbook provides additional procedures developed since the original publication of this Handbook. The information contained in this Handbook is designed to provide all Naval activities with useful information for the development and maintenance of manpower criteria and its documentation.

---

[8]See the Bibliography for various references.

TABLES

		Page
1.	Nonavailable Time	15
2.	Fractional Manpower Cutoffs	92A

FIGURES

2-1.	Work Center Identification and Description Summary	10C
2-2.	One-Level Organization Chart	10E
2-3.	Example of Work Center Activity Structure	10H
2-4.	General Organization of the Work Center Description	10L
2-5.	Example of a Work Center Description	10M
3-1.	Time Study Observation Sheet	23
3-2.	Number of Time Study Readings Required for ± 5% Accuracy Within 95% Confidence Level	27
3-3.	Plotting Variable Element Against Variable Conditions	32
3-4.	Table for Determining the Number of Required Work Sampling Observations for a Given Degree of Accuracy, within ± 2 Sigma Limits or 95 Percent Confidence Level	35
3-5.	Control Chart on a Daily Basis Using Constant Upper and Lower Control Limits	41
3-6.	Work Center Task Analysis Form	52E
3-7.	One Level Organization Chart	52G
3-8.	Watch Station Requirements	52I
3-9.	Work Center Identification and Description Summary	52K
4-1.	Ungrouped Data	55
4-2.	Frequency Distributions	57
4-3.	Percentage Frequency Distribution	57
4-4.	Documents Processed (In Thousands) by 15 Naval Air Stations Showing Three Types of Averages for a 12-month Period	61
4-5.	Computation of Weighted Mean	63
4-6.	Computation of Average Deviation	66
4-7.	Computation of Standard Deviation	67
4-7a.	Computation of Standard Deviation by the Short-Cut Method	69
4-8.	Rating Scales for Skill, Effort, and Conditions	73
4-9.	Man-Hour Guide	75
4-10.	Computation of Work Area Standard	77
4-11.	Computation of Man-Hour Requirements for Stores Accounting	85
4-12.	Scatter Diagram Showing Almost Perfect Correlation Between the Dependent and Independent Variables	87
4-13.	Types of Correlation as Shown in Various Hypothetical Scatter Diagrams	88
4-14.	Work Center Comparative Analysis	90E
4-15.	Variance Analysis of Work Center Data	90F
4-16.	Statistical Analysis-Linear	90G
4-17.	Statistical Analysis-Ratio	90H
4-18.	Statistical Analysis-Quadratic	90I
4-19.	Statistical Analysis-Exponential	90J
4-20.	Determination of Increments of Workload	93

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2. A subfunction is a group of related tasks or duties performed within a single function. For example:

a. Function: Financial Management

b. Subfunction: Accounting

c. Related Tasks or Duties: Maintenance of official accounting ledgers and supporting records covering commitments, obligations, and expenditure of official funds.

3. Definition Guideline

In defining the function, the analyst must ensure that the description, though general in nature, covers the major duties and responsibilities. The function may be divided into any number of subfunctions, depending on the variety of operations and responsibilities of the function. Each subfunction, however, must represent a productive activity or operation within the function. The title of each subfunction should be descriptive of its tasks or duties, and the tasks or duties should be described in the same style as the function description. Definitions of the Financial Management function and subfunctions are presented as Appendix A to illustrate how function and subfunction definitions are written.

4. Work Center Identification

a. Thoroughly analyze the organizational information obtained during the preliminary/familiarization step. Primary sources of information for initial work center identification are organizational/functional charts, and any existing external management systems such as the Maintenance and Material Management Manual. Note, however, that work centers do not necessarily follow existing organizational patterns. In some cases, existing organizational segments will be broken into two or more work centers; in other instances, it will be feasible to combine two or more organizational segments into one work center. The primary objective is to select work centers that will permit the development of the most useful and accurate criteria. Normally, on-site analysts should identify work centers at the lowest organizational-functional level. The analyst, who will later compare work center descriptions, data, and workload indicator information, can always combine small work centers; however dividing work centers and workload indicator information can be very difficult. OPNAV Form 5312/2, One-level Organization Chart, can be used to assist the analyst in understanding the existing organization. Each supervisor should be given this form to fill out to identify the organization(s) and personnel one level above and below him. See Figure 2-2 for an example of this form; instructions for preparing this form are given on the reverse side of the form.

b. After identifying work centers, for each work center complete sections A through D of the Work Center Identification and Description Summary (PRDL Test Form 82-6). These sections identify the organizational structure in which the work center is found, the mode of operation of the work center including the number of hours per day and days per week that the work center is operational, the physical layout of the work center and its relationship to other work centers, and the pertinent instructions and directives that apply. The Work Center Description described in the next paragraph will be attached to this form. During the preliminary phase, existing workload indicators and/or work units which pertain to the work center being studied should be identified as indicated on the reverse side of the Work Center Identification and Description Summary. These workload indicators and work units should include those for which there are formal reports as well as local records. Sometimes an existing work count report from another work center will be applicable in full or partially to the work center being studied. If there are no work counts being maintained by a work center, the work center supervisor should be encouraged to maintain appropriate work count records.

(1) Each of the activities can be identified either as common to the work center at all locations, or for measurement and separate treatment when it is not a common activity.

(2) The amount of detail that must be expressed in the work center definition to insure comprehensive and accurate measurement has been achieved.

(3) The selection of the best measurement method can be accomplished for each activity or for any given group of activities.

c. Figure 2-3 is a condensed hypothetical example of a detailed analysis extending through basic motions, or therbligs. Although it is rarely necessary to use this amount of detail, the example illustrates that an analysis can be carried to the n^{th} degree, if necessary, with the relative value of each activity clearly evident from its position in the structure. With activities arrayed in such a manner, potential variables in the work center manpower cost can be isolated, and by analyzing subordinate activities, possible causes can be identified. The net result is the list of potential and known variables that must be separately costed during the measurement phase to insure successful development of a work center manning standard that can be applied at all locations.

5. Work Center Definition

a. In any criteria development process, defining the work centers for which criteria are to be developed is a critical step. In the case of work center manning criteria, this definition process assumes added significance, because the criteria must be applicable at multiple locations and at various workload volumes. The work centers must, therefore, be defined in a manner that provides for relating the associated manpower cost with some workload index or indicator. Also, work that has a significant impact on

AND DESCRIPTION SUMMARY
PRDL Test Form 82-6 (Jun 69)

WORK CENTER IDENTIFICATION AND DESCRIPTION SUMMARY

Work Center Title and Code: _____

Station/Organization: _____

Form prepared: a. By: _____ b. Date: _____

c. Work Study Team: _____

A. Organization	Present	Recommended	Code
Department & Code	_____	_____	_____
Division & Code	_____	_____	_____
Branch & Code	_____	_____	_____
Section & Code	_____	_____	_____

B. Mode of Operation of Work Center

1. Hours per day: _____ 2. Days per week: _____

3. Describe number of shifts worked per day, personnel working other than normal duty day or shift (on a continuing basis); indicate directive which requires more than one shift (if verbal directive, indicate who directed); include number and types of equipment required or used (such as fork lifts, vehicles, etc.).

C. List of Pertinent Directives and Instructions (attach copies if available).

D. Physical Layout of Facility. Describe how the work center is located and its relationship to other work centers with which it interfaces; is the work center located in more than one area or building? Attach information (and any pertinent layout diagrams and maps).

E. Work Center Description (see Attachment #1).

F. Historical Workload Indicator Volume. Include data for last 12 months or 52 weeks, as appropriate. Attach data as Attachment #2.

G. Measurement Data. Attach measurement data forms as Attachment #3.

NOTE: There will normally be a number of attachments to this Summary. Attachment #1 will be the Work Center Description (PRDL Form 82-2). Attachment #2 will be Workload Indicators, Definitions, and Sources of Count (see reverse side of this form for the desired format). Attachment #3 will be the measurement data collected. Other attachments as necessary.

Figure 2-1. Work Center Identification and Description Summary

ATTACHMENT #3 to PRDL Test Form 32-6.

Workload Indicators, Definitions, and Sources of Count.

Workload Indicator #1:

W.I. #1 Definition:

Source of Count:

Point of Count:

EXAMPLE

Workload Indicator #2: Monthly Mission Aircraft Flying Hours

W.I. #2 Definition: The total number of flying hours logged monthly by mission aircraft; excludes mission support aircraft flying hours.

Source of Count: Monthly Aircraft Readiness and Flight Record (ASD 3), Flight Hours (FH) column su[illegible]or appropriate mission aircraft.
Point of Count: End of month.

Workload Indicator #3:

W.I. #3 Definition:

Source of Count:

Point of Count:

Workload Indicator #4:

W.I. #4 Definition:

Source of Count:

Point of Count:

Workload Indicator #5:

W.I. #5 Definition:

Source of Count:

Point of Count:

ONE-LEVEL ORGANIZATION CHART
OPNAV FORM 5312/2 (REV. 4-66) S/N 0107-778-8100

Submit in duplicate.
See complete instructions on reverse side.

1A. DATE

1B. YOUR NAME

1C. BUILDING NUMBER

1D. ROOM NUMBER

1E. TELEPHONE EXTENSION

3. NAME, GRADE AND TITLE OF *your* SUPERVISOR

4. YOUR GRADE AND TITLE

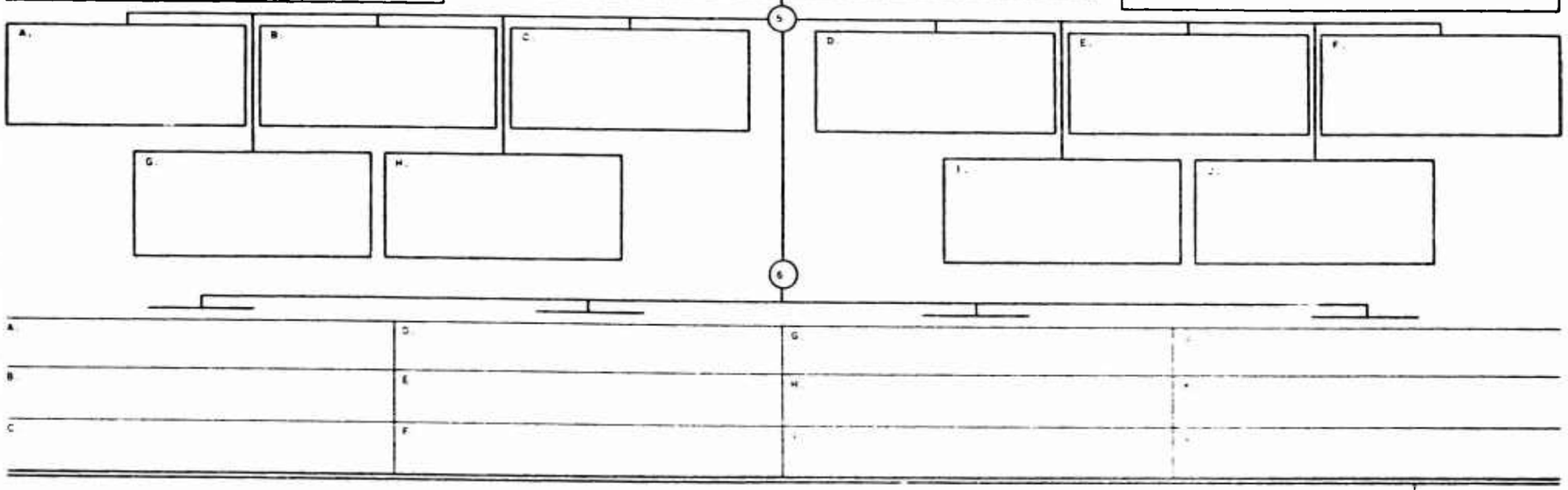
2A. DEPARTMENT

2B. DIVISION

2C. BRANCH

2D. SECTION

2E. UNIT/SHOP



7. BILLET POSITION TITLES	% TIME SPENT IN EACH
A PRIMARY	
B COLLATERAL	
C COLLATERAL	
D COLLATERAL	
TOTAL	

A-21856

Figure 2-2. One Level Organization Chart

INSTRUCTIONS FOR PREPARATION

A. A One-Level Organization Chart should be completed personally by each supervisor.

B. Blocks 1-4 — Complete as indicated. Use abbreviations when necessary.

C. Block 5 (A-J): Enter, in separate blocks, the name, designator/grade/rating/rate and title of each person reporting directly to you only if that person has subordinate(s) reporting directly to him. Any person whose name appears in one of these blocks will also be preparing one of these One-Level Organization Charts.

D. Block 6 (A-L): Enter the name, designator/grade/rating/rate and title of each person who reports directly to you but who does not have subordinate(s) reporting to him. Any person whose name appears in these spaces should not prepare a One-Level Organization Chart. NOTE: There are spaces for 12 employees in this section. List additional names on reverse of form and identify as "6M, N, O" etc.

E. Block 7 (A): Indicate title of job as shown in block 4 and percentage of time expended in this function.

Block 7 (B,C,D): List only those collateral duties which require a significant amount of time.

1 OF

the manning requirement, but is not common to a given work center at all locations, should be treated as an additive criterion or criteria. In order to meet these requirements it is necessary to analyze, in detail, the various activities of the function, determine which must be included in the definition, and categorize them in the manner that best accommodates measurement and computation.

b. The logical approach for such an analysis is to begin with the designated function or subfunction and systematically break it down, first into work centers, then the major activities of each work center, and continuing through progressively greater degrees of detail until the following conditions have been met:

(1) Each of the activities can be identified either as common to the work center at all locations, or for measurement and separate treatment when it is not a common activity.

(2) The amount of detail that must be expressed in the work center definition to insure comprehensive and accurate measurement has been achieved.

(3) The selection of the best measurement method can be accomplished for each activity or for any given group of activities.

c. Figure 2-3 is a condensed hypothetical example of a detailed analysis extending through basic motions, or therbligs. Although it is rarely necessary to use this amount of detail, the example illustrates that an analysis can be carried to the n^{th} degree, if necessary, with the relative value of each activity clearly evident from its position in the structure. With activities arrayed in such a manner, potential variables in the work center manpower cost can be isolated, and by analyzing subordinate activities, possible causes can be identified. The net result is the list of potential and known variables that must be separately costed during the measurement phase to insure successful development of a work center manning criteria that can be applied at all locations.

6. Preparing Work Center Descriptions

a. A Work Center Description will be prepared for each work center studied, using NAVPERSRANDLAB Test Form 82-2. Prepare a common description to be used at all measurement points for each work center studied.

b. When justifiable operational variances to the common work center description exist, they will be documented on separate additive Work Center Description forms. In these cases, only the exceptions to the standard description will be reported on the additives.

c. When additional pages are required, use plain white, standard-size bond paper for the continuation pages.

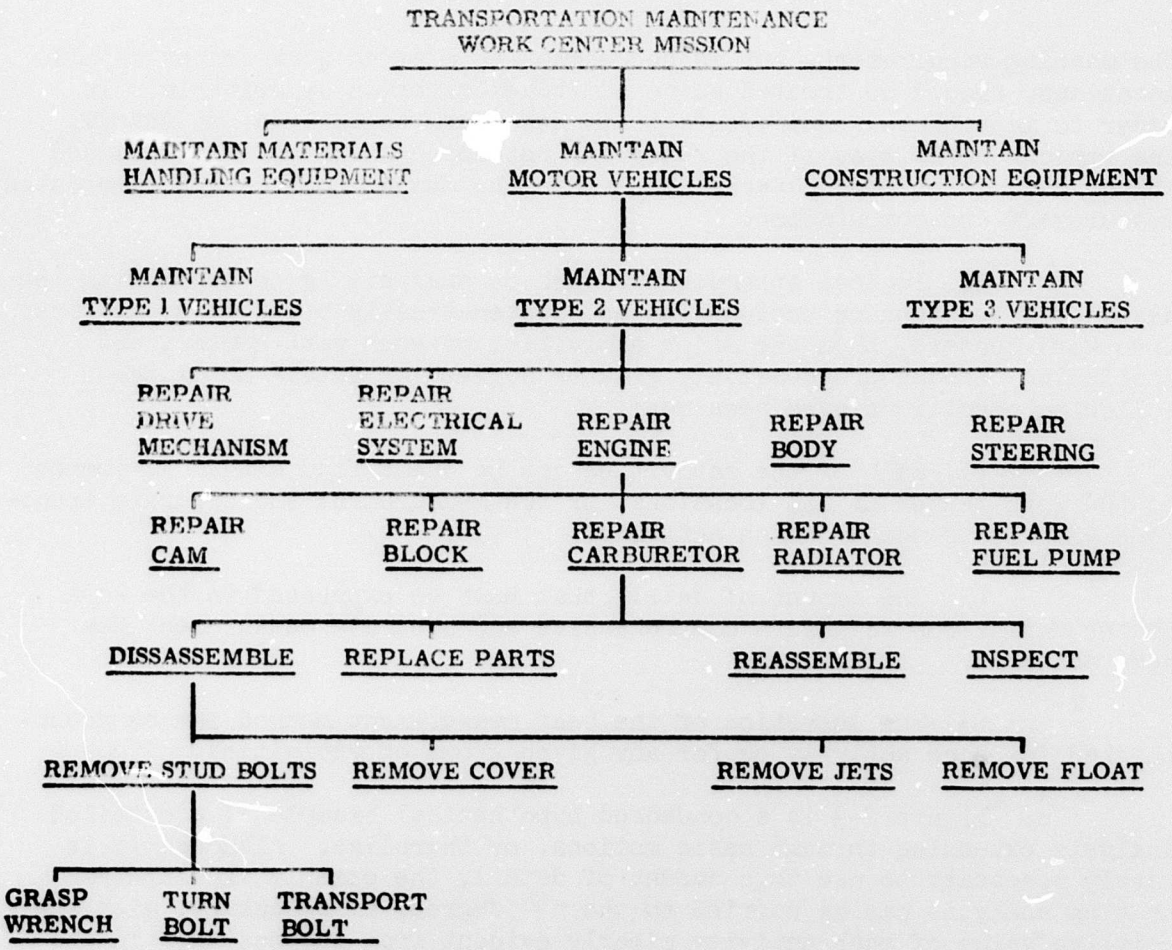
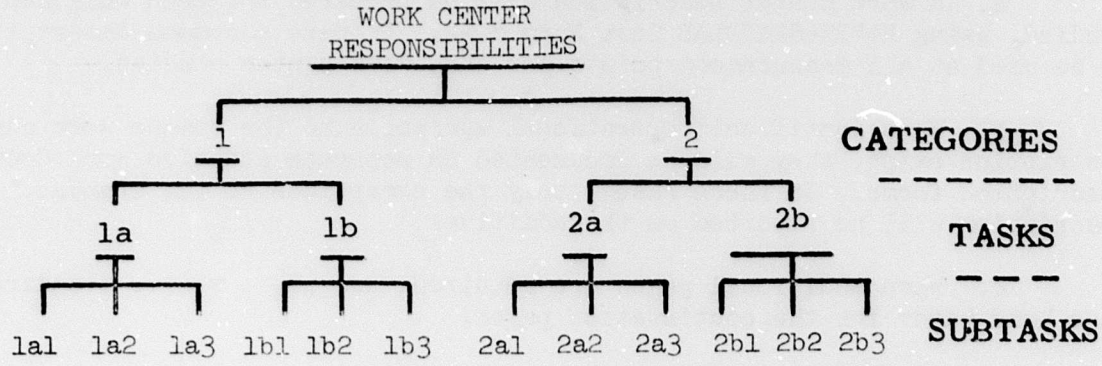


Figure 2-3. Example of Work Center Activity Structure.

d. Definition of Work Center Responsibilities:

(1) The definition is organized so that in effect, it becomes an explosion of the mission statement into work categories, tasks and subtasks. This relationship is graphically portrayed below:



It can be seen from this illustration that each successive level in the pyramidal relationship contains a breakout or further delineation of the level immediately above. Accordingly, the degree of detail increases with each subdivision of the mission. The work center's functional statement is a very broad statement that encompasses all of the responsibilities of the work center.

(2) The general format illustrated in figure 2-4 will be used for all work center definitions. The illustration depicts the maximum degree of detail that will be entered in the basic defintion. If additional detail is required, use additional sheets. The titles used must be descriptive of that level of activity and should be easily identifiable during the study; this will also provide work categories for use in work sampling if use of that measurement technique is also desired at different locations or times. The components are defined below:

(a) CATEGORIES. Category statements serve to describe in general terms, groupings of tasks that are performed in combination to discharge a major mission responsibility. Paragraph 1 in figure 2-4 is an example of a category description. Each category will be numbered and shown as a major paragraph.

(b) TASKS. Tasks are constituent parts of categories. They will be lettered and indented beneath the category they amplify. Paragraph 1a in figure 2-4 is an example of a task description.

(c) SUBTASKS. Subtasks are further subdivisions and/or detailed amplifications of tasks. They are to be numbered beneath the tasks which they delineate. Paragraph 2a(1) through (4) in figure 2-4 shows examples of subtasks.

(d) ELEMENTS. If even greater detail is required, subtasks can be fragmented into elements. Elements are not separately identified in the definition, although many are used to describe a subtask.

(3) Only productive categories will be entered. Nonproductive categories such as personal, rest, and unavoidable delay will not be shown in the work center definition.

(4) The number of categories used depends on the scope and diversity of the work center's responsibilities, and more importantly, on the results of the work center activity analysis previously described. Each of the major internal variables identified by that analysis must be treated as a separate category to insure sufficient data availability for developing an additive or a multivariate criteria in the event a single-factor manning relationship cannot be established.

(5) During the definition process, categories will be identified that are not accomplished in a given work center at all locations. These will be handled in one of two ways:

(a) If the use of multiple workload indicators is anticipated, the work category should clearly identify the activities with the equivalent workload (e. g., a type A vehicle maintained, a type B vehicle maintained).

(b) In all other cases, list "peculiar" categories on a separate work center description for possible treatment as additive criteria. Additive criteria should be restricted to identifying major differences in operations among like work centers, such as special requirements due to location, climate factors, or tenant support demands. The differences must be significant enough to make use of a single criterion for all work centers impractical.

(6) For some activities, proper categorization varies with conditional factors. In other cases, arbitrary determinations are necessary. The more prevalent of these are listed below, with categorization instructions to be followed in all studies.

(a) TRAVEL. Time spent for travel between work centers or between the work center and the job site, if essential to the job, is classified as productive (indirect). The same classification applies to the duty time expended in temporary duty (TAD) travel for accomplishment of official, job-oriented duties.

(b) TRAINING.

1. On-the-job-training (OJT) is established as a productive (indirect) category to accommodate time expended by a worker in a directly supervised, on-the-job proficiency training status, where the worker is being advised and/or assisted by the supervisor, but is not achieving any production. If a worker is "learning while producing," his time is recorded in the appropriate productive category and not as OJT.

Include, as OJT, group training presented in a classroom environment, when that approach is used in lieu of numerous individual OJT sessions on one subject. (Note: The time expended by a supervisor in providing OJT is also productive (indirect), but would be classified under the category of supervision, not OJT.)

2. Training that requires TAD for attendance is categorized and treated as nonavailable. The travel associated with such training is also classified nonavailable.

3. General Military Training (GMT) is treated as nonavailable.

(c) HOUSEKEEPING/CLEAN UP. Clean up or housekeeping activities, except for janitorial or custodial personnel, will be categorized as productive (indirect). Facility maintenance, such as painting work areas, is the responsibility of Public Works for shore activities.

(d) SUPERVISION. Limit this category to activities that are purely supervisory in nature, such as scheduling, assigning, and controlling work, and evaluating both work and workers.

(e) DELAY. Specific conditions of unavoidable delay may be identified for separate costing if desired or required. Examples of such a condition is delay awaiting transportation or delay awaiting material.

(f) STANDBY. Standby time is the difference between the time required for accomplishing the defined activities of the work center and an established minimum manning/station manning posture, provided the latter is larger. It is, therefore, impossible to properly define or use a standby time category unless a minimum manning requirement has been established prior to the measurement study. This stipulation applies on a stratified as well as an overall basis, e. g., minimum manning can vary by shift. Since Standby time results from a requirement for a person or persons to physically man a position, it is, in effect, productive in nature and is treated as such.

NAVPERSRANDLAB Test Form 82-2, Feb 1969

WORK CENTER DESCRIPTION

Date: _____

Station/Organization: _____

Department & Code: _____

Division & Code: _____

Branch & Code: _____

Section & Code: _____

General Functional Statement:

DESCRIPTION

1. CATEGORY TITLE.
   (General Category Description)

   a. TASK TITLE
      (Task Description)

      (1) SUBTASK TITLE
          (Subtask Description)
      (2)

   b.

2.

   a.

      (1)
      (2)

   b.

3.

   a.
   b.
   c.

AND SO FORTH . . . .

Figure 2-4. General Organization of the Work Center Definition.

Work Center Description
NAVPERSRANDLAB Test Form 82-2 (Eeb 69)

WORK CENTER DESCRIPTION

Date: 20 Feb 1969

Station/Organization: NAS, Saufley Field, Pensacola, Florida

Department & Code: Air Operations Department - AO

Division & Code: Photographic Division - AOP

Branch & Code: _____

Section & Code: _____

General Functional Statement: Operates a Navy Class "F" (small, non-aviation) Photography Laboratory.

DESCRIPTION

1. Schedule

a. Schedules taking and processing of photography; includes preparation of Photographic Job Orders (NAVWEPS Form 3150/6) and logging orders.

b. Answers telephone requests for service and/or status of job orders.

c. Notifies requester when job is completed.

2. Black and White Photographs. Takes black and white photographs of:

a. Public Affairs requirements:

(1) Promotions of, awards and presentations to station personnel, Fleet Hometown news coverage, inspections, parades, visits of dignitaries, and other newsworthy events.

(2) "After Solo" photographs of pilot training students.

(3) NROTC and USNA Cadet Midshipmen.

(4) Station sports events coverage for station newspaper.

b. Personnel requirements:

(1) Identification and passport photographs for station military, dependents, and civilians.

(2) BUPERS required photographs.

//AND SO FORTH//

Figure 2-5. Example of Work Center Description

j. Documentation of Operational Audit Data in Support of the Ashore Manning Documentation Program. There are two primary forms which have been designed for collecting data to support document development:

Work Center Description Form, (NAVPERSRANDLAB Test Form 82-2), see Figure 2-5.

Work Center Task Analysis Form, (NAVPERSRANDLAB Test Form 82-1), see Figure 3-6.

These forms have been developed as a uniform means of collecting and reporting essential data. However, they should not restrict or channel thinking to the point that it will inhibit initiative or imagination. Supplementary forms, charts, questionnaires, etc., as a means of data collection designed to meet unique operational requirements or procedures, are sometimes essential to substantiate findings or assist in later evaluations. Additionally, pertinent copies of reports, logs, instructions, letters, memos, etc. are also essential for evaluation.

(1) Preparing Work Center Descriptions.

(a) General. A Work Center Description will be prepared for each work center. Prepare a common description to be used at all measurement points. When there are justifiable operational variances to the standard work center description, document them in separate additive work center descriptions; only the exceptions to the standard description should be so identified.

(b) Heading.

1 Date: The date the work center description is completed will be entered.

2 Station/Organization: The organization being studied will be entered; for example, NAS, Saufley Field, Pensacola, Fla. if the station were being studied, or VT-1, NAS Saufley Field, Pensacola, Fla. if that squadron were being studied.

3 Department, Division, Branch, Section and Codes. Identify the work center down to its lowest organizational element. Use the organizational-functional codes provided in Appendix I.

(c) General Functional Statement. Provide a clear and concise description of the function (mission) of the work center in one or more sentences.

(d) Description. Describe the work center tasks, sub-tasks and elements. See paragraph 6, pages 10C through 10F, for detailed instructions.

(2) Preparing Work Center Task Analysis Forms.

(a) General. This form is used in conjunction with the Work Center Description in order to determine the times required to perform each task, subtask and element listed on the Work Center Description. This form does not have to be used while interviewing work center supervisors or personnel; however, the information required to complete the form must be obtained. The Work Center Task Analysis form was designed to be responsive to two different approaches in computive manhour requirements.

1 When there is a task, sub-task, or element for which there is no logical work unit, such as supervision, or no record of the count of the work units, the best estimate of the time spent per day/week/month can be obtained and the weekly manhour requirement can be computed.

2 When there is historical data on the numbers of work units produced over an extended period (normally monthly or weekly data for a 12 month or 52 week period) and the time required to produce one unit can be measured, then the total manhour requirement can be readily computed.

This form is designed to be automated in the future so that comparative analysis of data from compable work centers at numerous stations may be readily accomplished.

(b) Filling out Work Center Task Analysis Forms.

1 Line 1. Enter the title of the work center being studied and the appropriate organizational-functional code as listed in Appendix I. Enter the name and location of the activity, i.e., NAS, Saufley Field, Pensacola, Fla. Enter the date the form is prepared.

2 Line 2. Enter the titles of the Department, Division, and Branch and the appropriate organizational-functional codes as provided in Appendix I. If the work center is at the section organizational-level, this fact will be reflected in line 1.

3. Line 3.

a. Tasks, sub-tasks and elements. In this column enter the appropriate numbering and a concise, abbreviated single-line entry from the work center description.

b. Column A. Watch/Work Code. Enter the appropriate symbol, from the Watch/Work Table (located at the bottom left part of the form), which identifies the type of work or watch described in the task, sub-task, or element column. For complete definitions of each of these codes refer to the Glossary of Manning Criteria Terms (page 102A).

c. Column B. Work Unit. Enter an appropriate work unit for the associated task, sub-task, or element. Some tasks, such as supervision, do not have a work unit. A work unit is defined as an accountable and tangible expression of output or performance which can be identified and adequately described for the purpose of work measurement and/or cost accounting.

d. Column C. Task Frequency. Enter the appropriate symbol, as given in the Fequency Table, (located at the bottom of the form), which identifies the frequency of occurrence.

e. Column D. Units per Frequency. Enter the number of occurrences per task frequency. Enter the whole number occurrence per time period which expresses the actual task, sub-task, or element frequency.

