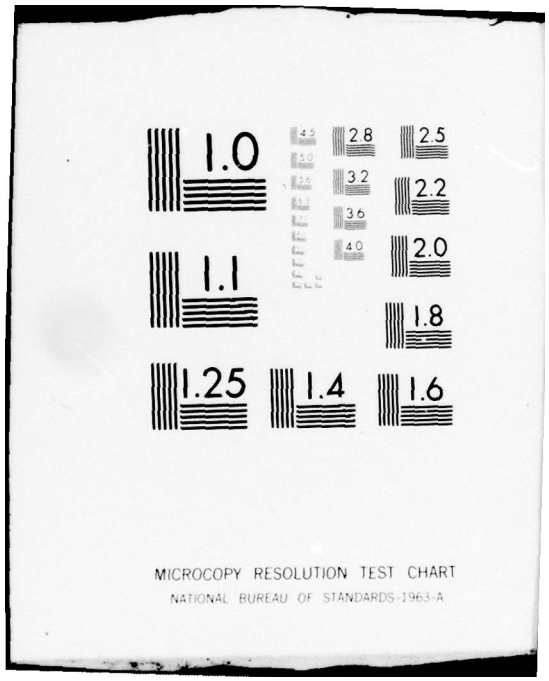
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(6) # THE ENLISTED REQUIREMENTS PLANNER (ENREP)

(10) Diane W. Schulte

(15) N0001 4-76-C-0001

(9) Research contribution,

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ENREP projects enlisted manpower requirements by rating and paygrade for any given set of ship and aircraft force levels for the 15 years covered by the POM and EPA. It adds the dimension of quality of personnel to projections of requirements and can be used to assess the effects of alternative force mixes and manning policies on requirements. ENREP draws figures for ship and aircraft forces and their corresponding manning factors from the Navy Resource Model (NARM), and a normalized distribution of ratings and paygrades from the Enlisted Billet File. The user can override these

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TABLE OF CONTENTS

	Page
Preface	1
The ENREP system	3
Data	3
User input options	5
Projection methods	6
Outputs	8
Individual ENREP routines	9
Preliminary routines	9
EXTRACT	9
FORCES	9
FACTORS	11
SUPPORT	13
TOTAL	13
Main routine PLANNER	14
Input mode	14
Projection mode	15
Subroutine MOVE	17
Appendix A - Dictionaries of ACT/PE/PU codes for ships and aircraft	A-1 - A-13
Appendix B - Program listings and flowcharts	B-1 - B-130
Appendix C - Illustrative inputs and outputs	C-1 - C-56
Appendix D - Notes on processing ENREP data files	D-1 - D-2

PREFACE

The Enlisted Requirements Planner (ENREP) projects Navy enlisted requirements by rating and paygrade, and by rating and length of service, for up to fifteen years. The ENREP projection is responsive to changes in the numbers of ship and aircraft forces and their manning and support levels. ENREP can be useful to a resource manager who needs to know such things as the effect on enlisted requirements of adding an aircraft carrier or of increased manning on strategic submarines. ENREP is also used to set manpower goals for the PROPHET system for projection of inventories (CNA Research Contribution 346). And because of the extended time span, ENREP can be used for long-range planning such as the Extended Planning Annex (EPA) to the Program Objectives Memorandum (POM).

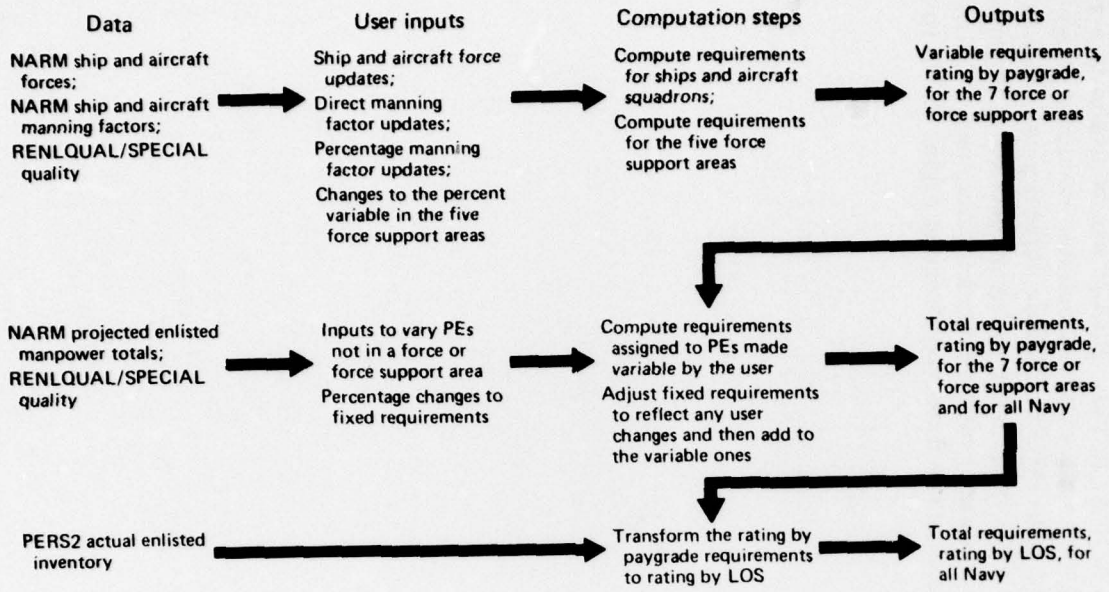


FIG. 1: OVERVIEW OF THE ENREP SYSTEM

THE ENREP SYSTEM

ENREP consists of five preliminary routines and the main projection routine, PLANNER. Each preliminary routine prepares a particular input for ENREP. PLANNER accepts any user inputs and the outputs of the preliminary routines and makes a projection.

DATA

The ENREP system relies on the following data sources:

1. Navy Resource Model (NARM)
   a. ship and aircraft forces
   b. ship and aircraft manning factors
   c. projected enlisted manpower totals.
2. Enlisted billet file, RENLQUAL/SPECIAL: rating by paygrade distributions
3. Pers-2: enlisted inventory.

The NARM provides inputs for ENREP by program element (PE) and program unit (PU) codes. The enlisted billet file, RENLQUAL/SPECIAL, provides inputs for ENREP by activity type (ACT) and PE codes.

Program elements are the smallest building blocks in the Navy's Five-Year Defense Plan (FYDP). Examples are ships by function, such as missile frigates; aircraft squadrons by function, such as A-7 squadrons; and RDT&E by project, such as gun systems development program.

Program unit codes provide detailed definition of force units. Ship forces are identified by status, type, class, and major claimant. Aircraft forces are identified by status, type, model, series, and major claimant. Examples are active submarines, Polaris class, Pacific Fleet; and active attack planes, model 7, series E, Atlantic Fleet. The ENREP system aggregates PU codes across major claimant because claimants do not provide additional information about the actual ships or aircraft.

Activity type codes identify ship type and type of aircraft squadron. Examples are destroyers and readiness squadrons. This code provides more information about aircraft squadrons. For example, the PE code for direct support squadrons does not distinguish between aircraft and helicopters, but the ACT code does.

The manning factors from the NARM specify the number of personnel required onboard and in the force support areas of base operations, training, medical support, recruiting and examining, and individual support (transients, patients and prisoners, and personnel holding account). The factors for force support areas are identified by the PE and PU of

the force unit they support, but the manpower is assigned to PEs in the respective support areas. Therefore, it is not possible to distinguish between support manpower for carriers as opposed to fighter squadrons, frigates as opposed to minesweepers, etc. This immediately establishes PE as the lowest level of detail for the ENREP system as a whole. In sum, these NARM inputs become the quantitative basis of the ENREP system.[1]

The enlisted billet file, RENLQUAL/SPECIAL, is the qualitative basis of the ENREP system.[2]

The NARM and the RENLQUAL/SPECIAL file share a common descriptor, PE code, but this code alone does not capture the differences between the various ships or aircraft assigned to a single PE. ENREP uses all three codes -- ACT, PE, and PU -- to describe forces and their manpower. What results is best described by an example. A class 1040 frigate and a class 1052 frigate, assigned to the PE non-missile frigates, have manning factors of 247 and 245, respectively. But the quality of men onboard these two classes of ships, and all other non-missile frigates, is identical. Similarly, an attack plane, such as the A-7E, and another of the same model but different in series, such as the A-7A, are assigned to the same PE, have different manning factors, but have identical quality. That is, for an ACT/PE/PU combination, the manning factor is determined by the PE/PU and the quality is determined by the ACT/PE. Note that the PE/PU uniquely determines the manning factors and the corresponding ACT code, but the ACT/PE ean have several PU codes and each will have the same quality. The ENREP system uses the PE code alone to describe all manpower requirements not assigned to ship or aircraft forces.

Dictionaries of ACT/PE/PU combinations are in appendix A. The ship ACT/PE/PU dictionary details the association between ship ACT codes, PE codes and PU codes, and identifies the ship's type and class by name. The aircraft ACT/PE/PU dictionary does the same for aircraft. The entries in each dictionary are arranged by ACT code, then by PE code, and lastly by PU code, all in ascending order. This order must be maintained when new entries are added.

Nearly every ENREP routine requires the ship and aircraft ACT/PE/PU dictionaries and they should be stored on a convenient medium to be readily available.

---

[1] NARM data files are available from Op-901M.

[2] RENLQUAL/SPECIAL files are available from Op-102C.

The enlisted inventory file from Pers-2 contains a count of the active personnel at the end of the previous fiscal year by rating, paygrade, and length of service (LOS). ENREP uses these counts to translate its final rating by paygrade requirements into rating by LOS requirements.

USER INPUT OPTIONS

ENREP provides the user with six options that may be exercised to modify source data and projection procedures:

1. Ship and aircraft force updates
2. Direct manning factor updates
3. Percentage manning factor updates
4. Changes to the variable percentage in the five force support areas
5. Ability to vary PEs not in a force or force support area
6. Percentage changes to the fixed requirements.

All modifications are effective for only one run of the model, and do not make any permanent changes to the data base.

The first option enables the user to modify and add to the NARM forces, or to create a hypothetical force mix. The user must specify the ACT, PE, and PU codes of the force unit, and the number of units in each year. ENREP allows 200 force unit updates.

The second option enables the user to directly override any of the six NARM manning factors for a particular force unit. The six factors are onboard, base operations, training, medical support, recruiting and examining, and individual support. For each override the user must specify the factor, the corresponding force unit, the range of years affected and the replacement factor value. ENREP allows for 100 direct factor updates.

The third option enables the user to make a percentage change in any NARM manning factor for a group of force units. For each percentage change the user must specify the factor, the force units in the group (maximum of 20), the years affected, and the percentage change in the factor value. ENREP allows for 50 percentage factor updates.

The fourth option enables the user to change the variability of any of the five force support areas -- base operations, training, medical support, recruiting and examining, and individual support. ENREP first calculates the percent that each force support area varies with the NARM forces and displays them for the user. To change one of these percents, the user must specify the force support area, the years affected, and the replacement variable percent. ENREP allows the user to change the variable percent for each force support area, in each year of the projection.

The fifth option enables the user to vary a group of program elements with the forces and their manning factors. These program elements, such as logistics or research and development, are normally fixed, or independent of forces. Any program element that is not in a force or a force support area can be modeled in this way. For each variation the user must specify the members of the group (maximum of 10), the percent to be variable, and a proxy to measure the variability. The proxy is any combination of ship forces, air forces, and the five force support areas. ENREP calculates the total variable requirement, by year, for ship forces, air forces, and the force support areas based on the NARM forces and factors and uses them as a base case. When ENREP responds to this option, it compares the total variable requirement for the proxy in the current run to that in the base case. The same percentage change is made to the variable component of the user's group. For example, assume the group is to be 20 percent variable and its proxy increased 10 percent. Then ENREP would increase the group's requirements 10 percent of 20 percent or 2 percent. ENREP allows the user to vary up to 10 groups of PEs.

The final option enables the user to adjust fixed requirements. A percentage increase or decrease in the standard ones can be specified for each year in the projection.

PROJECTION METHODS

ENREP estimates enlisted requirements for each projection year in five steps:

1. Computes requirements for personnel assigned to ships and to aircraft squadrons;
2. Computes requirements for personnel assigned to force support PEs;
3. Computes requirements for personnel assigned to PEs which the user has defined as variable but are not in a force or force support area;
4. Adds fixed requirements to variable ones; and
5. Transforms the resulting requirements from a rating by paygrade distribution to a rating by LOS distribution.

In the first step, the distribution of ratings and paygrades specified by the RENLQUAL/SPECIAL file is scaled to equal the onboard NARM manning factor for each ACT/PE/PU combination. (Recall that the user can override this factor.) The result is the enlisted strength required to man one ship or aircraft of the given class or series. Multiplying the requirements for each rating and paygrade by the corresponding number of ships or aircraft gives the total requirements for the ACT/PE/PU combination. Summing over all combinations yields one year's projection of force manpower.

In the second step, the enlisted requirements assigned to force support PEs are computed. These PEs constitute the following force support areas: base operations, enlisted training, medical support, recruiting and examining, and individual support. The procedure is similar to step one. For each ACT/PE/PU combination, the number of ships or aircraft is multiplied by the corresponding manning factor. This gives the number of enlisted personnel required by the current forces in each support area. If the user changes the percent of the support area that is normally variable, ENREP increases or decreases the variable requirements by the percent change divided by the normal percent variable, and also makes an offsetting change in the fixed endstrength of each PE. When the variable endstrength for a support area is computed, the RENLQUAL/SPECIAL file's distribution of ratings and paygrades is used to define the quality of each PE and the proportion of requirements among PEs. These billet requirements are scaled to the computed endstrength, maintaining the quality of each PE and the proportion of the requirements among the PEs. The resulting requirements are summed over all support areas to produce the force support manpower for one year in the projection.

In the third step, the enlisted requirements assigned to PEs which the user has specified as variable are computed. Since the requirements assigned to these PEs do not vary in the NARM, manning factors per ship and per aircraft do not exist; but the NARM does estimate the total endstrength for each PE as a fixed requirement. The user specifies the variable percentage of each PE and proxy requirements to measure changes to the variable portion. The user may choose any combination of the following requirements as a proxy: ship forces, aircraft forces, enlisted training, medical support, recruiting and examining, and individual support. To compute the variable requirements for a PE which is not variable in the NARM, ENREP multiplies the total endstrength by the percent that the user considers variable, yielding the variable endstrength associated with the NARM forces. The difference between total and variable endstrengths is the fixed endstrength for the PE. Next, the variable endstrength is adjusted by ENREP to reflect the current force levels. It determines the percentage change in the variable manpower required in the proxy by the current forces from that required in the proxy by the NARM forces. The same percentage increase or decrease is then made in the NARM variable endstrength, giving the variable endstrength which the current forces require in the PE. The ratings and paygrades of each PE are obtained from the RENLQUAL/SPECIAL file, and their total is scaled to equal the variable endstrength. For example, the user may vary 20 percent of the ship overhaul PE requirements using the ship forces and base operations as a proxy. Then if these proxy variable requirements increased 10 percent, requirements in ship overhaul PEs would increase 10 percent of 20 percent or 2 percent. Summing the resulting requirements for all of these PEs completes one year's projection of variable manpower.

In the fourth step, the projection of all-Navy enlisted requirements is completed by adding fixed requirements, rating and paygrade, to the variable ones in each PE. To find the fixed requirements, the variable endstrength required by the NARM forces, as computed in steps one and two, is subtracted from the total endstrength in the NARM for each PE in each year. To simulate NARM computations, ENREP uses the NARM forces and manning factors. The differences between the NARM total endstrengths and the ENREP variable endstrengths are assumed to be the fixed endstrengths for each PE. The quality for each PE is obtained from the RENLQUAL/SPECIAL file. In each subsequent projection, ENREP first increases or decreases the fixed requirements for each PE by the user percentage change, if given, and then adds them to the variable ones. The fixed requirements of the fifth year are used for the EPA years.

In the final step, the requirements just computed are transformed from the rating by paygrade distribution to a rating by LOS distribution. Within each rating, the number of personnel in a paygrade are spread across LOS reflecting the current Navy inventory, as obtained from Pers-2. The resulting rating by LOS requirements are displayed after the rating by paygrade requirements on the output listing.

OUTPUTS

The primary printed output of the ENREP system is enlisted requirements, rating by paygrade, for up to 16 years, including the current year. These requirements reflect the user inputs to force levels, manning policies, and projection procedures. The requirements are also written on a tape file with the additional dimension of PE, and transformed from a rating by paygrade distribution to a rating by LOS distribution, and displayed on a printed listing. As ENREP proceeds through the computation steps, it also displays variable and total requirements, rating by paygrade, for seven subsets of the Navy -- ship forces, aircraft forces, base operations, training, medical support, recruiting and examining, and individual support. In summary, the outputs are:

1. All-Navy total enlisted requirements, rating by paygrade, on the listing
2. All-Navy total enlisted requirements, PE by rating by paygrade, on a tape file
3. All-Navy total enlisted requirements, rating by LOS, on the listing
4. All-Navy variable enlisted requirements, rating by paygrade, on the listing
5. Variable requirements, rating by paygrade, for seven subsets of the Navy on the listing
6. Total requirements, rating by paygrade, for seven subsets of the Navy on the listing.

INDIVIDUAL ENREP ROUTINES

PRELIMINARY ROUTINES

The ENREP system contains five preliminary routines which create the system's data base. Each of these routines -- EXTRACT, FORCES, FACTORS, SUPPORT, and TOTAL -- will be discussed in this section. Figure 2 illustrates the relationship between these routines and the main routine PLANNER.