Columns C & D (General). The frequency used should reflect the expected natural rate of occurrence. For example, a monthly task should be expressed as MO under column C - Task Frequency, and 1 under column D - Units per Frequency. A quarterly report will be shown as QT under column C and 1 under column D; whereas tasks performed at four random times throughout the year will be shown as YR under column C and 4 under D. Do not combine the natural task frequencies. For example, a task such as "makes telephone call" should be recorded to reflect the exact mode, i.e. 15 per day at 2 minutes each (code D1 in column C, 15 in column D, and .033 in columns G or H as appropriate), and NOT as one per day at a half-hour duration. This will allow valid comparisons of frequencies and unit times for the respective entries.

f. Column E. Frequency Conversion Factor. Enter the applicable conversion factor from those listed in the Conversion Factor Table (located at the bottom of the form).

g. Column F. Frequency per Week. Compute this column by multiplying the entries in columns D and E.

h. Column G. Manhours per Accomplishment. Enter the best estimate of the time required for one occurrence of the time conversion table. This column is used when the number of units of output is not known and a task of diversified operations can only be summed in gross time requirements. When a distinct unit per time frequency is identifiable, use column H.

i. Column H. Manhours per Unit. Enter the best estimate of the time required to complete one unit of output. Use the time conversion table located at the bottom of the form. Note: Either column G or H will be filled out.

j. Column I. Manhours per Week. Compute this column by multiplying the entries in Columns F and G or D, E and H as appropriate.

k. Column J. Minimum Skill, Rating/Rate, NEC, etc. Required. Enter the Minimum Skill, Rating/Rate considered necessary to accomplish the stated task, subtask or element. Also include any NEC's required, if applicable.

(3) Additional Forms Required to Develop and Support Shore Manning Documents.

(a) Watch Station Requirements (NAVPERSRANDLAB Test Form 82-3). This form is used to document watch station manning requirements. The form is self-explanatory and additional information is contained on the reverse of the form. Particular care must be taken to identify productive work conducted by watch standers, such as performing administrative/support or maintenance tasks. This workload should be discussed separately in order to avoid allocating excessive manpower. Watch standing time should be evaluated to determine if some duty day workload can be accomplished by watch standers. See Figure 3-8.

(b) One-level Organization Chart (OPNAV Form 5312/2 (Rev. 4/66). This form should be completed by each Work Center Supervisor in accordance with the instructions on the reverse side of the form. See Figure 3-7.

(c) Work Center Identification and Description Summary (NAVPERSRANDLAB Test Form 82-6). See Figure 3-9. The purpose of this form is to summarize and coordinate all data collected about a work center during either a preliminary study or a measurement study. This form insures that data is collected pertinent to a work center's organization, mode of operation including equipments used, applicable Instructions and other directives, physical layout information, the work center description, work measurement data (after a measurement study has been conducted), and historical workload indicator/work unit volume data, including the sources and points of count of the data.

WORK CENTER TASK ANALYSIS
HYPERSRANDLAB TEST FORM 82-1 (Feb 69)

1. WORK CENTER AND CODE	ACTIVITY	DATE
2. DEPARTMENT AND CODE	DIVISION AND CODE	BRANCH AND CODE

3. TASKS - SUB-TASKS - ELEMENTS	A WATCH/ WORK CODE	B WORK UNIT (IF IDENTIFIABLE)	C TASK FREQUENCY	D UNITS PER FREQUENCY	E FREQUENCY CONVERSION FACTOR	F FREQUENCY PER WEEK (D x E)	G M/H PER ACCOMPLISHMENT	OR H M/H PER UNIT	I M/H PER WEEK (F xG) OR (DxExH)	J MINIMUM SKILL-RATE/ RATING/NEC ETC. REQUIRED
TOTALS (WHERE APPLICABLE)										

Figure 3-6 Work Center Task Analysis Form

52E

AUTHORIZED	ON BOARD	REQUIRED

WATCH/WORK TABLE

SYMBOL	DEFINITION
PM	PREVENTIVE MAINTENANCE
CM	CORRECTIVE MAINTENANCE
FM	FACILITIES MAINTENANCE
MW	MILITARY WATCHES
OW	OPERATIONAL WATCHES
SW	SERVICE WATCHES
AD	ADMINISTRATIVE/SUPPORT

FREQUENCY TABLE

IF THE FREQUENCY OF OCCURENCE IS:	USE SYMBOL	CONVERSION FACTOR
DAILY FOR A 5-DAY WEEK	D1	4.84
DAILY FOR A 5½-DAY WEEK	D2	5.34
DAILY FOR A 6-DAY WEEK	D3	5.84
DAILY FOR A 6½-DAY WEEK	D4	6.50
DAILY FOR A 7-DAY WEEK	D5	7.00
WEEKLY	WK	1.00
MONTHLY	MO	.23
QUARTERLY	QT	.08
YEARLY	YR	.02
NOT APPLICABLE-ACTIVITY NOT PERFORMED	NA	

TIME CONVERSION TABLE

SECONDS = HOURS	MINUTES = HOURS	MINUTES = HOURS	MINUTES = HOURS
10 .003	11 .184	27 .450	43 .717
15 .004	12 .200	28 .467	44 .734
30 .008	13 .217	29 .484	45 .750
45 .013	14 .234	30 .500	46 .767
60 .017	15 .250	31 .517	47 .783
MINUTES = HOURS	16 .267	32 .533	48 .800
1 .017	17 .283	33 .550	49 .817
2 .033	18 .300	34 .567	50 .834
3 .050	19 .317	35 .584	51 .850
4 .067	20 .333	36 .600	52 .867
5 .084	21 .350	37 .617	53 .884
6 .100	22 .367	38 .634	54 .900
7 .117	23 .384	39 .650	55 .917
8 .134	24 .400	40 .667	56 .934
9 .150	25 .417	41 .684	57 .950
10 .167	26 .434	42 .700	58 .967
			59 .984
			60 1.000

INSTRUCTIONS FOR PREPARATION OF WORK ENTER TASK ANALYSIS FORM (NAVPERSRANDLAB TEST FORM 82-1)

A. GENERAL: This form is to be filled out at the time of the on-site data collection phase by the analyst.

B. SECTIONS 1 & 2: Complete as indicated.

SECTION 3: Tasks - Sub-Tasks - Elements. Describe in detail, in an orderly series of concise statements, the tasks, sub-tasks, and elements which comprise the workload for this work center.

Column A. Enter from the Watch/Work Table the appropriate symbol which identifies the type of work or watch described in the task, sub-task, or element. Refer to separate instructions for complete definitions of each of these codes.

Column B. If identifiable, list the work unit which best describes the listed task, sub-task, or element. A work unit is defined as an accountable and tangible expression of output or performance which can be identified and appropriately described for the purpose of work measurement and/or cost accounting.

Column C. Enter the appropriate symbol, as given in the Frequency Table, which identifies the frequency of occurrence.

Column D. Enter the number of occurrences per task frequency. Enter the whole number occurrence per time period which expresses the actual task, sub-task, or element frequency.

Columns C & D (General): The frequency used should reflect the expected natural rate of occurrence. For example, A monthly task should be expressed as MO under column C "Task Frequency" and 1 under column D "Units per Frequency" (frequency occurrence). A quarterly report will be shown as QT under column "C" and 1 under column "D" whereas tasks performed at four random times throughout the year will be shown as YR under column "C" and 4 under column "D". Do not combine the natural task frequencies. For example, A task such as "make telephone call" should be recorded to reflect the exact mode, i.e. 15 per day at 2 minutes each (code D1 in column C, 15 in column D, and .033 in columns "G" or "H" as appropriate) NOT as one per day at a half-hour duration. This will allow valid comparisons of frequencies and unit times for the respective entries.

Column E. Enter the applicable conversion factor from those listed in the conversion factor table.

Column F. Compute this column by multiplying the entries in columns D and E.

Column G. Enter the best estimate of the time required for one occurrence of the task. (Refer to time conversion table). This column is used when the number of units of output is not known and a task of multifarious operations can only be summed in gross time requirements. When a distinct unit per time frequency is identifiable, use column H.

Column H. Enter the best estimate of the time required to complete one unit of output. (Refer to time conversion table).

Column I. Compute this column by multiplying the entries in columns F and G or D, E and H as appropriate.

Column J. Enter the minimum skill (rate, rating, NEC, etc) considered necessary to accomplish the stated task, sub-task or element.

NOT REPRODUCIBLE

ONE-LEVEL ORGANIZATION CHART
OPNAV FORM 5312/2 (REV. 4-66) S/N 0107-778-8100

Submit in duplicate.
See complete instructions on reverse side

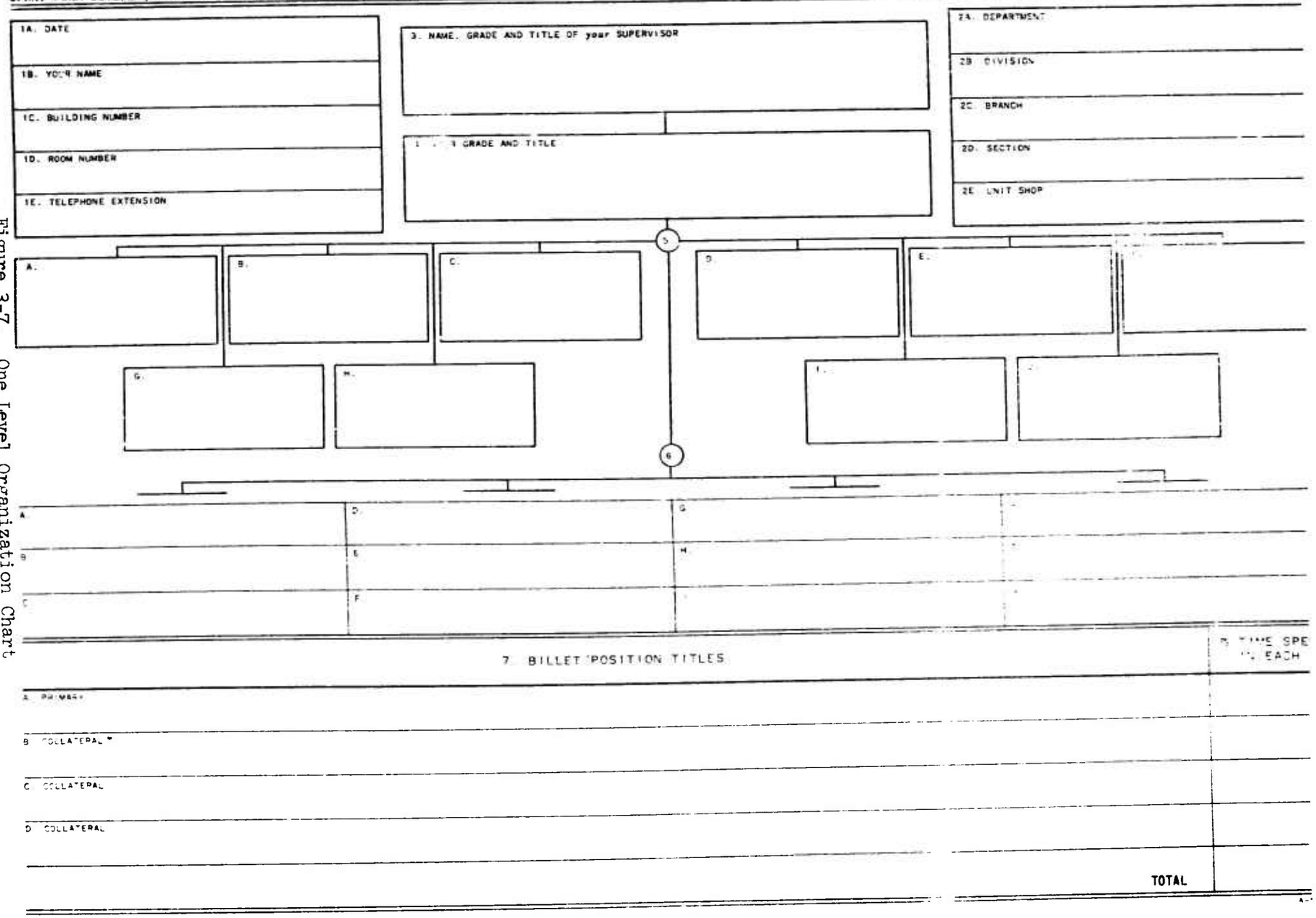


Figure 3-7. One Level Organization Chart

INSTRUCTIONS FOR PREPARATION

A. A One-Level Organization Chart should be completed personally by each supervisor.

B. Blocks 1-4 — Complete as indicated. Use abbreviations when necessary.

C. Block 5 (A-J): Enter, in separate blocks, the name, designator/grade/rating/rate and title of each person reporting directly to you only if that person has subordinate(s) reporting directly to him. Any person whose name appears in one of these blocks will also be preparing one of these One-Level Organization Charts.

D. Block 6 (A-L): Enter the name, designator/grade/rating/rate and title of each person who reports directly to you but who does not have subordinate(s) reporting to him. Any person whose name appears in these spaces should not prepare a One-Level Organization Chart. NOTE: There are spaces for 12 employees in this section. List additional names on reverse of form and identify as "6M, N, O" etc.

E. Block 7 (A): Indicate title of job as shown in block 4 and percentage of time expended in this function.

Block 7 (B,C,D): List only those collateral duties which require a significant amount of time.

WATCH STATION REQUIREMENTS
NAVPERSRANDLAB TEST FORM 82-3A (AUG 69)

STATION/ORGANIZATION	WORK CENTER TITLE	WORK CENTER CODE

TITLE OF WATCH/WATCH POSITION	TYPE OF WATCH (CODED)	SHIFT HOURS	DAYS PER WEEK	NUMBER OF SHIFTS PER DAY & DURATION OF EACH	PERSONNEL REQUIRED ON EACH SHIFT	TOTAL WATCH HOUR REQUIREMENT PER WEEK	RATING/ RATE REQUIRED
EXAMPLE		**EXAMPLE**					
MAIN GATE GUARD	MW	0800 - 0800	7 DAYS	3 - 8 HOUR SHIFTS	2	168 x 2 = 336	PO 2
STATION ROVING PATROL	MW	1530 - 0730	5 DAYS	2 - 8 HOUR SHIFTS	2	80 x 2 = 160	ANY MILITARY
	MW	0800 -0800	2 DAYS	3 - 8 HOUR SHIFTS	2	48 x 2 = 96	ANY MILITARY

52I

WATCH CODES

OW = OPERATIONAL WATCH
MW = MILITARY WATCH
SSW = SERVICE WATCH

Figure 3-8. Watch Station Requirements.

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WORK CENTER IDENTIFICATION
AND DESCRIPTION SUMMARY
PRDL Test Form 82-6 (Jun 69)

WORK CENTER IDENTIFICATION AND DESCRIPTION SUMMARY

Work Center Title and Code: _____

Station/Organization: _____

Form prepared: a. By: _____ b. Date: _____

c. Work Study Team: _____

A. Organization	Present	Recommended	Code
Department & Code	_____	_____	_____
Division & Code	_____	_____	_____
Branch & Code	_____	_____	_____
Section & Code	_____	_____	_____

B. Mode of Operation of Work Center

1. Hours per day: _____ 2. Days per week: _____

3. Describe number of shifts workedper day, personnel working other than normal duty day or shift (on a continuing basis); indicate directive which requires more than one shift (if verbal directive, indicate who directed); include number and types of equipment required or used (such as fork lifts, vehicles, etc.).

C. List of Pertinent Directives and Instructions (attach copies if available).

D. Physical Layout of Facility. Describe how the work center is located and its relationship to other work centers with which it interfaces; is the work center located in more than one area or building? Attach information (and any pertinent layout diagrams and maps).

E. Work Center Description (see Attachment #1).

F. Measurement Data. Attach measurement data forms as Attachment #2.

G. Historical Workload Indicator Volume. Include data for last 12 months or 52 weeks, as appropriate. Attach data as Attachment #3.

NOTE: There will normally be a number of attachments to this Summary. Attachment #1 will be the Work Center Description (PRDL Form 82-2). Attachment #2 will be the measurement data collected. Attachment #3 will be Workload Indicators, Definitions, and Sources of Count (see reverse side of this form for the desired format).

Figure 3-9. Work Center Identification and Description Summary

ATTACHMENT #3 to PRDL Test Form 82-6.

Workload Indicators, Definitions, and Sources of Count.

Workload Indicator #1:

W.I. #1 Definition:

Source of Count:

Point of Count:

EXAMPLE

Workload Indicator #2: Monthly Mission Aircraft Flying Hours

W.I. #2 Definition: The total number of flying hours logged monthly by mission aircraft; excludes mission support aircraft flying hours.

Source of Count: Monthly Aircraft Readiness and Flight Record (ASD 3), Flight Hours (FH) column sums for appropriate mission aircraft.
Point of Count: End of month.

Workload Indicator #3:

W.I. #3 Definition:

Source of Count:

Point of Count:

Workload Indicator #4:

W.I. #4 Definition:

Source of Count:

Point of Count:

Workload Indicator #5:

W.I. #5 Definition:

Source of Count:

Point of Count:

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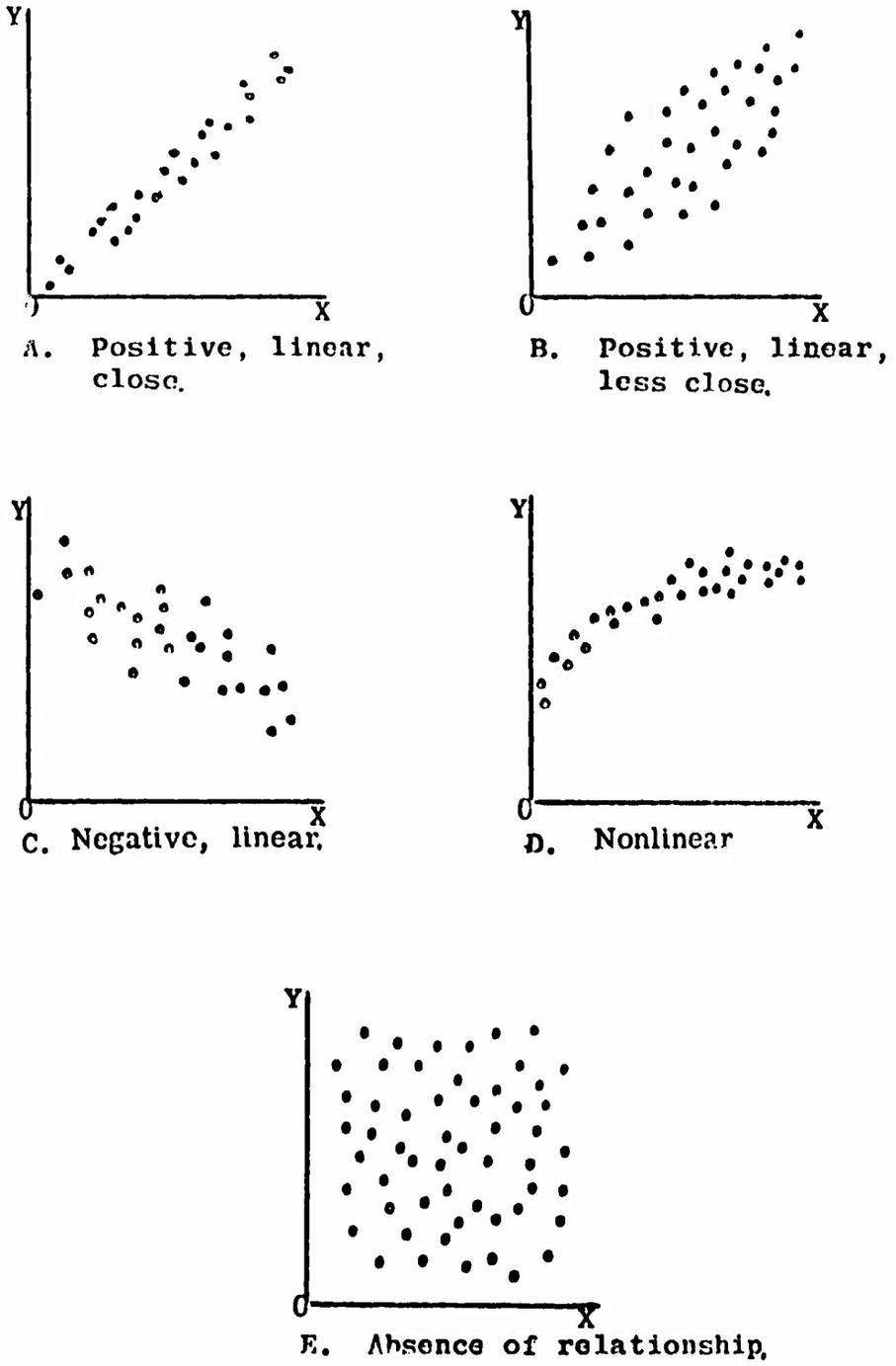

Figure 4-13. Types of Correlation as Shown in Various Hypothetical Scatter Diagrams.

(7) Degree of Fit. Three statistical measures of degree of fit can be used to define the fit of the regression data to the sampled data. These are: the standard error of the estimate, ($S_{y/x}$) the coefficient of correlation, (r); and the coefficient of determination, (r^2).

(a) The standard error of the estimate expresses, in units of the dependent variable, the dispersion of the population values (data) about the regression line, if a normal distribution exists. If the distribution approximates the normal, plus and minus one standard error will contain 68.27% of the population values; plus and minus two standard errors will contain 95.45% of the population values; and plus and minus three standard errors will contain 99.73% of the population values. The standard error of the estimate for a linear bivariate model is computed from:

$$S_{y/x} = \sqrt{\frac{\Sigma Y^2 - a\Sigma Y - b\Sigma XY}{N-2}} = \sqrt{\frac{\Sigma(Y-Y_c)^2}{N-2}}$$

(b) The coefficient of determination defines the proportion of the variation in the dependent variable explained by the regression equation. The coefficient of determination may be computed by several methods. A common way is to determine the coefficient of correlation and square it. The coefficient of correlation is computed using the equation:

$$r = \frac{N(\Sigma XY) - (\Sigma X)(\Sigma Y)}{\sqrt{[N(\Sigma X^2) - (\Sigma X)^2][N(\Sigma Y^2) - (\Sigma Y)^2]}}$$

(8) Significance. Tests for significance are statistical measures that determine acceptability of a given relationship. They actually reflect the odds that an indicated relationship is due to chance. Experienced statisticians realize that there are many tests available and that special consideration must be given to the selection of the one most suited to a particular study. Because these tests are explained in detail in several statistical texts, only the Student "t" and Fisher "F" tests of the correlation coefficient will be discussed here. These particular tests have been selected because they are the most common and provide a good indication in most instances.

(a) The "t" test of the correlation coefficient is used to estimate the probability that the coefficient could have been obtained by chance from a population with a true correlation coefficient of zero. The test is made by computing a "t" value for the coefficient and comparing it to the "t" table value to establish the level of the coefficient's significance. Tables of "t" values may be found in most statistical references. The "t" values may be computed from:

$$t_c = r\sqrt{\frac{N-m}{1-r^2}}$$

Where m equals the number of constants in the regression equation, N equals the number of standard input data points, r equals the coefficient of correlation, and r^2 equals the coefficient of determination. The "t" test is appropriate for testing correlation coefficients of regression equations with two constants. When testing correlation coefficients stemming from regression equations with more than two constants, use the "F" test is appropriate.

(b) The "F" test is made by computing an "F" value for the correlation coefficient and comparing it to the value of "F" given in an F-table. The "F" values may be computed from:

$$F_c = \frac{r^2}{1-r^2} \cdot \frac{N-m}{m-1}$$

Where m equals the number of constants in the regression equation, N equals the number of standard input data points, and r^2 equals the coefficient of determination.

(9) Levels of Correlation and Significance. These levels are relative measures of the quality of the relationship described by the estimating equation. Normal minimum levels for these parameters are, Coefficient of correlation value of .7071, Coefficient of determination value of 0.50 and correlation coefficient(s) which could not be due to chance more than 5 times in 100.

3. Average Good Operator.

To compute a standard by the average good operator technique, the analyst should:

a. Obtain the time values required to complete the entire work unit or category.

b. Discard all readings or observations interrupted by idle time.

c. Apply leveling and allowance factors only if categories of work were actually timed.

d. Follow the steps outlined under the historical experience technique.

4. Statistical Analysis Forms.

a. The following OPNAV forms are used to analyze data and compute criteria/standards for which there are three or more inputs (the Statistical Analysis-Linear form can be used with two inputs):

(1) Work Center Comparative Analysis, OPNAV Form _____ (presently PRDL Test Form 82-5).

(2) Variance Analysis of Work Center Data, OPNAV Form _____.

(3) Statistical Analysis-Linear, OPNAV Form _____.

(4) Statistical Analysis-Ratio Curve, OPNAV Form _____.

(5) Statistical Analysis-Quadratic Curve, OPNAV Form _____.

(6) Statistical Analysis-Exponential Curve, OPNAV Form _____.

b. Instructions for using these forms.

(1) Work Center Comparative Analysis, OPNAV Form____.

(a) This form is used to plot scatter diagrams in order to compare work center measurement studies and to aid in the selection of appropriate workload indicators. For the same work center at each study site (or unit), the following data will be entered on this form; the total manhours; the productive manhours (excluding non-available time); the military manpower requirement computed to two decimal places or the civilian manpower requirement if the work center is predominantly civilianized throughout the population studied; and the workload volumes for each of the workload indicators.

(b) After all data for a work center has been entered on this form, scatter diagrams will be prepared on graph paper, plotting the manpower requirement along the y-axis and the workload indicator volume along the x-axis. The scatter diagrams will indicate which workload indicator is or appears to be the best and whether a linear or non-linear relationship exists between the variables.

(2) Variance Analysis of Work Center Data, OPNAV Form____. This form is to be used when computing engineered standards from data obtained by work sampling or time study. Provision is made for:

(a) Leveling factors for skill, effort, and conditions.

(b) Allowance factors for personal, rest, and delay.

(c) Information as to the hours per day and the number of days per week that the work center operates. This information is often important in comparing work centers with different operating hours.

(d) The average workload - historical data plus workload data obtained during the measurement period.

(e) The time standard and the manpower standard for each work center. The time standard is computed by dividing the allowed (and leveled) time by the adjusted workload (see paragraph 4b, on page 75). The manpower standard is the military manpower requirement for the work center (unless it is a civilianized work center, in which case the civilian manpower requirement will be computed).

(f) Work categories and the percent occurrence ($\bar{P}$) of each work category. List the work categories for the work center and enter the $\bar{P}$ for each category. The percent occurrence ($\bar{P}$) is computed by dividing the allowed time for each category by the total productive time in that work center. Analysis of the $\bar{P}$'s for the same work category at different stations/locations provides insight into the reasons for variance of the plots on the scatter diagram.

(3) Statistical Analysis Forms, OPNAV Forms _____, _____, _____, and _____.

(a) These forms are used for statistical analyses of data which fit linear, ratio, quadratic and exponential curves. In Section I of these forms, the following data will be entered: the location, the X value (adjusted workload value), and the corresponding Y value (manpower requirement figured to two decimal places). Then, the required mathematical inputs to the formulae (which are indicated in Section I) are computed in order to arrive at the statistical model in Section II, using the formulae in Section III. For ease of computation, scientific notation (powers of ten) should be used to express the required inputs to the formula.

(b) Often, more than one curve can be fit to the same data. Selection of the one curve which is most appropriate is not only based on the measures of the degree of fit; realistic evaluation factors must also be considered. For example, for a work center in which there is mostly productive direct labor, a linear relationship normally will be found; however, for a supervisory work center, a ratio or quadratic curve will often fit best since the supervisory manpower requirement increases at a decreasing rate as its subordinate work centers increase.

Work Center Comparative Analysis PRDL Test Form 82-5A (Aug 69)

WORK CENTER COMPARATIVE ANALYSIS
FOR USE IN DEVELOPING MANPOWER CRITERIA

WORK CENTER & CODE _____ DIVISION: _____

DEPARTMENT: _____ BRANCH: _____

Study Sites/Unit Designation						
Total Manhours Required						
Productive Manhours						
Military Manpower Required (To closest hundredth)						
Civilian Manpower Required (Only if work center is civilianized)						

Workload Indicator Volumes and WLI Short Titles

WLI #1						
WLI #2						
WLI #3						
WLI #4						
WLI #5						

W.I. #1 Definition: _____
W.I. #2 Definition: _____
W.I. #3 Definition: _____
W.I. #4 Definition: _____
W.I. #5 Definition: _____

Figure 4-14. Work Center Comparative Analysis

VARIANCE ANALYSIS OF WORK CENTER DATA							DATE
WORK CENTER TITLE							WORK CENTER CODE
WORKLOAD INDICATOR							
I. INPUT DATA							
ITEM \ STATION/UNIT							
LEVELING FACTOR	SKILL						
	EFFORT						
	CONDITIONS						
	TOTAL						
ALLOWANCE FACTOR	PERSONAL						
	REST						
	DELAY						
	TOTAL						
OPERATION	HOURS/DAY						
	DAYS/WEEK						
AVERAGE (MONTHLY) (WEEKLY) WORKLOAD	HISTORICAL						
	SAMPLING						
STANDARDS	TIME						
	MANPOWER						
WORK CATEGORIES							
REMARKS							

Figure 4-15. Varience Analysis of Work Center Data.

STATISTICAL ANALYSIS -- LINEAR	COMPUTED BY	DATE
WORK CENTER TITLE AND CODE		

I. CORRELATION AND REGRESSION DATA

X	WORKLOAD INDICATOR # , AND TITLE:
Y	MANPOWER REQUIREMENT

n	LOCATION	X	Y	Y_c	$Y - Y_c$
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

n		ΣY	
ΣX		ΣX^2	
ΣY^2		ΣXY	

II. STATISTICAL MODEL AND PARAMETERS

PRIMARY LINE	SECONDARY LINE		
$Y_c = a + bX$	P_1	$X_1 =$	$Y_1 =$
	P_2	$X_2 =$	$Y_2 =$
$Y_c =$	$Y_c =$		

r	r^2	t	LEVEL OF SIGNIFICANCE	S_y

III. FORMULAS

$$b = \frac{n(\Sigma XY) - (\Sigma X)(\Sigma Y)}{n(\Sigma X^2) - (\Sigma X)^2}$$

$$a = \frac{\Sigma Y - b(\Sigma X)}{n}$$

$$t = r\sqrt{\frac{n-2}{1-r^2}}$$

$$S_y = \sqrt{\frac{\Sigma (Y - Y_c)^2}{n}}$$

$$r = \frac{n(\Sigma XY) - (\Sigma X)(\Sigma Y)}{\sqrt{[n(\Sigma X^2) - (\Sigma X)^2][n(\Sigma Y^2) - (\Sigma Y)^2]}}$$

Figure h-16. Statistical Analysis -- Linear.

STATISTICAL ANALYSIS – RATIO		COMPUTED BY		DATE		
WORK CENTER TITLE AND CODE						
I.	CORRELATION AND REGRESSION DATA					
X	WORKLOAD INDICATOR # , AND TITLE					
Y	MANPOWER REQUIREMENT					
n	LOCATION	X	Y	R	Y_c	$Y-Y_c$
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
n		$\bar{Y}$		ΣX^2		
ΣR				ΣR^2		
ΣX				ΣXR		

II.	STATISTICAL MODEL AND PARAMETERS				
PRIMARY LINE			SECONDARY LINE		
$Y_c = \frac{X}{a + bX}$			P_1	$X_1 =$	$Y_1 =$
			P_2	$X_2 =$	$Y_2 =$
$Y_c =$			$Y_c =$		
r	r^2	t	LEVEL OF SIGNIFICANCE	S_y	Y_{max}

III. FORMULAS

$$b = \frac{n(\Sigma XR) - (\Sigma X)(\Sigma R)}{n(\Sigma X^2) - (\Sigma X)^2}$$

$$R = \frac{X}{Y}$$

$$t = r\sqrt{\frac{n-2}{1-r^2}}$$

$$a = \frac{\Sigma R - b(\Sigma X)}{n}$$

$$r = \sqrt{\frac{\Sigma (Yc - \bar{Y})^2}{\Sigma (Y - \bar{Y})^2}}$$

$$Y_{max} = \frac{1}{b}$$

$$S_R = \sqrt{\frac{\Sigma (Y - Yc)^2}{n}}$$

90H Figure 4-17. Statistical Analysis - Ratio

STATISTICAL ANALYSIS - QUADRATIC

COMPUTED BY | DATE

WORK CENTER TITLE AND CODE

I. CORRELATION AND REGRESSION DATA

X	WORKLOAD INDICATOR # , AND TITLE
Y	MANPOWER REQUIREMENT

n	LOCATION	X	Y	Y_c	$Y - Y_c$
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

n		ΣX		ΣX^3	
ΣY		ΣX^2		ΣX^4	
ΣY^2		ΣXY		$\Sigma X^2 Y$	

II. STATISTICAL MODEL AND PARAMETERS

PRIMARY LINE			SECONDARY LINE		
$Y_c = a + bX + cX^2$			P_1	$X_1 =$	$Y_1 =$
			P_2	$X_2 =$	$Y_2 =$
$Y_c =$			$Y_c =$		
r	r^2	t	LEVEL OF SIGNIFICANCE	S_y	Y_{max}

III. FORMULAS

Normal equations used to derive primary line

I. $\Sigma Y = n\,a + b\Sigma X + c\Sigma X^2$

II. $\Sigma XY = a\Sigma X + b\Sigma X^2 + c\Sigma X^3$

III. $\Sigma X^2 Y = a\Sigma X^2 + b\Sigma X^3 + c\Sigma X^4$

$$r = \sqrt{\frac{a\Sigma Y + b\Sigma XY + c\Sigma X^2 Y - n\left[\frac{\Sigma Y}{n}\right]^2}{\Sigma Y^2 - n\left[\frac{\Sigma Y}{n}\right]^2}}$$

$$t = r\sqrt{\frac{n-2}{1-r^2}}$$

$$S_y = \sqrt{\frac{\Sigma (Y - Y_c)^2}{n}}$$

$$Y_{max} = \frac{4ac - b^2}{4c}$$

901 Figure 4-18. Statistical Analysis - Quadratic

STATISTICAL ANALYSIS – EXPONENTIAL	COMPUTED BY	DATE
WORK CENTER TITLE AND CODE		

I. CORRELATION AND REGRESSION DATA

X	WORKLOAD INDICATOR # , AND TITLE
Y	MANPOWER REQUIREMENT

n	LOCATION	X	Y	Y_c	$Y - Y_c$
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

n		$\Sigma (\text{Log}X)^2$	
$\Sigma \text{Log}X$		$\Sigma (\text{Log}Y)^2$	
$\Sigma \text{Log}Y$		$\Sigma \text{Log}X\text{Log}Y$	

II. STATISTICAL MODEL AND PARAMETERS

PRIMARY LINE	SECONDARY LINE		
$Y_c = aX^b$	P_1	$X_1 =$	$Y_1 =$
	P_2	$X_2 =$	$Y_2 =$
$Y_c =$	$Y_c =$		

r	r^2	t	LEVEL OF SIGNIFICANCE	S_y

III. FORMULAS

$$b = \frac{n\Sigma \text{Log}X\text{Log}Y - (\Sigma \text{Log}X)(\Sigma \text{Log}Y)}{n\Sigma (\text{Log}X)^2 - (\Sigma \text{Log}X)^2} \qquad Sy = \sqrt{\frac{\Sigma (Y - Yc)^2}{n}} \qquad t = r\sqrt{\frac{n-2}{1-r^2}}$$

$$\text{Log } a = \frac{\Sigma \text{Log}Y - b(\Sigma \text{Log}X)}{n}$$

$$r = \frac{n\Sigma \text{Log}X\text{Log}Y - (\Sigma \text{Log}X)(\Sigma \text{Log}Y)}{\sqrt{[n\Sigma (\text{Log}X)^2 - (\Sigma \text{Log}X)^2][n\Sigma (\text{Log}Y)^2 - (\Sigma \text{Log}Y)^2]}}$$

Figure 4-19. Statistical Analysis - Exponential.

E. Format of the Staffing Criteria

The key word in the Staffing Criteria Development Program up to this point has been development. Now the emphasis must shift to another word, presentation. Once the staffing criteria have been developed, their effectiveness depends greatly on the format in which they are presented. Not only must there be consistency in the type of information provided, but also a high degree of uniformity in its presentation. To achieve this uniformity, the Chief of Naval Operations requires that staffing criteria, developed for promulgation in the U. S. Navy Staffing Criteria Manual for Activities Ashore, contain the following basic information for each section or function:

1. Table of Contents

For quick reference and ease in determining the size and limitation of the function, the table of contents, showing the major segments and their exact location within each section, is presented immediately before each function.

2. Definition of the Function

This definition was written during the preliminary phase of the study and revised, if found to be necessary, during the measurement phase.

3. Definition of Subfunctions

These definitions also were written during the preliminary phase,

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(d) Fractional Manpower.

1 Work centers which have workloads that compute to other than whole man requirements pose a fractional manning problem. One approach used in the past was to select the 0.5 manpower requirement point; any workload that earned at least one half of a person when computed against the criteria or standard was awarded the next whole number without regard to work center size. Those that earned less than one-half person did not get the extra position. This was both unfair to the small work centers and was expensive to the Navy from an over-all manning standpoint. As a more equitable and realistic approach to this problem, earned man-hour cut off points are now established on the basis of the maximum desirable and/or permissible work overload per individual in the work center. No overload is imposed in civilian criteria and standards. In military criteria and standards, maximum individual overload is established at 10% of the average work week. This equates to a maximum of 4.0 hours a week overtime for individuals in work centers allowed less than 11 billets. As the number of billets increases above 10, a decrease in the maximum overload will result for each billet allowed. For example, when a work center is allowed 20 billets, the 10% overload factor equates to 2.0 hours overtime per week for each individual.

2 Table 2 reflects the fractional manpower cutoff points that coincide with whole-man authorizations in a military standard. For work centers allowed 10 or more, the cutoff point for any interval is the number of people allowed plus 0.99. For example, the cutoff point for a workload interval authorizing 25 people is 25.99.

TABLE 2

Fractional Manpower Cutoffs (using a 10% overload factor)

Fractional Manpower Requirement	To 1.10	1.11 to 2.20	2.21 to 3.30	3.31 to 4.40	4.41 to 5.50	5.51 to 6.60	6.61 to 7.70	7.71 to 8.80
Billets Allowed	1	2	3	4	5	6	7	8

Fractional Manpower Requirement	8.81 to 9.90	9.91 to 10.99	11.00 to 11.99	12.00 to 12.99
Billets Allowed	9	10	11	12

Using the 10% overload factor as reflected in the table above, there are two major steps in the development of a manning table: Computing the workload value to be associated with each manning increment in the table and determining the appropriate distribution of designators, ratings, NOBCs and NECs including grade and rate distribution

3 To compute the upper workload limits for each interval in the manning table, the following procedure will be followed:

a Using the statistical model (formula) for the work center, solve the equation for X.

b For each whole man increment of manpower required, enter the upper fractional manpower cutoff value from Table 2 for the Y value in the equation, and solve for X. The resultant value will be the maximum workload that the corresponding number of personnel will be expected to accomplish.

EXAMPLE: To compute the upper workload volume value for a personnel requirement of eight (8) in a work center where the Manning Equation(statistical model) is: $Y = 2.00 + 0.50X$

Step 1. Solve for X;
$0.50X = Y - 2.00$, $X = \frac{Y - 2.00}{0.50}$

Step 2. Enter the upper fractional manpower cutoff value for 8 personnel for the Y value in the equation:

$$X = \frac{8.80 - 2.00}{0.50} = \frac{6.80}{0.50} = 13.60$$

Step 3. Enter this workload value as the upper increment of the workload indicator for the column which requires 8 personnel. The lower increment for this same column will be one one-hundreth unit of workload indicator volume greater than the upper limit of the preceeding column. See below:

Range of Increments		9.21-11.40	11.41-13.60	
Personnel Required	6	7	8	9

ADDITIONS TO GLOSSARY OF STAFFING CRITERIA TERMS

ACTIVITY:

A unit, organization, or installation of distinct identity performing a specific function or mission and established under a commanding officer or officer-in-charge; e.g., naval station, naval shipyard, naval air station, a specific ship, air quadron, etc.
(See also ESTABLISHMENT, and INSTALLATION.)

ADDITIONAL DUTY:

a. Military - Duty in an authorized billet to which an individual is assigned, and which is in addition to his primary duty. The duty may or may not be at his permanent duty station.
b. Civilian - Duty in addition to regularly assigned duty.
(See also COLLATERAL DUTY and PRIMARY DUTY.)

ALLOCATION:

a. The number of officer and enlisted personnel authorized for each activity by the Chief of Naval Operations.
b. The apportionment of service personnel to a program or program element of the Five Year Defense Program.
(See also MANPOWER REQUIREMENTS.)

ALLOWANCE:

The quantitative and qualitative naval billets authorized for an activity to carry out its mission and tasks in peacetime. The number of personnel by grade and designator or rating authorized to be attached to pay units of the Naval Reserve in drill pay billets.

AUTHORIZATION:

An approval granted by competent authority. In manpower and personnel matters it is used as follows:

a. Military - The qualitative and quantitative listing of naval military peacetime allowances and requirements, and mobilization complements, reflecting the organization of an activity. (See also MANPOWER AUTHORIZATION.)
b. Civilian - The number of civilian positions granted an activity or group of activities for a specific period of time.

BILLET:

A group of duties, tasks, and responsibilities to be performed by a military person.
(See also BILLET TITLE, and POSITION.)

BILLET TITLE:

A position title of a specific billet. All officer and enlisted billets in shore activities show titles. Organizational titles and position titles conform to the organization structure approved by the cognizant command, bureau, or office.
(See also BILLET, and POSITION.)

COLLATERAL DUTY:

Duty to which an individual is assigned by his commanding officer which is in addition to his primary duty. These duties are always performed at the individual's permanent duty station.
(See also ADDITIONAL DUTY and PRIMARY DUTY.)

COMPLEMENT:

a. Fleet Units - The quantitative and qualitative naval billets authorized to an activity to effectively carry out all missions and tasks in wartime. This includes the ability to perform all equipment maintenance and to maintain Readiness Condition III

and full power operations for indefinite periods, as well as providing 100% battle station manning.

b. Shore (Field) Activities - The quantitative and qualitative naval manpower needs of an activity to effectively perform all tasks envisioned when mobilized.

DESIGNATOR CODE:

A 4-digit number used to group both billets and officers by categories, for manpower and personnel accounting and for administrative purposes; e.g., Unrestricted Line (1100, 13XX), Engineering Duty (1400), Supply (3100), etc. and to identify the status of officers; e.g., Unrestricted Line Reserve Officers (1105), Civil Engineer Corps-Training and Administration Reserve (5107), etc.

DUTY: The duty is the assignment of an individual for ours, which requires the presence or availability of the individual on board the activity to meet any demands with respect to security, safety, or mission fulfillment, particularly during periods other than normal working hours (such as weekends, and between 1630 and 0800). Duty section personnel will be available for non-scheduled work such as contingencies and emergencies.

ESTABLISHMENT:

An installation, together with its personnel and equipment, organized as an operating entity.
(See also ACTIVITY, FACILITY, and INSTALLATION.)

FACILITY:

A physical plant, such as real estate and improvements thereto, including buildings and equipment which provides the means for performing a function; e.g., base, factory.
(See also ACTIVITY and INSTALLATION, and NAVAL BASE.)

GRADE:

a. Military - A step or degree in a graduated scale of officer or military rank that has been established by law or regulation.
b. Civilian - All classes of positions which, although different with respect to kind or subject matter of work, are sufficiently alike

MANNING REQUIREMENTS. The qualitative/quantitative personnel needs of a shore activity to effectively perform all designed missions and functions (unit fully combat ready). Manning requirements include operational manning, maintenance manning, and administrative/support manning.

a. OPERATIONAL MANNING. The qualitative/quantitative personnel needs to man stations prescribed during the governing conditions of readiness.

b. MAINTENANCE MANNING. The qualitative/quantitative personnel needs to perform preventive, corrective and facility maintenance on the station and its installed systems and equipments.

(1) PREVENTIVE MAINTENANCE is work accomplished in response to scheduled requirements. In quantitative terms, it is the total workload associated with the performance of maintenance actions on operational systems, equipments or components that contributes to uninterrupted operation within designed characteristics.

(2) CORRECTIVE MAINTENANCE is work accomplished on an unscheduled basis because of malfunction, failure or deterioration. In quantitative terms, it is the workload associated with restoration of disabled systems, equipments or components to an operational condition within predetermined tolerances/limits.

(3) FACILITY MAINTENANCE. The sum of those actions required to preserve the facility, structures, buildings, grounds, and all permanently installed equipment against corrosion and/or deterioration and to maintain cleanliness. In quantitative terms it is the workloade associated with routine housekeeping and periodic work actions dictated by deterioration of painted or otherwise preserved surfaces.

c. ADMINISTRATIVE/SUPPORT MANNING. The qualitative/ quantitative personnel needs to perform administrative, military, resupply, food wervice, hygienic and other service tasks in support of station/unit personnel (and their dependents, when applicable).

MANPOWER:

The aggregate of human resources available to an organization or ship, including contract personnel.

MANPOWER LISTING (OPNAV 5320/3, formerly NAVEXOS -4521):

A shore manning document containing detailed military and civilian manpower data interlineated by organizational alignment. An annual standard ·od report required of all activities having both ı li- tary and civilians or civilians only from which mission of the activity; organizational identification, occupational category, title, and grade of military billets and civilian positions; and comparisons of personnel on board versus manpower authorizations can be obtained. Used extensively at headquarters levels, and can be used by manpower managers at all echelons of command in planning, programming, coo.dinating, administering and assessing all categories of manpower. This is a report rather than an authorizing document.

NAVY ENLISTED CLASSIFICATION CODE (NEC):

A 4-digit skill identifier assigned to some enlisted billets and personnel. When assigned to a billet, it identifies specific skills required to operate and maintain the growing inventory of complex weapon systems and other equipments, which are not specifically identified by ratings alone, as well as identifying many special skills on training not specifically associated with any rating. When assigned to personnel, it identifies those who have received training of performed duties resulting in effective skills more clearly defined than by their individual rating.

NAVY OFFICER BILLET CLASSIFICATION (NOBC):

A 4-digit code representing the description and/or requirements of officer billets allowed in an activity as reflected on the Manpower Authorization (OPNAV 1000/2) for that activity.

ON BOARD:

Personnel physically present on active duty or employment.

ON BOARD COUNT:

The number of personnel physically present and on the rolls of any component of the Department of the Navy charged to the authorized strentgth or allowance for that component as of a specific date.

POSITION:

The work, consisting of duties and responsibilities, assigned to a civilian employee by competent authority.
(See also POSITION, BILLET, AND BILLET TITLE.)

PRIMARY DUTY:

The prescribed functions of an authorized billet to which military person is detailed or assigned.
(See also ADDITIONAL DUTY and COLLATERAL DUTY.)

SHORE MANNING DOCUMENT (SHMD):

A new type manning document, under development by the CNO for naval shore facilities; features a methodology which applies selected work study techniques to quantitative basic manning criteria for maintenance, operations, support and administrative functions. The SMD displays in detail the rationale for manning predicated on configuration, computed workload and specified operating profile. This and other terms developed in the SMD program will be defined in subsequent issues of the Glossary.

SHORE (FIELD) ACTIVITIES:

All activities of the Department of the Navy not assigned to the operating forces of the Navy and not a part of the Navy Department. Formerly known as the Shore Establishment.

WATCH. The watch is that period during a duty day wherein an individual is assigned and required to be at a specified place to carry out functions relating to security, safety, or mission fulfillment. Normally, this period will be of four hours duration and will fall between the hours at the end of one normal work day and the beginning of the next work day. Three types of watches have been defined:

a. OPERATIONAL WATCH (OW) - A watch which must be manned in order for the station to perform its primary mission, such as control tower watch.

b. MILITARY WATCH (MW) - A watch performed at a station of a military nature such as fire watch, gate guards, roving patrols, etc.

c. SERVICE WATCH (SW) - A watch which provides a service to other personnel or dependents, such as movie watch, library watch, etc.

WATCH ON - WATCH OFF:

A method of using military manpower on board ship as well as shore (field) stations whereby the military person works four hours and is off duty four hours around the clock. This is traditionally referred to as port and starboard watch.

WORK CATEGORIZATION/CLASSIFICATION

a. CATEGORY - A major subdivision of the work center description, usually identified in terms of an active verb or noun when practical. Each category represents a number of associated tasks. The sum of all categories should equate all work authorized and required to be performed by the work center.

b. TASK. A constituent part of a work category.

c. SUB-TASK. A part of a task or an amplification of a task.

d. ELEMENT - Subdivision of a work cycle composed of a sequence of basic or fundamental motions. Elements are distinct, describable, measurable, and begin and end at well-defined points.

WORK CENTER. A grouping of personnel using similar machines, processes, methods, and operations, and performing homogeneous type work, usually located in a centralized area. The term is used to identify a relatively small activity within a broad functional segment. Personnel within a work center perform work that basically contributes to the same end-product or result, and their duties are similar or closely related.

WORK FLOW:

The flow or movement of things being worked on when passing from one operation to another. Measured by quantity, rate of movement, and minimum time lag or smoothness in performance.

WORK MEASUREMENT:

A technique employed independently or in conjunction with cost accounting for the collection of data on man-hours and production by work units, so that the relationship between work performed and man-hours expended can be calculated and used as the basis for manpower planning, scheduling, production, budget justification, performance evaluation, and cost control.

WORK STANDARD:

The number of man-hours selected to accomplish each work unit for the purpose of appraising its operation.

PROPOSED

APPENDIX I (ORGANIZATIONAL-FUNCTIONAL CODES)

to

OPNAV PUBLICATION 01B1-P1

HANDBOOK FOR STAFFING CRITERIA DEVELOPMENT

FOR ACTIVITIES ASHORE

APPENDIX I

ORGANIZATIONAL - FUNCTIONAL CODES

(6 digit alpha-numeric)

1. These codes are designed for use in ADP produced Shore Manning Documents to insure a logical sequencing of work centers by the computer, and secondly, to identify work centers during the preliminary, measurement, and criteria computation phases of developing Navy Shore Manning Documents (SHMDs) and manpower criteria.

2. The basis for the coding system consists of two letters which identify major organizational elements at the department level. The next organizational element below the department level, usually a division, is coded by adding a third letter to the basic two-letter code. This can be an arbitrary assignment providing there is no duplication of the third letter within a particular major organizational element. Progressively smaller elements (branches, sections, and units) are similarly coded by adding a fourth, fifth, or sixth letter, again avoiding duplication.

3. Major organizational elements of most naval activities have been designated two-letter codes contained in this appendix. Types of activities for which these two-letter codes have been devised include:

Naval Stations, Air Stations, and Bases.

Public Works Center and Facilities.

Supply Centers.

Communication Stations.

Administrative Commands.

Ammunition Depots.

4. Conformity with the two-letter codes identifying major organizational elements, contained in this appendix is mandatory. Every effort must be made to utilize these codes before originating new ones. Minor deviations in titles among activities, such as "Administration" vice "Administrative" are not sufficient to originate a new code. A new two-letter code may be originated only when a major organizational element is so unique it cannot be identified by a two-letter code in this appendix. If a new code must be originated, it should be submitted to by letter for approval and inclusion in the list of authorized codes.

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5. This appendix contains the following listings of codes:

Part I - Organization Codes, two letter codes listed alphabetically . . . . . Page I-3

Part II - Organization Codes, two letter codes listed by title . . . . . Page I-8

Part III - Organizational-Functional Codes . . . . . Page I-13

PART I - ORGANIZATION CODES

Two letter codes, alphabetical listing

AD	ADMINISTRATION
AM	AIRCRAFT MAINTENANCE
AO	AIR OPERATIONS
B	
C-	COMMAND AND SPECIAL STAFF
CD	ENGINEERING (PW)
CF	CONSOLIDATED STAFF
CG	ACTIVITY CIVIL ENGINEERS OFFICE
CM	COMMUNICATIONS
CN	CONSTRUCTION
CP	CIVILIAN PERSONNEL
CR	COMPTROLLER
CY	COMMISSARY
CZ	CONTRACTS
DP	DATA PROCESSING
EE	ELECTRONICS/ELECTRICAL
EH	ENGINEERING/HULL
EP	EXAM PROCESSING
ES	ENGINEERING SUPPORT
EV	EVALUATION AND ANALYSIS

FC FISCAL
FF FIRE FIGHTING
FL FIRST LIEUTENANT
FS FOOD SERVICE

GS SAFETY, GENERAL

HO HOUSING

IR INDUSTRIAL RELATIONS (to be replaced by Civilian Personnel, CP)
IT INDUSTRIAL MANAGEMENT
IV INTERVIEW AND CLASSIFICATION

J

K

LE EVIDENCE
LL LEGAL RESEARCH AND PRACTICAL LAW
LN ENLISTED
LP PROCEDURE
LR LOGISTICS/RESOURCES
LS SUBSTANTIVE LAW

MA	MATERIAL
MB	MARINE BARRACKS
MC	MAINTENANCE CONTROL
ME	MEDICAL
ML	MILITARY
MS	MESSAGE CENTER
MX	MAINTENANCE
NX	NAVY EXCHANGE
OP	OPERATIONS
OR	ORDNANCE
PD	PRODUCTION
PG	PLANNING GROUP
PM	MILITARY PERSONNEL
PN	PERSONNEL
PO	PERSONNEL CONTROL SUPPORT SERVICE
PP	PLANS AND PROGRAMS SUPPORT SERVICES
PW	PUBLIC WORKS
PZ	PROJECT MANAGEMENT
QA	QUALITY ASSURANCE/CONTROL
RE	REAL ESTATE
RG	REGIMENT
RM	RESOURCES MANAGEMENT
RS	SPECIAL SERVICES/RECREATION

SA	STABILITY AND REPAIR
SE	SECURITY AND LAW ENFORCEMENT
SG	SECURITY GROUP
SP	SUPPORT
SU	SUPPLY
TA	ACADEMIC
TE	TRAINING AND DEVELOPMENT
TF	TRAINING FACILITIES/SUPPORT
TG	ADMISSIONS OFFICE
TP	TRANSPORTATION
TR	TRAINING
TS	EDUCATION AND TRAINING SUPPORT SERVICE
TU	SPECIAL SUPPORT SERVICE
TX	TRAINER MAINTENANCE
TZ	TRAINING AIDS/DEVICES
UT	UTILITIES
WE	WEAPONS
WL	WEAPONS LABORATORY
XQ	ACQUISITION
XS	STATISTICAL
Y	
Z	

PART II - ORGANIZATION CODES

Two letter codes by title

ACADEMIC	TA
ACTIVITY CIVIL ENGINEERS OFFICE	CG
ACQUISITION	XQ
ADMINISTRATIVE	AD
ADMISSIONS OFFICE	TO
AIRCRAFT MAINTENANCE	AM
AIR OPERATIONS	AO

B

CIVILIAN PERSONNEL	CP
COMMAND AND SPECIAL STAFF	C-
COMMISSARY	CY
COMMUNICATIONS	CM
COMPTROLLER	CR
CONSOLIDATED STAFF	CF
CONSTRUCTION	CN
CONTRACTS	CZ

DATA PROCESSING	DP
DENTAL	DE

EDUCATION AND TRAINING SUPPORT SERVICE	TS
ELECTRONICS/ELECTRICAL	EE
ENGINEERING (PW)	CD
ENGINEERING/HULL	EH
ENGINEERING SUPPORT	ES
ENLISTED	LN
EVALUATION AND ANALYSIS	EV
EVIDENCE	LE
EXAM DEVELOPMENT	ED
EXAM PROCESSING	EP

FISCAL	FC
FIRE FIGHTING	FF
FIRST LIEUTENANT	FL
FOOD SERVICES	FS

G

HOUSING	HO

INDUSTRIAL MANAGEMENT	IT
INDUSTRIAL RELATIONS (to be changed to Civilian Personnel CP)	IR
INTERVIEW AND CLASSIFICATION	IV

J

K

LEGAL RESEARCH AND PRACTICAL LAW	LL
LOGISTICS/RESOURCES	LR

MAINTENANCE	MX
MAINTENANCE CONTROL	MC
MARINE BARRACKS	MB
MATERIAL	MA
MEDICAL	ME
MESSAGE CENTER	MS
MILITARY	MC
MILITARY PERSONNEL	PM
NAVY EXCHANGE	NX
OPERATIONS	OP
ORDNANCE	OR
PERSONNEL	PN
PERSONNEL CONTROL SUPPORT SERVICE	PO
PLANNING GROUP	PG
PLANS AND PROGRAMS SUPPORT SERVICES	PP
PROCEDURE	LP
PRODUCTION	PD
PROJECT MANAGEMENT	PZ
PUBLIC WORKS	PW
QUALITY ASSURANCE/CONTROL	QA
REAL ESTATE	RE
REGIMENT	RG
RESOURCES MANAGEMENT	RM

SAFETY, GENERAL	SG
SECURITY AND LAW ENFORCEMENT	SE
SECURITY GROUP	SG
SPECIAL SERVICES/RECREATION	RS
SPECIAL SUPPORT SERVICE	TV
STABILITY AND REPAIR	SA
STATISTICAL	XS
SUBSTANTIVE LAW	LS
SUPPLY	SU
SUPPORT	SP
TRAINER MAINTENANCE	TX
TRAINING	TR
TRAINING AIDS/DEVICES	TZ
TRAINING AND DEVELOPMENT	TE
TRAINING FACILITIES/SUPPORT	TF
TRANSPORTATION	TP
UTILITIES	UT

V

WEAPONS	WE
WEAPONS LABORATORY	WL

X

Y

Z

PART III - ORGANIZATIONAL - FUNCTIONAL CODES

ADMINISTRATION DEPARTMENT (AD)

Code	Division	Branch	Section
ADA	Office Services		
ADAC	" "	Correspondence	
ADAD	" "	Duplicating	
ADAM	" "	Mail Room/Directory	
ADAO	" "	OOD Branch	
ADAP	" "	Admin. Programs	
ADB	Barracks		
ADBE	"	Enlisted	
ADBC	"	CPO Staterooms	
ADBW	"	Waves	
ADC	Communications		
ADCA	"	Administrative	
ADCC	"	Cryptography	
ADCF	"	Rapid Communications	
ADCFA	"	Autodin	
ADCM	"	Msg Center/Relay	
ADCP	"	Telephone	
ADCR	"	Radio Communication	
ADCS	"	Radio Sta./Msg Center	
ADCT	"	Transmitter	
ADP	Military Personnel		
ADPE	" "	Enlisted Records	
ADPO	" "	Officer Records	
ADPD	" "	Education Services	
ADPB	" "	Barracks	
ADD	Band		
ADM	Messes		
ADMC	"	CPO Messes	
ADME	"	Enlisted Messes	
ADMOO	"	Officers Mess-Open	
ADMO	"	Officers Mess-Closed	
ADMOB	"	Butcher	
ADMOK	"	Baker	
ADMOM	"	Master-at-Arms	

ADMINISTRATION DEPARTMENT (Continued)

Code	Division	Branch	Section
ADMOG	Messes	Officers Mess-Closed	Galley
ADMOP	"	" "	Pantry/Veg. Prod.
ADMOR	"	" "	Provisions & Repl.
ADMOW	"	" "	Wardroom
ADMOT	"	" "	Caterer
ADMOY	"	" "	Scullery
ADMQ	"	" "	BOQ Supervision
ADMQD	"	" "	Front Desk
ADMQL	"	" "	Linen Issue
ADMQO	"	" "	Outside Detail
ADMQS	"	" "	Staterooms
ADMQT	"	" "	CO's Steward
ADR	Special Services		
ADRA	" "	Admin.	
ADRB	" "	Bowling	
ADRF	" "	Golf	
ADRG	" "	Gym/Athletics	
ADRC	" "	Finance	
ADRH	" "	Hobby Shops	
ADRHA	" "	" "	Auto Hobby Shop
ADRHC	" "	" "	Ceramic Hobby Shop
ADRHE	" "	" "	Electronic Hobby Shop
ADRHW	" "	" "	Wood Hobby Shop
ADRM	" "	Movie Theatre	
ADRL	" "	Library	
ADRN	" "	Grounds/Outside Detail	
ADRP	" "	Physical Fitness	
ADRR	" "	Recreation Center	
ADRS	" "	Stables	
ADRT	" "	Retail Sales	
ADRW	" "	Water Rec/Pools	
ADRWE	" "	Pool-Enlisted	
ADRWM	" "	Marina	
ADRWO	" "	Pool-Officer	

AIRCRAFT MAINTENANCE DEPARTMENT (AM)

Code	Division	Branch	Section
AMA	Administrative		
AMAD	"	Data Analysis	
AMC	Maint. Control		
AMDA	Data Analysis		
AMM	Material Control		
AMMA	" "	Administrative	
AMMM	" "	GSE Material	
AMMS	" "	Screening	
AMMT	" "	Tool Room	
AMQ	Quality Control		
AMQI	" "	Inspection	
AMQP	" "	Technical Pubs	
AMF	Air Frames		
AMFH	" "	Hydraulic Shop	
AMFL	" "	Metal Shop	
AMFW	" "	Welding Shop	
AMFM	" "	Machine Shop	
AMFN	" "	Non Destructive Test	
AMFP	" "	Paint Shop	
AMFS	" "	Structure Shop	
AMFT	" "	Tire Shop	
AMP	Power Plants		
AMPB	" "	Engine Buildup	
AMP57	" "	J-57 Shop	
AMP79	" "	J-79 Shop	
AMPC	" "	Test Cell	
AMPL	" "	Cleaning Shop	
AMPR	" "	Component Repair	
AMPT	" "	Tool Shop	
AMV	Avionics		
AMV1	"	Electrical	
AMV1B	"	"	Battery Shop
AMV1B1	"	"	Battery, Lead/Acid
AMV1B2	"	"	Battery, Nd/Cd
AMV1C	"	"	Electrical Compon. Repair