EXTRACT

Routine EXTRACT reads the enlisted billet file, RENLQUAL/SPECIAL, and writes the ENREP version, RENLQUAL/EXTRACT. Its purpose is to delete information not used in the ENREP system from each record, reducing the size of each record from 350 to 144 characters.

The input to EXTRACT is the RENLQUAL/SPECIAL file. Outputs of EXTRACT are:

1. RENLQUAL/EXTRACT file, stored on magnetic tape
2. Count of input and output records
3. Listing of every thousandth record, both input and output versions.

The program listing and flowchart are in appendix B and sample output is in appendix C.

The RENLQUAL/SPECIAL file is sorted by the BuPers unit identification code (BUIC). Some routines in the ENREP system require the RENLQUAL/EXTRACT file to be sorted by PE code and then by ACT. In other routines, the RENLQUAL/EXTRACT file must be sorted by ACT and then by PE. A standard system sort routine should be used to create these versions of the file, called RENLQUAL/PEACT and RENLQUAL/ACTPE, respectively.

Although the RENLQUAL/SPECIAL file is produced monthly, the ENREP system requires only an annual update. That is, the procedures described above need only be executed once per year, using the end fiscal year file of 30 September.

FORCES

Routine FORCES reads the ship or aircraft forces from the NARM/FORCES/SHIP or NARM/FORCES/AIRCRAFT file and writes the ENREP/FORCES/SHIP or ENREP/FORCES/AIRCRAFT file. There are two versions of this routine, one for ship forces and the other for aircraft forces. FORCES performs the following five steps:

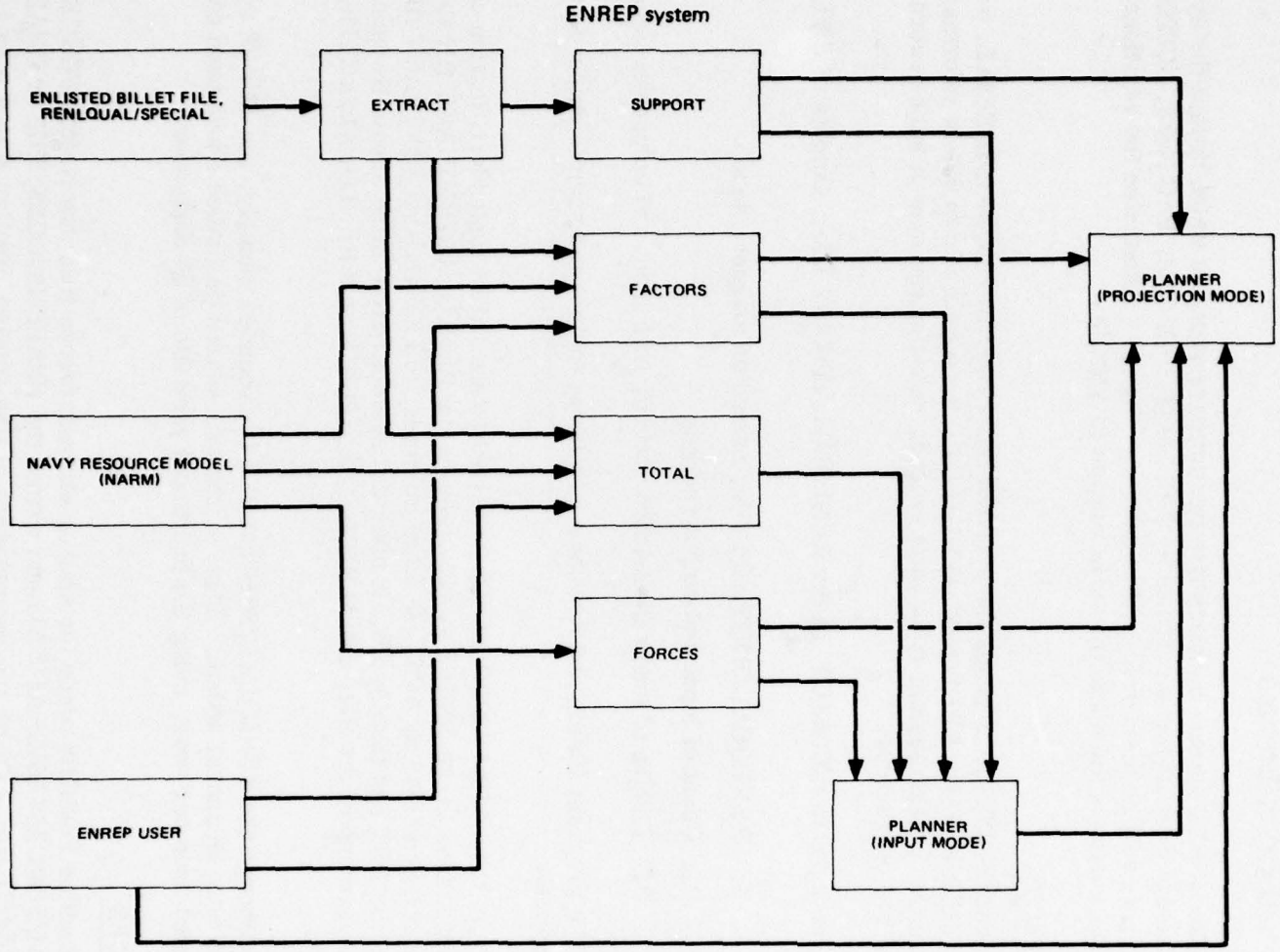


FIG. 2: OVERVIEW OF THE ENREP ROUTINES

1. Reads the NARM forces by PE/PU for each of the five years in the POM, replicating the last year's forces throughout the 10 EPA years;
2. Aggregates the forces across major claimant, a part of the PU code;
3. For aircraft only, deletes Marine forces and non-squadron Navy forces because their manning factors are not computed by the NARM;
4. Adds the ACT code associated with each PE/PU pair; and
5. Writes a file of force inputs for the projection routine, PLANNER.

The POM is updated twice annually and the two FORCES routines should be run with each update.

Inputs to FORCES are:

1. NARM/FORCES/SHIP or NARM/FORCES/AIRCRAFT file
2. Ship or aircraft ACT/PE/PU dictionary.[1]

Outputs of FORCES are:

1. ENREP/FORCES/SHIP or ENREP/FORCES/AIRCRAFT file, which contains forces for 16 years
2. Listing of ship or aircraft forces.

The program listing and flowchart are in appendix B. An unclassified (arbitrary) sample output is in appendix C.

FACTORS

Routine FACTORS combines the NARM manning factors and the RENLQUAL/ACTPE file quality (rating by paygrade distribution) to create a unit requirements matrix for each combination of ACT/PE/PU. These requirements are the number of personnel in each rating and paygrade required onboard one ship or aircraft described by the ACT, PE and PU codes. This routine must be run twice, once for ships and once for aircraft, each year when the NARM factors are updated.

The first step in creating these unit requirements matrices is to read the NARM factors -- onboard, base operations, training, medical support, recruiting and examining, and individual support -- from the NARM/FACTORS/SHIP or the NARM/FACTORS/AIRCRAFT file. These factors are read for each PE/PU pair, averaging across major claimants. Then FACTORS adds the ACT code associated with each PE/PU pair. In the second step, FACTOR reads the RENLQUAL/ACTPE file and compiles a matrix

[1] Listed in appendix A.

of billets, rating by paygrade by year, for each ACT/PE pair. In general, there are several NARM PE/PU pairs for each quality matrix. The onboard manning factor for each PE/PU pair is spread over the ratings and paygrades of the quality matrix in each year. The result is a unit requirements matrix for each ACT/PE/PU combination for each year in the POM. Note that manning factors do not vary across years but quality does. These matrices and the corresponding force support factors, without quality, are written on the ENREP/UNITREQ/SHIP or the ENREP/UNITREQ/AIRCRAFT file for input to PLANNER.

FACTORS also enables the user to create unit requirements matrices for ships or aircraft not in the NARM file. This option is useful in long range planning where new forces which are not defined in the standard inputs enter the fleet. The user must specify the ACT, PE, and PU codes for the new force unit, the factors for onboard and force support manning, and the quality proxy from the ACT/PE pairs on the billet file. In addition, the user must add the new ACT/PE/PU combination to the ship or aircraft dictionary.

A variation of this option is used if there are PE/PU pairs in the NARM file which do not have a corresponding ACT/PE pair in the billet file. In these cases, the user need only identify the quality proxy.

The inputs to FACTORS are:

1. RENLQUAL/ACTPE file
2. NARM/FACTORS/SHIP or NARM/FACTORS/AIRCRAFT file
3. Ship or aircraft ACT/PE/PU dictionary
4. List of new force units, their manning factors, and quality proxies
5. List of PE/PU pairs needing quality and their quality proxies.

The output of FACTORS is the ENREP/UNITREQ/SHIP or ENREP/UNITREQ/AIRCRAFT file, which contains the unit requirements matrix and force support factors for each combination of ACT/PE/PU, for each year in the POM.

The program listing and flowchart are in appendix B and a sample input and a sample output are in appendix C.

A simple routine named FACTORS/UTILITY combines the ENREP/UNITREQ/SHIP file and the ENREP/UNITREQ/AIRCRAFT file to create the ENREP/UNITREQ/ALL file. This action reduces the number of tape drives required when PLANNER is executed. A sample listing is also shown in appendix B.

SUPPORT

Routine SUPPORT creates a quality matrix for each PE of the five support areas -- base operations, training, medical support, recruiting and examining, and individual support. SUPPORT simply reads the RENLQUAL/PEACT file and compiles a quality matrix of billets, rating by paygrade by year, for each PE in the force support areas. Then these matrices are arranged by support area and written to the ENREP/SUPPORT/QUALITY file for input to PLANNER. Since the support quality is identical for all ships and aircraft, support manning factors are spread across these quality matrices in PLANNER to reduce the size of the data base.

The input to SUPPORT is the RENLQUAL/PEACT file.

The outputs of SUPPORT are:

1. ENREP/SUPPORT/QUALITY file, which contains the quality matrix for each PE in the force support areas, for each year in the POM
2. Listing of those quality matrices.

The program listing and flowchart are in appendix B and a sample output is in appendix C.

TOTAL

Routine TOTAL combines the NARM projected enlisted totals with the RENLQUAL/PEACT file quality to create a total requirements matrix for each PE in each year of the POM. These requirements are the total number of personnel in each rating and paygrade, by PE and year. PLANNER subtracts the variable requirements it computes using NARM inputs from these total requirements to compute fixed requirements by PE and year.

TOTAL reads the RENLQUAL/PEACT file and compiles a quality matrix of billets for each PE and year. Then it spreads the corresponding NARM total from the NARM/ENLTOTALS file across the quality matrix and writes the resulting total requirements matrix on the ENREP/TOTALREQ file for PLANNER. TOTAL can also display the billet quality unchanged by not using the NARM input.

Usually, there are some PEs on the NARM file which do not have a quality matrix in the RENLQUAL/PEACT file. A TOTAL option enables the user to specify a PE which has a quality matrix as a proxy for a PE which does not. Generally, a user will not know which PE codes require this input until TOTAL has been run once and identifies them. This option can also be used to replace the quality matrix of a PE with that of another PE. Another TOTAL option enables the user to alter the quality matrix of a PE by multiplying all billets of a particular rating by an input scaling factor.

Inputs to TOTAL are:

1. RENLQUAL/PEACT file
2. NARM/ENLTOTALS
3. List of PEs needing a quality matrix and their proxy PEs
4. List of ratings and their scaling factors for each PE whose quality is being altered.

Outputs of TOTAL are:

1. ENREP/TOTALREQ file, which contains the total requirements matrix for each PE in each year of the POM
2. Display of NARM projected enlisted totals by PE and year
3. Display of the all Navy requirements by rating, paygrade, and year.

The program listing and flowchart are in appendix B, and a sample input and output are in appendix C.

The output file, ENREP/TOTALREQ, must be sorted by PE code within each year. A standard system sort routine should be used to create the ENREP/TOTALREQS version of this file.

MAIN ROUTINE PLANNER

The most important and complex module of the ENREP system, PLANNER, has two distinct modes of operation. In the first mode, it operates as an input routine, generating fixed requirements for each PE and year and computing statistics to describe the variability of force and force support program elements. In the second mode, it acts as a projection routine, combining inputs from the preliminary routines, the user, and itself to project enlisted requirements. These requirements are described by rating and paygrade and by rating and length of service (LOS) over a fifteen year time span.

Input Mode

The inputs to PLANNER, input mode, are:

1. ENREP/FORCES/SHIP and ENREP/FORCES/AIRCRAFT files, which contain ship and aircraft forces (FORCES)
2. ENREP/UNITREQ/ALL file, which contains the ship and aircraft unit requirements matrices and support manning factors (FACTORS)

3. ENREP/SUPPORT/QUALITY file, which contains the force support quality matrices (SUPPORT)

4. ENREP/TOTALREQS file, which contains the total requirements matrices (TOTAL)

5. Ship and aircraft ACT/PE/PU dictionary (User).

These inputs are described in detail in the previous section.

PLANNER assumes that the total requirement for a PE has a fixed and a variable component, although one of the components may be zero. The total requirements, rating by paygrade for each PE, are obtained from TOTAL. These requirements quantitatively reflect the NARM and qualitatively reflect the RENLQUAL file. PLANNER calculates the variable component for each PE using the NARM forces, NARM manning factors, and the RENLQUAL file quality obtained from FORCES, FACTORS, and SUPPORT. In the input mode, PLANNER does not accept user modifications to the NARM and RENLQUAL file inputs or to the procedure used to calculate the variable components. It subtracts the variable component from the total requirement, yielding the fixed component for each PE, in each year of the POM. These fixed requirements and the statistics on force and force support variability are saved for later use by PLANNER in the projection mode. Note that the calculation of variable requirements is identical regardless of the operational mode, except that in the input mode user modifications are not accepted.

The outputs of PLANNER, input mode, are:

1. ENREP/FIXEDREQ file, which contains the fixed requirements matrices

2. ENREP/PLANNER/STATS file, which contains the force and force support variability statistics.

Projection Mode

The standard inputs to PLANNER, projection mode, are:

1. ENREP/FORCES/SHIPS and ENREP/FORCES/AIRCRAFT files, which contain the ship and aircraft forces (FORCES)

2. ENREP/UNITREQ/ALL file, which contains the ship and aircraft unit requirements matrices and support manning factors (FACTORS)

3. ENREP/SUPPORT/QUALITY file, which contains the force support quality matrices (SUPPORT)

4. ENREP/FIXEDREQ file, which contains the fixed requirements matrices (PLANNER)

5. ENREP/PLANNER/STATS file, which contains the force and force support variability statistics (PLANNER)

6. Ship and aircraft ACT/PE/PU dictionary (User)
7. PERS2/ENLINVEN file, which contains the enlisted inventory (Pers-2).

The user inputs to PLANNER, projection mode, are:

1. Ship and aircraft force updates
2. Direct manning factors updates
3. Percent manning factor updates
4. Changes in the variable percentage of the five force support areas
5. Inputs to vary PEs not in a force or force support area
6. Percentage changes in the fixed requirements.

These inputs are described in detail in the "User Input Options" section.

PLANNER reads and displays all user inputs. Next, it reads the ship or aircraft force input for each ACT, PE, and PU combination, in each year. These forces are modified to reflect any user force updates and displayed to document the run.

PLANNER repeats the following procedures consecutively for each year in the projection. First, it computes the manpower assigned to ships and to aircraft squadrons. It reads the rating by paygrade unit requirements matrix for each ACT, PE, and PU combination, and then modifies these matrices to reflect any user factor updates. Then the unit requirements are multiplied by the corresponding number of units and the results are added to the other requirements for the PE.

Manpower assigned to force support is calculated similarly. PLANNER reads the five support manning factors for each force ACT, PE, and PU combination, and then modifies these factors to reflect any user updates. Then each factor is multiplied by the corresponding number of force units, yielding the number of enlisted personnel required by the current forces in each support area. PLANNER uses the force support quality matrices to proportion each endstrength among the PEs of its support area, and to define the quality within each PE. Lastly, if the user has changed the variable percentage of a force support area, the variable requirements for that area are increased or decreased by the percentage change divided by the usual variable percentage. This yields enlisted requirements by rating, paygrade, and PE in each force support area.

To complete the computation of variable requirements, PLANNER calculates them for the PEs which are not in a force or force support PE but are to vary in response to the user's inputs. For each of these PEs, PLANNER multiplies the total endstrength by the percent the user considers variable, yielding the variable endstrength associated with the NARM forces. The difference between the total and variable endstrengths

becomes the fixed endstrength for the PE. Next, PLANNER adjusts the variable endstrength to reflect the current forces. It calculates the percentage change in the variable manpower required in the proxy by the current forces from that required in the proxy by the NARM forces. The same percentage change is made to the variable endstrength. The result is spread across the quality dimensions, yielding the manpower required by the current forces in this PE with the current set of user options.

To complete the projection, PLANNER adds the fixed requirements to any variable ones in each PE. These fixed requirements are calculated by PLANNER operating in the input mode, and are subject to user modification. The user may specify a percentage increase or decrease in fixed requirements, in every year. Also, if the user had specified a change in the percent a force support area is variable, PLANNER makes the complementary change to the fixed requirements for that support area at this time. This completes the projection for one year. The total requirements are displayed on a listing by rating and paygrade and are written to the ENREP/FINAL file by PE, rating, and paygrade.