AIRCRAFT MAINTENANCE DEPARTMENT (Continued)

Code	Division	Branch	Section
AMV2	Avionics	Electronics	
AMV2N	"	"	Night Check
AMV2R	"	"	Comm Nav Equip Repair
AMV3	"	Calibration Lab.	
AMVE	"	Test & Calibration	
AMVG	"	"	Cart Maint/QC Shop
AMVES	"	"	Support Equipment Shop
AMVET	"	"	Test Equipment Shop
AMVF	"	Fire Control	
AMVX	"	Electrical/Instruments Shop	
AME	Aviators Equipment		
AMER	"	"	Regulator Shop
AMEP	"	"	Paraloft Br.
AMEF	"	"	Flotation Shop
AMEO	"	"	Liquid O_2/N_2 Shop
AMS	Support Equipment		
AMSC	"	"	Air Compressor
AMSH	"	"	Hydraulic Br.
AMSS	"	"	Structures
AMSG	"	"	GTC85/100 Maint.
AMSQ	"	"	GSE Instr & Qual
AMW	Armament Equipment		

AIR OPERATIONS DEPARTMENT (AO)

Code	Division	Branch	Section
AOA	Administration		
AODC	Disaster Control		
AODO	Duty Officer		
AOE	Gnd. Electronics Maint.		
AOEM	" " "	General Maintenance	
APEG	" " "	GCA Maintenance	
AOEA	" " "	Air Nav Aids Maint.	
AOF	Fire Division		
AOFA	" "	Administration	
AOFC	" "	Crash/Fire	
AOFCO	" "	Crash/Fire	Outlying Field
AOFCW	" "	Crash/Fire	Wheel Watch
AOFF	" "	Crash & Struct. Fire (Combined Operation)	
AOFM	" "	Vehicle Maint.	
AOFS	" "	Structural Fire	
AOM	Ops Maintenance		
AOMA	" "	Administration	
AOMC	" "	Maint. Control	
AOMD	" "	Data Analysis	
AOMQ	" "	Quality Control	
AOMM	" "	Material Control	
AOML	" "	Aircraft Branch	
AOMLP	" "	" "	Transports
AOMLS	" "	" "	SAR Maintenance
AOMLT	" "	" "	Line-Transient
AOMLV	" "	" "	Avionics
AOMS	" "	Ground Support Equip.	
AOMV	" "	Aviator Equipment	
AOP	Photographic		
AOR	Search & Rescue		
AORC	" "	SAR Air Crews	
AOS	Flight Support		
AOSS	" "	Scheduling	
AOSF	" "	Flt Records & Reports	
AOSG	" "	Arresting Gear	
AOSR	" "	Search & Rescue	
AOST	" "	Log. Support & CRT	

AIR OPERATIONS DEPARTMENT (Continued)

Code	Division	Branch	Section
AOT	Air Traffic Control		
AOTG	" " "	GCA	
AOTR	" " "	RATCC	
AOTT	" " "	Tower	
AOTTC	" " "	Flt. Plan/Clear	
AOTTO	" " "	OLF/ALF Tower	
AOW	Weapons		
AOY	Port Services		
AOYC	" "	Shipping Control	
AOYS	" "	Deep Sea Survival	
AOYU	" "	Utility Boats	
AOYY	" "	Yawls	

COMMAND AND SPECIAL STAFF (C-)

Code	Division/ Special Staff	Branch	Section
C-CO	Command (includes CO, XO, and secretarial support)		
C-CH	Chaplain		
C-CE	Civil Engineer		
C-LE	Judge Advocate		
C-LEA	" "	Legal Assist.	
C-LED	" "	Administration	
C-LEI	" "	Investigations	
C-LEJ	" "	Mil. Justice	
C-MA	Mgmt. Assistance		
C-MAA	" "	Mgmt. Analysis	
C-MAM	" "	Manpower Mgmt.	
C-MAP	" "	Plans & Programs	
C-AA	Chief MAA		
C-DL	Discipline		
C-DLM	"	Master-at-Arms	
C-BK	Barrack (When not organized under Admin. Dept.)		
C-BKW	"	Waves	
C-SP	Shore Patrol		
C-OD	Officer of Day		
C-OOD	Officer of Deck		
C-PA	Public Affairs		
C-S	Safety		
C-SA	"	Aviation Safety	
C-SG	"	Ground Safety	
C-SGD	"	Ground Safety	Driver Training
C-BG	Brig		
C-BGS	"	Supervision	
C-BGG	"	Guards	
C-FM	Facility Mgmt.		
C-FMS	" "	Maint. & Service	
C-FMP	" "	Planning	
C-FMT	" "	Transportation	

CIVILIAN MANPOWER MANAGEMENT (CP)
(Civilian Personnel)

Code	Division	Branch
CPE	Employment/Employee Rel.	
CPEM	" " "	Employment
CPER	" " "	Employee Rel.
CPT	Training	
CPW	Wage & Classification	

COMMISSARY (CY)

*CYA	Accounting	
*CYAF	"	Fiscal
*CYAR	"	Records & Returns
*CYS	Sales	
*CYSC	"	Check Out
*CYSG	"	General Sales
*CYSM	"	Meat
*CYSP	"	Produce
*CYC	Control	
*CYCP	"	Procurement
*CYSC	"	Stock Records
*CYM	Material	
*CYMR	"	Receiving
*CYMS	"	Storage
*CYMT	"	Transportation

*These codes reflect the organization described in NAVSUP PUB I, Vol. I (Chap. IB, Paragraph 11070)

COMMUNICATIONS DEPARTMENT (CM)

Code	Division	Branch
CMA	Autodin	
CMF	Facilities	
CMM	Maintenance	
CMR	RPS Division	
CMT	Traffic	

DATA PROCESSING DEPARTMENT (DP)

DPA	Admin. & Planning	
DPAP	" "	Mgmt. Planning
DPAQ	" "	Quality Control
DPD	Systems Design & Prog.	
DPO	DP Operations	Computer
DPOA	" "	Key Punch
DPOK	" "	

DENTAL DEPARTMENT (DE)

DEA	Administrative	
DES	Dental Services	
DESO	" "	Operative
DESP	" "	Prosthetics
DESH	" "	Dental Hygiene
DESX	" "	X-ray

COMPTROLLER DEPARTMENT (CR)

Code	Division	Branch	Section
CR1	Spl Asst - Mgmt Assist		
CR2	Spl Asst - Internal Review		
CR3	Spl Asst - Fin'l & ADP Sys		
CRA	Accounting		
CRAC	"	Cost & Rpts.	
CRACE	"	Cost & Rpts.	Cost
CRAI	"	Inv. & Plant Acc't	
CRAII	"	" "	Inventory
CRAIP	"	" "	Plant Account
CRAM	"	Resource Mgmt.	
CRAMA	"	" "	Section A
CRAMB	"	" "	Section B
CRAN	"	NIF Acctg.	
CRANC	"	"	Cost Acctg.
CRANG	"	"	General Acctg.
CRAP	"	Payroll & Timekpg.	
CRAPP	"	" "	Payroll
CRAPPA	"	" "	Unit A
CRAPPB	"	" "	Unit B
CRAPPC	"	" "	Unit C
CRAPR	"	" "	Personnel & Retire.
CRAR	"	Resources Acctg.	
CRARA	"	" "	Resources Mgmt.
CRAS	"	Stores Return	
CRB	Budget & Prog. Anal.		
CRD	Disbursing		
CRDF	"	Fiscal	
CRDP	"	Pay Records	
CRDPE	"	" "	Enlisted Accounts
CRDPO	"	" "	Officer Accounts
CRDPM	"	" "	Marine Off & Cadets
CRDPS	"	" "	Separation
CRDR	"	Records	
CRDT	"	Travel	
CRDV	"	Public Voucher	
CRDVC	"	" "	Claims
CRDVT	"	" "	Transportation

MEDICAL DEPARTMENT (ME)

Code	Division	Branch	Section
MEA	Administration		
MEAP	"	Med. Property & Supply	
MEAR	"	Personnel & Records	
MEC	Clinical/Gen. Med.		
MECE	" "	Eye, Ear, Nose & Throat	
MECI	" "	In patient	
MECO	" "	Out patient	
MECD	" "	Dependents Clinic	
MECM	" "	Mil. Sick Call/Ward	
MECN	" "	Nursing	
MECL	" "	Clinical Labs	
MECP	" "	Pharmacy	
MECR	" "	Radiography	
MECS	" "	Surgery	
MEO	Occup. Health & Pre. Med.		
MEOH	" "	Occup. Health	
MEOP	" "	Prev. Med.	
MEOS	" "	Sanitation	
MEV	Aviation Medicine		
MEVP	" "	Aviation Physiology	

PUBLIC WORKS DEPARTMENT (PW)

Code	Division	Branch	Section
PWH	Housing Office		
PWHF	" "	Furniture Warehouse	
PWA	Administration		
PWAF	"	Finance & Budget	
PWAI	"	Inventory	
PWAO	"	Office Services	
PWAR	"	Reports	
PWAS	"	Statistics & Serv.	
PWAT	"	Telephone	
PWAP	"	Personnel	
PWAM	"	Management Analysis	
PWB	SeaBee		
PWC	Maintenance Control		
PWCL	" "	Inspection	
PWCP	" "	Planning & Estimating	
PWCW	" "	Work Reception & Control	
PWCZ	" "	Contracts	
PWCZA	" "	"	Contract Administration
PWCZM	" "	"	Maintenance
PWCZC	" "	"	Construction
PWCZE	" "	"	Arch.-Engr.
PWE	Engineering		
PWEC	"	Civil	
PWEM	"	Mechanical	
PWEE	"	Electrical	
PWEG	"	Engineering Support	
PWEA	"	Architectural & Struct.	
PWEP	"	Plans & Specifications	
PWEF	"	Facility Planning	
PWM	Maintenance		
	"		
PWMB	"	Building Trades	
PWMBC	"	" "	Carpenter Shop
PWMBP	"	" "	Paint Shop
PWMBW	"	" "	Wharf Building
PWMBM	"	" "	Masonry & Paving

PUBLIC WORKS DEPARTMENT (Continued)

Code	Division	Branch	Section
PWMM	Maintenance	Metal Trades	
PWMMM	"	" "	Machine
PWMMS	"	" "	Sheet Metal
PWMMP	"	" "	Plumbing
PWMG	Maintenance	Janitorial & Grounds	
PWMGR	"	" "	Refuse Disp. & Pest Cont.
PWMGG	"	" "	Grounds & Structures
PWMGJ	"	" "	Janitorial
PWMGT	"	" "	Trouble/Emerg. Services
PWME	Maintenance	Electrical Trades	
PWMEC	"	" "	Communication & Alarms
PWMER	"	" "	Refrig. & Air Cond.
PWML	Maintenance	Labor & Janitorial	
PWMLI	"	" "	Improved Grounds
PWMLJ	"	" "	Janitorial
PWMLR	"	" "	Railroad Maint.
PWT	Transportation		
PWTM	"	Maintenance	
PWTMA	"	"	Auto. Repair
PWTMG	"	"	Mat. Hand. Repair
PWTMH	"	"	Equipment Repair
PWTMS	"	"	Special Repair
PWTO	Transportation	Operations & Dispatch	
PWTOA	"	" "	Ops-Auto
PWTOH	"	" "	Ops-Heavy Equip.
PWTOL	"	" "	License Bureau
PWTOM	"	" "	Ops-Motor Pool
PWTOS	"	" "	Ops-Bus Runs
PWU	Utilities		
PWUG	"	Generation & Distrib.	
PWUW	"	Water & Sewage	

SECURITY DEPARTMENT (SE)

Code	Division	Branch	Section
SEA	Administration		
SEAP	"	Pass, Tags & ID	
SED	Disaster Control		
SEF	Fire	(Note: Fire Division normally organized under Operations or Air Operations Dept.)	
SEFA	"	Admin	
SEFC	"	Crash/Fire	
SEFCM	"	"	Maintenance
SEFS	"	Structural Fire	
SEI	Investigation		
SEP	Police		
SEPS	"	Shore Patrol	
SEPB	"	Brig/Confinement	
SEPI	"	Investigator	
SEPN	"	Internal Security	
SEPP	"	Perimeter Security	
SEPR	"	Roving Patrol	
SES	Shore Patrol		

SUPPLY/COMPTROLLER DEPARTMENT (SU/CR)

SU/CRA	Accounting	*	*
SU/CRB	Budget Prog. & Anal.	*	*
SU/CRD	Disbursing	*	*

*Use Comptroller Department Codes for further detail.

SUPPLY DEPARTMENT (SU)

Code	Division	Branch	Section
*SUA	Administration		
*SUAB	"	Budget & Statistics	
*SUAD	"	Systems & Procedures	
*SUAE	"	Mgmt. Engineering	
*SUAM	"	Mgmt. Planning	
*SUAP	"	Planning	
*SUAS	"	Services	
*SUASG	"	"	General Files & Corr.
*SUASO	"	"	Offices Service
*SUL	Planning		
SUP	Purchase		
*SUS	Staff Services		
*SUSA	" "	Admin. & Planning	
*SUSI	" "	Inventory	
SUSD	" "	Data Services	
*SUT	Technical		
*SUI	Inventory		
*SUIA	"	Audit	
SUIAR	"	"	Regular Inventory
SUIAS	"	"	Special Inventory
*SUIC	"	Count	
SUICR	"	"	Regular Count
SUICS	"	"	Special Count
SUIP	"	Plant Account	
*SUZ	Supply Services		
*SUZC	" "	Stock Control	
SUZCM	" "	" "	Purchase Material
SUZCR	" "	" "	Receipt Control
SUZCP	" "	" "	Plant Account
SUZCD	" "	" "	Data Services

*These codes reflect organization described in NAVSUP Pub I (Chapter 1B, Paragraph 11065).

SUPPLY DEPARTMENT (Continued)

Code	Division	Branch	Section
*SUZF	Supply Services	Fuel	
SUZFG	" "	"	Liquid Gases
SUZL	" "	Liaison	
*SUZP	" "	Purchase	
*SUZR	" "	Retail Clothing	
SUZR&F	" "	Clothing & Flt. Gear	
*SUZS	" "	Storage	Flight Gear Issue
[illegible]	" "	"	Servmart
SUZSM	" "	"	Retail Clothing
SUZSX	" "	"	Pre-Expended Bins
*SUZT	" "	Transportation	
SUZV	Supply Services	Supply Support Center	
**SUZVC	" "	" " "	Component Control
**SUZVR	" "	" " "	Supply Response
**SUZVS	" "	" " "	Supply Screening
SUZVX	" "	" " "	Pre-Expended Bin
*SUC	Control		
*SUCI	Control	Issue Control	
SUCIB	"	" "	Stub Requist. Coord.
SUCIC	"	" "	Commodity Mgmt Sec. A
SUCICA	"	" "	" " " B
SUCICB	"	" "	" " " C
SUCICC	"	" "	" " " D
SUCID	"	" "	Document Editing
*SUCII	"	" "	Issue
SUCIO	"	" "	Off-Sta. Processing
*SUCIS	"	" "	Special Program
SUCIV	"	" "	Services Unit
SUCM	Control	Program Management	
SUCMF	"	" "	Fleet Prog. Mgr.
SUCMI	"	" "	Indust. Prog. Mgr.
SUCP	Control	Purchase	
SUCPB	"	"	Buying & Order
SUCPC	"	"	Contract Admin.
SUCPP	"	"	Purchase Service

*These codes reflect organization described in NAVSUP Pub I (Chapter 1B, Paragraph 11065).

**These codes reflect organization described in the Naval Aviation Maintenance and Material Management (3-M) Manual, Paragraph 42103.

SUPPLY DEPARTMENT (Continued)

Code	Division	Branch	Section
*SUCR	Control	Receipt Control	
*SUCRL	"	" "	R. C. Liaison
*SUCRN	"	" "	Naval Material
SUCRI	"	" "	Insp. at Source & OSO
SUCRD	"	" "	Insp. at Destination
SUCRO	"	" "	OSO Unit
SUCRS	"	" "	Summary Unit
*SUCRP	Control	Receipt Control	Purchase Material
SUCRPG	"	" "	GSA & SDCP Unit
SUCRPL	"	" "	Local Purchase Unit
SUCRX	"	" "	NORS Expediting
*SUCS	Control	Stock Control	
*SUCS1	"	" "	Stock Records-Section 1
*SUCS9	"	" "	Stock Records-Section 9
SUCSD	"	" "	Doc. & Data Control
*SUCSF	"	" "	Financial Invent. Contr.
SUCSFC	"	" "	Invest. & Correction Unit
SUCSFL	"	" "	Ledger Control Unit
*SUCSM	"	" "	Machine Records
*SUCSR	"	" "	Stock Reporting
SUCST	"	" "	Technical Data
*SUD	Disposal		
*SUDE	"	Excess Material	
*SUDM	"	Merchandising	
*SUDR	"	Recording & Reporting	
*SUF	Food Service		
SUFA	" "	Administration	
SUFP	" "	Food Prep. & Serving	
SUFB	" "	Butcher Shop	
SUFK	" "	Bakery Shop	
SUFM	" "	Master at Arms	
SUFMM	" "	Messmen	
SUFMS	" "	Scullery	
SUSF	" "	Provisions	

*These codes reflect the organization described in NAVSUP Pub I (Chapter 1B, Paragraph 11065).

SUPPLY DEPARTMENT (Continued)

Code	Division	Branch	Section
*SUM	Material		
*SUMC	"	Retail Clothing Store	
*SUMF	"	Fuel	
SUMFA	"	"	Acft Fuel Delivery
SUMFL	"	"	Liquid Gases
*SUML	Material	Labor & Equipment	
*SUMLB	"	" "	Bldg. Services
*SUMLE	"	" "	Equipment
*SUMLL	"	" "	Labor
SUMM	Material	Servmart	
*SUMP	Material	Shop Stores	
SUMP20	"	" "	Shop Store #20
SUMP30	"	" "	Shop Store #30
SUMP40	"	" "	Shop Store #40
SUMPV	"	" "	Servmart
*SUMS	Material	Storage	
*SUMSI	"	"	Screening & Ident.
*SUMSS	"	"	Stores Sections
*SUMT	Material	Traffic	
*SUMTD	"	"	Delivery
*SMUTH	"	"	Household Goods
*SUMTI	"	"	Material Inspection
*SUMTP	"	"	Packing & Preservat.
*SUMTR	"	"	Receiving
*SUMTS	"	"	Shipping
SUV	Aviation Support		
**SUVC	" "	Component Control	
SUVP	" "	Special Projects	
**SUVR	" "	Supply Response	
**SUVS	" "	Supply Screening	
SUVX	" "	Pre-Expended Bins	

*These codes reflect the organization described in NAVSUP Pub I (Chapter iB, Paragraph 11065).

**These codes reflect organization described in the Naval Aviation Maintenance and Material Management (3-M) Manual, Paragraph 42103.

TRAINING DEPARTMENT (TR)

Code	Division	Branch	Section
TRA	Administration		
TRAB	"	Book Issue	
TRI	Academics		
TRIC	"	Code Instruction	
TRL	Leadership Tra.*		
TRT	Training Aids		
TRTC	" "	Cockpit Trnr	
TRTF	" "	Film Library	
TRTG	" "	Graphic Arts	
TRTM	" "	Maintenance	
TRTS	" "	Synthetic Trainers	
TRTT	" "	Material	

*Includes Retention and Career Counseling.

WEAPONS DEPARTMENT (WE)

Code	Division	Branch	Section
WEA	Admin/Technical		
WED	Production		
WEM	Magazine/Explosives		
WEMG	" "	Magazines	
WEME	" "	Explosive Handling	
WER	Armament Ranges		
WERA	" "	Admin/Technical	
WERB	" "	Bombing	
WERR	" "	Armory	
WERS	" "	Small Arms	
WERM	" "	Material/Stock Control	
WERL	" "	Missile	
WEO	Air Ordnance		
WEP	Planning		
WEPC	"	Production Control	
WEPM	"	Material	
WEPS	"	CADS	
WEPO	"	EOD/SW	
WEQ	Quality Assurance		
WEU	Advanced Underwater Wep.		
WEUM	" " "	Mobile Assembly	
WES	Storage & Handling		
WESE	" "	Equipment	

U. S. NAVY SHORE MANNING DOCUMENTATION PROGRAM

Revised

SHORE MANNING DOCUMENT

for

NAS SAUFLEY FIELD

2 March 1970

This document eliminates any further manpower requirements from being provided to the station from tenant VT-Squadrons for the Intermediate Maintenance, Supply and Messman functions.

Applicable

_____ Echelon 1 - Chief of Naval Operations

_____ Echelon 2 - Chief of Naval Air Training

_____ Echelon 3 - Chief of Naval Air Basic Training

__X__ Echelon 4 - Commanding Officer, NAS Saufley

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DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, D.C. 20350

IN REPLY REFER TO
OP-102C7/vld
Ser 12461P10
22 JUN 1970

From: Chief of Naval Operations
To: Distribution List

Subj: Shore Manning Document (SHMD) for NAS Saufley Field; promulgation of

Ref: (a) OPNAVINST 1000.16A of 3 February 1969

Encl: (1) SHMD for NAS Saufley Field

1. The Chief of Naval Operations is engaged in developing manning documents for naval shore activities. These documents are called Shore Manning Documents (SHMDs) and apply operational analysis techniques to quantitative basic manning criteria in order to determine minimum manpower requirements.

2. A manpower survey of NAS Saufley Field was conducted from September 1968 through December 1968 employing work measurement and objective evaluation techniques of operational analysis. Based on the results of the survey and on information submitted during the review cycle through February 1970, minimum manpower requirements have been determined for a pilot training rate (PTR) of 2525. These requirements are presented in enclosure (1) for NAS Saufley Field.

3. A computer modeling technique is being tested which will provide the capability to modify the manpower requirements of NAS Saufley to meet varying pilot training rates. The model is based on PTR increments of 250 with a range of 2000-4000. It is anticipated that the model will be operational by 15 July 1970.

4. Manning as shown in the SHMD is termed Organizational Manning and is the delineation by individual military billet and civilian position of the minimum quantitative and qualitative manpower requirements essential to full mission performance of NAS Saufley Field at the time of the survey. The mixture of military billets and civilian positions is considered optimum. Organizational Manning is implemented when the Manpower Authorization (OPNAV Form 1000/2) and the civilian ceiling of NAS Saufley Field are revised to reflect the manning delineated in the SHMD.

OP-102C7/vld
Ser 12461P10

5. Under circumstances where resources are not sufficient to implement Organizational Manning, Conditional Manning will be effected. Generally, this will occur when insufficient manpower resources are authorized by the Secretary of Defense or when the number of on-board personnel falls below the activity's authorized level. Under Conditional Manning it will be incumbent upon the chain of command to reprogram available resources or to reduce or delete tasks and functions.

6. The SIMD provides Navy managers at all levels with a basis for controlling manpower resources. All future requests for military manpower changes submitted in accordance with reference (a) must be substantiated by data in the SIMD format. The methodology used in developing the SIMD meets the requirements imposed by the Bureau of the Budget for effective justification of manpower requirements and future civilian ceiling changes should also be based on enclosure (1).

B. H. SHUPPER
By direction

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FOREWORD

1. The Shore Manning Document (SHMD) for NAS Saufley Field delineates the minimum qualitative/quantitative naval personnel requirements to effectively carry out the assigned mission and tasks based upon existing facilities and organization within CNABATRA.

2. The manpower requirements stated herein are operational requirements and reflect the constraints contained in the documents indicated in Section V. These requirements are based on.

a. The Mission and Task Statement (Section I).

b. The Operational Analysis and Work Sampling of NAS Saufley Field.

c. Basic manning criteria for watch requirements.

d. Minimum manpower requirements for the accomplishment of the workload as defined in the Operational Capabilities and the Mission and Task statements.

e. Standard Navy work week ashore of 40 hours for both military and civilian personnel and associated standard allowances (Section IV) except for firefighters (up to 72 hours work week).

f. A CNATRA annual pilot training rate of 2525 pilots.

TABLE OF CONTENTS

		Page
Foreword		ii
SECTION		
I.	MISSION AND TASKS	1
II.	OPERATIONAL CAPABILITIES	3
III.	DEFINITIONS OF TERMS	5
IV.	STANDARD WORK WEEK ASHORE	10
V.	DOCTRINAL CONSTRAINTS	12
VI.	SUMMARY OF MANNING REQUIREMENTS	13
VII.	OFFICER BILLET SUMMARY	14
VIII.	ENLISTED BILLET SUMMARY	16
IX.	CIVILIAN BILLET SUMMARY	17
X.	STATION CHARACTERISTICS	19
APPENDIX A - ORGANIZATION CHARTS		A-1
APPENDIX B - MANPOWER REQUIREMENTS		
	Command and Special Staff	B-1
	Administration Department	B-4
	Supply/Comptroller	B-17
	Medical Department	B-25
	Dental Department	B-29
	Training Department	B-30
	Air Operations Department	B-32
	Aircraft Maintenance Department	B-34
	Security Department	B-43

I. MISSION AND TASKS

A. MISSION. To provide basic (primary stage) training to student naval aviators. To maintain and operate facilities and provide services and material to support operations of aviation activities and units of the Naval Air Training Command and other activities and units, as designated by the Chief of Naval Operations.

B. TASKS.

1. Develop, schedule and administer CNABATRA Basic Academic Training for student naval aviators.

2. Operate and maintain airfield facilities and provide services to support station, tenant, and transient aircraft.

3. Provide search and rescue, special air logistics support and administrative aircraft and services as required.

4. Maintain and operate ALF Barin Field and provide operational support to outlying fields.

5. Operate as a satellite of NAS Pensacola under the Refined Aeronautical Support Program (RASP).

6. Provide maintenance on supported aircraft and associated support equipment at authorized levels of maintenance.

7. Provide protection for the station from unlawful entry, sabotage, espionage, theft, or other covert acts.

8. Provide material support to station departments, tenants, and assigned activities, by procurement, receipt, storage, issue, and disposal of materials and equipment.

9. Establish, coordinate, and maintain an integrated financial management program which provides to top management factual and analytical data essential for effective management control of station operations.

10. Provide general administrative and office services for the command.

11. Render medical and dental services to assigned personnel, their dependents and to civilian employees.

12. Provide logistic support and housekeeping functions for assigned personnel.

13. Provide such other services as may be designated by proper authority.

II. OPERATIONAL CAPABILITIES

Within the parameters of the Mission and Tasks for the U. S. Naval Air Station, Saufley Field, Pensacola, Florida the following operational capabilities are identified:

1. Develop, schedule and administer the CNABATRA basic academic training program for a student load of 2900 to 3200 per annum.

2. Provide air operational support or assigned training squadrons and contiguous transient aircraft on a 24 hour basis. Recover aircraft under instrument flight rules by non-directional beacon/automatic direction finder.

3. Provide intermediate aircraft maintenance to support two (2) operating training squadrons comprised of one-hundred forty (140) T-34 type aircraft, and thirty-five (35) T-28 type aircraft. Additionally provide intermediate maintenance support for three station administrative aircraft, one UC-45 and two T-28's.

4. Provide intermediate maintenance support for naval aviation ground support equipment required by the station and two operating training squadrons.

5. Provide logistic/material support in terms of administrative, messing, berthing, parts/equipment procurement, financial, religious, and recreational services to the station and supported tenant squadrons.

6. Provide messing facilities in support of two separate messing requirements.

   a. Officer and Student Messing: 250 meals per sitting

   b. Enlisted Messing: 300 meals per sitting

7. Provide berthing facilities and services in support of two separate berthing requirements.

a. Officer and Student Berthing: 6 senior officer quarters, 440 officer and officer student quarters and 320 aviation officer candidate quarters.

b. Enlisted Berthing: 470 Station Personnel

220 Squadron Personnel

8. Provide medical and dental services to approximately 1400 military personnel on a 24 hours basis. Provide out-patient services for approximately 250 military dependents weekly and 250 civilian employees. Provide Ambulance Service for hospital patients and to outlying fields.

9. Provide fire protection for the station and tenant activities. In addition, provide Crash/Fire services for the two operating training squadrons during operational training flights at Saufley Field and outlying supported fields. Provide Crash/Fire services for transient aircraft utilizing Saufley Field runways.

10. Provide physical protection to the station from unlawful entry, sabotage and other covert acts.

11. Provide support to emergency and local disaster control situations.

III. DEFINITION OF TERMS

ALLOWANCE. The quantitative and qualitative naval billets authorized for an activity to carry out its mission and tasks in peacetime.

BILLET. A group of duties, tasks, and responsibilities to be performed by military or civilian personnel.

"G" BILLET. An enlisted billet of a general nature which does not require a particular rating technical skill, but has been established to utilize the military skill of petty officers for the purpose of improving sea/shore rotation for specific ratings.

BILLET TITLE. A position title or a specific billet. All officer and enlisted billets in shore activities show titles. Organizational titles and position titles conform to the organization structure approved by the cognizant command, bureau, or office.

COLLATERAL DUTY. Duty to which an individual is assigned by his commanding officer which is in addition to his primary duty. These duties are always performed at the individual's permanent duty station.

DESIGNATORS. Groups officers and billets by categories for personnel accounting and administrative purposes and identifies status of officers.

DUTY. Duty is a group of closely related tasks which constitute the largest subdivision of a billet (job).

ELEMENT. Element is one of a series of specific work steps or single actions performed in accomplishing a task.

MANNING REQUIREMENTS. Manning requirements are the qualitative/quantitative naval personnel needs of a shore activity to effectively perform all designed missions and functions (unit fully combat ready). Manning requirements include operational manning, maintenance manning, and administrative/support manning.

OPERATIONAL MANNING. The qualitative/quantitative personnel needs to man stations prescribed during the governing condition of readiness. For CNATRA stations the governing condition of readiness is peacetime since that condition requires the greatest employment of manpower to satisfactorily accomplish the training mission at a specified level.

MAINTENANCE MANNING. The qualitative/quantitative personnel needs to perform preventive, corrective and facility maintenance on the station and its installed systems and equipments.

ADMINISTRATIVE/SUPPORT MANNING. The qualitative/quantitative personnel needs to support the workload associated with support of attached personnel and station equipments such as administrative, hygienic, resupply, food service, military duties, drills and evolutions, as normally performed by Supply Department personnel and station clerical personnel, medical, and postal ratings.

MINIMUM MANPOWER REQUIREMENT. The minimum manpower, both quantitatively and qualitatively, required by a command to effectively carry out its mission and tasks.

NAVAL ENLISTED CLASSIFICATION. System of identifying and describing specific skills, aptitudes, and experience of naval enlisted personnel and billets.

NAVAL OFFICER CODE (NOC). System of identifying and describing specific skills, aptitudes, and experience of naval officers and billets.

NORMAL PRODUCTIVITY. The output of an average worker, possessing average skills and qualifications, expending average effort under average working conditions.

OPERATING DEPARTMENT (LINE). Performs a specialized function of the basic mission of the activity; normally contribute directly to the fulfillment of the broad objectives of the activity, and are dependent upon the staff departments for specialized advice or services.

PRIMARY FUNCTION. Function that must be performed to achieve the mission or objective of the command.

RESPONSIBILITY. The requirement that an individual be accountable for the performance of functions.

SPAN OF CONTROL. A concept of the scope of supervision required to provide effective management, subject to such variants as the number and kind of personnel reporting directly to a supervisor, the type of supervision required, the kind of work they do, the distance at which they do it, and the effect this distance has on the reaction time required.

SPECIAL ASSISTANTS. Special Assistants comprise the immediate staff of the two top executives.

SPONSOR. A broad term covering responsibilities assigned a command, bureau, or office in support of a designated project.

STAFF DEPARTMENTS. Staff Departments render a specialized service either to the operating departments, other staff departments or to both.

TASK. A group of closely related work elements which constitute an integral step in the performance of a duty. With respect to an activity, it is a specifically assigned responsibility which relates directly to the overall mission. With respect to an individual, it is a single identifiable part of an individual's duties.

TIME

Assigned Time - Total man-hours assigned to a work area; total personnel assigned multiplied by the number of hours in the normal or regular work period (8-hour day, 40-hour week, 169-hour month, etc.)

Available Time - Total man-hours available for duty within a work area (includes borrowed time, overtime, and actual time).

Borrowed Time - Productive man-hours in work area under study by personnel on loan from another work area.

Loaned Time - Time loaned to other work areas, which in turn becomes nonavailable to the work area being studied.

Nonavailable Time - Man-hours assigned to a work area but not available to perform work. Such time includes annual leave, sick leave, administrative leave, training and orientation, and normal military duties.

Nonproductive Time - Available time which is not productive because of personal needs, rest, idleness, and delays.

Overtime - Time expended performing productive work in excess of normal duty hours.

Productive Time - The sum of direct and indirect times expended in a work area to produce the product or render the service.

WATCH MANNING - Watch manning includes Operational Watch, Military Watch and Service Watch.

Operational Watch - A watch which must be manned in order for the station to perform its primary mission (example: Control Tower watch).

Military Watch - A watch performed of a military nature such as fire watch, gate guards, roving patrols, etc.

Service Watch - A watch which performs a service to other personnel including dependents (examples: movie watch, library watch, etc).

WORK CENTER. A grouping of personnel using similar machines, processes, methods, and operations, and performing homogeneous type work, usually located in a centralized area. The term is used to identify a relatively small activity within a broad functional segment. Personnel within a work center perform work that basically contributes to the same end-product or result, and their duties are similar or closely related.

WORKLOAD. An expression of the amount of work, identified by the number of work units or volume of a workload indicator, that a work center has on hand at any given time or is responsible for performing during a specified period of time.

WORKLOAD INDICATOR. An index or unit of measure which is consistently expressive of, or relatable to, the manpower required to accomplish the quantitatively and qualitatively defined responsibilities of a work center or an end-product, or combination thereof, that is representative of the work performed in the work center. It may be either something physically produced in the work center (referred to as a production-type workload factor), or something that is external to, but served by, the work center (referred to as a work generator-type workload factor).

IV. STANDARD WORK WEEK ASHORE

MILITARY STANDARD WORK WEEK ASHORE

WHERE ACCOMPANYING DEPENDENTS ARE AUTHORIZED

(Normal 5 Day Work Week)
Watch in Four

	Average Per Week
Leave Allowance	3.20 hours
Quarters	1.25 hours
Service Diversions	2.50 hours
Training	3.75 hours
Total Non-Available Time	10.70 hours
Work Balance Available for support, watches, maintenance, utilities tasks and administrative work	29.30 hours
TOTAL	40.00 hours

CIVILIAN STANDARD WORK WEEK ASHORE

(Normal 5 Day Work Week)

	Average Per Week
Leave and Absence Allowance*	6.16 hours
Training Allowance	.20 hours
Total Non-Available Time	6.36 hours
Work Balance Available for maintenance, administrative, operational, and support work	33.64 hours
TOTAL	40.00 hours

*Includes annual leave, sick leave, and other leave and absences which consists of all paid and unpaid absences not included in the annual and sick leave categories, such as jury duty, military leave, absence without leave, leave without pay, snow, fire drills, blood donations, chest X-rays, voting, etc.

Fractional Manpower

Work centers which have workloads that compute to other than whole man requirements pose a fractional manning problem when the fractional manpower requirement cannot be combined with other fractional requirements within the same functional or organizational areas. One approach used in the past was to select the 0.5 manpower requirement point; any workload that earned at least one half of a person when computed against the criteria or standard was awarded the next whole number without regard to work center size. Those that earned less than one-half person did not get the extra position. This was both unfair to the small work centers and was expensive to the Navy from an over-all manning standpoint. As a more equitable and realistic approach to this problem, earned man-hour cutoff points are now established on the basis of the maximum desirable and/or permissible work overload per individual in the work center. Normally no overload is imposed on civilians. For military personnel a maximum individual overload is established at 10% of the average work week. This equates to a maximum of 4 hours a week overtime for individuals in work centers allowed less than 11 billets. As the number of billets increases above 10, a decrease in the maximum overload will result for each billet allowed. For example, when a work center is allowed 20 billets, the 10% overload factor equates to a maximum of 2.0 hours overtime per week for each individual.

Table 1 reflects the fractional manpower cutoff points that coincide with whole-man authorizations. For work centers allowed 10 or more, the cutoff point for any interval is the number of people allowed plus 0.99. For example, the cutoff point for a workload interval authorizing 15 people is 15.99.

TABLE 1

Fractional Manpower Cutoffs (using a 10% overload Factor)

Fractional Manpower Requirement	To 1.10	1.11 to 2.20	2.21 to 3.30	3.31 to 4.40	4.41 to 5.50	5.51 to 6.60	6.61 to 7.70	7.71 to 8.80
Billets Allowed	1	2	3	4	5	6	7	8

Fractional Manpower Requirement	8.81 to 9.90	9.91 to 10.99	11.00 to 11.99	12.00 to 12.99
Billets Allowed	9	10	11	12

V. DOCTRINAL CONSTRAINTS

1. Aircraft Maintenance Department Technical Information Maintenance Instruction No. T-28-66. "Aircraft Maintenance Department Organization Manual".

2. AMD Analysis Section undated Memo, "Established Work Standards for AMD".

3. CNO ltr Ser 12444P10 of 27 May 68, "Prototype Shore Manning Document, Development for NAAS Saufley Field".

4. VCNO Memo OP-100/mg Ser 10528P10 of 22 March 1968, "Navy Standard Work Week for Enlisted Personnel Ashore".

5. Director of Civilian Manpower Management (Department of the Navy) ltr OCCM 052.5:hmp of 13 Dec 68, "Navy Standard Work Week for Civilian Personnel"

6. Saufley Field Instruction 5452.1H of 16 Jan 64 (through Change #7 of 6 Oct 65), "Organization of NAAS, Saufley Field".

7. Naval Aviation Maintenance and Material Management Manual, 1 Oct 67.

8. NAVAIRINST 4700.2, "The Naval Aircraft Maintenance Program".

9. Manual of Navy Enlisted Classifications (NAVPERS 15105 series).

10. Manual of Qualifications for Advancement in Rating (NAVPERS 18068B).

11. Manual of Naval Officer Classifications (NAVPERS 15839B).

12. Navy Civilian Personnel Instructions Manual (NAVEXOS P-122).

13. SAUFLEY FIELD INSTRUCTION 1601.9B of 8 Dec 1967 (through Change #2 of 24 Sep 1968), "Saufley Field Watch Instruction".

14. U. S. Navy Aircraft Firefighting and Rescue Manual, NAVAIR 00-80R-14, 1 Jan 1968.

15. OPNAVINST 11320.3, 31 Aug 1968, "Fire Protection Program at Navy Shore Activities".

16. OPNAVINST 11320.11B, 1957, "Structural Firefighting Requirements for Naval Shore Activities".

17. U. S. Naval Structural Firefighting Manual, 1953, OPNAVINST 11320.15.

VI. SUMMARY OF MANNING REQUIREMENTS

1. Manning Requirements developed for NAS Saufley Field are:

Officers	Enlisted	Civilian	Total
45	488	137	670

2. Maximum Cross Utilization of personnel within divisions has been effected. General apportionment of manpower is as follows:

Officers	6.71%
Petty Officers	40.30%
Designated Strikers	25.52%
Non-rated Trainees	7.02%
Civilians	20.45%

3. Civilian Grades shown in the Manpower Requirements Section (Appendix B) are grades determined by the local Civilian Personnel Office which services the activity.

VII. OFFICER BILLET SUMMARY

Command and Staff	Design/Grade	NOBC	No. Req.
Commanding Officer	1310/CAPT	9421	1
Executive Officer	1310/CDR	9436	1
Aviation Safety Officer	1310/LCDR	2856	1
Chaplain (Catholic)	4100/LT	3701	1
Chaplain (Protestant)	4100/LT	3701	1
Staff Civil Engineer	5100/LTJG	4210	1
Administration			
Administration Officer	1310/CDR	2610	1
Personnel Officer	6200/LT	3965	1
Communications Officer	1100/LTJG	9510	1
Officer of the Day	Any Officer Desig/Grade	-	4
Supply/Comptroller			
Supply-Fiscal Officer	3100/LCDR	1918	1
Division Off/Asst Supply Off.	3100/LTJG	1918	1
Food Service Officer	7980/CWO2	1130	1
Medical			
Flight Surgeon	2100/CDR	0045	1
Medical Officer, G. P.	21/LT	0070	3
Dental			
Dental Officer	2200/LCDR	0365	1
Assistant Dental Officer	2200/LT	0335	2
Training			
Training Officer	1310/CDR	3283	1
Leadership Division Officer	1370/LCDR	3990	1
Instructor	1310/LT	3236	5
Instructor	1370/LT	3236	4
Air Operations			
Operations Officer	1310/LCDR	8668	1
ATC Division Officer	1370/LT	8647	1
Ground Electronics Officer	6400/LTJG	5977	1

OFFICER BILLET SUMMARY (Continued)

Aircraft Maintenance			
Maintenance Officer	1520/CDR	8189	1
Maintenance Control/Material Control Officer	6850/LCDR	8175	1
Data Analysis/Quality Assurance Officer	6850/LT	8189	1
Avionics/Support Equipment/Line Division Officer	6850/LT	8198	1
Power Plants/Airframes/Aviator Equipment Officer	6850/LT	8191	1
Security			
Security/Police Officer	1370/LCDR	2750	1
Crash/Fire Supervisor	1310/LT	2790	1
Asst Crash/Fire Supervisor	7600/CWO2	2790	1

VIII. ENLISTED BILLET SUMMARY

RATING	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
Petty Officer			6	7	12	2			27
Non-Rated	19	5							24
AB							1		1
ABE		7	6	8					21
ABF			1	1	1				3
ABH			3	2	2	3			10
AC				3	3	1			7
ADR		1	4	6	3	3			17
AE		2	5	3	2	1			13
AF								2	2
AM		2	6	6	4	1			19
AN							1		1
AME			1						1
AMH			1	2	1				4
AMS		3	5	4	3				15
AN/AA	7	41							48
AS					1	1			2
ASE			1						1
ASH		1	1	1					3
ASM			2						2
AT					4	1			5
ATN		2	7	3					12
AZ		2	4		1	1			8
BM			1			2		1	4
BT				2	1				3
CS			7	3	3	1	1		15
CYN		1							1
DC				1	2				3
DT/DN/DA		3	1	1		1			6
EN				2					2
EO		3							3
ET					1	1			2
ETN				2					2
FN		1							1
GMG				1					1
HM/HN/HA	1	10	7	6	2		1		27
JO			1		1				2
MM				2	1	2	1		6
MR				1					1
PH			1	1	1				3
PN		2	1	2		1	1		7
PR		1	2	2	1	1			7
RD				1					1
RM		1	3	1	1				6
SD/TN/TA	2	75	8	12	1	1	1		100
SK		1	1		3		1		6
SM					1				1
SN/SA	10	13							23
TD		1	1	1	1				4
YN		1		1	1			1	4
YC				1					1
TOTALS	39	179	87	89	58	24	8	4	488

IX. CIVILIAN BILLET SUMMARY

GS/WB Series	Billet Title	No. Req.
Special Assistants		
GS-018	General Safety Officer	1
GS-301	Secretary	1
GS-318	Chaplain's Assistant	1
GS-322	Secretary	1
GS-322	Clerk-Typist	1
GS-343	Management Assistant	1
Administration		
GS-188	Special Services Officer	1
GS-188	Golf Course Manager	1
GS-189	Retail Sales	1
GS-301	Bookkeeper/Accounting Technician	1
GS-302	Messenger/Duplication Service	1
GS-302	OOD Driver	1
GS-305	Postal Clerk	2
GS-312	Clerk-Stenographer	1
GS-322	Clerk-Typist	3
GS-301	Office Services Supervisor	1
GS-344	Management Technician	1
GS-525	Accounting Technician	1
GS-1101	COM Manager	1
GS-1411	Library Technician	1
WG-35002	Laborer	1
Supply		
GS-318	Secretary	1
GS-356	Card Punch Operator	4
GS-501	Budget Clerk	1
GS-520	Supervisor, Accts Maint Clerk	1
GS-520	Accounts Maintenance Clerk	2
GS-560	Budget Analyst	1
GS-560	Deputy Comptroller	1
GS-590	Time and Leave Clerk	1
WG-57055	Truck Driver (Heavy)	1
WG-69007	Leader Stockman	2
WG-69007	Stockman	1
WG-69007	Warehouseman/Driver	2
WG-69054	Liq. Fuels Distr. Sys. Operator	4
WG-74004	Cook	6
WG-74008	Mess Attendant	12
WS-69054	Foreman, Liq. Fuels Distr. Sys.	1
WX-54061	Inspector, Petrol. Products	1

CIVILIAN BILLET SUMMARY (Continued)

Medical

GS-322	Clerk-Typist	1
GS-610	Staff Nurse	1
GS-621	Nursing Assistant (M&S)	1

Dental

GS-682	Dental Hygienist	1

Training

GS-318	Secretary (Typing)	1
GS-322	Clerk-Typist	1

Air Operations

GS-322	Clerk-Typist	1
GS-1060	Photographer	1
GS-2040	Supply Clerk (Typist)	1
GS-2152	Air Traffic Controller	6
WG-26014	Electronics Mechanic	3
WG-26008	Radio Mechanic	2
GS-856	Electronics Technician	1

Aircraft Maintenance

None.

Security

GS-081	Fire Chief	1
GS-081	Assistant Fire Chief	2
GS-081	Driver/Operator	8
GS-081	Firefighter	8
GS-081	Firefighter/Maintenanceman	1
GS-081	Fire Captain	2
GS-081	Firefighter (Airfield)	27
GS-322	Clerk-Typist	1

IX. GENERAL STATION CHARACTERISTICS - NAS SAUFLEY FIELD

1. Four hard-surfaced runways at NAS Saufley:
   a. Runway 4/22 6035' x 200'
   b. Runway 9/27 5296' x 200'
   c. Runway 13/31 5356' x 200'
   d. Runway 18/36 5200' x 200'
2. Aids to navigation:
   a. Non-directional beacon (NOB/ADF)
   b. Visual-omni Range
3. Outlying field under the operational control of NAS Saufley:
   a. OLF Barin
4. Other outlying fields used by NAS Saufley:
   a. OLF Wolf
   b. OLF Silverhill
   c. OLF Summerdale
   d. OLF Magnolio
   e. OLF Canal
   f. OLF Faircloth
5. Naval Dispensary.
6. Dental Treatment Facility.
7. Intermediate Aircraft Maintenance.
8. Satellite Supply Department.
9. Bachelor Officer Quarters.
10. Bachelor Enlisted Quarters.
11. Family Quarters.

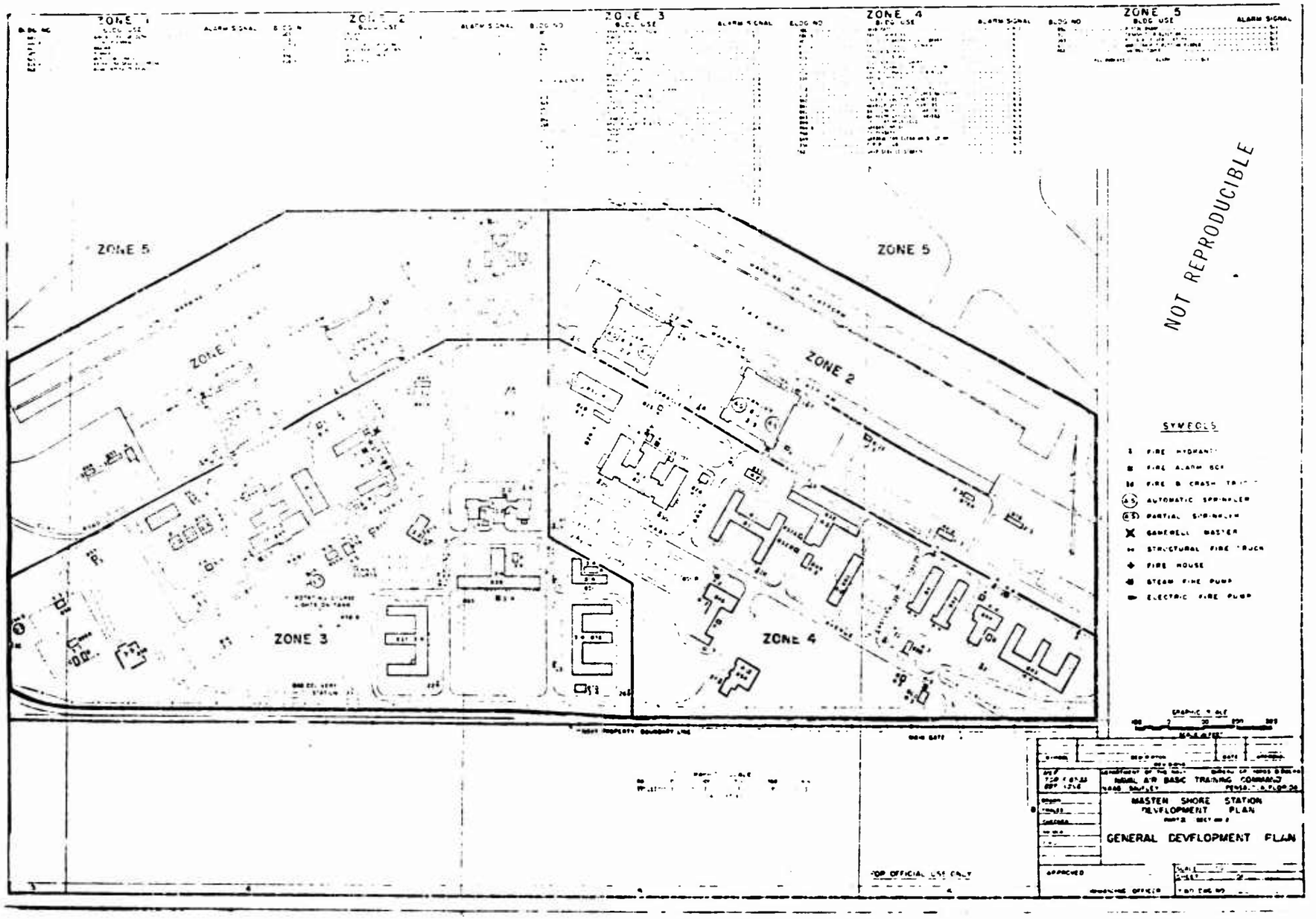
12. Officer Messing Facilities.

13. Enlisted Messing Facilities.

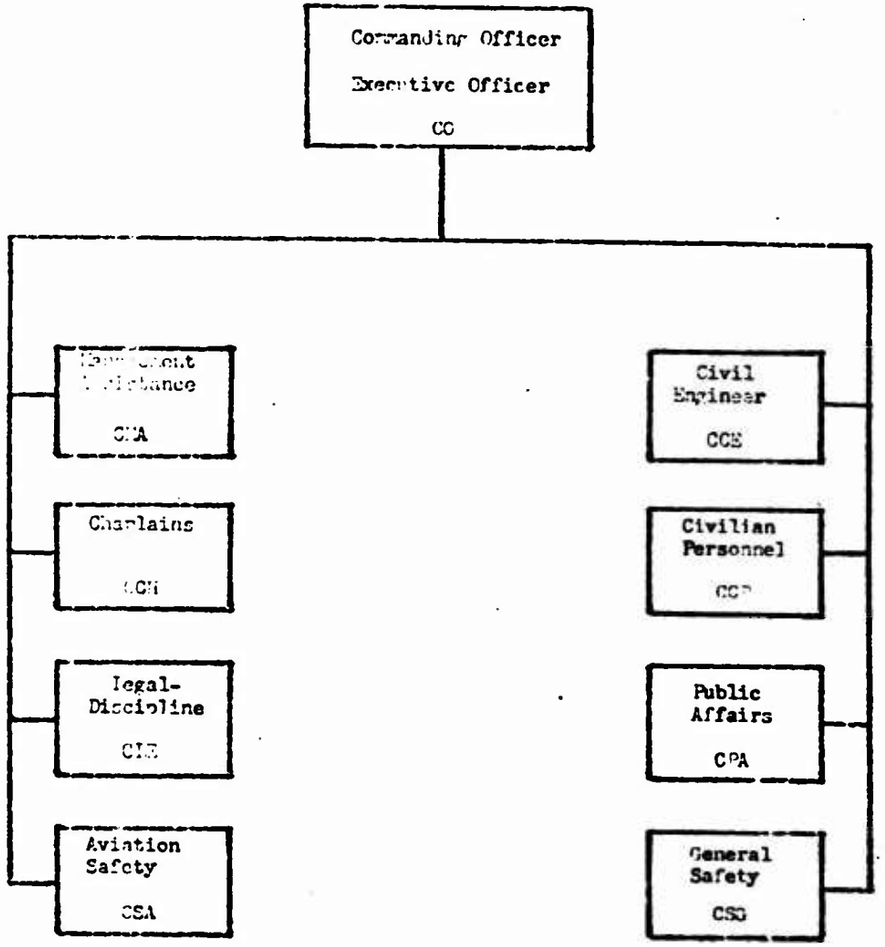
14. Permanent Hangar Facilities.

15. 24 hour all weather landing facility.

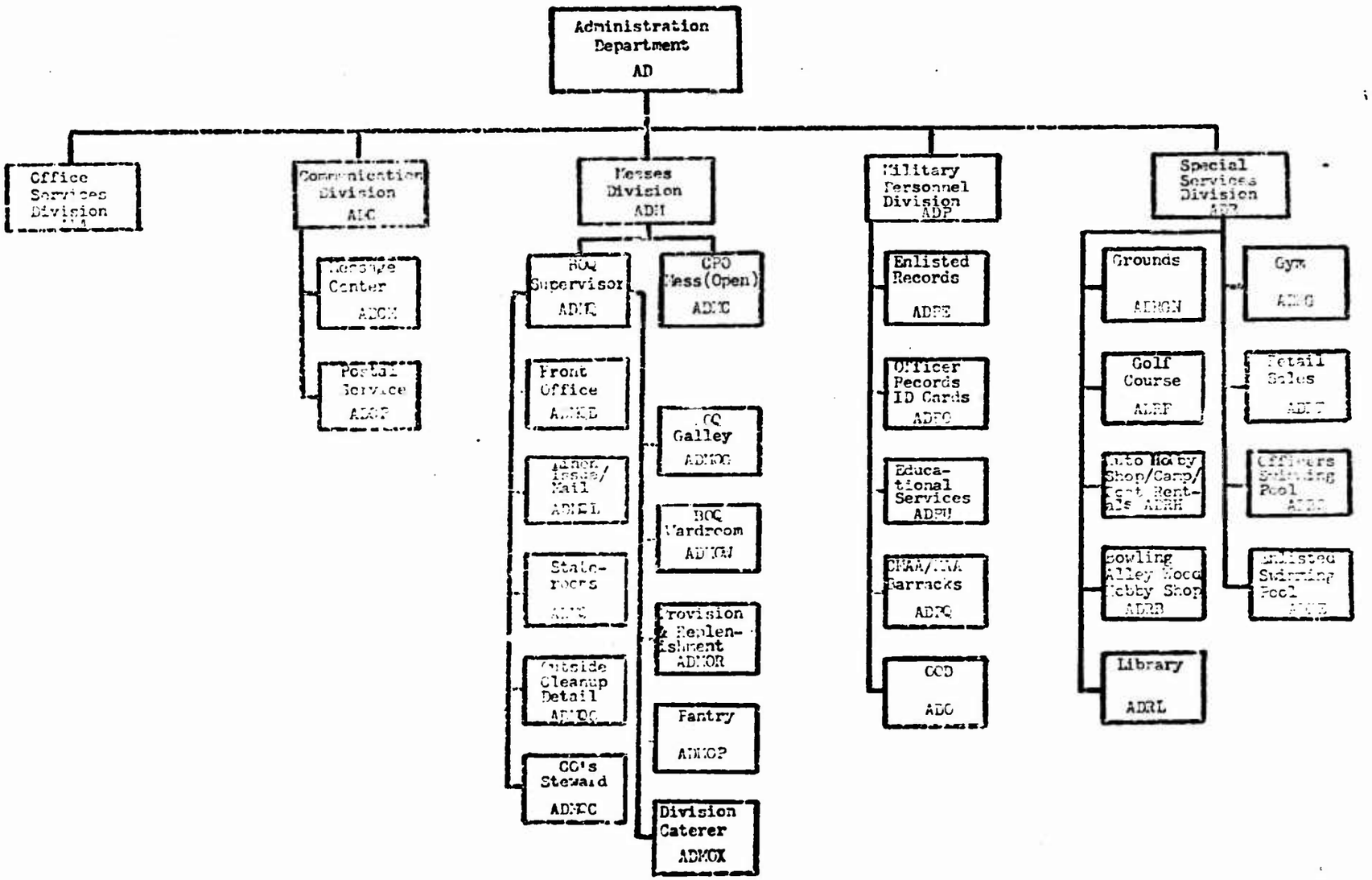
16. Station Map - (See next page)


ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5
ZONE 5
ZONE 5
ZONE 1
ZONE 2
ZONE 3
ZONE 4
NOT REPRODUCIBLE
SYMBOLS
FIRE HYDRANT
FIRE ALARM BOX
FIRE & CRASH TRUCK
AUTOMATIC SPRINKLER
PARTIAL SPRINKLER
GASWELL MASTER
STRUCTURAL FIRE TRUCK
FIRE HOUSE
STEAM FIRE PUMP
ELECTRIC FIRE PUMP
MASTEN SHORE STATION
DEVELOPMENT PLAN
GENERAL DEVELOPMENT PLAN
FOR OFFICIAL USE ONLY