PLANNER can translate the quality of its projections from rating by paygrade to rating by LOS. For each rating, it reads the actual inventory by paygrade and LOS. Then for each paygrade, it calculates the distribution across the LOS cells. The number of requirements in each rating and paygrade combination is spread across LOS using the corresponding distribution and the results are summed by rating and LOS. This version of the projection is also displayed on the listing.

A listing of the PLANNER routine and a flowchart are in appendix B. Sample inputs and outputs are in appendix C.

SUBROUTINE MOVE

Nearly every routine in the ENREP system requires subroutine MOVE, a general purpose ALGOL algorithm which performs character manipulation. The statement

CALL MOVE (X, I, Y, J, K)

causes the K characters, beginning at position I, of array X to be inserted into array Y, beginning at position J. Array X is never changed. For example, if

X(1) = AAAAAA

X(2) = BBBBBB

Y(1) = CCCCCC

Y(2) = DDDDDD

and the statement

```
CALL MOVE (X, 5, Y, 2, 6)
```

is executed, the results are

X(1) = AAAAAA

X(2) = BBBBBB

Y(1) = CAABBB

Y(2) = BDDDDD.

APPENDIX A

DICTIONARIES OF ACT/PE/PU CODES FOR SHIPS AND AIRCRAFT

ANNEX A-1

DICTIONARY OF ACT/PE/PU CODES
FOR SHIPS

ACT CODE	PE CODE	PU CODE	SHIP NAME
123	242972	117201	AD-26CL
123	242972	117203	AD-14CL
123	242972	117205	AD-37CL
123	242972	117206	AD-41CL
128	244412	116005	AE-21CL
128	244412	116006	AE-23CL
128	244412	116007	AE-26CL
133	244412	116104	AF-58CL
134	244412	116201	AFS-1CL
142	243132	116701	AG-153CL
142	243132	116703	AG-520CL
142	421182	156701	AG-153CL
149	245612	116601	AGDS-1CL
152	655012	119401	AGEH-1CL
158	244122	117302	AGF-3CL
159	655012	110711	AGSS-555CL
159	655012	110713	AGSS-569CL
210	244412	116304	AD-51CL
210	244412	116306	AD-143CL
210	244412	116307	AD-177CL
210	244412	116308	AD-NEWCL
212	244412	116401	AOE-1CL
216	244412	116501	AOR-1CL
216	244412	116502	AOR-7CL
256	244512	117801	AR-5CL
256	244512	117804	AR-28CL

ACT CODE	PE CODE	PU CODE	SHIP NAME
284	244522	118701	ARS-50CL
284	244522	118702	ARS-38CL
292	112222	116801	AS-19CL
292	112222	116802	AS-31CL
292	112222	116803	AS-33CL
292	242822	116801	AS-19CL
293	242822	116901	AS-11CL
293	242822	116902	AS-36CL
293	242822	116903	AS-39CL
297	245612	117001	ASR-7CL
297	245612	117002	ASR-21CL
306	244522	118902	ATF-81CL
306	244522	118903	ATF-95 CL
306	244522	118904	ATF-148CL
317	244522	119001	ATS-1CL
329	655012	119301	AVM-1CL
350	655012	112801	AGFF-1CL
381	242912	111501	CG-10
381	242912	111502	CG-11
381	242912	111504	CG-4
381	242912	111505	CG-5
382	242912	111601	CGN-9
382	242912	111602	CGN-25
382	242912	111603	CGN-35
382	242912	111604	CGN-36
382	242912	111605	CGN-38

ACT CODE	PE CODE	PU CODE	SHIP NAME
381	242912	111608	CGN-42
384	242912	111802	CG-16
384	242912	111803	CG-26
403	241122	110204	CV-42
403	241122	110205	CV-43
403	241122	110206	CV-41
403	241122	110207	CV-59
403	241122	110208	CV-60
403	241122	110209	CV-62
403	241122	110210	CV-63
403	241122	110211	CV-63
403	241122	110212	CV-64
403	241122	110213	CV-66
403	241122	110214	CV-67
407	241122	110301	CVN-65
407	241122	110302	CVN-68
407	241122	110303	CVN-69
407	241122	110304	CVN-70
410	241122	110602	CVV-1CL
439	847412	110501	CVT-16CL
441	242922	112213	DD-47CL
441	242932	112208	DD-710CL
441	242932	112210	DD-931CL
441	242932	112211	DD-945CL
441	242932	112212	DD-963CL
442	242922	112301	DDG-35CL

ACT CODE	PE CODE	PU CODE	SHIP NAME
442	242922	112302	DDG-31CL
442	242922	112303	DDG-2CL
442	242922	112305	DDG-37CL
456	242952	112705	FF-1037CL
456	242952	112706	FF-1040CL
456	242952	112707	FF-1052CL
457	242942	113201	FFG-7CL
458	242942	112901	FFG-1CL
465	242812	113402	LSES-1CL
488	244112	113703	LCC-19CL
556	244112	113801	LHA-1CL
558	244112	113906	LKA-113CL
559	523662	114002	LPA-248CL
560	244112	114101	LPD-1CL
560	244112	114103	LPD-4CL
565	244112	114201	LPH-2CL
575	244112	114403	LSD-28CL
575	244112	114404	LSD-36CL
575	244112	114405	LSD-41CL
595	244112	114504	LST-1179CL
623	243022	115601	MSO-422CL
625	243022	115401	MCM-1CL
654	242962	114901	PG-84CL
654	242962	114902	PG-92CL
660	242962	115001	PHM-1CL
693	242812	110913	SS-563CL

ACT CODE	PE CODE	PU CODE	SHIP NAME
693	242812	110914	SS-572CL
693	242812	110915	SS-574CL
693	242812	110918	SS-580CL
697	242812	111001	SSN-571CL
697	242812	111002	SSN-575CL
697	242812	111003	SSN-578CL
697	242812	111004	SSN-585CL
697	242812	111007	SSN-594CL
697	242812	111008	SSN-597CL
697	242812	111009	SSN-637CL
697	242812	111010	SSN-671CL
697	242812	111011	SSN-685CL
697	242812	111012	SSN-688CL
697	242812	111013	SSN-NEWCL
706	112212	111101	SSBN-598CL
706	112212	111102	SSBN-608CL
706	112212	111103	SSBN-616CL
706	112212	111104	SSBN-627CL
706	112212	111105	SSBN-640CL
706	112282	111201	TRIDENT
1306	523782	128903	ATF-95CL RESERVE
1306	523782	128904	ATF-148CL RESERVE
1441	523502	122208	DD-710CL RESERVE
1441	523502	122211	DD-945CL RESERVE
1558	523662	123905	LKA-112CL RESERVE
1559	523662	124002	LPA-248CL RESERVE

ACT CODE	PE CODE	PU CODE	SHIP NAME
1559	523662	124003	LPA-249CL RESERVE
1623	523592	125601	MSO-422CL RESERVE
1623	523592	125602	MSO-428CL RESERVE
1623	523592	125603	MSO-508CL RESERVE
1625	523592	125401	MCM-1CL RESERVE
1654	523532	124901	PG-84CL RESERVE

ANNEX A-2

DICTIONARY OF ACT/PE/PU CODES
FOR AIRCRAFT

ACT CODE	PE CODE	PU CODE	AIRCRAFT NAME
6628	523712	217815	HH-1K
6629	244532	217616	UH-46D
6629	244532	217619	CH-46D
6629	244532	217631	UH-46A
6629	244532	226830	HH-3A
6629	244532	227235	SH-3A
6629	244532	227250	SH-3D
6629	244532	227469	CH-53E
6629	244532	228230	VH-3A
6629	244532	237233	SH-3G
6629	244532	277613	CH-46E
6629	523792	226830	HH-3A
6631	242332	227235	SH-3A
6631	242332	227250	SH-3D
6631	242332	227251	SH-3H
6631	242622	227235	SH-3A
6631	242622	227250	SH-3D
6631	242622	227251	SH-3H
6631	242622	227499	RH-53X
6631	523322	227235	SH-3A
6631	523322	227250	SH-3D
6631	523322	237233	SH-3G
6632	243032	227485	CH-53E
6632	243032	227499	RH-53X
6635	242432	267275	SH-2F
6635	242432	277249	HSX(L)

ACT CODE	PE CODE	PU CODE	AIRCRAFT NAME
6635	242622	217619	CH-46D
6635	242622	217631	HH-46A
6635	242622	227469	CH-53E
6635	242622	227485	CH-53E
6635	242622	228230	VH-3A
6635	242622	237233	SH-3G
6635	242622	267255	SH-2D
6635	242622	267275	SH-2F
6635	242622	277249	HSX(L)
6635	351312	217005	HH-2D
6635	351312	283090	RP-3D
6695	241532	211220	RA-5C
6695	241562	211220	RA-5C
6705	241342	210813	KA-6D
6705	241342	220810	A-6E
6705	241352	230620	A-7E
6705	241352	230635	A-7B
6705	241352	230640	A-7A
6705	241362	280680	A-18
6705	241562	205297	TA-7C
6705	241562	210813	KA-6D
6705	241562	215620	T-39D
6705	241562	216020	T-28C
6705	241562	216050	T-28B
6705	241562	220810	A-6E
6705	241562	225430	T-2C

ACT CODE	PE CODE	PU CODE	AIRCRAFT NAME
6705	241562	230620	A-7E
6705	241562	230630	A-7C
6705	241562	230635	A-7B
6705	241562	230640	A-7A
6705	241562	236475	TC-4C
6705	241562	245230	TA-4F
6705	241562	250660	A-4F
6705	241562	250665	A-4E
6705	241562	280680	A-18
6705	523112	250651	A-4L
6705	523132	230620	A-7E
6705	523132	230635	A-7B
6705	523132	230640	A-7A
6709	242512	222408	P-3C
6709	242512	232415	P-3B
6709	242512	232420	P-3A
6709	242622	222408	P-3C
6709	242622	232415	P-3B
6709	523412	232415	P-3B
6709	523412	232420	P-3A
6709	523412	252445	SP-2H
6710	241422	260279	F-4N
6710	241422	260284	F-4J
6710	241422	260295	F-4S
6710	241442	220210	F-14A
6710	241452	200220	F-18

ACT CODE	PE CODE	PU CODE	AIRCRAFT NAME
6710	241562	200220	F-18
6710	241562	215205	T-38A
6710	241562	220210	F-14A
6710	241562	235216	TA-4J
6710	241562	260279	F-4N
6710	241562	260284	F-4J
6710	241562	260295	F-4S
6710	241562	290274	F-5F
6710	241562	290275	F-5E
6710	523172	260279	F-4N
6710	523172	260292	F-4B
6710	523172	260295	F-4S
6716	244532	208409	DC-130A
6716	244532	225680	TA-3B
6716	244532	230640	A-7A
6716	244532	235216	TA-4J
6716	244532	238433	DP-2H
6716	244532	242425	EP-2H
6716	244532	250660	A-4F
6716	244532	250665	A-4E
6716	244532	257245	UH-3A
6716	244532	268423	DP-3A
6716	244532	272875	EP-3A
6716	523792	235216	TA-4J
6718	242342	222205	S-3A
6718	242622	222205	S-3A

ACT CODE	PE CODE	PU CODE	AIRCRAFT NAME
6762	241532	220210	F-14A
6762	241532	240435	RF-8G
6762	523252	240435	RF-8G
6763	241522	212605	E-2C
6763	241522	212615	E-2B
6763	241562	212605	E-2C
6763	241562	212615	E-2B
6763	241562	225208	TE-2C
6763	241562	225210	TE-2A
6763	523242	212615	E-2C
6763	523242	222650	E-1B
6764	113152	222810	EC-130Q
6764	113152	222815	EC-130G
6764	241552	211620	EA-3B
6764	241552	225680	TA-3B
6764	241552	232420	P-3A
6764	241552	272870	EP-3B
6764	241552	272879	EP-3E
6765	244532	213805	C-9B
6765	244532	223020	C-130F
6765	244532	223620	CT-39E
6765	244532	223623	CT-39G
6765	244532	243032	VC-118B
6765	523792	213805	C-9B
6765	523792	253036	C-118B
6765	241542	211820	EA-6B

ACT CODE	PE CODE	PU CODE	AIRCRAFT NAME
6765	241562	211820	EA-6B
6766	244532	221632	EA-4F
6766	244532	231423	ERA-3B
6766	244532	231832	EA-6A
6766	244532	242835	NC-121K
6766	523262	231023	KA-3B
6766	523262	231832	EA-6A
6768	241512	213430	C-2A
6768	241512	223470	C-1A
6768	241512	227485	RH-53D
6785	244532	214830	US-2B
6785	244532	260284	F-4J
6785	244532	260295	F-4S
6789	351122	232420	P-3A
6789	351122	293092	RP-3A
6797	847412	217631	HH-46A
6797	847412	218005	TH-57A
6797	847412	218055	TH-57
6797	847412	227820	TH-1L
6797	847412	237823	UH-1L
6797	847412	237832	UH-1E
6797	847432	214410	UH-11A
6797	847432	214830	US-2B
6797	847432	217631	HH-46A
6797	847432	267843	UH-1N
6799	847412	216050	T-28B

ACT CODE	PE CODE	PU CODE	AIRCRAFT NAME
6799	847412	216239	T-34C
6799	847412	225430	T-2C
6799	847412	225840	TS-2A
6799	847412	235216	TA-4J
6799	847412	265250	T-44A
6799	847422	215620	T-39D
6799	847422	225430	T-2C
6799	847422	235216	TA-4J
6799	847432	215620	T-39D
6799	847432	223222	VC-131
6799	847432	223224	C-131F
6799	847432	223470	C-1A
6799	847432	253619	CTX