APPENDIX A

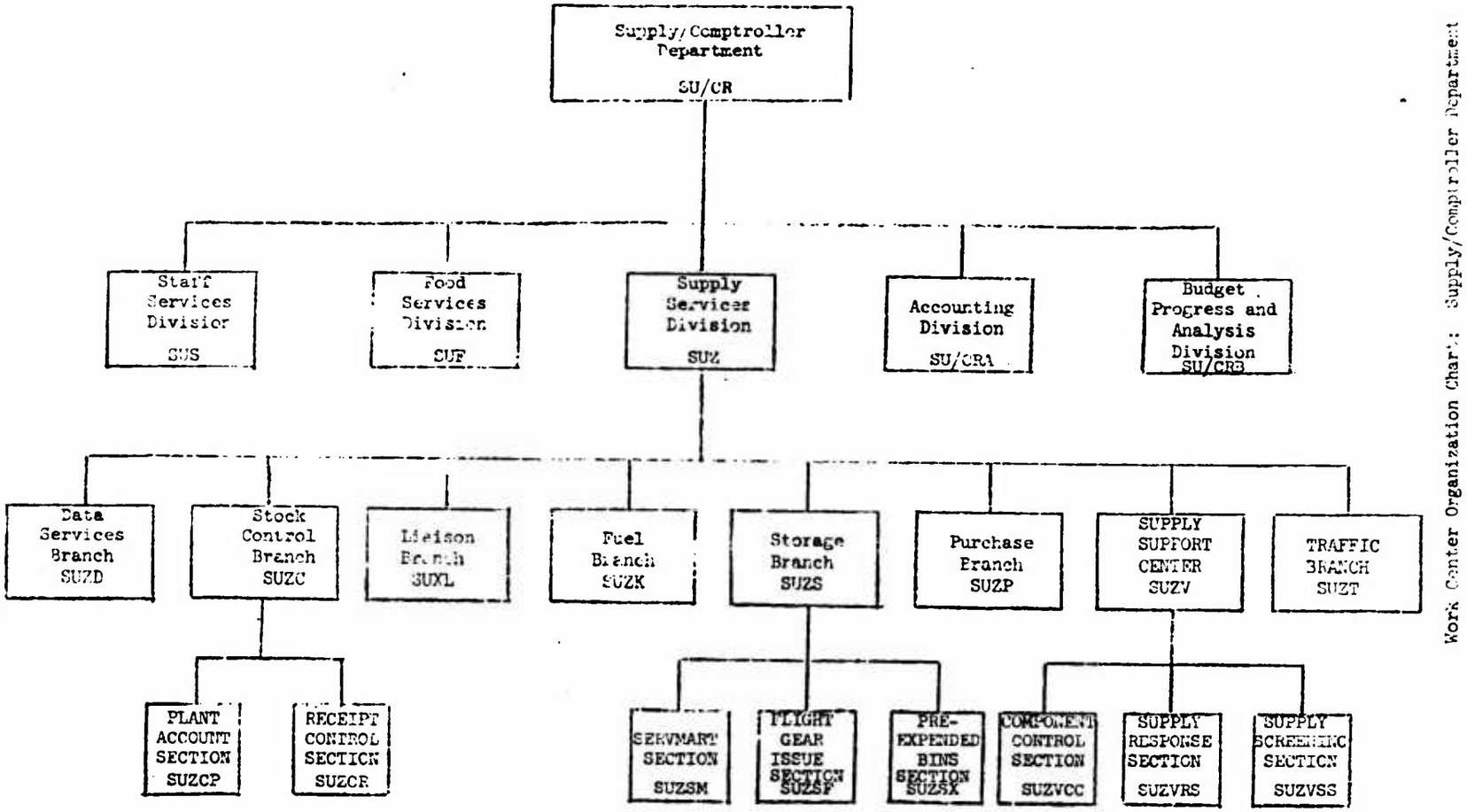


Work Center Organization Chart: Command and Staff



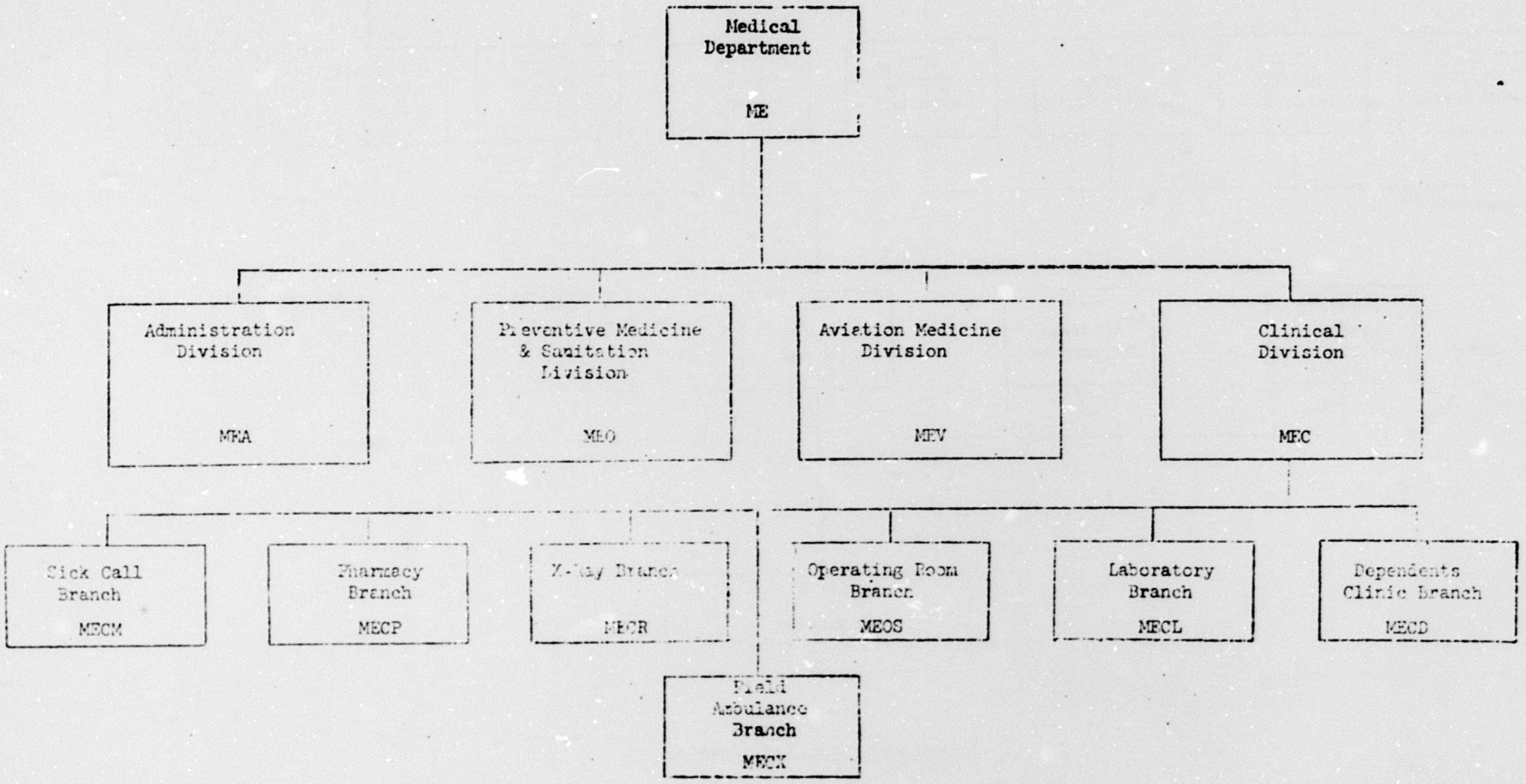
Navy Department Organization Chart: Administration Department

SUPPLY/COMPTROLLER DEPARTMENT



Work Center Organization Chart: Supply/Comptroller Department

MEDICAL DEPARTMENT



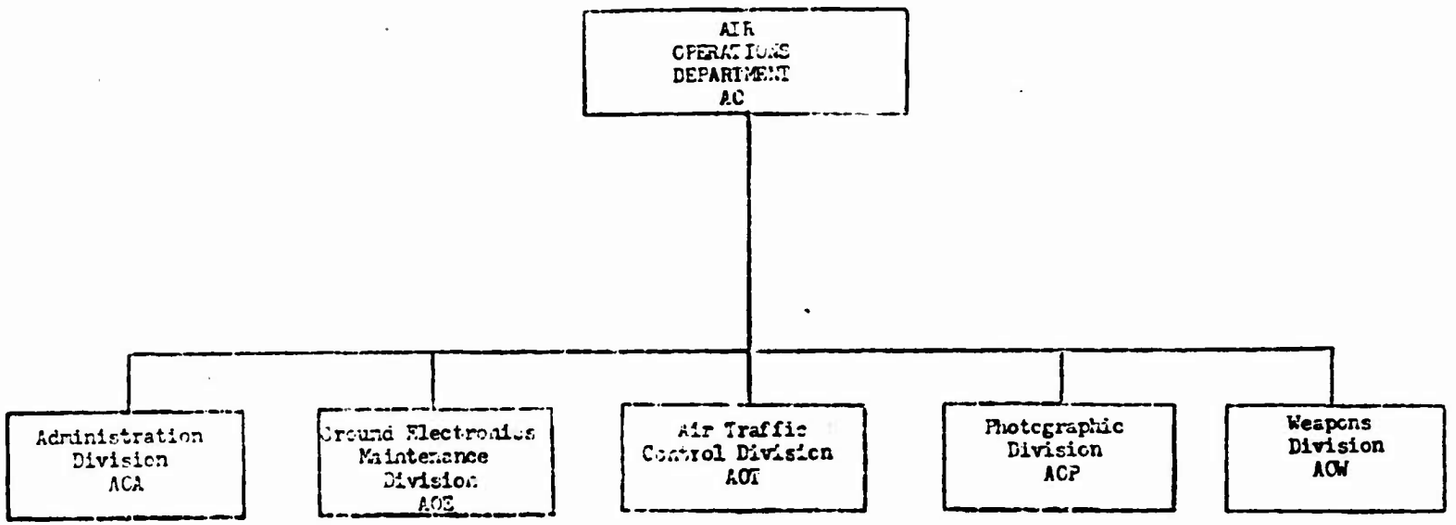
Work Center Organization Chart: Medical Department

A-1

Work Center Organization Chart: Dental Department

Work Center Organization Chart: Training Department

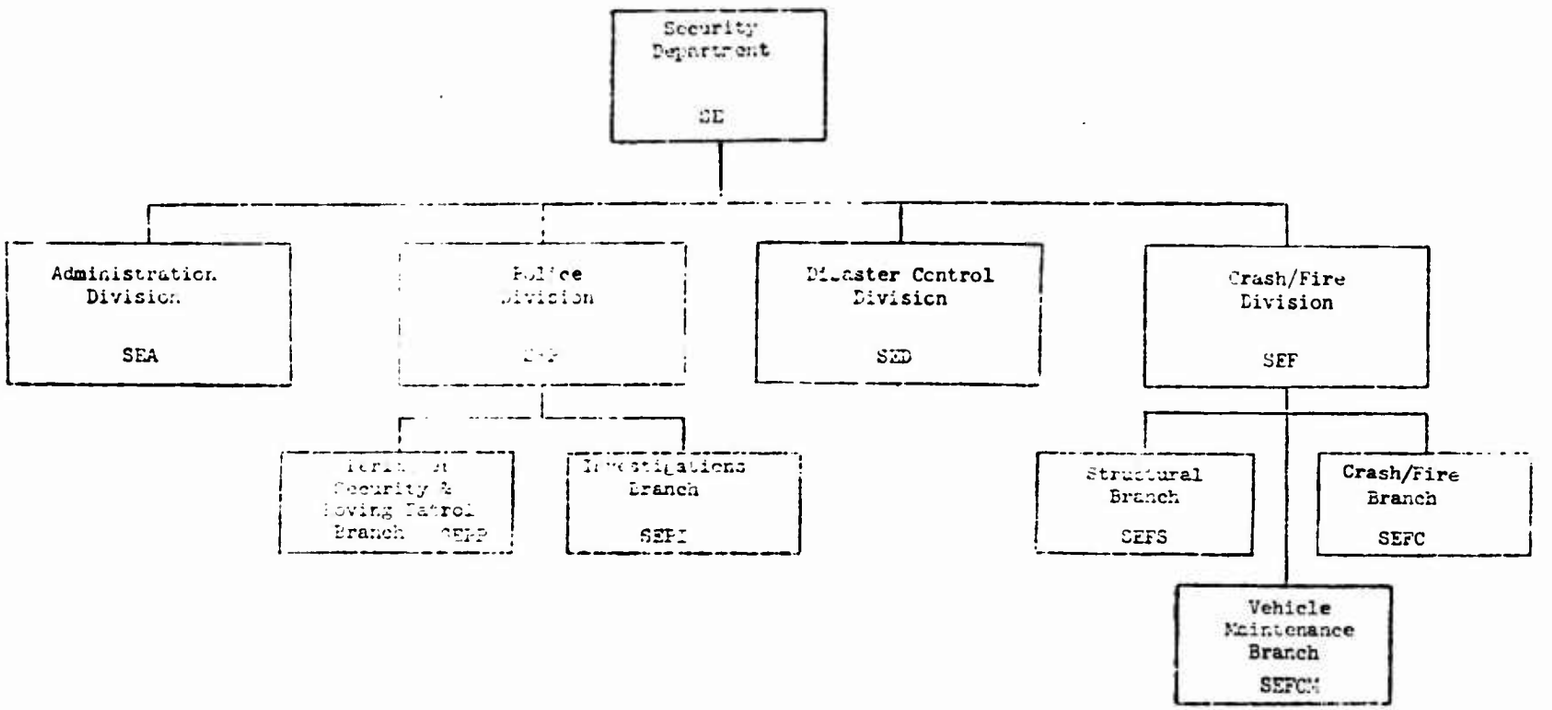
AIR OPERATIONS DEPARTMENT



Work Center Organization Charts: Air Operations Department

Work Center Organization Chart: Aircraft Maintenance Department

SECURITY DEPARTMENT



Work Center Organization Chart: Security Department

APPENDIX B

SHORE MANNING DOCUMENT

MARP CODE (1)	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC (2)	PREPARED BY: Naval Personnel Research and Development Laboratory

(3) ORGANIZATIONAL IDENTIFICATION										MANPOWER REQUIRED			
Dept.	Div.	Br.	Sect.	Work Center Title (4)	Org-Funct. Code (5)	Sub-cost Center Code (6)		Work Load Indicator or Work Unit (9)	Average Weekly Workload (10)	Total Man-hours Required	OFF	EM	CIV	.....

LINE NUMBER (11)	NO. (12)	YR. (12)	UIC (13)	COST/ SUB-COST CENTER (6)	COST ACC'T NUMBER (7)	BILLET/POSITION TITLE (14)	NOBC/ NEC (15)	SVC TYPE (16)	DESIG/ RATING/ SERIES (17)	PAY GRADE (18)	NO. (19)	PROD. TIME (20)	NON AVAIL TIME (21)	LABOR COST (22)	RMS WORK VOLUME (23)

IDENTIFICATION OF ELEMENTS AND EXPLANATORY NOTES.

1. Manpower Allocation Requirement Plan code.

2. Bureau Unit Identification Code.

3. The organizational identification data will normally be that which is used by the command or activity if it has an internal organizational coding system to the division or branch level. If it does not have or use a coding system, the codes developed by NAVPERSRANDLAB will be used.

4. The Work Center Title will often be the existing organizational title; however, work centers are often identified at a lower organizational level to enable better analysis of like activities across the Naval Shore Establishment.

5. Organizational - Functional Codes have been developed to show functional relationships within naval organization structure. These codes are used to identify and analyze naval manpower requirements across the Naval Shore Establishment.

6. Sub-cost Center Codes are designated in NAVCOMP Manual, Volume II, Chapter 4.

7. The Cost Account Number is a code which is used if there is no appropriate sub-cost center code or if additional differentiation of an existing Sub-cost Center Code is needed. Cost Account Numbers may be locally developed. If a new or revised Sub-cost Center code has been published, the old code may be used in the Cost Account Number Column for cross-reference purposes.

8. When there is a Work Unit or a Work Load Indicator for a Work Center, a letter will be inserted in this column to indicate the type/source of the work unit or work load indicator. The code will be used to key input data into the Manpower Allocation Model. When there is an appropriate, meaningful NAVCOMPT RMS work unit, it will normally be used. See Table I, at the end of these notes, for the letters to be used.

9. The appropriate Work Unit or Work Load Indicator title will be entered in this block. When there is a reported NAVCOMPT RMS Work Unit, it will normally be used.

10. The Average Weekly Work Load will be the average weekly work volume corresponding to the Work Unit or Work Load Indicator in the preceeding block. When a command or activity has been studied by either a NAVPERSRANDLAB, Manpower Survey, or Fleet Work Study Team, the team will attempt to obtain data for a one year period (or a shorter period if there has been a change in operation or procedures during the previous 52 week or 12 month period). When accumulative data is reported by the month, the weekly volume is obtained by multiplying the monthly data by 0.23, since there are 4.35 weeks per month.

11. Line numbers may be used by the activity developing a SHMD.

12. The Month and Year Columns will be the effective date when there is an approved manpower change.

13. The UIC Code is the last three digits of the UIC.

14. The Billet/Position Title will be a descriptive title which will not exceed 23 digits (including spaces and punctuation). At a later date, a listing of standardized billet and position titles will be promulgated.

15. The appropriate NOBC for officers and NEC for enlisted personnel will be entered in this column when required.

16. Service Type Codes: O for Officer, W for Warrant Officers, E for Enlisted Personnel, and GS, WB, WF, etc. for the appropriate type of Civil Service Personnel.

17. The required Designator for officers, Rating for enlisted personnel, and Series for Civil Service personnel will be entered in this column.

18. Pay Grades.
Officers: 1 for ENS, 2 for LTJG, etc.
Warrant officers: 1 for WO1, 2 for CWO2, etc.
Enlisted Personnel: 1 for E-1 through 9 for E-9,
Civilian grades are the grades determined by the local Civilian Personnel Office which services the activity.

19. This column will have the number of billets required for that line entry.

20. The entry in this column will be the productive time measured by the preparing activity. The time may be expressed in tenths or hundredths of hours.

21. Non-available Time is a number of hours established by CNO.

22. Labor Cost determination will be entered at a later date.

23. The RMS Average Weekly Work Load Volume will be entered in this column. Also see Notes 9. and 10. When this column is completed, only the first billet in a Work Center need have the data recorded in this column.

TABLE I - Codes for Types of Work Units and Work Load Indicators.

WORK UNITS

R: NAVCOMPT Manual I (Resource Management System) designated Work Units.

M: 3M (Maintenance and Material Management) designated Work Units which are not covered by or are more detailed or appropriate than the NAVCOMPT Volume I Work Units.

W: Other Work Units or Multiple Work Units.

WORK LOAD INDICATORS

P: Population WLI's for designated populations such as: Officers, Enlisted, Military (officers and enlisted), Civilians for the command or activity including or excluding tenant personnel.

F: Aircraft Flying Hours (for designated aircraft).

A: Number of Aircraft (count of designated aircraft by type or types).

C: Collector - number of Department, Division, Branch, (or other organizational element) personnel.

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SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS Saufley Field, Pensacola, Florida	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION										TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Funct Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
C-	A/AA			Command	C-CO	1A10	No. of Personnel (incl. Tenants)	2050	80.0	2	0	0	2
C-	MA			Management Assistance office	C-MA	1B00	No. of Personnel (incl. Tenants)	2050	40.0	0	0	1	1
C-	CH			Chaplains office	C-CH	9931	Military Population	869	91.31	2	0	1	3

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
			COMMAND												
			825	1A10		Commanding Officer	9421	0	1310	6	1	29.30	10.70		2050
			825	1A10		Executive Officer	9436	0	1310	5	1	29.30	10.70		
			MANAGEMENT ASSISTANCE												
			825	1B00		Management Assistant		GS	343	11	1	33.64	6.36		2050
			CHAPLAIN												
			825	9931	1A50	Catholic Chaplain	3701	0	4100	3	1	14.86	10.70		869
			825	9931	1A50	Protestant Chaplain	3701	0	4100	3	1	14.15	10.70		
			825	9931	1A50	Chaplain's Assistant		GS	318	4	1	33.63	6.36		

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS Saufley Field	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION									TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Funct Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
C-	PA			Public Affairs	C-PA	1A30	No. of public Affairs actions	54.7	112.29	0	2	1	3
C-	CE			Civil Engineer	C-CE	9100	N.A.	N.A.	65.74	1	0	1	2
C-	CP			Civilian Personnel	C-CP	1D10	Civilian on Board Strength	160	14.87	0	0	0	0

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
			PUBLIC AFFAIRS												
			825	1A30		Public Affairs Officer *	2412	0	110X	2	0	10.83			54.7
			825	1A30		Editor-Journalist		E	J01	6	1	24.29	10.7		
			825	1A30		Journalist		E	J03	4	1	20.00	10.7		
			825	1A30		Clerk-Typist		GS	322	3	1	29.91	6.36		
			CIVIL ENGINEER												
			825	9100		Staff Civil Engineer	4210	0	5100	2	1	30.35	10.70		-
			825	9100		Secretary **		GS	301	6	1	18.33	6.36		
			CIVILIAN PERSONNEL												
			825	1D10		Clerk-Typist ***		GS	301	6	0	14.87			160

* Collateral duty of Communications Officer
** Also serves Civilian Personnel Office
*** Billet provided in Civil Engineer office

MAPP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS Saufley Field	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title						OFF	ENL	CIV	TOTAL
C-	LE			Legal	C-LE	1A40	Legal Cases	11.4	26.24	0	1	0	1
C-	SA			Aviation safety	C-SA	1A7A	N.A.	N.A.	30.70	1	0	0	1
C-	SG			General Safety	C-SG	1A7G	N.A.	N.A.	55.27	0	0	2	2

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
			LEGAL												
			825	1A40		Discipline Officer *									
			825	1A40		Closed Microphone Reporter	2515	E	YN2	5	1	15.54	10.70		11.4
			AVIATION SAFETY												
			825	1A70	1A7A	Aviation Safety Officer #	2856	O	1310	4	1	20.00	10.70		-
			GENERAL SAFETY												
			825	1A70	1A7G	General Safety officer #		GS	018	10	1	22.55	6.36		-
			825	1A70	1A7G	Secretary		GS	322	3	1	20.00	6.36		

* Collateral duty of Aviation Safety Officer.

\# This position is required by naval directives

SHORE MANNING DOCUMENT

COST CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	ACCOMPLISHMENT: Naval Education, Research and Development Laboratory
5-01-2	1A00-0/10-00	NAS, Saufley Field, Pensacola	03825	

PERSONNEL/ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	EM	CIV	TOTAL
Dept	Div	Br.	Sect.	Work Center Title									
AD				Administration Department	AD	1E10	Department Personnel	525	42.7	1	0	0	1
AD	A			Office Services Division	ADA	1J00	Documents Processed	3065	242.41	0	0	0	0
AD	C	M		Message Center	ADCM	6A10	Messages Processed	365	181.65	1	4	0	5

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK YEARS
				ADMINISTRATION DEPARTMENT											
			825	1E10		Administration Officer	2610	O	1310	5	1	32.0	10.7		525
				OFFICE SERVICE DIVISION											
			825	1J00		Office Services Supervisor		GS	301	7	1	35.25	6.36		-
			825	1J00		Management Technician		GS	344	5	1	33.45	6.36		
			825	1J00		Clerk-Typist		GS	322	3	2	64.20	12.72		
			825	1J00		Clerk-Steno		GS	312	4	1	35.75	6.36		
			825	1J00		Messenger/Dupl. Serv.		GS	302	2	1	35.60	6.36		
				COMMUNICATIONS DIVISION											
				MESSAGE CENTER											
			825	6A10		Communications Officer*	9510	O	1100	2	1	12.95	10.70		-
			825	6A10		Communications Center Supervisor		E	RM2	5	1	19.55	10.70		
			825	6A10		Records and Pubs. Clerk		E	RM3	4	1	30.65	10.70		
			825	6A10		Communications Clerk		E	CYNSN	3	1	32.50	10.70		
			825	6A10		Communications Clerk		E	RMSN	3	1	32.50	10.70		
						*Communication officer has collateral duty of public affairs officer recommend secondary NOBC-2412.									

SHORE MANNING DOCUMENT

NARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY: Naval Personnel Research and Development Laboratory
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	

ORGANIZATIONAL IDENTIFICATION				Work Center Title	Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	OFF	EM	CIV	TOTAL
Dept	Div	Br.	Sect.										
AD	C	P		Postal Service Branch	ADCP	1RG0	Pounds of Mail Processed	185	74.36	0	0	2	2
AD	P			Personnel Officer	ADP	1E00	Enlisted and Officer Records Maintained	475(E) 50(O)	43.25	1	0	0	1
AD	P	E		Enlisted Records Branch	ADPE	1E30	Enlisted Serv. Records Maintained	475	140.90	0	4	0	4

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
				POSTAL DIRECTORY BRANCH											
			825	1RG0		Postal Clerk		GS	305	2	1	28.00	6.36		-
			825	1RG0		Postal Clerk		GS	305	2	1	33.64	6.36		
				MILITARY PERSONNEL DIVISION											
			825	1E10		Personnel Officer	3965	0	6200	3	1	32.55	10.70		525
				ENLISTED RECORDS BRANCH											
			825	1E30		Personnel Office Supervisor		E	PNC	7	1	30.95	10.70		475
			825	1E30		Leave/Files/Reenl/Disch		E	PN2	5	1	20.70	10.70		
			825	1E30		Receipts		E	PN3	4	1	26.55	10.70		
			825	1E30		Transfers		E	PNSN	3	1	20.00	10.70		

SHORE MANNING DOCUMENT

NARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY: Naval Personnel Research and Development Laboratory
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	

ORGANIZATIONAL IDENTIFICATION				Work Center Title	Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	OFF	EM	CIV	TOTAL
Dept	Div	Br.	Sect.										
AD	C	P		Postal Service Branch	ADCP	1RG0	Pounds of Mail Processed	185	74.36	0	0	2	2
AD	P			Personnel Officer	ADP	1E00	Enlisted and Officer Records Maintained	475(E) 50(O)	43.25	1	0	0	1
AD	P	E		Enlisted Records Branch	ADPE	1E30	Enlisted Serv. Records Maintained	475	140.90	0	4	0	4

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
				POSTAL DIRECTORY BRANCH											
			825	1RG0		Postal Clerk		GS	305	2	1	28.00	6.36		-
			825	1RG0		Postal Clerk		GS	305	2	1	33.64	6.36		
				MILITARY PERSONNEL DIVISION											
			825	1E10		Personnel Officer	3965	0	6200	3	1	32.55	10.70		525
				ENLISTED RECORDS BRANCH											
			825	1E30		Personnel Office Supervisor		E	PNC	7	1	30.95	10.70		475
			825	1E30		Leave/Files/Reenl/Disch		E	PN2	5	1	20.70	10.70		
			825	1E30		Receipts		E	PN3	4	1	26.55	10.70		
			825	1E30		Transfers		E	PNSN	3	1	20.00	10.70		

SHORE MANNING DOCUMENT

SHARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	MANPOWER FACTORS			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AD	P	O		Officer Records and ID Cards Branch	ADPO	1E20	Officer Service Records and ID Cards Issued	50 (Records) 50 (ID Cds.)	33.15	0	1	0	1
AD	P	U		Educational Services	ADPU	1E40	Population Served	475	156.51	0	3	1	4

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
			OFFICER RECORDS AND ID CARDS BRANCH												
			825	1E20		Officer Records, ID and Disbursing Liaison	9588	E	YN1	6	1	22.45	10.70		50
			EDUCATIONAL SERVICES BRANCH												
			825	1E40		Educational Services Supervisor		E	PNCS	8	1	27.05	10.7		-
			825	1E40		Spec. Programs and Correspondence		E	PN2	5	1	28.15	10.7		
			825	1E40		Clerk		E	PNSN	3	1	30.05	10.7		
			825	1E40		Clerk-Typist		GS	322	3	1	32.80	6.36		

START CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	MANPOWER REQUIREMENTS			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AD	M			OINC Commissioned Officers Mess Closed	ADM	9922	Residents	495	71.17	0	0	2	2
AD	M	Q		BOQ Supervisor	ADMQ	9922	Residents	495	40.50	0	1	0	1
AD	M	Q	D	Front Office	ADMQD	9922	Residents	495	393.05	0	9	0	9

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
			OFFICERS MESSES DIVISION												
			825	9922	1E50	COM Officers Mess Manager		GS	1101	12	1	32.15	6.36		495
			825	9922	1E50	Accounting Technician		GS	525	5	1	26.30	6.36		
			BOQ SUPERVISOR BRANCH												
			825	9922	1E50	BOQ Supervisor		E	SDCS	8	1	29.80	10.70		495
			FRONT OFFICE SECTION												
			825	9922	1E50	Front Office Supervisor		E	SD2	5	1	31.35	10.70		495
			825	9922	1E50	Front Office Clerk		E	SD3	4	1	32.30	10.70		
			825	9922	1E50	Desk Watch		E	TN	3	4	133.20	42.80		
			825	9922	1E50	BEQ Fire Watch		E	TN	3	3	99.90	32.10		

SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	MANPOWER REQUIRED			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AD	M	Q	L	Linen Issue/Mail	ADMQL	9922	Residents/Pieces Mail	495 (R) 2970 (M)	57.40	0	2	0	2
AD	M	O	G	BOQ Galley	ADMOG	9932	Meals Served	5000	866.12	0	21	0	21
AD	M	O	P	Pantry	ADMOP	9933	Meals Served	5000	144.24	0	4	0	4

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
				LINEN ISSUE/MAIL SECTION											
			825	9925	1E50	Linen Distribution		E	TN	3	1	11.00	10.70		495
			825	9925	1E50	Mail PO		E	SD3	4	1	25.00	10.70		
				BOQ GALLEY BRANCH											
			825	9933		Galley/Wardroom Chief		E	SDC	7	*	10.40	5.30		5000
			825	9933		Galley/Wardroom PO/Div. MAA		E	SD1	6	*	15.60	5.30		
			825	9933		Galley Watch Captain (Port)		E	SD2	5	1	29.30	10.70		
			825	9933		Galley Watch Captain (STBD.)		E	SD2	5	1	29.30	10.70		
			825	9933		Galley Cook (Port)		E	SD2	5	2	57.91	21.40		
			825	9933		Galley Cook (STBD.)		E	SD2	5	2	57.91	21.40		
			825	9933		Galley Cook (Port)		E	SD3	4	2	56.78	21.40		
			825	9933		Galley Cook (STBD.)		E	SD3	4	1	29.30	10.70		
			825	9933		Galley Cook (Port)		E	TN	3	6	172.16	64.20		
			825	9933		Galley Cook (STBD.)		E	TN	3	6	172.16	64.20		
				PANTRY SECTION											
			825	9933		POINC Pantry (Port)		E	SD2	5	1	25.36	10.70		5000
			825	9933		POINC Pantry (STBD.)		E	SD2	5	1	25.36	10.70		
			825	9933		Pantry Steward (Port)		E	TN	3	1	25.36	10.70		
			825	9933		Pantry Steward (STBD.)		E	TN	3	1	25.36	10.70		

*SDC and SD1 - Serve jointly in BOQ Galley and BOQ Wardroom.

MARP CODE 5-01-2	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY: Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	MANPOWER REQUIREMENTS			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AD	M	0	W	BOQ Wardroom	ADMOW	9933	Meals Served	5,000	1472.65	0	38	0	38
AD	M	0	R	Provisions and Replenishment	ADMOR	9933	Inventory ($ Value)	18,000	121.10	0	3	0	3

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
				BOQ WARDROOM SECTION											
			825	9933		Wardroom/Galley Chief		E	SDC	7	1*	15.60	5.40		5000
			825	9933		Wardroom/Galley PO/Division MAA		E	SD1	6	1*	10.15	5.40		
			825	9933		Wardroom Supervisor (Port)		E	SD2	5	1	29.30	10.70		
			825	9933		Wardroom Supervisor (STBD.)		E	SD2	5	1	29.30	10.70		
			825	9933		Wardroom Steward (Port Sect.)		E	TN	3	2	58.60	21.40		
			825	9933		Wardroom Steward (STBD. Sect.)		E	TN	3	1	29.30	10.70		
			825	9933		Wardroom Steward		E	SD3	4	1	28.91	10.70		
			825	9933		Wardroom Steward		E	TN	3	30	875.49	321.00		
				PROVISIONS AND REPLENISHMENT											
			825	9933		POINC Prov. & Replenishment Room		E	SD2	5	1	31.00	10.70		
			825	9933		Stock Clerk		E	TN	3	2	58.00	21.40		

*SDC and SD1 - Serve jointly in BOQ Galley and BOQ Wardroom.

SHORE MANNING DOCUMENT

MANP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	MANPOWER UNITS			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AD	M	O	X	Division Caterer	ADMOX	9933	No. of Parties	5	40.70	0	1	0	1
AD	M	Q	S	Staterooms	ADMQS	9922	No. of Residents	443	769.06	0	18	0	18
AD	M	Q	O	Outside Cleanup Detail	ADMQO	9922	Square Feet Policed	36,500	83.90	0	2	0	2

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
				CATERER											
			825	9933		Caterer		E	SD3	4	1	30.00	10.70		-
				STATEROOMS											
			825	9922	1E50	Stateroom Supervisor		E	SD3	4	1	29.16	10.70		443
			825	9922	1E50	Stateroom Maintenance		E	TN	3	17	547.30	181.90		
				OUTSIDE CLEANUP DETAIL											
			825	9922	1E50	Outside Cleanup Detail		E	TA	2	2	62.50	21.40		-

MANPOWER CONF 5-01-2	ACTIVITY CODE 1459-0710-00	COMMAND/ACTIVITY NAS, Saufley Field, Pensacola	BUIC 03825	PREPARED BY: Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	MANPOWER			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AD	M	Q	C	Captain's Steward	ADMQC	9933	Meals Prepared and Served	10	41.75	0	1	0	1
AD	M	C		CPO Mess (Open)	ADMC	9934	Customers Served	1185	93.00	0	4	0	4

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
				CAPTAIN'S	STEWARD										
			825	9933	1E50	CO's Steward		E	TN	3	1	31.05	10.70		10
				CPO MESS (OPEN)											
			825	9934		Manager, CPO Mess (Open)		E	CPO	7	1	25.10	10.70		-
			825	9934		Asst. Manager, CPO Mess (Open)		E	CPO	7	1	25.10	10.70		
			825	9934		POINC Stockroom		E	PO1	6	1	*	10.70		
			825	9934		Facility Maintenance		E	SN	3	1	*	10.70		

*Not Studied

SHORE MANNING DOCUMENT

MARF CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	MANNING LEVEL			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AD	R			Special Services Division	ADR	9937	Military Population	869	202.98	0	3	2	5
AD	R	D		Grounds Branch	ADRD	9937	Military Population	869	204.22	0	4	1	5
AD1	R	G		Gymnasium Branch	ADRG	9937	Military Population	869	149.55	0	4	0	4

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
			SPECIAL SERVICES DIVISION												
			825	9937		Special Services Officer		GS	188	9	1	30.41	6.36		869
			825	9937		Bookkeeper/Accounting Technician		GS	301	6	1	33.20	6.36		
			825	9937		Leading CPO/Div. Officer		E	BMCM	9	1	33.40	10.70		
			825	9937		Division Yeoman/Clerk		E	SK3	4	1	29.90	10.70		
			825	9937		Asst. Clerk/Messenger/Driver	2500	E	SN	3	1	31.25	10.70		
			GROUNDS BRANCH												
			825	9937		Grounds P.O./Training P.O.		E	DC1	6	1	28.30	10.70		869
			825	9937		Asst. Grounds P.O.		E	BM3	4	1	28.30	10.70		
			825	9937		Grounds Keeper		E	SA	2	2	64.82	21.40		
			825	9937		Laborer		WG	35002	2	1	33.64	6.36		
			GYMNASIUM BRANCH												
			825	9937		Gymnasium Maintenance		E	E-2	2	1	31.25	10.70		869
			825	9937		Gymnasium Watch/Movie Sales/MAA		E	E-2	2	2	54.50	21.40		
			825	9937		Movie Operator		E	E-3	3	1	21.00	10.70		

SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	MANPOWER REQUIRED			
Dept	Div	Br.	Sect.	Work Center Title						CPF	EM	CIV	TOTAL
AD	R	H		Auto Hobby/Camp/Boat Rentals	ADRH	9937	Military Population	869	84.05	0	2	0	2
AD	R	B		Bowling Alley/Wood Hobby Shop	ADRB	9937	Military Population	869	75.15	0	2	0	2
AD	R	L		Library	ADRL	9937	Military Population	869	108.66	0	2	1	3

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
						AUTO HOBBY/CAMP/BOAT RENTALS BRANCH									
			825	9937		Auto Hobby Shop Instructor		E	EN2	5	1	30.65	10.70		869
			825	9937		Camping Boat Rentals Clerk		E	FN	3	1	32.00	10.70		
						BOWLING ALLEY/WOOD HOBBY SHOP BRANCH									
			825	9937		Bowling Alley Manager		E	MM2	5	1	28.75	10.70		869
			825	9937		Wood Hobby Shop Instructor		E	DC2	5	1	25.00	10.70		
						LIBRARY BRANCH									
			825	9937		Library Technician		GS	1411	4	1	33.40	6.36		869
			825	9937		Library Watch		E	P03	4	2	47.50	21.40		

NAVY CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	MANNING LEVEL			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AD	R	T		Retail Sales	ADRT	9937	Items Sold, Issued or Received	630	42.01	0	0	1	1
AD	R	O		Officers Swimming Pool	ADRO	9937	Officer Population	394	66.40	0	2	0	2
AD	R	E		Enlisted Swimming Pool	ADRE	9937	Enlisted Military Population	475	66.40	0	2	0	2

LINE NUMBER	MO.	YR.	UIC	COST/SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/NEC	SVC TYPE	DESIG/RATING/SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
			RETAIL SALES BRANCH												
			825	9937		Retail Sales		GS	189	5	1	35.65	6.36		-
			OFFICERS SWIMMING POOL BRANCH												
			825	9937		Lifeguard		E	E-3	3	2	45.00	21.40		-
			ENLISTED SWIMMING POOL BRANCH												
			825	9937		Lifeguard		E	E-3	3	2	45.00	21.40		-

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	BILLETS ENTERED			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AD	R	F		Golf Course	ADRF	9937	Military Population	869	41.26	0	0	1	1

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
			GOLF	COURSE BRANCH											
			825	9937		**Golf Course Manager**		GS	189	5	1	34.90	6.36		869

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	PUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS SAUFLEY FIELD, PENSACOLA	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION										TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Funct Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
SU/CR				Supply/Comptroller Dept.	SU/CR	2100 1C10	Dep't Personnel	103	119.96	1	1	1	3
SU	A			Staff Services Div.	SUS	2100	Dep't Personnel	103	37.66			1	1
SU	F			Food Services Div.	SUF	9911	Meals Served	5,127	160.00	1	3	0	4

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
						SUPPLY/COMPTROLLER DEPARTMENT									
			825	2100	2A10	Supply -Fiscal Officer	1918	0	3100	4	1	27.0	10.70		103
			825	2100	1C10	Deputy Comptroller		GS	560	11	1	35.8	6.36		
			825	2100	2A10	Dep't Leading Chief		E	SKCS	8	1	29.4	10.70		
						STAFF SERVICES DIVISION									
			825	2100	2A10	Secretary		GS	318	5	1	31.3	6.36		103
						FOOD SERVICES DIVISION									
			825	9911		Food Service Officer	1130	W	7980	2	1	29.3	10.7		5127
			825	9911		Food Service Supervisor		E	CSCS	8	1	29.3	10.7		
			825	9911		Records - Accounting		E	SK1	6	1	29.3	10.7		
			825	9911		Clerk Typist		E	SKSN	3	1	29.3	10.7		

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-10-2	1459-0710-00	NAS Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION										TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Funct Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
SU	F	P		Food Prep.&Serving	SUFP	9911	Meals Served	5127	798.14	0	14	6	20
SU	F	MAA		Master At Arms	SUFM	9911	Meals Served	5127	80.00	0	2	0	2
SU	F	MM		Messmen	SUFMM	9911	Meals Served	5127	1040.90	0	16	12	28

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
						FOOD PREPARATION AND SERVING BRANCH									
			825	9911		Galley captain		E	CSC	7	1	29.30	10.70		5127
			825	9911		Watch Captain		E	CS1	6	2	58.60	21.40		
			825	9911		Cook		E	CS2	5	2	58.60	21.40		
			825	9911		Baker		E	CS2	5	1	29.30	10.70		
			825	9911		Cook		E	CS3	4	3	87.90	32.10		
			825	9911		Issue Room		E	CS1	6	1	29.30	10.70		
			825	9911		Baker		E	CS3	4	2	58.60	21.40		
			825	9911		Butcher		E	CS3	4	1	29.30	10.70		
			825	9911		Special Meals Cook		E	CS3	4	1	29.30	10.70		
			825	9911		Cook		WG	74004	8	3	99.99	19.08		
			825	9911		Cook		WG	74004	5	3	99.99	19.08		
						MASTER-AT-ARMS BRANCH									
			825	9911		Mess Deck MAA.		E	BT2	5	2	58.60	21.40		5127
						MESS MEN BRANCH									
			825	9911		Mess Attendant		WG	74008	2	10	336.4	63.6		5127
			825	9911		Mess Attendant		WG	74008	2	2	68.2	12.7		
			825	9911		Mess Attendant		E	SN	3	8	234.4	85.6		
			825	9911		Mess Attendant		E	SA	2	8	234.4	85.6		

SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION									TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Funct Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
SU	Z			Supply Services Div.	SUZ	2100	Division Personnel	-	80.0	1	1		2
SU	Z	C		Stock Control Br.	SUZC	2200	Line Items	-	72.4	0	2	0	2
SU	Z	C	R	Receipt Control	SUZCR	2210	Line Items	-	80.7	0	2	0	2

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
			SUPPLY SERVICES DIVISION												
			825	2100	2A10	Div. Off./ Asst Supply Off	1918	0	3100	2	1	29.2	10.7		-
			825	2100	2A10	Leading Chief		E	AKC	7	1	29.3	10.7		
			STOCK CONTROL BRANCH												
			825	2200	2B20	Supervisor		E	AK1	6	1	29.3	10.7		-
			825	2200	2B20	Stock Monitor		E	AK3	4	1	21.7	10.7		
				RECEIPT CONTROL SECTION											
			825	2210	2B30	Stock Monitor		E	AK2	5	1	29.3	10.7		-
			825	2210	2B30	Stock Monitor		E	AK3	4	1	30.0	10.7		

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	UIC	PREPARED BY:
5-01-2	1459-0710-00	NAS Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION										TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Func Code	Sub-cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-Hours Required	OFF	ENL	CIV	TOTAL
SU	Z	L		Liaison Branch	SUZL	2200	N/A	N/A	40.0	0	1	0	1
SU	Z	P		Purchase Branch	SUZP	2200	N/A	N/A	34.5	0	1	0	1
SU	Z	S		Storage Branch	SUZS	2100	N/A	N/A	76.0	0	1	1	2

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
			LIAISON BRANCH												
			825	2200	2D00	MORS/Work Stoppage Expediter		E	AK1	6	1	29.30	10.70		-
			PURCHASE BRANCH												
			825	2200	2C10	Purchasing Agent		E	SK1	6	1	23.80	10.70		-
			STORAGE BRANCH												
			825	2100	2J30	Supervisor		E	AK2	5	1	29.30	10.70		-
			825	2100	2J30	Leader Stockman		WG	09007	6	1	33.64	6.36		

SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	UIC	PREPARED BY:
5-01-2	1459-0710-00	NAS Dallas, Texas Detachment	03805	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION				Work Center Title	Org-Fund Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section							OFF	ENL	CIV	TOTAL
SU	Z	C	P	Plant Account	SU8CT	2136	Line Items	-	31.7	0	1	0	1
SU	Z	D		Data Services	SU8D	1H40	No. of Cards	-	Not studied	0	1	4	5
SU	Z	F		Fuel Branch	SU8F	2141	Gallons Handled	68,542	394.0	0	3	7	10

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
				PLANT ACCOUNT SECTION											
			825	2136	2B10	Plant Account clerk		E	SK1	6	1	21.0	10.7		-
				DATA SERVICES BRANCH											
			825	1H40		Card Punch Operator		GS	356	3	4	*			-
			825	1H40		Seaman		E	SN	3	1	*			
				FUEL BRANCH											
			825	2141	2G20	Supervisor		E	ABF1	6	1	27.30	10.70		-
			825	2141	2G20	Fuel Form Operator		E	ABF2	5	1	27.30	10.70		
			825	2141	2G20	Fuel Form Operator		E	ABF3	4	1	27.30	10.70		68,542
			825	2141	2G20	Inspector, Petrol. Products		WX	54061	47	1	33.64	6.36		
			825	2141	2G20	Foreman, Liq. Fuels Distr		WS	69054	9	1	33.64	6.36		
			825	2141	2G20	Liq. Fuels Distr. Sys. Opr.		WB	69054	9	2	67.28	12.72		
			825	2141	2G20	Liq. Fuels Distr. Sys. Opr.		WB	69054	9	2	67.28	12.72		
			825	2141	2G20	Truck Driver (Heavy)		W2	57055	7	1	33.64	6.36		

* Not Studied

SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	UIC	PREPARED BY:
5-01-2	3450-0710-00	NAS [illegible], Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION										TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Func Code	Sub-Cost Center Code	Work Load Indicator or Work Unit		Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
SU	Z	S	M	Servmart	SUMSM	2141	Line Item Issue	1	691	33.12	0	2	2	2
SU	Z	S	F	Flight Gear Issue	SUMSF	2142	Line Item Issue	1	"	19.3	0	0.5	0	0.5
SU	Z	S	X	Pre-Expended Bins	SUMSX	2123	Line Item Issue	1	"	21.5	0	0.5	0	0.5

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
				SERVMART SECTION											
			825	2142	2H10	Leader Stockman		WG	69007	6	1	35.2	6.36		-
			825	2142	2H10	Stockman		WG	69007	5	1	35.2	6.36		
				FLIGHT GEAR ISSUE SECTION											
			825	2142	2H30	Stock Clerk		E	AK3	4	.5	14.5	5.4		-
				PRE EXPENDED BINS SECTION											
			825	2123	2D10	Stock Clerk		E	AK3	4	.5	18.2	5.3		-

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	PUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION									TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Funct Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
SU	Z	SSC	CC	Component Control	SUZVCC	2200	-	-	41.4	0	1	0	1
SU	Z	SSC	SR	Supply Response	SUZVSR	2200	-	-	79.5	0	2	0	2
SU	Z	SSC	SS	Supply Screening	SUZVSS	2145	-	-	39.8	0	1	0	1

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
						COMPONENT CONTROL SECTION									
			825	2200	2B50	Comp. Control/Screening Supv.		E	AK2	5	1	30.7	10.7		-
						SUPPLY RESPONSE SECTION									
			825	2200	2BA0	Monitor (Typist)		E	AK3	4	1	28.8	10.7		-
			825	2200	2BA0	Monitor (Typist)		E	AKAN	3	1	29.3	10.7		
						SUPPLY SCREENING SECTION									
			825	2145	2D50	Screening		E	AK2	5	1	29.1	10.7		-

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	UIC	PREPARED BY:
5-01-2	1459-0710-00	NAS Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION										TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Funct Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
SU	Z	T		Traffic Branch	SUZT	2300	Line Item Processed	558	170.44	0	3	2	5
SU/CR	A			Accounting Div.	SU/CRA	1C40	Documents Processed	1974	153.84	0	0	4	4
SU/CR	B			Budget Prog. & Anal.	SU/CRB	1C30	Reports Processed or Analyzed	91	68.92	0	0	2	2

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
			TRAFFIC BRANCH												
			825	2300	2K20	Supervisor		E	AK1	6	1	14.0	10.70		-
			825	2300	2K20	Warehouseman/Driver		WG	69007	5	2	67.28	12.72		
			825	2300	2K20	Off. Sta. Driver/Expeditor		E	AK2	5	1	21.92	10.70		
			825	2300	2K20	Off. Sta. Driver/Expeditor		E	AKAN	3	1	22.42	10.70		
			ACCOUNTING DIVISION												
			825	1C40		Supvy Accts Maint. Clerk		GS	520	5	1	32.10	6.36		1974
			825	1C40		Accounts Maint. Clerk		GS	520	4	2	64.20	12.72		
			825	1C40		Time & Leave Clerk		GS	590	3	1	32.10	6.36		
			BUDGET PROGRESS AND ANALYSIS DIVISION												
			825	1C30		Budget Analyst		GS	560	9	1	28.10	6.36		-
			825	1C30		Budget Clerk		GS	501	4	1	28.10	6.36		

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Fld, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION										TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Funct Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
ME	MEA			Administration	MEA	4100	Pers Served	633	520	0	12	1	13
ME	MEO			Prev. Med. & Sanitation	MEO	4N00	Inspections Perf.	28	80	1	1	0	2
ME	MEV			Aviation Medicine	MEV	4000	Physicals Perf.	51	160	1	3	0	4

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
	MEDICAL DEPARTMENT														
	ADMINISTRATION DIVISION														
			825	4C00	4LC0	Dept. Leading CPO		E	HMCS	8	1	29.3	10.7		
			825	4C00	4LC0	Medical Admin. Tech.	8442	E	HM1	6	1	29.3	10.7		
			825	4C00	4L00	Finance & Supply Clerk		E	HM2	5	1	29.3	10.7		
			825	4C00	4L00	Medical Records Clerk		E	HM3	4	1	29.3	10.7		
			825	4C00	4L00	Information Clerk		E	HM3	4	1	29.3	10.7		
			825	4C00	4L00	Information Clerk		E	HN	3	1	29.3	10.7		
			825	4C00	4L00	Clerk-Typist		GS	322	3	1	33.64	6.36		
			825	4C00	4C00	Medical Watchstander		E	HN	3	6	175.8	64.2		
	PREVENTIVE MEDICINE AND SANITATION DIVISION														
			825	4C00	4N00	Medical Officer, G. P.	0070	O	2100	3	1	29.3	10.7		
			825	4C00	4N00	Preventive Medicine Tech.	8432	E	HM2	5	1	29.3	10.7		
	AVIATION MEDICINE DIVISION														
			825	4000		Flight Surgeon	0045	O	2100	5	1	29.3	10.7		
			825	4C00		Aviation Medicine Tech.	8406	E	HM1	6	1	29.3	10.7		
			825	4C00		Aviation Medicine Tech.	8406	E	HM3	4	2	58.6	21.4		

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title						OFF	ENL	CIV	TOTAL
ME	MEC	MECM		Sick Call	MECM	4C00	Patients Processed	350	160	1	3	0	4
ME	MEC	MECP		Pharmacy	MECM	4G00	Presorp. Filled	532	40	0	1	0	1
ME	MEC	MECR		X-Ray	MECR	4F00	Films Exposed	112	40	0	1	0	1

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
			SICK CALL BRANCH												
			825	4C00		Medical Officer, G. P.	0070	O	2100	3	1	29.3	10.7		
			825	4C00		Sick Call Corpsman	8404	E	HM3	4	2	58.6	21.4		
			825	4C00		Sick Call Corpsman		E	HN	3	1	29.3	10.7		
			PHARMACY BRANCH												
			825	4C00	4G00	Pharmacy Technician	8482	E	HM2	5	1	29.3	10.7		
			X-RAY BRANCH												
			825	4C00	4F00	X-Ray Technician	8452	E	HM2	5	1	29.3	10.7		

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-5700-00	NAF, Barkley Field	03025	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION									TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Funct Code	Sub Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
ME	MED	MEOO		Operating Room	MEOF	4000	Treatments Given	102	40	0	1	0	1
ME	MED	MEOL		Laboratory	MEOL	4800	Tests Performed	399	80	0	2	0	2
ME	MED	MEOD		Dependents Clinic	MEOS	4000	Patients Processed	220	120	1	0	2	3

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET OR RATING TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
						OPERATING ROOM BRANCH									
			825	4000		Operating Room Tech.	8403	E	HM2	5	1	29.3	10.7		
						LABORATORY BRANCH									
			825	4000	4800	Clinical Laboratory Assistant	8412	E	HM2	5	1	29.3	10.7		
			825	4000	4800	Laboratory Assistant		E	HA	2	1	29.3	10.7		
						DEPENDENTS CLINIC BRANCH									
			825	4000		Medical Officer, C. F.	0070	O	2100	3	1	29.3	10.7		
			825	4000		Staff Nurse		GS	610	5	1	33.64	6.36		
			825	4000		Nursing Assistant (MHS)		GS	621	3	1	33.64	6.36		

SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1451-0710-00	NAS, Saufley Field	03045	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION								Average Weekly Workload	Total Man-hours Required	TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Funct Code	Sub-Cost Center Code	Work Load Indicator or Work Unit			OFF	ENL	CIV	TOTAL
ME	MEC	MECX		Field Ambulance	MECX	4000	(Watchstanding)		120	0	3	0	3

LINE NUMBER	MO.	YR.	UIC	COST/ SUB--COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
			FIELD	AMBULANCE	BRANCH										
			825	4000		Ambulance Corpsman	8404	E	HM3	4	1	29.3	10.7		
			825	4000		Ambulance Corpsman		E	HN	3	2	58.6	21.4		

SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION										TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Funct Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
DE	DEA			Administration	DEA	4D00	Documents Processed	250	120	0	3	0	3
DE	DES			Dental Services	DES	4D00	Procedures Perf.	400	280	3	3	1	7

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
	DENTAL DEPARTMENT														
		ADMINISTRATION DIVISION													
			825	4D00		Dept. Leading CPO	8722	E	DTC	7	1	29.3	10.7		
			825	4D00		Admin. Dental Tech.	8703	E	DT2	5	1	29.3	10.7		
			825	4D00		Dental Technician		E	DT3	4	1	29.3	10.7		
		DENTAL SERVICES DIVISION													
			825	4D00		Dental Officer	0365	O	2200	4	1	29.3	10.7		
			825	4D00		Asst. Dental Officer	0335	O	2200	3	1	29.3	10.7		
			825	4D00		Asst. Dental Officer	0335	O	2200	3	1	29.3	10.7		
			825	4D00		Dental Assistant		E	DN	3	3	87.9	32.1		
			825	4D00		Dental Hygienist		GS	682	5	1	33.64	6.36		

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1451-0710-00	NAS, Saufley Field	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION									TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Funded Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
TR				Training Department	TR	6J10	Students Trained	344	40	1	0	0	1
TR	TRA			Administration Div.	TRA	6J10	Students Trained	344	80	0	0	2	2
TR	TRL			Leadership Development & Enl. Retention Div.	TRL	6J10	Students in Class	80	200	1	4	0	5

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
	TRAINING DEPARTMENT														
			825	6J10		Training Officer	3283	O	1310	5	1	29.3	10.7		
	ADMINISTRATION DIVISION														
			825	6J10		Secretary (Typing)		GS	318	5	1	33.64	6.36		
			825	6J10		Clerk-Typist		CS	322	3	1	33.64	6.36		
	LEADERSHIP TRAINING/ENLISTED RETENTION DIVISION														
			825	6J10	6J22	Leadership Development Officer	3990	C	1370	4	1	29.3	10.7		
			825	6J10	6J22	Supervisor/Instructor		E	YNCM	9	1	29.3	10.7		
			825	6J10	6J22	Instructor		E	MMC	7	2	58.6	21.4		
			825	6J10	6J22	Career Counselor		E	BMC	7	1	29.3	10.7		

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Sagtley Field	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION										TOTAL MANPOWER REQUIRED			
Dept	Div	Branch	Section	Work Center Title	Org-Fund Code	Sub-Cost Center Code	Work Load Indicator or Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
TR	TRT			Training Aids Div.	TRT	9550	Items Serviced	1000	160	0	4	0	4
TR	TRI			Academic Training Div.	TRI	6J30	Students Trained	344	360	9	0	0	9
TR	TRI	TRIC		Code Instruction/Book Issue Branch	TRIC	6J30	Student in Class	203	131.1	0	3	0	3

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
		TRAINING AIDS DIVISION													
			825	9550		Supervisor/Maintenance		E	TD1	6	1	29.3	10.7		
			825	9550		Maintenance Repairman		E	TD2	5	1	29.3	10.7		
			825	9550	9570	Movie Rigger		E	TD3	4	1	29.3	10.7		
			825	9550	9570	Movie Rigger		E	TDAN	3	1	29.3	10.7		
		ACADEMIC TRAINING DIVISION													
			825	6J30	6J21	Instructor	3236	O	1310	3	5	146.5	53.5		
			825	6J30	6J21	Instructor	3236	O	1370	3	4	117.2	42.8		
		CODE INSTRUCTION/BOOK ISSUE BRANCH													
			825	6J30	6J21	Supervisor/Code Instructor		E	RM1	6	1	33.0	10.7		
			825	6J30	6J21	Code Instructor		E	RM3	4	2	66.0	21.4		

SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	DUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Sanley Field, Pensacola	03825	Naval Personnel Research and Development Labor

ORGANIZATIONAL IDENTIFICATION				Work Center Title	Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	Manpower Allowance OFF	EM	CIV	T
Dept.	Div	Br.	Sect.										
AO				Air Operations Department	AO	6000	Department Personnel		37.30	1	2	0	
AO	A			Administration Division	AOA	6010	Department Personnel		80.66	0	1	1	
AO	E			Gnd Electronics Maint	AOE	6050	No. & Types of Equipment Maintained	See Equip. Inventory	468.44	1	5	7	

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACCT NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST
	AIR OPERATIONS DEPARTMENT													
			825	6000		Operations Officer	8668	O	1310	4	1	26.6	10 70	
	ADMINISTRATION DIVISION													
			825	6000		Supervisor/Department Leading CPO		E	ADFC	7	1	30.5	10.70	
			825	6000		Clerk-Typist		GS	322	3	1	33.10	6.36	
	GROUND ELECTRONICS MAINTENANCH DIVISION													
			825	6050		Ground Electronics Officer	5977	O	6400	2	1	21.10	10.70	
			825	6050		Supervisor		E	ETC	7	1	29.30	10.70	
			825	6050		Electronics Technician		E	ET1	6	1	29.30	10.70	
			825	6050		Electronics Technician		E	ETN2	5	2	58.60	21.40	
			825	6050		Supply Clerk (Typist)		GS	2040	3	1	33.64	6.36	
			825	6050		Electronics Technician		GS	856	9	1	33.64	6.36	
			825	6050		Electronics Mechanic		WG	26014	11	3	99.92	19.08	
			825	6050		Radio Mechanic		WG	26008	10	2	68.28	12.72	
			825	6050		Mirror Landing System Maintenance	4745	E	IC2	5	1	*	10.70	

*Not Studied (new requirement)

SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION										MANPOWER REQUIREMENTS			
Dept	Div	Br.	Sect.	Work Center Title	Org-Funct. Code	Sub-cost Center Code	Work Load Indicator on Work Unit	Average Weekly Workload	Total Man-hours Required	OFF	EM	CIV	TOTAL
AO	P			Photographic Division	AOP	6C60	Positives & Neg's Produced	777.6	162.0	0	3	1	4
AO	T			Air Traffic Control Div.	AOT	6C20	Home Station T. O.'s Landings, Touch and Go's	6,458	563.94	1	7	6	14
AO	W			Weapons Division	AOW	AF00	Personnel Trained	30	43.6	0	1	0	1

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
		PHOTOGRAPHIC DIVISION													
			825	6C60		Division Officer (see Code AOT)	8647	O	1370	3	0	2.0	-		778
			825	6C60		Supervisor		E	PH1	6	1	29.30	10.70		
			825	6C60		Photographer		E	PH2	5	1	29.30	10.70		
			825	6C60		Photographer		E	PH3	4	1	29.30	10.70		
			825	6C60		Photographer		GS	1060	5	1	33.64	6.36		
		AIR TRAFFIC CONTROL DIVISION													
			825	6C20		ATC Division Officer	8647	O	1370	3	1	26.40	10.70		6,458
			825	6C20		ATC Supervisor		E	ACC	7	1	29.30	10.70		
			825	6C20		Air Traffic Controller		E	AC1	6	3	92.10	32.10		
			825	6C20		Air Traffic Controller		E	AC2	5	3	92.40	32.10		
			825	6C20		Air Traffic Controller		GS	2152	10	3	99.99	19.08		
			825	6C20		Air Traffic Controller		GS	2152	9	3	99.99	19.08		
		WEAPONS DIVISION													
			825	6C79		Division Officer (Code AOE)		O	6400	2	0	2.00	-		-
			825	6C79		Maintenance/Repair - Range Ops		E	GMG2	5	1	30.9	10.70		

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Sauflo Field, Pensacola	03825	Naval Personnel Research and Development Laborat

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	ASSIGNED PERSONNEL			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AM				Aircraft Maintenance	AM	AA1C	Personnel Assigned	110	40	1	0	0	1.0
AM	AD			Administrative Division	AMA	AA1C	Personnel Assigned	110	110.1	0	3	0	3.0
AM	AML			Analysis	AMAA	AA1C	Documents Processed	750	97.2	.5	2	0	2.5

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACCT NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
	AIRCRAFT MAINTENANCE DEPARTMENT														
			825	AA1C		Maintenance Officer	8189	O	1520	5	1	29.3	10.7		110
	ADMINISTRATIVE DIVISION														
			825	AA1C		Leading CPO/Administrative Supv.		E	AFCM	9	1	29.3	10.7		
			825	AA10		Records/Reports		E	AZ3	4	1	23.7	10.7		
			825	AA1C		Clerical Assistant/Messenger		E	AZAN	3	1	25.0	10.7		
	ANALYSIS DIVISION														
			825	AA10		Data Analysis Officer	8189	O	6850	3	.5	14.6	5.4		
			825	AA10		Senior Analyst	6313	E	AZC	7	1	26.5	10.7		
			825	AA10		Assistant Analyst/Messenger		E	AZAN	3	1	29.3	10.7		

UIC CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	Personnel Allowance			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AM	MC			Maintenance Control	AMC	AA10	Documents Processed	250	99.4	.5	2	0	2.5
AM	MC	CAL		Calibration	AMCC	AA60	Work Orders	20	55.2	0	2	0	2.0
AM	QA			Quality Assurance	AMQ	AA20	Prime Inspections	15	188.6	.5	5	0	5.5

LINE NUMBER	MO.	YR.	UIC	COST/SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/NEC	SVC TYPE	DESIG/RATING/SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
			MAINTENANCE CONTROL DIVISION												
			825	AA10		Maintenance Control Officer	8175	O	6850	4	.5	14.6	5.4		
			825	AA10		Maintenance Control/Prod. Contr.		E	AFCM	9	1	29.3	10.7		
			825	AA10		Prod. Contr. Assistant		E	AZ1	6	1	28.7	10.7		
			CALIBRATION BRANCH												
			825	AA60		Calibration		E	AT1	6	1	*14.7	10.7		20
			825	AA60		Calibration Assistant		E	AN	3	1	*19.1	10.7		
			QUALITY ASSURANCE DIVISION												
			825	AA20		Quality Assurance Officer	8177	O	6850	3	.5	14.6	5.4		15
			825	AA20		Supervisor/P. P. Inspector		E	ADRC	7	1	27.2	10.7		
			825	AA20		Technical Library/Train Assistant		E	AZ3	4	1	29.3	10.7		
			825	AA20		Electronics Inspector		E	AT1	6	1	*24.2	10.7		
			825	AA20		Electrical Insp/Dept. Trng.		E	AE1	6	1	*22.2	10.7		
			825	AA20		Airframes Insp/Career Counselor	9588	E	AMS1	6	1	*12.2	10.7		

*Skill level specified Required by law, statue or directive, and/or skill mix essential for operation of work center.