APPENDIX B

PROGRAM LISTINGS AND FLOWCHARTS

ANNEX B-1

PROGRAM EXTRACT

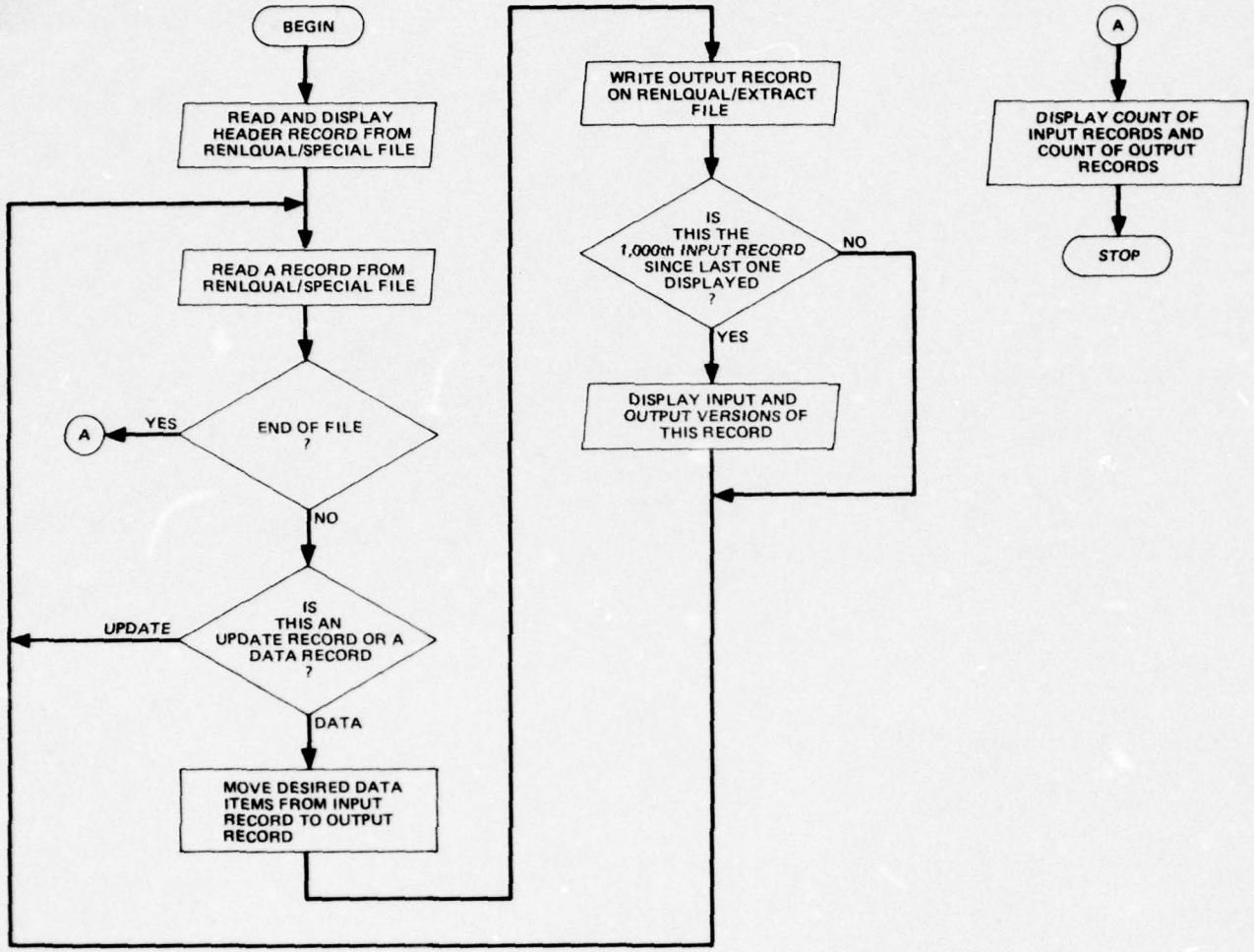
```
  100    $RESET FREE
  200     ID DIVISION.
  300     PROGRAM-ID.  REQEXT.
  400
  500     ENVIRONMENT DIVISION.
  600     INPUT-OUTPUT SECTION.
  700     FILE-CONTROL.
  800         SELECT IN-FILE  ASSIGN TO PETAPE.
  900         SELECT OUT-FILE  ASSIGN TO PETAPE.
 1000         SELECT LISTING ASSIGN TO PRINTER.
 1100
 1200     DATA DIVISION.
 1300     FILE SECTION.
 1400     FD  IN-FILE
 1500         LABEL RECORDS STANDARD  VALUE OF ID IN-NAME
 1600         RECORDING MODE IS STANDARD
 1700         BLOCK CONTAINS  41 RECORDS
 1800         DATA RECORDS ARE IN-REC, IN-REC-2.
 1900     01  IN-REC.
 2000         02  BLIC                    PICTURE X(5).
 2100         02  FILLER                  PICTURE X(2).
 2200         02  BSC                     PICTURE X(5).
 2300         02  PROJECTION-DATE         PICTURE X(2).
 2400         02  PROJ-MONTH              PICTURE 9(2).
 2500         02  FILLER                  PICTURE X(3).
 2600         02  UIC                     PICTURE 9(5).
 2700         02  UIC2                    PICTURE S9(5).
 2800         02  MAPP                    PICTURE X(4).
 2900         02  ACT-CODE                PICTURE X(4).
 3000         02  FILLER                  PICTURE X(6).
 3100         02  ACT-LONGNAME            PICTURE X(26).
 3200         02  FILLER                  PICTURE X(4).
 3300         02  ACT-SHORTNAME           PICTURE X(16).
 3400         02  ENL-DIST-COMM-CODE      PICTURE X(3).
 3500         02  ACT-MISSION-CODE        PICTURE X(2).
 3600         02  PAPC                    PICTURE X(5).
 3700         02  FIO                     PICTURE X(2).
 3800         02  BPG                     PICTURE X(1).
 3900         02  COG                     PICTURE X(1).
 4000         02  MANNING-CONTRL-AUTH     PICTURE X(1).
 4100         02  RESTR-MANNING-CODE      PICTURE X(1).
 4200         02  FILLER                  PICTURE X(5).
 4300         02  ADDC                    PICTURE X(2).
 4400         02  PE-SPONSOR              PICTURE X(2).
 4500         02  FILLER                  PICTURE X(4).
 4600         02  TYCOM                   PICTURE X(2).
 4700         02  TYPE-ASSIGNMENT         PICTURE X(1).
 4800         02  MILITARY-CLAIMENT       PICTURE X(4).
 4900         02  GEO-RESPONSIBILITY      PICTURE X(1).
 5000         02  GEO-LOCATION            PICTURE X(8).
 5100         02  HOMEPORT-ABBR           PICTURE X(6).
 5200         02  HOMEPORT-GROUPING       PICTURE X(1).
 5300         02  NAVAL-DISTRICT          PICTURE X(2).
 5400         02  AREA-TYPE-CITY          PICTURE X(3).
 5500         02  PROGRAM-ELEMENT         PICTURE X(6).
 5600         02  DPPC                    PICTURE X(2).
 5700         02  OFFICER-DIARY-STTUS     PICTURE X(1).
 5800         02  ENLISTD-DIARY-STTUS     PICTURE X(1).
 5900         02  PRIORITY-MANNING        PICTURE X(14).
 6000         02  FILLER                  PICTURE X(7).
 6100         02  FILLER                  PICTURE X(3).
```

```
6200          02  OFFICER-ALLOW-TRIGR PICTURE X(1).
6300          02  ENLISTD-ALLOW-TRIGR PICTURE X(1).
6400          02  TRANSACTION-NUMBER  PICTURE X(5).
6500          02  TRANSACTION-DATE    PICTURE X(6).
6600          02  MDI-INDICATOR       PICTURE X(1).
6700          02  FILE-CODE           PICTURE X(1).
6800          02  RECORD-NUMBER       PICTURE X(1).
6900          02  FILLER              PICTURE X(4).
7000          02  ALLOW-TRIG          PICTURE X(1).
7100          02  REQMNTS-TRIG        PICTURE X(1).
7200          02  MOB-TIG             PICTURE X(1).
7300          02  ALGMENT-INDICATOR   PICTURE X(1).
7400          02  FAC                 PICTURE X(1).
7500          02  DESIG-GRADE         PICTURE X(5).
7600          02  RANK-ABBREV         PICTURE X(5).
7700          02  AGDU                PICTURE X(4).
7800          02  PNOBC               PICTURE X(4).
7900          02  SNOBC               PICTURE X(4).
8000          02  TPIC                PICTURE X(5).
8100          02  QUALITY-CODE        PICTURE X(1).
8200          02  CLR-PROJ-ALLOW      PICTURE S9(5).
8300          02  FYC                 PICTURE S9(5).
8400          02  FY1                 PICTURE S9(5).
8500          02  FY2                 PICTURE S9(5).
8600          02  FY3                 PICTURE S9(5).
8700          02  FY4                 PICTURE S9(5).
8800          02  FY5                 PICTURE S9(5).
8900          02  MDI                 PICTURE S9(5).
9000          02  MD1                 PICTURE S9(5).
9100          02  MD2                 PICTURE S9(5).
9200          02  MD3                 PICTURE S9(5).
9300          02  MD6                 PICTURE S9(5).
9400          02  MD12                PICTURE S9(5).
9500          02  BILLET-TITLE        PICTURE X(40).
9600          02  SEC-SUBSPEC         PICTURE X(5).
9700          02  PRI-SUBSPEC         PICTURE X(5).
9800          02  FILLER              PICTURE X(2).
9900
10000     01  IN-REC-2.
10100         02  IN-REC-DISP-1  PICTURE X(100).
10200         02  IN-REC-DISP-2  PICTURE X(100).
10300         02  IN-REC-DISP-3  PICTURE X(100).
10400         02  IN-REC-DISP-4  PICTURE X(50).
10500
10600     FD  OUT-FILE
10700         LABEL RECORDS STANDARD  VALUE OF ID OUT-NAME
10800         BLOCK CONTAINS  75 RECORDS
10900         RECORDING MODE IS STANDARD
11000         DATA RECORDS ARE OUT-REC, OUT-REC-P.
11100     01  OUT-REC.
11200         02  BUIC                PICTURE X(5).
11300         02  LIC                 PICTURE 9(5).
11400         02  MAPP                PICTURE X(4).
11500         02  ACT-CODE            PICTURE X(4).
11600         02  ACT-SHORTNAME       PICTURE X(16).
11700         02  ACT-MISSION-CODE    PICTURE X(2).
11800         02  TYPE-ASSIGNMENT     PICTURE X(1).
11900         02  PROGRAM-ELEMENT     PICTURE X(6).
12000         02  DPPC                PICTURE X(2).
12100         02  PRIORITY-MANNING    PICTURE X(14).
12200         02  FAC                 PICTURE X(1).
12300         02  DESIG-GRADE         PICTURE X(5).
12400         02  RANK-ABBREV         PICTURE X(5).
12500         02  PNOBC               PICTURE X(4).
```

```
12600          02  SNOBC                   PICTURE X(4).
12700          02  QUALITY-CODE            PICTURE X(1).
12800          02  CUR-PROJ-ALLOW          PICTURE S9(5).
12900          02  FYC                     PICTURE S9(5).
13000          02  FY1                     PICTURE S9(5).
13100          02  FY2                     PICTURE S9(5).
13200          02  FY3                     PICTURE S9(5).
13300          02  FY4                     PICTURE S9(5).
13400          02  FY5                     PICTURE S9(5).
13500          02  MDI                     PICTURE S9(5).
13600          02  MD1                     PICTURE S9(5).
13700          02  MD2                     PICTURE S9(5).
13800          02  MD3                     PICTURE S9(5).
13900          02  MD6                     PICTURE S9(5).
14000          02  MD12                    PICTURE S9(5).
14100      01  OUT-REC-P.
14200          02  OUT-DISPLY1      PICTURE X(100).
14300          02  OUT-DISPLY2      PICTURE X(44).
14400
14500      FD  LISTING
14600          DATA RECORDS ARE PAPER1, PAPER2.
14700      01  PAPER1.
14800          02  TITLE            PICTURE X(20).
14900          02  CTRX             PICTURE ----,---,--9.
15000          02  WASTE1           PICTURE X(69).
15100      01  PAPER2.
15200          02  WASTE2           PICTURE X(1).
15300          02  DISPLY-REC       PICTURE X(100).
15400
15500      WORKING-STORAGE SECTION.
15600
15700      77  DISP-CTR PICTURE S9(8) COMPUTATIONAL-1 VALUE ZERO.
15800      77  IN-RECS PICTURE S9(8) COMPUTATIONAL-1 VALUE ZERO.
15900      77  OUT-RECS PICTURE S9(8) COMPUTATIONAL-1 VALUE ZERO.
16000      77  NBR-PRINT PICTURE S9(8) COMPUTATIONAL-1 VALUE ZERO.
16100      77  IN-NAME        PICTURE X(18) VALUE "RENQJUL77ALL/0001.".
16200      77  OUT-NAME       PICTURE X(18) VALUE "RENQJUL77/EXTRACT.".
16300
16400      PROCEDURE DIVISION.
16500
16600      STARTUP.
16700          MOVE 100 TO NBR-PRINT.
16800          OPEN OUTPUT LISTING.
16900          OPEN OUTPUT OUT-FILE.
17000          OPEN INPUT IN-FILE.
17100          READ IN-FILE AT END GO TO QUIT.
17200           MOVE SPACES TO PAPER1
17300           MOVE " THE HEADER RECORD " TO TITLE.
17400           WRITE PAPER1.
17500           MOVE SPACES TO PAPER2.
17600           MOVE IN-REC-DISP-1 TO DISPLY-REC.
17700           WRITE PAPER2.
17800           MOVE IN-REC-DISP-2 TO DISPLY-REC.
17900           WRITE PAPER2.
18000           MOVE IN-REC-DISP-3 TO DISPLY-REC.
18100           WRITE PAPER2.
18200           MOVE SPACES TO PAPER2.
18300           MOVE IN-REC-DISP-4 TO DISPLY-REC.
18400           WRITE PAPER2 BEFORE ADVANCING 3 LINES.
18500
18600
18700      CYCLER.
18800          ADD 1 TO IN-RECS.
18900          READ IN-FILE AT END GO TO QUIT.
```

```
19000          ADD 1 TO DISP-CTR.
19100
19200          IF PROJECTION-DATE IS NOT EQUAL TO SPACES GO TO CYCLER.
19300
19400          MOVE CORRESPONDING IN-REC TO OUT-REC.
19500          WRITE OUT-REC.
19600          ADD 1 TO OUT-RECS.
19700
19800          IF DISP-CTR NOT LESS THAN NBR-PRINT
19900              MOVE ZERO TO DISP-CTR
20000              MOVE SPACES TO PAPER1
20100              MOVE IN-RECS TO CTRX
20200              MOVE " NO." TO TITLE
20300              WRITE PAPER1
20400              MOVE SPACES TO PAPER2
20500              MOVE IN-REC-DISP-1 TO DISPLY-REC
20600              WRITE PAPER2
20700              MOVE IN-REC-DISP-2 TO DISPLY-REC
20800              WRITE PAPER2
20900              MOVE IN-REC-DISP-3 TO DISPLY-REC
21000              WRITE PAPER2
21100              MOVE SPACES TO PAPER2
21200              MOVE IN-REC-DISP-4 TO DISPLY-REC
21300              WRITE PAPER2
21400              MOVE OUT-DISPLY1 TO DISPLY-REC
21500              WRITE PAPER2
21600              MOVE SPACES TO DISPLY-REC
21700              MOVE OUT-DISPLY2 TO DISPLY-REC
21800              WRITE PAPER2 BEFORE ADVANCING 2 LINES.
21900
22000          GO TO CYCLER.
22100
22200
22300      QUIT.
22400          CLOSE IN-FILE.
22500          CLOSE OUT-FILE WITH LOCK.
22600          MOVE SPACES TO PAPER1.
22700          MOVE " JOB COMPLETED" TO TITLE.
22800          WRITE PAPER1 BEFORE ADVANCING 2 LINES.
22900          MOVE SPACES TO PAPER1
23000          MOVE IN-RECS TO CTRX.
23100          MOVE " INPUT RECORDS" TO TITLE.
23200          WRITE PAPER1 BEFORE ADVANCING 2 LINES.
23300          MOVE SPACES TO PAPER1.
23400          MOVE OUT-RECS TO CTRX.
23500          MOVE " OUTPUT RECORDS" TO TITLE.
23600          WRITE PAPER1.
23700          STOP RUN.
```

Routine EXTRACT



ANNEX B-2

FORMAT OF RENLQUAL/EXTRACT RECORDS

Location	Variable
1-5	Bureau unit identification code
6-10	Unit identification code
11-14	Manpower authorization requirements plan code
15-18	Activity type code
19-34	Activity short name
35-36	Activity mission code
37	Sea/shore code
38-43	Program element
44-45	Defense planning and programming code
46-52	Priority manning - one
53-59	Priority manning - two
60	Functional area code
61-65	Rating name abbreviation
66-69	Rating numeric code
70	Paygrade (A, J, 1, 2, 3, 4, 5, 6, 7)
71-74	Primary Navy enlisted code
75-78	Second Navy enlisted code
79	Paygrade (9, 8, 7, 6, 5, 4, 3, 2, 1)
80-84	Current projected allowance
85-89	Current fiscal year (FYC) requirements
90-94	Current plus one fiscal year (FY1) requirement
94-99	FY2 requirement
100-104	FY3 requirement
105-109	FY4 requirement
110-114	FY5 requirement
115-119	Initial mobilization requirement
120-124	Initial plus one month (MB1) mobilization requirement
125-129	Initial plus two month (MB2) mobilization requirement
130-134	MB3 requirement
135-139	MB6 requirement
140-144	MB12 requirement

ANNEX B-3

PROGRAM FORCES,
SHIP VERSION

```
$RLSET FREE
$SET AUTOBIND
$BIND = FROM CNA/LIB/=
FILE  1(TITLE="OCT77NARM/SHIP",FILETYPE=4,KIND=DISK)
FILE  2(TITLE="OCT77NARM/SHIP/ACT",KIND=DISK,
     *MAXRECSIZE=1),BLOCKSIZE=570,UNITS=WORDS)
FILE  3(TITLE="ENREP/DICT/SHIP",FILETYPE=8,KIND=DISK)
C
C              READS THE NARM SHIP FORCES BY PU AND PE
C              ASSIGNS EACH PU/PE AN ACT CODE
C              SORTS BY ACT/PE/PU
C              WRITES A FILE FOR ENREP
C              INPUTS =  1 - NARM FILE SORTED BY PU THEN PE CODES IN
C                                    ASCENDING ORDER
C                        3 - ACT/PE/PU DICTIONARY
C              OUTPUTS = 2 - ENREP FILE
C
C              THE NARM SHIP FILE CONTAINS FORCES FOR 9 YEARS,
C              ALTHOUGH THE DATA FOR YEARS 5-9 ARE THE SAME

      DIMENSION FORCE(200,4,16), IDENT(200,4,4), TMP(16), NPE(200),
     *     ACTCOD(200), NMCODE(200), PUCODE(200), JDENT(75,30,4),
     *     FORCE2(75,30,16), NR(100)
      INTEGER PU, PE, ACT, ACTCOD, PUCODE
C
C         READ THE ACT/PE/PU DICTIONARY
      READ (3,4000) NS
 4000 FORMAT (I5)
      WRITE (6,4050)
 4050 FORMAT (1HI/4X,"THE ACT/PE/PU DICTIONARY IS:"/
     *         1X,3HNO.,3X,3HACT,6X,2HPE,4X,4HNAME,6X,2HPU/)
      DO 5 I=1,NS
      READ(3,4010) ACTCOD(I), KK, NMCODE(I), PUCODE(I)
    5 WRITE (6,4011) I,ACTCOD(I),KK,NMCODE(I),PUCODE(I)
 4011 FORMAT (1X,I3,2X,I4,2X,I6,2X,A6,2X,I6)
 4010 FORMAT(I4,2X,I6,2X,A6,2X,I6)
C
C             INITIALIZE VARIABLES - IYR = BASE YEAR (1978)
C                                  - N1 = 200 PU CODES MAX
C                                  - N2 = 4 PE CODES PER PU MAX
C                                  - M1 = 75 ACT CODES MAX
C                                  - M2 = 30 RECORDS PER ACT MAX
      IYR=1978
      N1=200
      N2=4
      M1=75
      M2=30
      DO 10 I=1,N1
      DO 10 J=1,N2
      DO 10 K=1,16
   10 FORCE(I,J,K)=0.
      LPU=0
      MAC=0
      NPU=0
C
C         SKIP NARM HEADER RECORD
      READ (1,4030) TMP
 4030 FORMAT (16A6)
      WRITE (6,4040) TMP
 4040 FORMAT (1HI,1046/1X,8A6)
```

```
C          READ FORCES BY PU/PE
C          REPLICATE 9TH YEAR OVER YEARS 10-16
C          REMOVE THE CLAIMANT FROM THE PU CODE (DIGITS 7-8)
C          DELETE PU TYPES 97, INDICATE OVERHAULS NOT SHIPS
   20 READ(1,4020,END=50) PU,PE,(TMP(I),I=1,9)
 4020 FORMAT (I8,2X,I6,19X,39X,9F13.0)
      DO 25 I=10,16
   25 TMP(I)=TMP(9)
      PU=PU/100
      KK=(PU-(PU/10000)*10000)/100
      IF(KK.GE.97) GO TO 20

C          TEST FOR A NEW PU
      IF(PU.EQ.LPU) GO TO 30

C          NEW PU
      NPU=NPU+1
      IF (NPU.GT.N1) WRITE (6,9010) PU,PE
 9010 FORMAT (21H0 ERROR TOO MANY PUS,2I8)
      IF(NPU.GT.N1)  NPU=N1
      LPU=PU
      NPE(NPU)=1
      JPE=1
      IDENT(NPU,1,1)=PU
      IDENT(NPU,1,2)=PE
      KPE=1
      GO TO 40

C          TEST FOR A NEW PE
   30 DO 35 I=1,JPE
      KPE=I
      IF(PE.EQ.IDENT(NPU,I,2)) GO TO 40
   35 CONTINUE

C          NEW PE
      NPE(NPU)=NPE(NPU)+1
      JPE=JPE+1
      IF(JPE.LE.N2) GO TO 38
      WRITE(6,9020) PU,PE
 9020 FORMAT(21H0 ERROR TOO MANY PES ,2I8)
      JPE=N2
      NPE(NPU)=N2
   38 IDENT(NPU,JPE,1)=PU
      IDENT(NPU,JPE,2)=PE
      KPE=JPE

C          ADD TO THE FORCES
   40 DO 45 J=1,16
   45 FORCE(NPU,KPE,J)=FORCE(NPU,KPE,J)+TMP(J)
      GO TO 20

C          END OF FILE - RELEASE INPUT FILE
   50 CLOSE (1,DISP=KEEP)

C          ASSIGN ACT-CODE
      DO 66 I=1,NPU
      J=NPE(I)
      IF (J.LT.1) GO TO 66
      DO 65 K=1,J
      L=NSCANX(PUCODE,NS,IDENT(I,K,1))
      IF(L.EQ.0) GO TO 62
      IDENT(I,K,3)=ACTCOD(L)
      IDENT(I,K,4)=NMCODE(L)
C          FLAG ALL ZERO RECORDS WITH A ZERO ACT CODE
```

```
12600           DO 61 L=1,16
12700           IF (FORCE(I,K,L).GT.0.0) GO TO 65
12800        61 CONTINUE
12900           IDENT(I,K,3)=0
13000           GO TO 65
13100     C          FLAG RECORDS WITH NO DICTIONARY ENTRY WITH A ZERO ACT CODE
13200        62 WRITE(6,1000) IDENT(I,K,1),IDENT(I,K,2),(FORCE(I,K,L),L=1,16)
13300      1000 FORMAT(17HERROR - WHAT IS ,2I4,16F5.0)
13400           IDENT(I,K,3)=0
13500           IDENT(I,K,4)=NMCODE(NS+1)
13600        65 CONTINUE
13700        66 CONTINUE
13800
13900     C          SORT THE FORCES BY ACT-CODE
14000           N=NPU+1
14100           DO 85 I=1,NPU
14200           LIM=N-I
14300           IF (LIM.LT.2) GO TO 85
14400           DO 80 J=2,LIM
14500           IF(IDENT(J-1,1,3).LE.IDENT(J,1,3)) GO TO 80
14600           IHOLD=NPE(J-1)
14700           NPE(J-1)=NPE(J)
14800           NPE(J)=IHOLD
14900           DO 75 K=1,N2
15000           DO 70 L=1,16
15100           XHOLD=FORCE(J-1,K,L)
15200           FORCE(J-1,K,L)=FORCE(J,K,L)
15300        70 FORCE(J,K,L)=XHOLD
15400           DO 75 L=1,4
15500           IHOLD=IDENT(J-1,K,L)
15600           IDENT(J-1,K,L)=IDENT(J,K,L)
15700           IDENT(J,K,L)=IHOLD
15800        75 CONTINUE
15900        80 CONTINUE
16000        85 CONTINUE
16100     C
16200     C          COUNT THE NUMBER OF ACT CODES AND THE NUMBER OF RECORDS IN EACH
16300           IACT=-100
16400           NAC=0
16500           DO 250 I=1,NPU
16600           DO 240 J=1,NPE(I)
16700           IF (IACT.EQ.IDENT(I,J,3)) GO TO 210
16800           IACT=IDENT(I,J,3)
16900           NAC=NAC+1
17000           IF (NAC.GT.M1) WRITE (6,200) M1
17100           IF (NAC.GT.M1) NAC=M1
17200      200 FORMAT (" INCREASE ARRAY SIZE - MORE THAN ",I3," ACT CODES")
17300           NR(NAC)=0
17400      210 NR(NAC)=NR(NAC)+1
17500           IF (NR(NAC).GT.M2) WRITE (6,220) M2
17600      220 FORMAT (" INCREASE ARRAY SIZE - MORE THAN ",I3," RECORDS IN AN ACT
17700          * CODE")
17800           IF (NR(NAC).GT.M2) NR(NAC)=M2
17900           K=NR(NAC)
18000           DO 230 L=1,4
18100      230 JDENT(NAC,K,L)=IDENT(I,J,L)
18200           DO 235 L=1,16
18300      235 FORCE2(NAC,K,L)=FORCE(I,J,L)
18400      240 CONTINUE
18500      250 CONTINUE
18600
18700     C          SORT FORCES BY PE WITHIN EACH ACT
18800           DO 120 I=1,NAC
18900           N=NR(I)
```

```
      M=N+1
      DO 110 J=1,N
      LIM=M-J
      IF (LIM.LT.2) GO TO 110
      DO 100 K=2,LIM
      IF(JDENT(I,K-1,2).LE.JDENT(I,K,2)) GO TO 100
      DO 90 L=1,16
      XHOLD=FORCE2(I,K-1,L)
      FORCE2(I,K-1,L)=FORCE2(I,K,L)
   90 FORCE2(I,K,L)=XHOLD
      DO 95 L=1,4
      IHOLD=JDENT(I,K-1,L)
      JDENT(I,K-1,L)=JDENT(I,K,L)
   95 JDENT(I,K,L)=IHOLD
  100 CONTINUE
  110 CONTINUE
  120 CONTINUE

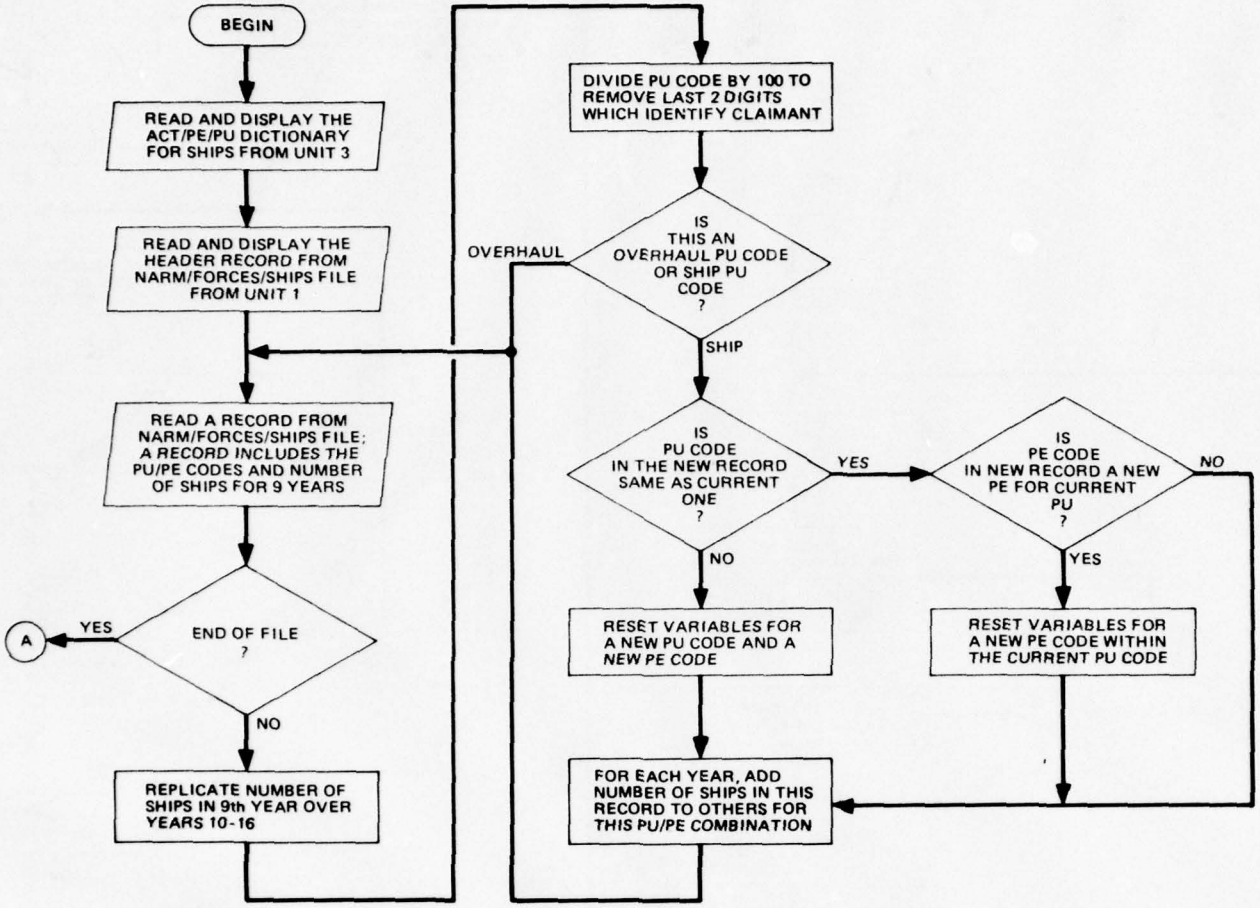
C          WRITE NEW FILE
      NL=100
      DO 170 I=1,NAC
      J=VR(I)
      DO 170 K=1,J
      IF (JDENT(I,K,3).EQ.0) GO TO 170
      WRITE(2,2040) JDENT(I,K,3),JDENT(I,K,2),JDENT(I,K,1),
     *          (FORCE2(I,K,L),L=1,16)
 2040 FORMAT (I4,I6,I6,16F6.0)
      NL=NL+1
      IF(NL.LE.25) GO TO 165
      WRITE(6,2000) (L,L=1978,1993)
 2000 FORMAT(1H1/1X,2(3X,3HACT),4X,2HPE,6X,2HPU/
     *           3X,4HNAME,2X,4HCODE,2(3X,4HCODE,1X),1X,16I6/)
      NL=0
  165 WRITE(6,2020) JDENT(I,K,4),JDENT(I,K,3),JDENT(I,K,2),JDENT(I,K,1)
     *,          (FORCE2(I,K,L),L=1,16)
 2020 FORMAT(1H0,2X,A4,2X,I4,2X,I6,2X,I6,1X,16F6.0)
  170 CONTINUE
      CLOSE (2,DISP=CRUNCH)

      STOP
      END

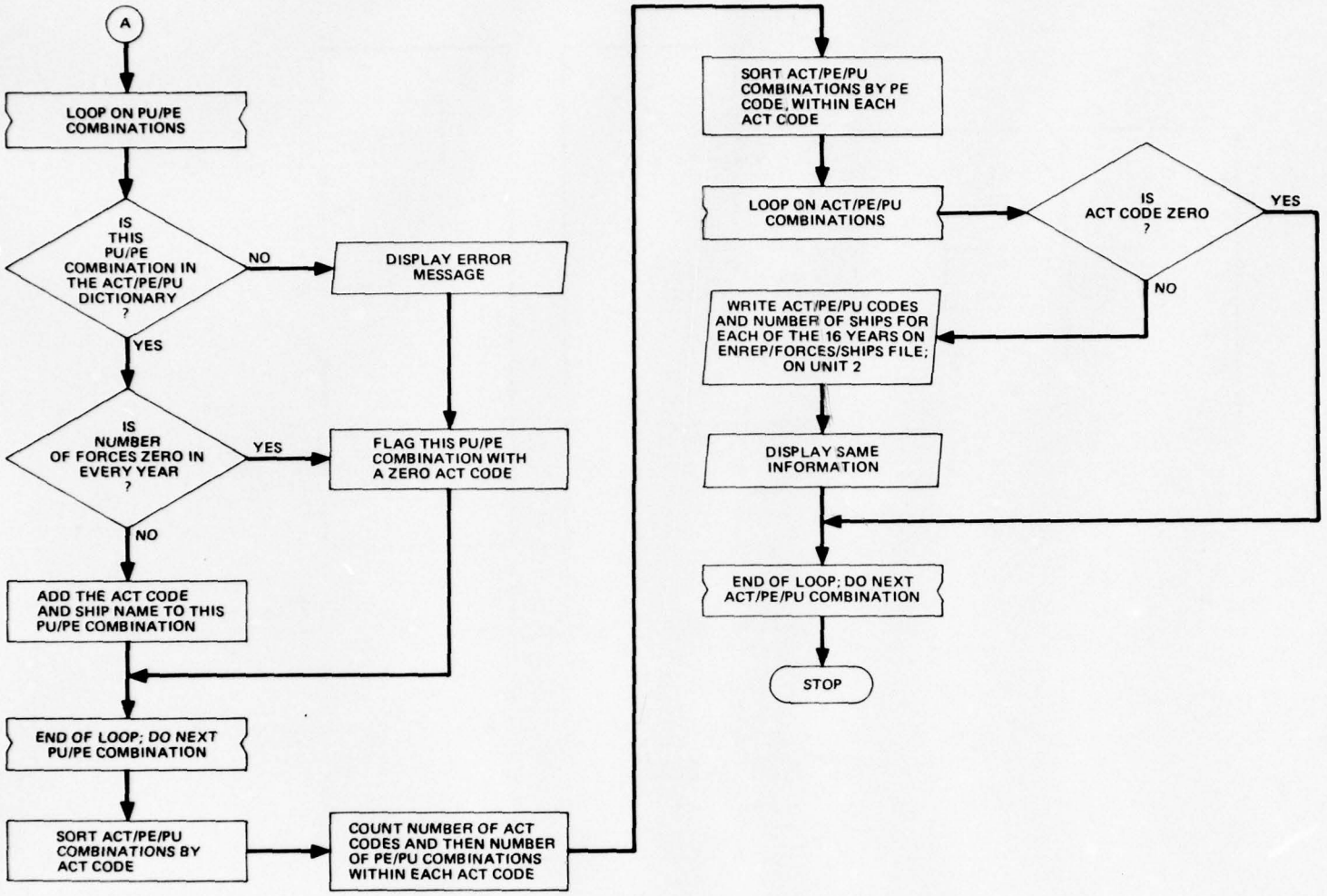
C*******************************************************************************

      INTEGER FUNCTION NSCANX(M,L,I)
C
C          SEARCH ELEMENTS 1-L OF ARRAY M FOR AN OCCURANCE OF I
C
      DIMENSION M(1)
      J=L
    5 IF(M(J).IS.I) GO TO 10
      J=J-1
      IF (J.GT.0) GO TO 5
      J=0
   10 NSCANX=J
      RETURN
      END
```