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION				Work Center Title	Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	MAN-YEARS			
Dept	Div	Br.	Sect.							OFF	EM	CIV	TOTAL
AM	MAT			Material Control	AMM	AA30	Line Items Received from Supply	300	165.2	.5	4	0	4.5
AM	PP			Power Plants	AMP	AA40	Work Orders Completed by Division	46	93.0	.3	2	0	2.3
AM	PP	EBU		Engine Build-up	AMPB	AA40	Items Processed	5.5	226.7	0	6	0	6.0

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
			MATERIAL CONTROL DIVISION												
			825	AA30		Material Control Officer	8175	O	6850	4	.5	14.6	5.3		300
			825	AA30		Division Supervisor		E	AK1	6	1	29.3	10.7		
			825	AA30		Weapons System Procurement		E	AK2	5	1	25.7	10.7		
			825	AA30		General Procurement		E	AK3	4	1	25.0	10.7		
			825	AA30		Supply Screening		E	AK3	4	1	22.5	10.7		
			POWER PLANTS DIVISION												
			825	AA40		Power Plants Officer	8191	O	6850	3	.3	9.8	3.2		-
			825	AA40		Division Supervisor		E	ADRC	7	1	29.3	10.7		
			825	AA40		Training/EBU		E	ADR2	5	1	29.3	10.7		
			ENGINE BUILD-UP BRANCH												
			825	AA40		Branch Supervisor		E	ADR1	6	1	29.3	10.7		5.5
			825	AA40		Engine Build-up Mechanic		E	ADR2	5	1	27.0	10.7		
			825	AA40		Engine Build-up Mechanic		E	ADR3	4	2	55.6	21.4		
			825	AA40		Engine Build-up Mechanic		E	ADRAN	3	1	27.8	10.7		
			825	AA40		Engine Build-up Elec.		E	AE3	4	1	*22.8	10.7		

*Skill mix essential for proper operation of work center.

MARF CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	61825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION				Work Center Title	Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	BILLETS			
Dept	Div	Br.	Sect.							OFF	EM	CIV	TOTAL
AM	PP	CR		Component Repair	AMPC	AA40	Items Processed	40	107.2	0	5	0	5.0
AM	AF			Airframes	AMF	AA50	Items Processed	286	93.3	.5	2	0	2.5
AM	AF	CR		Component Repair	AMFI	AA50	Items Processed	110	351.4	0	9	0	9.0

LINE NUMBER	MO.	YR.	UIC	COST/SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/NEC	SVC TYPE	DESIG/RATING/SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
				COMPONENT REPAIR BRANCH											
			825	AA40		Branch Supervisor/Component Repair		E	ADR1	6	1	29.0	10.7		40
			825	AA40		Prop Shop		E	ADR2	5	1	27.0	10.7		
			825	AA40		MAG Shop		E	ADR2	5	1	29.0	10.7		
			825	AA40		MAG Shop		E	ADR3	4	1	29.3	10.7		
			825	AA40		MAG and Prop Shop		E	ADR3	4	1	29.3	10.7		
				AIRFRAMES DIVISION											
			825	AA50		Airframes Officer	8192	O	6850	3	.5	18.6	5.3		
			825	AA50		Division Supervisor		E	AMCS	8	1	29.3	10.7		
			825	AA50		Maintenance Admin		E	AZ3	4	1	23.3	10.7		
				COMPONENT REPAIR BRANCH											
			825	AA50		Branch Supv/Comp Repair		E	AMS1	6	1	29.3	10.7		110
			825	AA50		Maint Admin/Comp Repair		E	AMS2	5	1	29.3	10.7		
			825	AA50		Component Repair		E	AMS2	5	1	29.0	10.7		
			825	AA50		Component Repair	7222	E	AMS2	5	1	28.0	10.7		
			825	AA50		Comp Repair/Paint Shop		E	AMS3	4	1	29.0	10.7		
			825	AA50		Comp Repair/Paint Shop		E	AMSAN	3	1	28.0	10.7		
			825	AA50		Comp Repair/Photography	7224	E	AMS3	4	1	27.5	10.7		
			825	AA50		Component Repair		E	AMS3	4	1	28.0	10.7		
			825	AA50		Component Repair		E	AMSAN	3	1	28.0	10.7		

SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	PLANNER RATES			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AM	AF	HYD		Hydraulics	AMFH	AA50	Hydraulics Components Processed	26	108.9	0	3	0	3.0
AM	AF	TIRE		Tire Shop	AMFT	AA50	Items Processed	150	80.0	0	2	0	2.0
AM	AF	RAD		Radiography	AMFR	AA50	Items Processed	Not Available	38.7	0	1	0	1.0

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
			HYDRAULICS BRANCH												
			825	AA50		Branch Supv/Comp Repair		E	AMH1	6	1	29.3	10.7		26
			825	AA50		Component Repair		E	AMH2	5	1	24.0	10.7		
			825	AA50		Component Repair		E	AMH3	4	1	23.5	10.7		
			TIRE BRANCH												
			825	AA50		Branch Supv/Tire Repair		E	AMS3	4	1	29.3	10.7		150
			825	AA50		Tire Shop		E	AMSAN	3	1	29.3	10.7		
			RADIOGRAPHY BRANCH												
			825	AA50		Technician	7224	E	AMS1	6	1	28.0	10.7		

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	MA			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AM	AF	MACH		Machine Shop	AMFM	AA50	Items Processed	16	18.7	0	1	0	1.0
AM	AV			Avionics	AMV	AA60	Sum of Items Processed	371	18.9	.5	0	0	0.5
AM	AV	ELEC		Electrical	AMV1	AA60	Items Processed	309.8	328.8	0	9	0	9.0

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
			MACHINE SHOP BRANCH												
			825	AA50		Machinist		E	MR2	5	1	*8.0	10.7		16
			AVIONICS DIVISION												
			825	AA50		Avionics Officer	8198	0	6800	3	.5	13.6	5.3		—
			ELECTRICAL BRANCH												
			825	AA60		Branch Supv/Train/Shop Coor.		E	AEC	7	1	20.5	10.7		309.8
			825	AA60		Component Repair		E	AE1	6	1	25.0	10.7		
			825	AA60		Component Repair		E	AE2	5	2	47.2	21.4		
			825	AA60		Component Repair		E	AE3	4	2	53.6	21.4		
			825	AA60		Component Repair		E	AEAN	3	1	26.8	10.7		
			825	AA60		Battery Shop		E	AE3	4	1	29.6	10.7		
			825	AA60		Battery Shop		E	AEAN	3	1	29.8	10.7		

*Skill level specified Required by directive; essential for proper operation of work center.

SHORE MANNING DOCUMENT

TYPE CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY: Naval Personnel Research and Development Laboratory
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	OFF	EM	CIV	TOTAL
Dept	Div	Br.	Sect.	Work Center Title									
AM	AV	ELECT		Electronics	AMV2	AA60	Items Processed	61.6	450.4	0	13	0	13
AM	AV			Aviators Equipment	AMEE	AA80	Items Processed	471.0	275.1	.2	7	0	7.2

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	MONTHS
				ELECTRONICS BRANCH											
			825	AA60		Branch Supv/Training		E	ATC	7	1	29.3	10.7		61.6
			825	AA60		Radio Tech Rpr/Insp		E	AT1	6	1	29.3	10.7		
			825	AA60		Radio Tech Rpr		E	ATN2	5	2	40.8	21.4		
			825	AA60		Radio Tech Rpr		E	ATN3	4	3	66.8	32.1		
			825	AA60		Radio Tech Rpr		E	ATNAN	3	2	51.2	21.4		
			825	AA60		Nav Inst Tech Rpr/NSP		E	AT1	6	1	22.7	10.7		
			825	AA60		Nav Inst Tech Rpr		E	ATN2	5	1	20.4	10.7		
			825	AA60		Nav Inst Tech Rpr		E	ATN3	4	1	20.4	10.7		
			825	AA60		Maint Admin/Test Equip Contr.		E	ATN3	4	1	30.4	10.7		
				AVIATORS EQUIPMENT DIVISION											
			825	AA80		Aviator Equipment Officer	8194	0	6850	3	.2	5.9	2.2		471.0
			825	AA80		Division Supervisor		E	PRC	7	1	27.0	10.7		
			825	AA80		Maint Admin/Train/Pack/Rep		E	PR2	5	1	29.7	10.7		
			825	AA80		Insp/Pack/Rep		E	PR1	6	1	31.0	10.7		
			825	AA80		Insp/Pack/Rep		E	PR3	4	1	30.2	10.7		
			825	AA80		Helmet & Sewing Shop		E	PR2	5	1	27.5	10.7		
			825	AA80		Helmet & Sewing Shop		E	PRAN	3	1	27.7	10.7		
			825	AA80		Life Vest/Raft/Oxygen Shop		E	PR3	4	1	19.0	10.7		

MAPP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	UIC	PREPARED BY:
3-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION													
Dept	Div	Br.	Sect.	Work Center Title	Cog-nizant Code	Subsidiary Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-Hours Required	MIL OFF	MIL ENL	CIV	TOTAL
AM	SE			Support Equipment	[illegible]	AA90	Items Processed	68	311.4	.1	8	0	8.3

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACCT NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL. TIME	LABOR COST	WORK UNITS
			SUPPORT EQUIPMENT DIVISION												
			825	AA90		Support Equipment Officer	8195	O	6850	3	.3	9.8	3.2		68
			825	AA90		Division Supervisor		E	ASC	7	1	25.5	10.7		
			825	AA90		Shop Supv/Training		E	AS1	6	1	29.3	10.7		
			825	AA90		Engines		E	ASM3	4	2	52.0	21.4		
			825	AA90		Engines		E	ASE3	4	1	20.5	10.7		
			825	AA90		Engines		E	ASMAN	3	1	26.0	10.7		
			825	AA90		Structures		E	ASH2	5	1	28.0	10.7		
			825	AA90		Structures		E	ASH3	4	1	25.5	10.7		

SHORE MANNING DOCUMENT

NAVY CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	MAN-HOURS PER WEEK			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
AM	L			Line Division	AML	6F30	Items Processed	170	488.1	.2	12	0	12.2

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
		LINE DIVISION													
			825	6F30		Line Division Officer	8196	O	6850	3	.2	5.9	2.2		170
			825	6F30		Division Supervisor		E	ADR1	6	1	29.3	10.7		
			825	6F30		Line Maintenance		E	ADR2	5	2	58.6	21.4		
			825	6F30		Line Maintenance		E	AMS2	5	1	29.3	10.7		
			825	6F30		Line Maintenance		E	AMS3	4	1	29.3	10.7		
			825	6F30		Line Maintenance		E	AMH2	5	1	29.3	10.7		
			825	6F30		Line Maintenance		E	AE2	5	1	29.3	10.7		
			825	6F30		Line Maintenance		E	AE3	4	1	29.3	10.7		
			825	6F30		Line Maintenance		E	ATN3	4	2	58.6	21.4		
			825	6F30		Maintenance/Admin		E	AZ3	4	1	29.3	10.7		
			825	6F30		Oxygen Equipment Maintenance		E	AME3	4	1	29.3	10.7		

SHORE MANNING DOCUMENT

NAVPERS CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1456-0710-00	NAS, Cecil Field, Jacksonville	03828	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	OFF	ENL	CIV	TOTAL
Dept	Div	Br.	Sect.	Work Center Title									
SE				Security Department	SE	6B10	Personnel Assigned	154	40	1	0	0	1
SE	A			Administration Division	SEA	6B10	Actions Completed	460	120	0	2	1	3
SE	P			Police Division	SEP	6B20	(Watchstanding)		453.2	0	11	0	11

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
	SECURITY DEPARTMENT														
			825	6B10		Security/Police Officer	2750	O	1370	4	1	29.3	10.7		154
	ADMINISTRATION DIVISION														
			825	6B10		Division Supervisor		E	XXXX	8	1	29.3	10.7		460
			825	6B10		Pass and Tag Clerk		S	311	6	1	29.3	10.7		
			825	6B10		Clerk-Typist		GS	322	4	1	33.64	6.36		
	POLICE DIVISION														
			825	6B20		Guard Supervisor		E	[illegible]	6	2	61.00	21.40		-
			825	6B20		Guard (Fixed/Mobile)		E	[illegible]	5	3	91.5	32.1		
			825	6B20		Guard (Fixed/Mobile)		E	[illegible]	4	4	122.0	42.8		
			825	6B20		Guard (Fixed/Mobile)		E	[illegible]	3	2	61.	21.4		

SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	UIC	PREPARED BY:
5-01-2	1459-0720-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION									MANPOWER REQUIREMENTS			
Dept	Div	Br.	Sect.	Work Center Title	Org-Fund Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	OFF	EM	CIV	TOTAL
SE	P	I		Investigations Division	SEPI	6B20	Actions Completed	10	40	0	1	0	1
SE	D			Disaster Control Division	SED	6B10	Actions Completed	35	40	0	1	0	1
SE	F			Crash/Fire Division	SEF	6B60	Personnel Assigned	136	80	2	0	0	2

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACCT NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
			INVESTIGATIONS DIVISION												
			825	6B20		Investigator		E	SME	6	1	29.3	10.7		10
			DISASTER CONTROL DIVISION												
			825	6B20		Damage Controlman		E	DC1	6	1	29.3	10.7		35
			CRASH/FIRE DIVISION												
			825	6B60		Crash/Fire Supervisor	2790	O	1310	3	1	29.3	10.7		136
			825	6B60		Assistant Crash/Fire Supervisor	2790	W	7600	2	1	29.3	10.7		

SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	UIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION					Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	MANPOWER RESPONSE			
Dept	Div	Br.	Sect.	Work Center Title						OFF	EM	CIV	TOTAL
SE	F	S		Structural Branch	SEFS	6B50	(Watchstanding)		992	0	0	14	14
SE	F	C		Crash/Fire Branch	SEFC	6B60	(Watchstanding)		8280	0	80	35	115

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACCT NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
				STRUCTURAL FIRE BRANCH											
			825	6B50		Fire Chief		GS	081	10	1	56			
			825	6B50		Assistant Fire Chief		GS	081	8	2	144			
			825	6B50		Driver/Operator		GS	081	5	2	144			
			825	6B50		Firefighter		GS	081	4	8	576			
			825	6B50		Firefighter/Maintenanceman		GS	081	4	1	72			
				CRASH/FIRE BRANCH											
			825	6B60		Fire Captain		GS	081	6	2	144			
			825	6B60		Driver/Operator		GS	081	5	6	432			
			825	6B60		Firefighter (Airfield)		GS	081	4	27	1944			
			825	6B60		Crash/Fire Captain		E	ABH1	6	2	144			
			825	6B60		Crash/Fire Captain		E	ABE2	5	4	288			
			825	6B60		Driver/Operator		E	ABE2	5	4	288			
			825	6B60		Driver/Operator		E	ABH3	4	3	216			
			825	6B60		Driver/Operator		E	ABE3	4	4	288			
			825	6B60		Driver/Operator		E	EOCN	3	3	216			
			825	6B60		Firefighter/Rescue		E	ABEAN	3	5	360			
			825	6B60		Firefighter/Rescue		E	AN	3	40	2880			
			825	6B60		Firefighter/Rescue		E	AA	2	7	504			
			825	6B60		Crane Operator		E	ABH1	6	2	144			
			825	6B60		Crane Operator		E	ABH2	5	2	144			
			825	6B60		Arresting Gear Operator		E	ABE3	4	2	144			
			825	6B60		Arresting Gear Maintenanceman		E	AE AN	3	2	144			

SHORE MANNING DOCUMENT

MARP CODE	ACTIVITY CODE	COMMAND/ACTIVITY	BUIC	PREPARED BY:
5-01-2	1459-0710-00	NAS, Saufley Field, Pensacola	03825	Naval Personnel Research and Development Laboratory

ORGANIZATIONAL IDENTIFICATION										MANNING REQUIREMENTS			
Dept	Div	Br.	Sect.	Work Center Title	Org-Funct. Code	Sub-cost Center Code	Work Load Indicator (I) or Work Unit (U)	Average Weekly Workload	Total Man-hours Required	OFF	EM	CIV	TOTAL
SE	F	M		Vehicle Maintenance Branch	SEFM	6B60	Vehicles Processed	84	280	0	7	0	7

LINE NUMBER	MO.	YR.	UIC	COST/ SUB-COST CENTER	COST ACC'T NUMBER	BILLET/POSITION TITLE	NOBC/ NEC	SVC TYPE	DESIG/ RATING/ SERIES	PAY GRADE	NO.	PROD. TIME	NON AVAIL TIME	LABOR COST	WORK UNITS
			VEHICLE MAINTENANCE BRANCH												
			825	6B60		Leading Chief		E	ABCS	8	1	29.3	10.7		
			825	6B60		Maintenance/Drill Chief		E	ABHC	7	1	29.3	10.7		
			825	6B60		Equipment Maintenanceman		E	MM1	6	1	29.3	10.7		
			825	6B60		Equipment Maintenanceman		E	MM2	5	1	29.3	10.7		
			825	6B60		Equipment Maintenanceman		E	EN2	5	1	29.3	10.7		
			825	6B60		Equipment Maintenanceman		E	RD2	5	1	29.3	10.7		
			825	6B60		Rep/Rec/File Clerk		E	YNSN	3	1	29.3	10.7		

COMPARISON BETWEEN WORK SAMPLING AND OPERATIONAL AUDIT
MEASUREMENT STUDIES FOR THE
AIRCRAFT MAINTENANCE DEPARTMENT

NAVAL AIR STATION, SAUFLEY FIELD, PENSACOLA, FLORIDA

Recommended Billet Title (Where Applicable)	Rank/ Rate & Rating	NEC Desig/ NOBC	Allow-ance	Work Sampl-ing*	Opnl. Audit	WS - OA
Maintenance Officer	CDR	1520 8175	1		1	
Maint/Material Control Off.	LCDR	6850 8175	1		1	
Power Plts/Air Fms/Av. Equip	LCDR	6850 8191	1		0	
Power Plts/Air Fms/Av. Equip	LT	6850 8191	0		1	
Avionics/Supp Equipment	W-3	7610 8198	1		0	
Avionics/Supp Equip/Line	LT	6850 8198	0		1	
Material Control/Admin	W-2	7410 8305	1		0	
Line Division	LT	1310 8196	1		0	
Quality Control	LT	6850 8177	1		0	
TOTAL OFFICERS			7		4	N/A
ENLISTED MANNING						
Admin Control Division						
Leading Chief	AFCM		1	1	1	
Tra/Car Counsel	ADR1		1	**	0	
Tra Records/Reports	AN		1	0	0	
Records/Reports	AZ3		0	1	1	
Clerical Ast/Msgr	AZAN		0	1	1	
Sub-Total			3	3	3	0

*Work sampling data does not include a Personal and Fatigue factor (10%)
**Function transferred

Recommended Billet Title (Where Applicable)	Rank/ Rate & Rating	NEC Desig/ NOBC	Allow-ance	Work Sampl-ing*	Opnl. Audit	WS - OA
Material Control Division						
Supervisor	AKC		1	1	0	+1
Supervisor	AK1		1	1	1	0
Weps Sys Procurement	AK2		1	1	1	0
General Procurement	AK3		1	1	1	0
Supply Screening	AK3		0	0	1	-1
Sub-Total			4	4	4	0
Quality Control Division						
Supervisor	ADCS		1	0	0	0
Supv/Power Plts Insp	ADRC		0	0	1*	+1
Tech Lib/Tra Asst	AZ3		1	0	1*	+1
Avionics Inspection	AT1		1	1	1	0
Avionics Insp/Dept Train	AE1		1	1	1*	0
Air Frames/Car. Counsel	AMS1	9588	1	0	1*	+1
Power Plts Insp	ADR1		1	0	0	0
Sub-Total			6	2	5	+3
Maintenance Control Division						
Maint Chief/Prod Control	AFCM		0	1	1	0
Supervisor	ADCS		1	0	0	0
Prod Control Asst	AZ1		0	0	1	+1
Prod Control	ADR1		1	1	0	-1
Calibration	AT1		1	1	1	0
Calibration Asst	AN		1	1	1	0
Maint Control Asst	AN		0	1	0	-1
Sub-Total			4	5	4	-1
Analysis Division						
Senior Analyst	AZC	6313	1	1	1	0
Asst Analyst/Msgr	AZAN		1	0	1	+1
Maint Analyst	AMS2		0	1	0	-1
Sub-Total			2	2	2	0

*Additional function assigned.

Recommended billet Title (Where Applicable)	Rank/ Rate & Rating	NEC Desig/ NOBC	Allow-ance	Work Sampl-ing*	Opni. Audit	WS - AO
Avionics Division						
Electronics Branch						
Supervisor/training	ATC		1	1	1	0
Radio Rep Tech/Training	AT1		1	1	1	0
Radio Repair Tech	ATN2		1	1	1	0
Radio Repair Tech	ATN2		1	1	1	0
Radio Repair Tech	ATN3		1	1	1	0
Radio Repair Tech	ATN3		1	1	1	0
Radio Repair Tech	ATN3		1	1	1	0
Radio Repair Tech	ATNAN		1	1	1	0
Radio Repair Tech	ATNAN		1	1	1	0
Nav Rep Tech/Inspector	AT1		0	1	1	0
Nav Rep Tech	ATN2		1	0	1	+1
Nav Rep Tech	ATN3		1	1	1	0
Logs and Records	ATN3		1	0	1	+1
Repair	ATN3		1	0	0	0
Repair	ATNAN		0	1	0	-1
Sub-Total			13	11	13	+2
Electrical Branch						
Supervisor/Training	AEC		1	1	1	0
Training/Shop Coordinator	AE1		1	0	0	0
Component Repair	AE1		0	1	1	0
Component Repair	AE2		1	1	1	0
Component Repair	AE2		1	1	1	0
Component Repair	AE3		1	1	1	0
Component Repair	AE3		1	0	1	+1
Component Repair	AEAN		1	1	1	0
Battery Shop	AE3		1	1	1	0
Battery Shop	AEAN		1	1	1	0
Battery Shop	AEAN		1	0	0	0
Component Repair	AEAN		1	0	0	0
EBU	AE2		1	0	0	0
Component Repair	AE3		1	0	0	0
			13	8	9	+1

Recommended Billet Title (Where Applicable)	Rank/ Rate & Rating	NEC Desig/ NOBC	Allow-ance	Work Sampl-ing*	Opnl. Audit	WS - AO
Power Plants Division						
Supervisor	ADRC		1	1	1	0
Training/EBU	ADR2		1	1	1	0
Engine Build-up Branch						
Supervisor	ADR1		1	1	1	0
EBU	ADR2		1	1	1	0
EBU	ADR3		1	1	1	0
EBU	ADR3		1	0	1	+1
EBU	ADRAN		1	1	1	0
EBU	AE3		0	0	1	+1
EBU	AN		1	1	0	-1
EBU	AN		1	1	0	-1
EBU	AN		0	1	0	-1
Sub-Total			9	9	8	-1
Component Repair Branch						
Supervisor/Comp. Repair	ADR1		1	1	1	0
Prop Shop	ADR2		0	1	1	0
Comp. Repair/Prop Shop	ADR3		1	0	0	0
MAG Shop	ADR2		1	1	1	0
MAG Shop	ADR3		0	0	1	+1
Comp. Repair/Prop Shop	AN		1	0	0	0
Comp. Repair/MAG Shop	AN		1	1	0	-1
MAG and Prop Shop	ADR3		0	0	1	+1
Sub-Total			5	4	5	+1
Aviators Equipment Division						
Supervisor	PRCS		1	1	0	-1
Supervisor	PRC		0	0	1	+1
Train/Rep/Packing	PR2		1	1	1	0
Inspect/Packing	PR1		1	1	1	0
Inspect/Packing	PR3		1	0	1	+1
Helmet/Sewing	PR2		1	0	1	+1
Helmet/Sewing	PRAN		1	1	1	0
Raft/Oxy	PR3		1	0	1	+1
Packing	PRAN		1	1	0	-1
Oxy Shop	AME2		1	0	0	0
Packing	AN		0	1	0	-1
Sub-Total			9	6	7	+1

Recommended Billet Title (Where Applicable)	Rank/ Rate & Rating	NEC Desig/ NOBC	Allow-ance	Work Sampl-ing*	Opnl. Audit	WS - AO
Support Equipment Division						
Supervisor	ASC		1	1	1	0
Shop Supervisor/Training	AS1		1	1	1	0
Ground Support	AS1		0	1	0	-1
Engines	ASM3		1	1	1	0
Engines	ASM3		0	1	1	0
Engines	ASE3		1	1	1	0
Engines	ASHAN		1	1	1	0
Structures	ASH2		1	0	1	+1
Structures	ASH3		0	0	1	+1
Elec Equip Maintenance	ASE2		1	1	0	-1
Elec Equip Maintenance	ASEAN		1	0	0	0
Ground Support	ASM2		0	1	0	-1
Sub-Total			8	9	8	-1
Airframes Division						
Supervisor	AMCS		1	1	1	0
Maintenance Admin	AZ3		0	0	1	+1
Metal Shop Branch						
Supervisor/Component Repair	AMS1		1	1	1	0
Maint Admin/Comp Repair	AMS2		1	1	1	0
Component Repair	AMS2		0	1	1	0
Component Repair	AMS2	7222	0	1	1	0
Comp Repair/Paint Shop	AMS3		1	1	1	0
Comp Repair/Paint Shop	AMSAN		1	1	1	0
Comp Repair/Radiography	AMS3	7224	1	0	1	-1
Component Repair	AMS3		1	0	1	+1
Component Repair	AMSAN		1	1	1	0
Insp/Comp Repair	AMS1		1	0	0	0
Metal Shop	AMSAN		1	1	0	-1
Paint Shop	AMS3		1	0	0	0
Sub-Total			11	9	11	+2
Machine Shop Branch						
Machinist	MR1		1	1	0	-1
Sub-Total			1	1	0	-1

Recommended Billet Title (Where Applicable)	Rank/ Rate & Rating	NEC Desig/ NOBC	Allow- ance	Work Sampl- ing*	Opnl. Audit	WS - AO
Hydraulics Shop Branch						
Supervisor/Comp Repair	AMH1		1	0	1	+1
Component Repair	AMH2		1	1	1	0
Component Repair	AMH3		1	0	1	+1
Component Repair	AMHAN		1	0	0	0
Component Repair	AN		1	0	0	0
Component Repair	AN		1	0	0	0
Component Repair	AMH2		0	1	0	-1
Sub-Total			6	2	3	+1
Tire Shop Branch						
Tire Repair	AMS2		0	1	0	-1
Tire Repair	AMS3		1	0	1	+1
Tire Repair	AMSAN		1	0	1	+1
Sub-Total			2	1	2	+1
Radiography Branch						
Technician	ASM1	7224	0	0	1	+1
Sub-Total			0	0	1	+1
Line Division						
Supervisor	ADRC		1	1	0	-1
Supervisor	ADR1		0	0	1	+1
Logs and Records	AZ3		1	0	0	0
Logs and Records	AZAN		0	0	1	+1
Material	AKAN		1	0	0	0
Hydraulics Insp	AMH1		1	0	0	0
Trouble Shooters	ADR1		1	0	0	0
Trouble Shooters	ADR2		1	0	0	0
Trouble Shooters	ADR2		1	0	0	0
Trouble Shooters	ADRAN		1	0	0	0
Trouble Shooters	ADRAN		1	0	0	0
Plane Captains	AN		1	0	0	0
Plane Captains	AN		1	0	0	0
Plane Captains	AN		1	0	0	0
Plane Captains	AN		1	0	0	0
Plane Captains	AN		1	0	0	0
Plane Captains	AN		1	0	0	0
Plane Captains	AN		1	0	0	0

Continued on next page

Recommended Billet Title (Where Applicable)	Rank/ Rate & Rating	NEC Desig/ NOBC	Allow-ance	Work Sampl-ing*	Opnl. Audit	WS - AO
Struct Supv/Inspector	AMS1		1	0	0	0
Line Maintenance	ADR2		1	1	1	0
Line Maintenance	ADR3		1	1	1	0
Line Maintenance	ADR3		1	0	0	0
Line Maintenance	ADR3		1	0	0	0
Line Maintenance	AMH2		1	0	0	0
Line Maintenance	AMH3		0	0	0	0
Line Maintenance	AMHAN		1	0	0	0
Line Maintenance	AMS2		1	0	1	+1
Line Maintenance	AMS3		1	0	0	0
Line Maintenance	AMSAN		1	0	0	0
Line Maintenance	AMSAN		1	1	0	-1
Line Maintenance	AE2		1	0	0	0
Line Maintenance	AE3		0	0	1	+1
Line Maintenance	AE2		1	0	0	0
Line Maintenance	ATN2		1	0	0	0
Line Maintenance	ATN3		1	0	1	+1
Line Maintenance	ATN3		1	0	0	0
Line Maintenance	AE2		1	0	0	0
Sub-Total			33	5	9	+3
TOTAL ENLISTED			129	81*	93	+12

*This total does not include a Personal and Fatigue Factor of 10%. Approximately 8 additional billets would be required when this factor is added, thus yielding a requirement of 89 (work sampling) versus 93 (operational audit).

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UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author)	2a. REPORT SECURITY CLASSIFICATION
Naval Personnel Research and Development Lab. Washington Navy Yard Washington, D. C. 20390	UNCLASSIFIED
	2b. GROUP N/A

3. REPORT TITLE

DEVELOPMENT OF SHORE MANNING DOCUMENTS (SHMD's) USING THE OPERATIONAL AUDIT MEASUREMENT METHOD

4. DESCRIPTIVE NOTES (Type of report and inclusive dates)

Final, May 1968 - November 1970

5. AUTHOR(S) (First name, middle initial, last name)

Allen Byspiel

6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
November 1970	245	41

8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)
b. PROJECT NO. TDP P43.07X.B2b	WRR 71-4
c.	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report) N/A
d.	

10. DISTRIBUTION STATEMENT

This document has been approved for public release and sale. Its distribution is unlimited.

11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY
N/A	Personnel Research Division Bureau of Naval Personnel Washington, D. C. 20370

13. ABSTRACT

This report documents the development of Shore Manning Documents (SHMD's), a new concept in determining and documenting Navy manpower requirements (military and civilian) for shore activities. The requirements for better manpower determination tools, Navy guidance, and related manpower systems are given. The reasons for the selection of the operational audit measurement method as the primary means of determining naval manpower requirements are provided, along with a discussion of Navy-wide related data systems, development of a SHMD format and specially designed measurement study forms. The four phases of developing a SHMD are explained; these are the preliminary, measurement, SHMD development, and SHMD review and promulgation phases. There are also two follow-on phases; criteria development and model development which are also discussed. These last two phases enable Shore Manning Documents to become dynamic tools for determining naval manpower ashore. Research is continuing in the model development area.

14 KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
SHMD						
Shore Manning Document						
Manpower						
Manpower Requirements						
Manpower Requirements Ashore						
Work Measurement						
Operational Audit						
Operational Audit Measurement Method						
Manpower Criteria						
Models						
Mathematical Models						
Mini-models						