Routine FORCES, ship version



Routine FORCES, ship version



ANNEX B-4

PROGRAM FORCES,
AIRCRAFT VERSION

```
      $RESET FREE
      $SET AUTOBIND
      $BIND = FROM CVA/LIB/=
      FILE  1(TITLE="OCT77NARM/AIR",FILETYPE=8,KIND=DISK)
      FILE  2(TITLE="OCT77NARM/AIR/ACT",KIND=DISK,
     *UNITS=WORDS,MAXRECSIZE=1),BLOCKSIZE=570)
      FILE  3(TITLE="ENREP/DICT/AIR",FILETYPE=8,KIND=DISK)
      FILE  4(KIND=PRINTER)
      C
      C          READS TFS NARM A/C FORCES BY PU AND PE
      C          DELETES MARINE AIR
      C          DELETES NON-SQUADRON AIR
      C          ASSIGNS EACH PU/PE AN ACT CODE
      C          SORTS BY ACT/PE/PU
      C          WRITES AN ENREP FILE
      C          INPUTS =  1 - NARM FILE SORTED BYE PU THEN PE CODES IN
      C                                        ASCENDING ORDER
      C                    3 - ACT/PE/PU DICTIONARY
      C          OUTPUTS = 2 - ENREP FILE
      C
      C              THE NARM AIRCRAFT FILE CONTAINS FORCES FOR 7 YEARS,
      C              ALTHOUGH THE DATA FOR YEARS 6-9 ARE THE SAME
      C
            DIMENSION  FORCE(30,35,15), IDENT(30,35,4), IMP(15), NPE(200),
           *           AFORCE(22,16), INDEX(220,4), NR(220), NPU(220,20),
           *           GORCE(200,15,16), JDENT(200,15,4),
           *           ACTCOD(220), NMCODE(220), PUCODE(220), PECODE(220),
           *           SCOPE(46)
            EQUIVALENCE (GORCE(1),FORCE(1)), (IDENT(1),IDENT(1))
            INTEGER PU, PE, ACT, ACTCOD, PUCODE, PECODE, SCOPE
            DATA SCOPE / 113152, 241342, 241352, 241362, 241382, 241392,
           *        241422, 241442, 241452, 241512, 241522, 241532,
           *        241542, 241552, 241562, 242322, 242332, 242342,
           *        242422, 242432, 242442, 242512, 242622, 243032,
           *        244532, 351122, 351312, 523112, 523122, 523132,
           *        523142, 523162, 523172, 523242, 523252, 523262,
           *        523322, 523332, 523412, 523712, 523792, 241462,
           *        827442, 847412, 847422, 8474327
      C
      C          READ THE ACT/PE/PU DICTIONARIES
            READ(3,4050) NC
       4050 FORMAT(215)
            WRITE (6,4010)
       4010 FORMAT (1H1/6X,"THE ACT/PE/PU DICTIONARY IS:"/
           *        1X,3HNO.,3X,3HACT,6X,2HPE,4X,4HNAME,6X,2HPU/)
            DO 500 I=1,NC
            READ(3,4000) ACTCOD(I), PECODE(I), NMCODE(I), PUCODE(I)
        500 WRITE (6,4020) I, ACTCOD(I), PECODE(I), NMCODE(I), PUCODE(I)
       4020 FORMAT (I4,I6,I4,2X,A6,I8)
       4000 FORMAT(I4,2X,I6,2X,A6,2X,I6)
      C
      C          INITIALIZE VARIABLES - IYR - SETTING THE BASE YEAR TO 1978
      C                               - N1 - 200 PU CODES MAX
      C                               - N2 - 15 PE CODES PER PU MAX
      C                               - M1 - 30 ACT CODES MAX
      C                               - M2 - 35 RECORDS PER ACT CODE
            IYR=1978
            ND=NC
            PUCODE(221)=0
            PECODE(220)=0
```

```
6200          ACCODE(22))=BH
6300          ACCOD(220)=0
6400          N1=200
6500          N2=16
6600          M1=30
6700          M2=35
6800          DO 10 I=1,N1
6900          DO 10 J=1,N2
7000          DO 10 K=1,16
7100       10 FORCE(I,J,K)=0.
7200          JTY=0
7300          NAC=0
7400          NP=0
7500
7600       C      SKIP NARM HEADER RECORD
7700          READ (1,4060) IMP
7800       4060 FORMAT (1616)
7900          WRITE (6,4070) IMP
8000       4070 FORMAT (1H1,10A6/1X,84(-))
8100       C
8200       C          READ FORCES BY PU/PE
8300       C          DELETE MARINE A/C - DIGIT 6 OF PE IS A 3
8400       C          DELETE NON-SQUADRON A/C - PE NOT IN ARRAY SCOPE
8500       C          REPLICATE YEAR 9 OVER YEARS 10-16
8600       C          REMOVE CLAIMANT FROM THE PU CODE (DIGITS 7-8)
8700          20 READ(1,4040,END=50) PU,PE,(IMP(I),I=1,9)
8800       4040 FORMAT (I8,2X,I6,19X,34X,9F13.0)
8900          I=PE-(PE/10)*10
9000          IF (I.EQ.3) GO TO 20
9100          I=NSCANX(SCOPE,4,PE)
9200          IF (I.EQ.0) GO TO 20
9300          DO 25 I=10,16
9400          IMP(I)=IMP(9)
9500          PU=PU/100
9600
9700       C          TEST FOR A NEW PU
9800          IF(PU.EQ.JTY) GO TO 30
9900
10000      C          NEW PU
10100         NP=NP+1
10200         IF (NP.GT.N1) WRITE (6,9010) PU,PE
10300      9010 FORMAT (21H0 ERROR TOO MANY PUS,2I8)
10400         IF(NP.GT.N1) NP=N1
10500         JTY=PU
10600         NPE(NP)=1
10700         JPE=1
10800         JDENT(NP,1,1)=PU
10900         JDENT(NP,1,2)=PE
11000         KPE=1
11100         GO TO 40
11200
11300      C          TEST FOR A NEW PE
11400         30 DO 35 I=1,JPE
11500         KPE=I
11600         IF(PE.EQ.JDENT(NP,I,2)) GO TO 40
11700         35 CONTINUE
11800
11900      C          NEW PE
12000         NPE(NP)=NPE(NP)+1
12100         JPE=JPE+1
12200         IF(JPE.LE.N2) GO TO 38
12300         WRITE(6,9020) PU,PE
12400      9020 FORMAT(21H0 ERROR TOO MANY PES ,2I8)
12500         JPE=N2
```

```
12600           NPE(NP)=K2
12700        38 JDENT(NP,JPE,1)=PU
12800           JDENT(NP,JPE,2)=PE
12900           KPE=JPE
13000
13100     C          ADD TO THE FORCES
13200        40 DO 45 J=1,16
13300        45 FORCE(NP,KPE,J)=FORCE(NP,KPE,J)+IMP(J)
13400           GO TO 20
13500
13600     C          END OF FILE - RELEASE INPUT FILE
13700        50 CLOSE (1,DISP=KEEP)
13800
13900     C          ASSIGN ACT-CODE
14000           NC=0
14100           DO 66 I=1,NP
14200           J=NPE(I)
14300           DO 66 K=1,J
14400     C          LOOK IN DICTIONARY
14500           DO 58 L=1,ND
14600           IF(PJCODE(L).NE.JDENT(I,K,1)) GO TO 58
14700           IF(PECODE(L).NE.JDENT(I,K,2)) GO TO 58
14800           GO TO 60
14900        58 CONTINUE
15000     C          NO MATCH - PRINT MESSAGE - IGNORE IT
15100           WRITE(6,1000)  JDENT(I,K,1), JDENT(I,K,2), (FORCE(I,K,L),L=1,16)
15200         1000 FORMAT(1X,'ERROR - WHAT IS ',I8,I10,16F5.0)
15300           GO TO 66
15400     C          IF NO AIRCRAFT ASSOCIATED WITH THIS PU/PE IGNORE IT
15500        60 DO 59 M=1,16
15600           IF (FORCE(I,K,M).GT.0) GO TO 61
15700        59 CONTINUE
15800           GO TO 66
15900     C          GOOD MATCH
16000        61 NC=NC+1
16100           IF (NC.GT.220) WRITE (6,1001)
16200         1001 FORMAT (' INCREASE SIZE OF ARRAY, INDEX, - MORE THAN 220 INPUT REC
                  *ORDS')
16300           IF(NC.GT.220) NC=220
16400           INDEX(NC,1)=ACCOD(L)
16500           INDEX(NC,2)=PECODE(L)
16600           INDEX(NC,3)=JDENT(I,K,1)
16700           INDEX(NC,4)=NMCODE(L)
16800           DO 62 M=1,16
16900        62 AFORCE(NC,M)=FORCE(I,K,M)
17000        66 CONTINUE
17100
17200     C          SORT THE FORCES BY ACT-CODE
17300           N=NC+1
17400           DO 85 I=1,NC
17500           LIM=N-I
17600           IF (LIM.LT.2) GO TO 85
17700           DO 84 J=2,LIM
17800           IF(INDEX(J-1,1).LE.INDEX(J,1)) GO TO 84
17900           DO 75 K=1,4
18000           IHOLD=INDEX(J-1,K)
18100           INDEX(J-1,K)=INDEX(J,K)
18200        75 INDEX(J,K)=IHOLD
18300           DO 80 K=1,16
18400           XHOLD=AFORCE(J-1,K)
18500           AFORCE(J-1,K)=AFORCE(J,K)
18600        80 AFORCE(J,K)=XHOLD
18700        84 CONTINUE
18800        85 CONTINUE
18900
```

```
C          COUNT NUMBER OF ACTIVITIES
C               AND WITHIN EACH THE NUMBER OF RECORDS
      NAC=0
      IACT=0
      DO 200 I=1,NC
      IF(IACT.EQ.INDEX(I,1)) GO TO 200
      NAC=NAC+1
      IF (NAC.GT.M1) WRITE (6,197) M1
  197 FORMAT (" INCREASE SIZE OF ARRAYS, FORCE + IDENT, - MORE THAN ",I2
     *," ACT CODES")
      IF(NAC.GT.M1) NAC=M1
      IACT=INDEX(I,1)
      NR(NAC)=0
  200 NR(NAC)=NR(NAC)+1

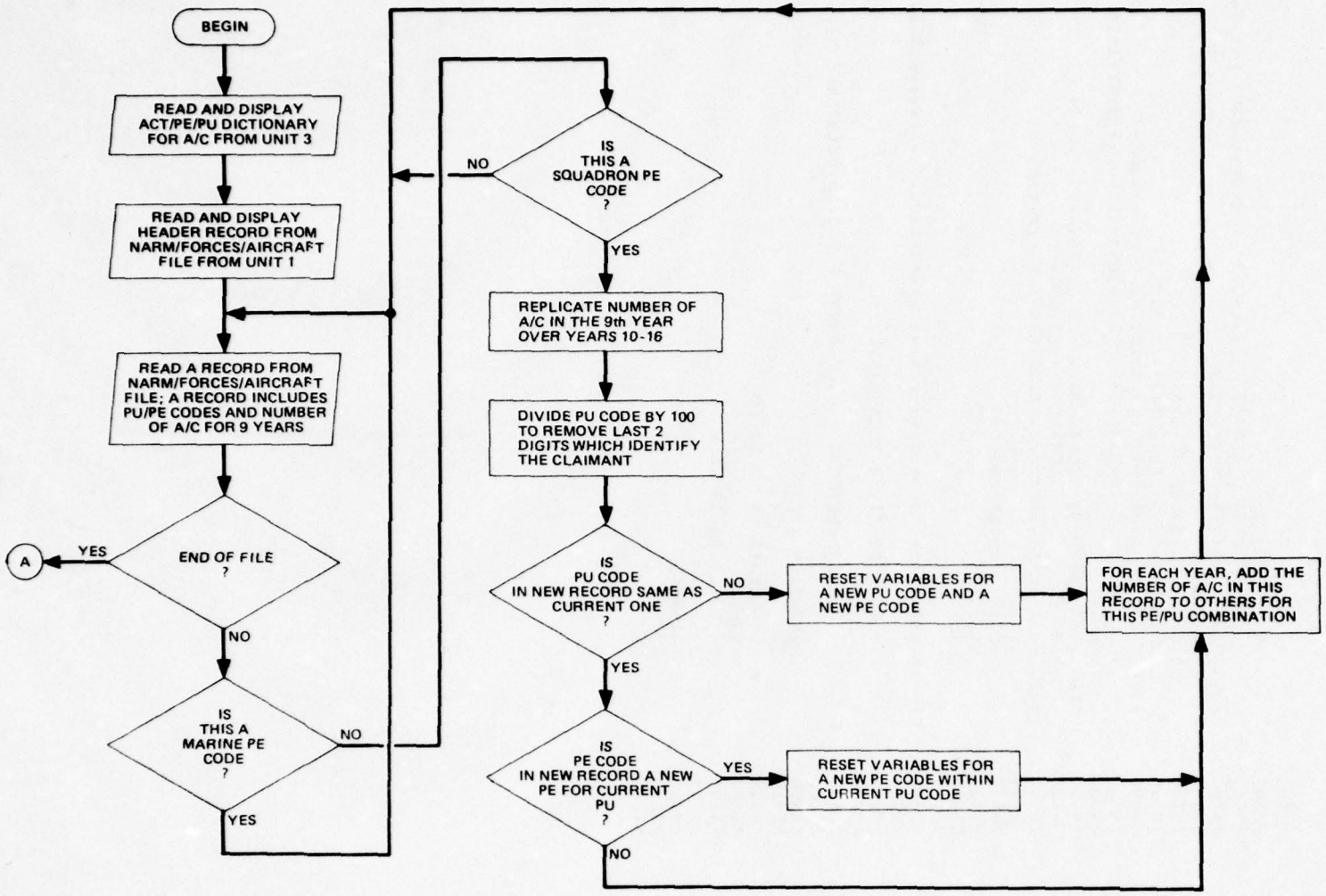
      IACT=1
      L1=1
      IF (NR(1).GT.M2) WRITE (6,209) M2
  209 FORMAT (" INCREASE SIZE OF ARRAYS, FORCE + IDENT, - MORE THAN ",I2
     *," RECORDS IN AN ACT CODE")
      IF(NR(1).GT.M2) NR(1)=M2
      L2=NR(1)
      L3=0
  210 IF (L1.GT.L2) GO TO 221
      DO 220 I=L1,L2
      DO 215 J=1,4
      K=I-L3
  215 IDENT(IACT,K,J)=INDEX(I,J)
      DO 220 J=1,16
      K=I-L3
  220 FORCE(IACT,K,J)=AFORCE(I,J)
  221 L1=L1+NR(IACT)
      L3=L3+NR(IACT)
      IACT=IACT+1
      IF (NR(IACT).GT.M2) WRITE (6,209) M2
      IF(NR(IACT).GT.M2) NR(IACT)=M2
      L2=L2+NR(IACT)
      IF(IACT.LE.NAC) GO TO 210

C          SORT FORCES BY PE WITHIN EACH ACT
      DO 120 I=1,NAC
      N=NR(I)
      M=N+1
      DO 110 J=1,N
      LIM=M-J
      IF (LIM.LT.2) GO TO 110
      DO 100 K=2,LIM
      IF(IDENT(I,K-1,2).LE.IDENT(I,K,2)) GO TO 100
      DO 90 L=1,16
      XHOLD=FORCE(I,K-1,L)
      FORCE(I,K-1,L)=FORCE(I,K,L)
   90 FORCE(I,K,L)=XHOLD
      DO 95 L=1,4
      IHOLD=IDENT(I,K-1,L)
      IDENT(I,K-1,L)=IDENT(I,K,L)
   95 IDENT(I,K,L)=IHOLD
  100 CONTINUE
  110 CONTINUE
  120 CONTINUE

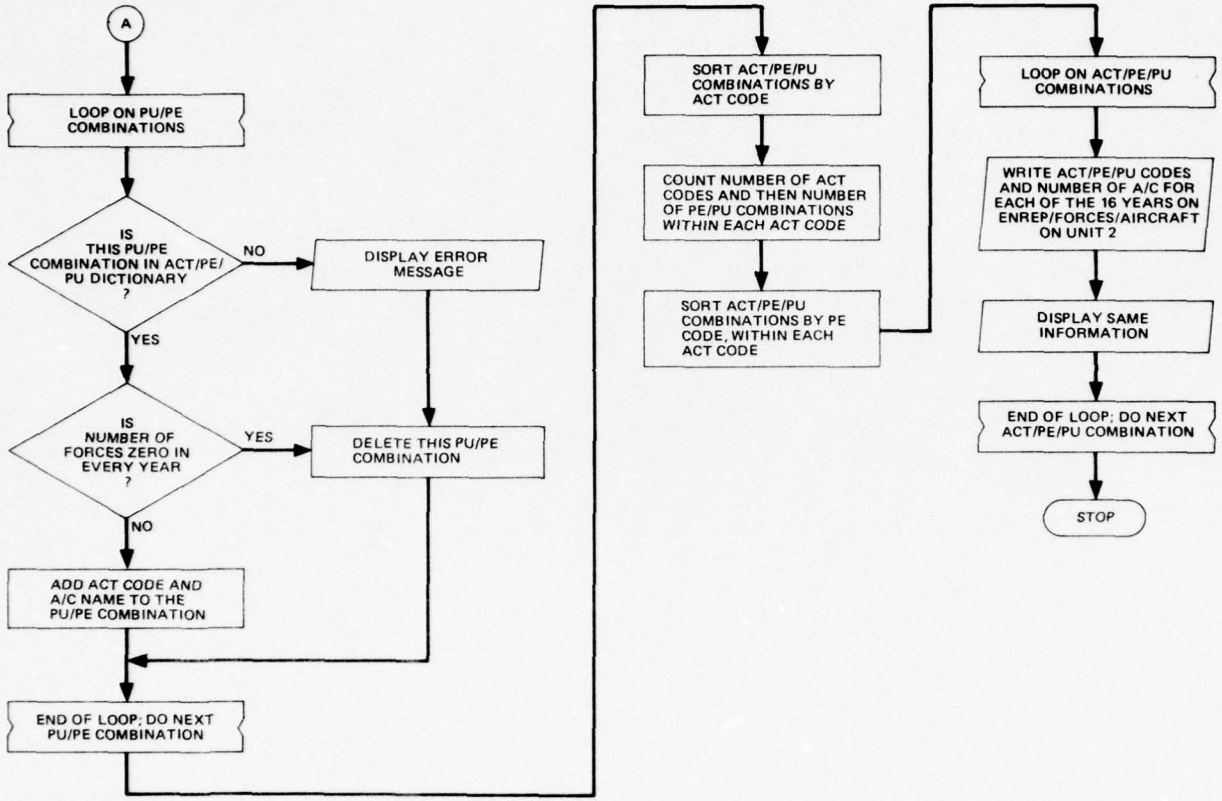
C          WRITE NEW FILE
      NL=100
      DO 170 I=1,NAC
```

```
2540          J=NX(1)
25500         DO 170 K=1,J
25600         WRITE(2,2040) (IDENT(I,K,L),L=1,3),(FORCE(I,K,L),L=1,16)
25700    2040 FORMAT (I4,I6,I6,16F6.0)
25800         NL=NL+1
25900         IF(NL.LE.25) GO TO 170
26000         WRITE (6,2000) (L,L=1978,1993)
26100    2000 FORMAT(1H1/4X,5HA/C,4X,5HACT,4X,2HPE,5X,2HPU/
26200        *            3X,4HNAME,3X,4HCODE,2(3X,4HCODE,1X),1X,16I6/)
26300         NL=0
26400     170 WRITE(6,2020) IDENT(I,K,4),(IDENT(I,K,L),L=1,3)
26500        *,                (FORCE(I,K,L),L=1,16)
26600    2020 FORMAT(1HO,1X,A6,2X,I4,2X,I6,2X,I6,1X,16F6.0)
26700
26800         CLOSE (2,DISP=CRUNCH)
26900         STOP
27000         END
27100
27200    C*************************************************************************
27300
27400         INTEGER FUNCTION NSCANX(M,L,I)
27500
27600    C         SEARCH ELEMENTS 1-L OF ARRAY M FOR AN OCCURANCE OF I
27700
27800         DIMENSION M(1)
27900         J=L
28000       5 IF(M(J).IS.I) GO TO 10
28100         J=J-1
28200         IF (J.GT.0) GO TO 5
28300         J=0
28400      10 NSCANX=J
28500         RETURN
28600         END
```

Routine FORCES, air version



Routine FORCES, air version



ANNEX B-5

SQUADRON PROGRAM ELEMENTS

PE	TITLE
11315N	Fleet ballistic missile control systems command
24134N	A-6 squadrons
24135N	A-7 squadrons
24136N	A-18 squadrons
24142N	F-4 squadrons
24144N	F-14 squadrons
24145N	F-18 squadrons
24151N	Carrier on-deck squadrons
24152N	Early warning aircraft squadrons
24153N	Reconnaissance squadrons
24154N	Sea based electronic warfare squadrons
24155N	Shored based electronic warfare squadrons
24156N	Readiness squadrons
242322	S-2 squadrons
24233N	SH-3 squadrons
24234N	S-3 squadrons
24242N	AV-8B squadrons
24243N	Light air multi-purpose systems
24244N	AV8A squadrons
24251N	Anti-submarine warfare patrol squadrons

24262N	Readiness squadrons
24303N	Air mine countermeasure squadrons
24453N	Direct support squadrons aircraft
35112N	Oceanography
35131N	Mapping, charting, geodesy
52311N	A-4 squadrons
52313N	A-7 squadrons
52316N	F-8 squadrons
52317N	F-4 squadrons
52324N	Early warning aircraft squadrons
52325N	Reconnaissance squadrons
42326N	Sea based electronic warfare squadrons
52332N	SH-3 squadrons
52333N	S-3 squadrons
52341N	Anti-submarine warfare patrol squadrons
52371N	Coastal and river forces
52379N	Direct support squadrons, aircraft
84741N	Undergraduate pilot training
84742N	Undergraduate navigators training
84743N	Other flight training

ANNEX B-6

PROGRAM FACTORS

```
100     $RESET FREE
200     $SET AUTOBIND
300     $BIND  = FROM CNA/LIB/=
400     FILE  1(TITLE="RENQJUL77/ACTPE",KIND=PETAPE,FILETYPE=8)
500     FILE  2(TITLE="CC177NARM/SFACTORS/SHIP",KIND=DISK,FILETYPE=8)
600     FILE  3(KIND=PRINTER)
700     FILE  4(TITLE="ENREP/DICT/SHIP",KIND=DISK,FILETYPE=8)
800     FILE  5(TITLE="ENREP/FACTORS/SHIPDATA",KIND=DISK,FILETYPE=8)
900     FILE  8(KIND=PETAPE,TITLE="ENREP/UNITREQ/SHIP",BLOCKSIZE=999,
1000          *  MAXRECSIZE=999,SERIALNO=000565)
1100    FILE  9(KIND=DISK,MAXRECSIZE=999,BLOCKSIZE=999,AREASIZE=10)
1200    FILE  10(KIND=DISK,MAXRECSIZE=999,BLOCKSIZE=999,AREASIZE=10)
1300    FILE  11(KIND=DISK,MAXRECSIZE=999,BLOCKSIZE=999,AREASIZE=10)
1400    FILE  12(KIND=DISK,MAXRECSIZE=999,BLOCKSIZE=999,AREASIZE=10)
1500    FILE  13(KIND=DISK,MAXRECSIZE=999,BLOCKSIZE=999,AREASIZE=10)
1600    C
1700    C          CREATES A UNIT REQUIREMENTS MATRIX FOR EACH ACT/PE/PU
1800    C               COMBINATION IN EACH YEAR, RATING BY PAYGRADE
1900    C          THE QUALITY MIX IS OBTAINED FROM THE BILLET FILE
2000    C               BY ACT AND PE
2100    C          AND THE FACTORS ARE OBTAINED FROM THE NARM
2200    C               BY PE AND PU
2300    C
2400    C          FILE 1 = RENLQUAL FILE SORTED BY ACT CODE AND THEN BY PE CODE,
2500    C                   BOTH IN ASCENDING ORDER
2600    C          FILE 2 =  NARM FACTOR FILE SORTED BY PU CODE THEN BY PE CODE
2700    C                   THEN BY FACTOR SEQUENCE NUMBER, ALL IN ASCENDING
2800    C                   ORDER
2900    C          FILE 3 = OUTPUT LISTING
3000    C          FILE 4 = THE ACT/PE/PU DICTIONARY SORTED BY ACT CODE THEN BY
3100    C                   PE CODE THEN BY PE CODE, ALL IN ASCENDING ORDER
3200    C          FILE 5 = USER INPUT
3300    C          FILE 6 = OUTPUT LISTING
3400    C          FILE 8 = THE UNIT REQUIREMENTS MATRICES
3500    C          FILES 9-13 = STORAGE
3600    C
3700          COMMON /$A/ ACTCOD(191), NMCODE(191), PUCODE(191), PECODE(191),
3800         *          INDEX(191,2), NM1, NM2, SHIP, AIR
3900          COMMON /$1/ NARM(95,30,15),  BILLET(5,110,9), PROXY(35,15), NREC,
4000         *           FIND, FLAG, NTYP, MTYP, NP, PRXC, IACT, NA, IPE, NL
4100          COMMON /$2/ IRA, KPG, JREQ(5), KREQ(5), IR
4200          COMMON /$3/ BILLTN(5,110,9)
4300          COMMON /$8/ JRATE(110), OK
4400          DIMENSION INARM(95,30,15), STORE(12480)
4500          EQUIVALENCE (INARM(1), NARM(1), STORE(1))
4600          INTEGER ACTCOD, PUCODE, PECODE, FIND, AIR, SHIP,
4700         *       PRCXY, PRXC, ACT, PE, FLAG, OK, A, B
4800          REAL NARM
4900          DATA IBLK/6H      /
5000          DATA SHIP/4HSHIP/, AIR/4HA/C /
5100          DATA OK/6HCKCKOK/
5200          DATA JRATE/4H0100,4H0150,4H0200,4H0250,4H0300,4H0350,4H0400,4H0401
5300         *    ,4H0404,4H0450,4H0500,4H0600,4H0601,4H0602,4H0604,4H0800,4H0801
5400         *    ,4H0802,4H0803,4H0810,4H0900,4H1000,4H1001,4H1002,4H1010,4H1080
5500         *    ,4H1100,4H1200,4H1400,4H1500,4H1611,4H1622,4H1633,4H1644,4H1655
5600         *    ,4H1666,4H1700,4H1701,4H1750,4H1800,4H1900,4H2000,4H2100,4H2200
5700         *    ,4H8500,4H2290,4H2300,4H2490,4H2600,4H2700,4H3100,4H3200,4H3300
5800         *    ,4H3700,4H3800,4H3900,4H4000,4H4020,4H4100,4H4200,4H4300,4H4600
5900         *    ,4H4700,4H4400,4H5080,4H5100,4H5300,4H5380,4H5410,4H5500,4H5600
6000         *    ,4H5700,4H5800,4H6080,4H6180,4H6200,4H6205,4H6206,4H6300,4H6310
6100         *    ,4H6400,4H6500,4H6520,4H6600,4H6700,4H6704,4H6705,4H6706,4H6800
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```
6200          *    ,4H6900,4H6901,4H6902,4H6903,4H7000,4H7100,4H7200,4H7300,4H7500
6300          *    ,4H7501,4H7502,4H7503,4H7401,4H7600,4H7700,4H8000,4H8300,4H8600
6400          *    ,4H9000,4H9000,4H7800/
6500     C
6600     C          READ FORCE INDICATOR, SHIP OR AIR
6700               READ (5,1000) FIND
6800      1000 FORMAT(A4)
6900               IF(FIND.NE.SHIP) FIND=AIR
7000               WRITE (6,1040) FIND
7100      1040 FORMAT(1H0,8X,A4," UNIT REQUIREMENTS MATRICES ARE BEING CREATED.")
7200     C
7300     C          READ DICTIONARY  ACT/PE/PU
7400               CALL RDDICT
7500     C
7600     C          READ ANY USER PROXIES
7700               CALL RDPROX
7800     C
7900     C          COMPUTE NARM FACTOR
8000               CALL CFACT
8100     C
8200     C          INITIALIZE  VARIABLES
8300               LACT=6711
8400               IF (FIND.EQ.AIR) LACT=6799
8500               NL=100
8600               MREC=0
8700               DO 65 I=1,5
8800               DO 65 J=1,110
8900               DO 65 K=1,9
9000            65 BILLET(I,J,K)=0.0
9100               ACT=0
9200               IACT=0
9300               JACT=IBLK
9400               IPE=IBLK
9500               IR=0
9600               FLAG=0
9700               PE=IBLK
9800               NDICT=1
9900     C
10000    C          READ RECORD FROM BILLET FILE
10100       80 IR=IR+1
10200          READ (1,5050,DATA=81,ERR=91,END=120,RESULTS=IND)
10300         *       ACT,PE,IRA,NPG,(JREQ(I),KREQ(I),I=1,5)
10400       5050 FORMAT (14X,I4,19X,A6,22X,A4,9X,I1,10X,5(I4,A1))
10500          GO TO 82
10600    C          UNUSUAL RECORD
10700       81 WRITE (6,4000) IR,IND,ACT,PE
10800       4000 FORMAT(15H0UNUSUAL RECORD,I10,
10900         *       10X,12HINDICATOR IS,I10,
11000         *        10X,I4,I8)
11100    C
11200    C          GOOD READ
11300    C          BY PASS RECORD IF:
11400    C            THE PE CODE IS IN ERROR, THAT IS EQUALS TH1122
11500    C            ACT RANGE FOR SHIPS IS OUTSIDE OF 1-711
11600    C            ACT RANGE FOR A/C IS OUTSIDE OF 6628-6799
11700       82 IF (PE.EQ.6HTH1122) GO TO 80
11800          IF(ACT.GT.LACT) GO TO 120
11900          IF(ACT.LT.6628.AND.FIND.EQ.AIR) GO TO 80
12000    C
12100    C          SAME ACT AS PREVIOUS RECORD, BUT NOT USED (FLAG=0)
12200    C          SAME ACT AS PREVIOUS RECORD, AND IS USED (FLAG>0)
12300               IF(ACT.EQ.IACT.AND.FLAG.EQ.0) GO TO 80
12400               IF(ACT.EQ.IACT.AND.FLAG.GE.1) GO TO 110
12500    C
```

```
C          NEW ACTIVITY CODE
C          COMPLETE THE PREVIOUS ACTIVITY
      IF(FLAG.LE.0) GO TO 88
C          LOOK FOR PROXIES
C               CHECK THE ACT-CODES
   83 IF(PROXY(PRXC,6)-IACT) 84,85,87
C               ERROR - SKIP THIS PROXY INPUT
   84 PROXY(PRXC,8)=IBLK
      PRXC=PRXC+1
      FLAG=FLAG+1
      GO TO 83
C               MATCH ON ACT/CODE, CHECK PE-CODES
   85 IF(PROXY(PRXC,8).NE.IPE) GO TO 87
C               GOOD MATCH
      PRXC=PRXC+1
      FLAG=FLAG+1
      GO TO 83
C          WRITE RECORD
   87 CALL WRREC
C
C          RESET VARIABLES, BEGIN NEXT ACT/PE COMBINATION
   88 IACT=ACT
      IPE=PE
      DO 90 I=1,5
      DO 90 J=1,110
      DO 90 K=1,9
   90 BILLET(I,J,K)=0.0
C          COMPARE NEW ACT-CODE TO LIST OF ACT CODES IN DICTIONARY
      NA=NSCANX(ACTCOD(NDICT),NTYP,ACT)
      IF(NA.GT.0.AND.NA.LE.NTYP) GO TO 95
      FLAG=0
      WRITE(3,9050) ACT
 9050 FORMAT(1HO,I6," ACT CODE IS NOT USED")
      GO TO 80
C          ADD THIS RECORD TO THE QUALITY MATRIX FOR THIS ACT/PE
   95 FLAG=1
      NDICT=NA
      CALL ADD
      GO TO 80
C
C          FIND PE CODE AND SEE IF IT IS A NEW ONE FOR THIS ACT CODE
  110 IF(PE.EQ.IPE) GO TO 118
C
C          NEW PE CODE FOR THIS ACT, WRITE RECORD FOR THE PREVIOUS ACT/PE
C          CHECK FOR PROXIES
C               CHECK THE ACT-CODES
  111 IF(PROXY(PRXC,6)-IACT) 112,113,115
C               ERROR - SKIP THIS PROXY INPUT
  112 PROXY(PRXC,8)=IBLK
      PRXC=PRXC+1
      FLAG=FLAG+1
      GO TO 111
C               MATCH ON ACT/CODE, CHECK PE-CODES
  113 IF(PROXY(PRXC,8).NE.IPE) GO TO 115
C               GOOD MATCH
      PRXC=PRXC+1
      FLAG=FLAG+1
      GO TO 111
C          WRITE THIS RECORD
  115 CALL WRREC
C          RESET VARIABLES FOR THE NEXT PE IN THIS ACT CODE
      DO 116 I=1,5
      DO 116 J=1,110
      DO 116 K=1,9
```

```
      116 BILLET(I,J,K)=0.0
          IPE=PE
          FLAG=1
C
C             ADD THIS RECORD TO THE QUALITY MATRIX FOR THIS ACT/PE
      118 CALL ADD
          GO TO 80
C
C             END OF FILE ON BILLET FILE
C             COMPLETE THE LAST ACTIVITY
      120 IF(FLAG.LE.0) GO TO 126
C             LOOK FOR PROXIES
C                   CHECK THE ACT-CODES
      122 IF(PROXY(PRXC,6)-IACT) 123,124,126
C                   ERROR - SKIP THIS PROXY INPUT
      123 PROXY(PRXC,8)=IBLK
          PRXC=PRXC+1
          FLAG=FLAG+1
          GO TO 122
C                   MATCH ON ACT/CODE, CHECK PE-CODES
      124 IF(PROXY(PRXC,8).NE.IPE) GO TO 126
C                   GOOD MATCH
          PRXC=PRXC+1
          FLAG=FLAG+1
          GO TO 122
C             WRITE RECORD
      126 CALL WRREC
      128 IR=IR-1
          WRITE (6,6000) IR
     6000 FORMAT(1HO/1X,I10,14H INPUT RECORDS)
          LOCK 1
C
C             BE SURE QUALITY WAS ADDED TO ALL NARM ENTRIES
          WRITE (6,7000)
     7000 FORMAT(1H1)
          DO 140 I=1,NM1
          DO 140 J=1,NM2
          IF(INARM(I,J,15).LE.0) GO TO 140
          IF(INARM(I,J,11).EQ.OK)   GO TO 140
          WRITE (6,7050) INARM(I,J,15),INARM(I,J,14),INARM(I,J,13),
         *                INARM(I,J,12)
     7050 FORMAT(14HOTHE ACTIVITY ,A6,1X,I4,9H WITH PE ,I6,
         *      9H WITH PU ,I6,
         *      35H DOES NOT HAVE A BILLET FILE ENTRY.)
      140 CONTINUE
C
C             BE SURE ALL NEW ACTIVITIES WERE INCLUDED
          WRITE (6,7000)
          IF (NP.LT.1) GO TO 155
          DO 150 I=1,NP
          IF(PROXY(I,3).EQ.OK)   GO TO 150
          WRITE (6,8000) (PROXY(I,J),J=1,7)
     8000 FORMAT(24HOPROBLEM WITH NEW ACT/PE/PL ,A6,1X,I4,1H/,I6,1H/,I6,
         *      4H.   ,16HPROXY IS ACT/PE ,A6,1X,I4,1H/,I6,1H.)
      150 CONTINUE
C
C             COPY THE 5 DISK FILES TO THE OUTPUT TAPE
C             SEPARATE YEARS BY A FLAG RECORD WITH STORE(1)=999999
      155 IU=8
          DO 170 I=1,5
          JU=IU+I
          REWIND JU
      160 READ(JU,END=162) (STORE(J),J=1,9),
                  (((BILLTN(I,J,K),K=1,9),J=1,11),
```

```
      WRITE(8,3000) (STORE(J),J=1,9),
     *          ((BILLTN(I,J,K),K=1,9),J=1,110)
 3000 FORMAT (3I6,6F5.1,99(F6.1))
      GO TO 160
  168 STORE(1)=999999
      WRITE(8,3000) (STORE(J),J=1,9),
     *          ((BILLTN(I,J,K),K=1,9),J=1,110)
  170 CONTINUE
C
C          RELEASE THE SCRATCH FILES
      CLOSE (9)
      CLOSE (10)
      CLOSE (11)
      CLOSE (12)
      CLOSE (13)
      END

C*********************************************************************

      SUBROUTINE RDDICT
      COMMON /$A/ ACTCOD(191), NMCODE(191), PUCODE(191), PECODE(191),
     *           INDEX(191,2), NM1, NM2, SHIP, ATR
      COMMON /$1/ NAME(95,30,15),  BILLET(5,11,9), PROXY(35,15), MREC,
     *           FIND, FLAG, NTYP, MTYP, NP, PRXC, IACT, NA, IPE, NL
      INTEGER ACTCOD, PUCODE, PECODE, FIND
C
C            INITIALIZE VARIABLES  - 190 ACT/PE/PU DICTIONARY ENTRIES MAX
C                                  -  94 ACTS MAX
C                                  -  30 PES PER ACT MAX
      MTYP=190
      NM1=94
      NM2=30
      NL=100
      NAC=0
      IACT=0
C               READ DICTIONARY ENTRIES
C                 ASSIGN EACH AN ACT NO., AND WITHIN EACH ACT A RECORD NO.
      READ(4,1050) NTYP
 1050 FORMAT(I5)
      IF (NTYP.GT.MTYP) NTYP=MTYP
      DO 6 I=1,NTYP
      READ(4,1060) ACTCOD(I),PECODE(I),NMCODE(I),PUCODE(I)
 1060 FORMAT(I4,2X,I6,2X,A6,2X,I6)
      IF(IACT.EQ.ACTCOD(I)) GO TO 4
      IACT=ACTCOD(I)
      NAC=NAC+1
      IF(NAC.GT.NM1) NAC=NM1
      MPE=0
    4 INDEX(I,1)=NAC
      MPE=MPE+1
      IF(MPE.GT.NM2) MPE=NM2
      INDEX(I,2)=MPE
      NL=NL+1
      IF(NL.LE.25) GO TO 6
      WRITE (6,1070) FIND
 1070 FORMAT(1H1/5X,4HACT,,4X,2HPE,5X,4H4,4X,2HPU/
     *           5X,4HCODE,3X,4HCODE,4X,4HNAME,3X,4HCODE)
      NL=0
    6 WRITE (6,1080) ACTCOD(I),PECODE(I),NMCODE(I),PUCODE(I)
     *           ,INDEX(I,1),INDEX(I,2),I
 1080 FORMAT(1H0,4X,I4,2X,I6,2X,A6,2X,I6,2I4,I5)
      RETURN
      END
```

```
C*****************************************************************
      SUBROUTINE PCPROX
      COMMON /$A/ ACTCOD(191), NMCODE(191), PUCODE(191), PECODE(191),
     *          INDEX(191,2), NML, N42, SHIP, AIR
      COMMON /$1/ NAPM(95,30,15), BILLET(5,110,9), PROXY(35,15), MREC,
     *           FIND, FLAG, NTYP, MTYP, NP, PRXC, IACT, NA, IPE, NL
      DIMENSION NPL(95), PXNAPM(95,15)
      EQUIVALENCE (PROXY(1,1),PXNAPM(1,1))
      INTEGER ACTCOD, PUCODE, PECODE, FIND, SHIP,
     *      PROXY, PRXC
      DATA IBLK/6H      /
C
C          INITIALIZE VARIABLES - 35 PROXY INPUTS MAX
      NP=0
      MP=35
      DO 10 I=1,MP
      PROXY(I,1)=IBLK
      PROXY(I,8)=IBLK
   10 PROXY(I,5)=IBLK
C
C         READ THE PROXY INPUTS
C          PROXY(NP,I) - COLS: 1- 6 - NAME OF NEW FORCE UNIT
C                    2  -      9-12 - NEW ACT CODE
C                    3  -     15-20 - NEW PE CODE
C                    4  -     25-28 - NEW PU CODE
C                    5  -     31-36 - NAME OF PROXY FORCE UNIT
C                    6  -     39-42 - PROXY ACT CODE
C                    7  -     45-50 - PROXY PE CODE
C                    8  -     53-58 - PROXY PE CODE, REPLACING THE LAST
C                                      DIGIT "2" WITH A "N"
C                    9  -        63 - FACTOR INDICATOR - IF ZERO READ
C                                      AND USE THE USER'S FACTORS,
C                                      IF NOT ZERO USE THE NAPM FACTORS
C         PXNAPM(NP,10) - COLS: 1- 5 - OVRSEAS MANNING
C                   11  -      6-10 - BASE OPS MANNING
C                   12  -     11-15 - TRAINING MANNING
C                   13  -     16-20 - MEDICAL MANNING
C                   14  -     21-25 - RECRUITING + EXAMINING MANNING
C                   15  -     26-30 - INDIVIDUAL MANNING ( TP+P AND
C                                     HOLDING ACCT)
   20 NP=NP+1
      IF(NP.GT.MP) NP=MP
      READ (5,2000,END=21) (PROXY(NP,I),I=1,9)
 2000 FORMAT(A6,2X,I4,2X,I6,2X,I6,2X,A6,2X,I4,2X,I6,2X,A6,I3)
      IF(PROXY(NP,9).NE.0) GO TO 20
      READ (5,2010) (PXNAPM(NP,I),I=10,15)
 2010 FORMAT (6F5.0)
      GO TO 20
   21 NP=NP-1
      IF(NP .EQ.0) GO TO 50
C
C         PROCESS THE PROXY INPUTS
      DO 32 I=1,NP
C          LOOK FOR THE NEW ACT/PE IN THE DICTIONARY
      IT=NTYP
   22 J=NSCANX(ACTCOD(1),IT,PROXY(I,2))
      IF(J.EQ.0) GO TO 30
      IF(PROXY(I,3).EQ.PECODE(J)) GO TO 26
      IT=J-1
      GO TO 22
   26 IT=MTYP
C          LOOK FOR THE PROXY ACT/PE IN THE DICTIONARY
   27 J=NSCANX(ACTCOD(1),IT,PROXY(I,6))
```

```
38200           IF(J.EQ.0) GO TO 30
38300           IF(PROXY(I,7).EQ.PECODE(J)) GO TO 32
38400           IT=J-1
38500           GO TO 28
38600     C          ERROR - DELETE THIS INPUT
38700        30 WRITE (6,2040) (PROXY(I,J),J=1,7)
38800      2040 FORMAT(23H0 INVALID PROXY ENTRY  ,A6,I5,I7,I7,3X,A6,I5,I7)
38900           PROXY(I,6)=9999
39000     C          END OF LOOP
39100        32 CONTINUE
39200     C
39300     C          SORT PROXIES ON ACTIVITY
39400           N=NP+1
39500           DO 36 I=1,NP
39600           LIM=N-I
39700           IF (LIM.LT.2) GO TO 37
39800           DO 36 J=2,LIM
39900           IF(PROXY(J-1,6).LE.PROXY(J,6)) GO TO 36
40000           DO 34 K=1,15
40100           IHOLD=PROXY(J-1,K)
40200           PROXY(J-1,K)=PROXY(J,K)
40300        34 PROXY(J,K)=IHOLD
40400        36 CONTINUE
40500     C
40600     C          COUNT NUMBER OF PROXIES PER ACTIVITY
40700        37 NAC=0
40800           IACT=0
40900           DO 38 I=1,NP
41000           IF(IACT.EQ.PROXY(I,6)) GO TO 38
41100           NAC=NAC+1
41200           IACT=PROXY(I,6)
41300           NPE(NAC)=0
41400        38 NPE(NAC)=NPE(NAC)+1
41500     C
41600     C          SORT ON PE WITHIN EACH ACT
41700           IACT=1
41800           L1=1
41900           L2=NPE(1)
42000        40 L5=0
42100           L3=L2+1
42200           L4=L1+1
42300           IF (L1.GT.L2) GO TO 45
42400           DO 44 I=L1,L2
42500           L5=L5+1
42600           LIM=L3-L5
42700           IF (L4.GT.LIM) GO TO 45
42800           DO 44 J=L4,LIM
42900           IF(PROXY(J-1,7).LE.PROXY(J,7)) GO TO 44
43000           DO 42 K=1,15
43100           IHOLD=PROXY(J-1,K)
43200           PROXY(J-1,K)=PROXY(J,K)
43300        42 PROXY(J,K)=IHOLD
43400        44 CONTINUE
43500        45 L1=L1+NPE(IACT)
43600           IACT=IACT+1
43700           L2=L2+NPE(IACT)
43800           IF(IACT.LE.NAC.AND.PROXY(L1,6).NE.9999) GO TO 40
43900     C
44000     C          PRINT THE PROXIES
44100           WRITE (6,2020)
44200      2020 FORMAT(1H1/8X,3(5X,3HNEW),8X,2(5X,5HPROXY)/
44300          *  6X,3HNEW,4X,4HACT.,4X,
44400          *                        2HPE,6X,2HPU,6X,5HPROXY,3X,4HACT ,6X,2HPE,
44500          *15X,"USER MANNING FACTORS"/
```

```
44600          *  6X,4HNAME,3X,4HCODE,2(4X,4HCODE),4X,4HNAME,4X,4HCODE,6X,
44700          *   5HCODES,10X,10H  ON-BOARD,10H  BASE OPS,10H  TRAINING,10H    MED
44800          *ICAL,10H    RECRUIT,12H  INDIVIDUAL/)
44900           DO 46 I=1,NF
45000           IF(PROXY(I,6).EQ.99999) GO TO 48
45100           IF (PROXY(I,9).NE.0) WRITE (6,2060) (PROXY(I,J),J=1,8)
45200           IF (PROXY(I,9).EQ.0) WRITE (6,2060) (PROXY(I,J),J=1,8),
45300          *        (PXNAME(I,J),J=10,15)
45400     2060 FORMAT(/5X,A6,I6,2I8,4X,A6,I6,I8,2X,A6,4X,5F10.0,F12.0)
45500       46 CONTINUE
45600          I=NP+1
45700       48 NP=I-1
45800       50 PROXC=1
45900          PROXY(NP+1,6)=99999
46000          RETURN
46100          END
46200
46300     C*****************************************************************
46400
46500          SUBROUTINE ADD
46600          COMMON /$1/ NAME(95,30,15),  BILLET(5,110,9), PROXY(35,15), MREC,
46700         *            X(6), IACT
46800          COMMON /$2/ IPA, KPG, JREQ(5), KREQ(5), IS
46900          COMMON /$8/ JRATE(110), OK
47000          DIMENSION IVAL(9)
47100          DATA IVAL /      1HA, 1HB, 1HC, 1HD,
47200         *            1HE, 1HF, 1HG, 1HH, 1HI/
47300     C
47400     C         THIS ROUTINE DECODES A RECORD
47500     C
47600     C         FIND RATING INDEX
47700          KRA=NSCANX(JRATE(1),110,IRA)
47800          IF(KRA.EQ.0) GO TO 40
47900     C
48000     C         FIND PAYGRADE INDEX
48100     C         E9 IS IN POSITION 1, ..., E1 IS IN POSITION 9
48200          IF(KPG.LT.1.OR.KPG.GT.9) GO TO 40
48300          KPG=10-KPG
48400     C
48500     C         COMPUTE REQUIREMENTS
48600     C         THE LAST DIGIT IN EACH REQ. FIELD IS A LETTER,
48700     C           AND MUST BE TRANSLATED TO A NUMBER
48800          DO 20 K=1,5
48900          K2=NSCANX (IVAL,9,KREQ(K))
49000       20 BILLET(K,KRA,KPG)=BILLET(K,KRA,KPG)+FLOAT((JREQ(K)*10)+K2)
49100          RETURN
49200     C
49300     C         ERROR
49400       40 WRITE(3,1000) IS,IACT,IPE,IPA,KPG,(JREQ(I),KREQ(I),I=1,5)
49500     1000 FORMAT(1HO,I8,I6,I8,2X,A4,I3,2X,5(I4,A1,2X))
49600          RETURN
49700          END
49800
49900     C*****************************************************************
50000
50100          SUBROUTINE CFACT
50200          COMMON /$A/ ACTCOD(191), NMCODE(191), PUCODE(191), PECODE(191),
50300         *            INDEX(191,2), NM1, NM2, SHIP, AIR
50400          COMMON /$1/ NAME(95,30,15),  BILLET(5,110,9), PROXY(35,15), MREC,
50500         *            FIND, FLAG, NTYP, ATYP
50600          DIMENSION INAME(95,30,15), FACTOR(7), KEY(7,2)
50700          EQUIVALENCE (INAME(1),NAME(1))
50800          REAL NAME
50900          INTEGER ACTCOD, PU, PE, PECODE, SEQ, FLT,
```

```
*        FIND, SHIP, RECODE
      DATA KEY / 191,  902,  923,  925,  931,  940,  941,
     *           1070, 1939, 1959, 1961, 1967, 1987, 1988/
C
C          COMPUTES THE ENLISTED MANPOWER FACTORS
C               FOR EACH PU/PE PAIR
C
C          INITIALIZE VARIABLES
      IFIND=2
      IF (FIND.EQ.SHIP) IFIND=1
      IFYR=1978
      ILYR=1982
      NL=100
      IEND=0
C
C           READ FACTOR FILE FOR THE FIRST TIME
C           FILE MUST BE SORTED BY PU, THEN PE, THEN FACTOR SEQ. NO.
      READ (2,1000,END=111) IPU,FLT,IPE,ISEQ,TMP
 1000 FORMAT (I6,I2,2X,I6,14X,I5,39X,F13.0)
C
C           INITIALIZE FOR A NEW PU/PE COMBINATION
   10 PU=IPU
      PE=IPE
      SEQ=ISEQ
      FACTOR(1)=TMP
      NFAC=1
      IF=1
      IF (IEND.EQ.1) GO TO 111
C
C         CONTINUE READING FOR THIS PU/PE COMBINATION
C         SUM FACTORS BY TYPE FOR LIKE PU/PE COMBINATIONS IN "FACTOR"
C         COUNT NUMBER OF PAIRS IN "NFAC"
C         COUNT FACTOR TYPE WITHIN A PU/PE PAIR IN "IF"
   30 READ (2,1000,END=111) IPU,FLT,IPE,ISEQ,TMP
C
C         SAME PROGRAM UNIT, PROGRAM ELEMENT, AND FACTOR
      IF (IPU.NE.PU.OR.IPE.NE.PE.OR.ISEQ.NE.SEQ) GO TO 32
C         MAKE SURE THE TRAINING CLAIMENT(72) AND TRAINING CLAIMENT(62)
C         ARE ASSOCIATED WITH LIKE PES, TYPE 5 AND TYPE 8 RESPECTIVELY
      IF (FLT.EQ.60.OR.FLT.EQ.72) GO TO 31
      I=IPE/100000
      IF (I.EQ.5.AND.FLT.EQ.72) GO TO 31
      IF (I.EQ.8.AND.FLT.EQ.62) GO TO 31
      NFAC=1
      FACTOR(IF)=0.0
      GO TO 30
   31 NFAC=NFAC+1
      FACTOR(IF)=FACTOR(IF)+TMP
      GO TO 30
C
C       SAME PROGRAM UNIT AND PROGRAM ELEMENT, BUT NEXT FACTOR
   32 IF (IPU.NE.PU.OR.IPE.NE.PE) GO TO 34
C         COMPUTE PREVIOUS FACTOR FIRST
C         IF NFAC = 0, SOMETHING WENT WRONG, FLAG IT WITH A -100.
C         OTHERWISE AVERAGE THE FACTOR ACROSS LIKE PU/PE PAIRS,
C         WHICH IS THE ACTUALLY AVERAGING ACROSS CLAIMENT
      IF (NFAC.EQ.0) FACTOR(IF)=-100.
      IF (NFAC.GT.0) FACTOR(IF)=FACTOR(IF)/FLOAT(NFAC)
C         DO NEXT FACTOR NOW
      IF=IF+1
      SEQ=ISEQ
C         VERIFY THAT THE NEXT FACTOR IS THE RIGHT ONE
      IF (IF.GT.7) GO TO 36
      IF (ISEQ.NE.KEY(IF,IFIND)) GO TO 32
```

```
57400           FACTOR(IF)=TMP
57500           NFAC=1
57600           IF (FLT.EQ.60.OR.FLT.EQ.70) GO TO 30
57700           I=IPE/100000
57800           IF (I.EQ.5.AND.FLT.EQ.72) GO TO 30
57900           IF (I.EQ.8.AND.FLT.EQ.62) GO TO 30
58000           NFAC=0
58100           FACTOR(IF)=0.)
58200           GO TO 30
58300     C
58400     C        NEW PROGRAM UNIT AND PROGRAM ELEMENT
58500     C         COMPUTE PREVIOUS FACTOR FIRST
58600     C         IF NFAC = 0, SOMETHING WENT WRONG, FLAG IT WITH A -100.
58700     C         OTHERWISE AVERAGE THE FACTOR LAST ACROSS LIKE PU/PE PAIRS,
58800     C         WHICH IS THE ACTUALLY AVERAGING ACROSS CLAIMENT
58900        34 IF (NFAC.EQ.0) FACTOR(IF)=-100.
59000           IF (NFAC.GT.0) FACTOR(IF)=FACTOR(IF)/FLOAT(NFAC)
59100           IF (IF.EQ.7) GO TO 40
59200     C
59300     C          ERRORS
59400           WRITE (6,2000) IPU,FLT,IPE,ISE),TMP
59500      2000 FORMAT (8H0 PU/PE ,I6,I2,I7,I6,F6.0,15H BEGAN TOO SOON)
59600           STOP
59700        36 WRITE (6,2010) IPU,FLT,IPE,ISE),TMP
59800      2010 FORMAT (8H0 PU/PE ,I5,I2,I7,I6,F6.0,24H HAS MORE THAN 7 FACTORS)
59900           STOP
60000        38 WRITE (6,2020) IPU,FLT,IPE,ISE),TMP
60100      2020 FORMAT (8H0 PU/PE ,I5,I2,I7,I6,F6.0,26H HAS A FACTOR OUT OF ORDER)
60200           STOP
60300     C
60400     C           NEW  COMBINATION LOCATED IN IPU,IPE
60500     C           PROCESS THE ONE LOCATED IN PU,PE
60600     C
60700     C         FIND THE ACTIVITY CODE ASSOCIATED WITH THIS PU/PE
60800        40 DO 70 NT=1,NTYP
60900           IF (PU.EQ.PUCODE(NT).AND.PE.EQ.PECODE(NT)) GO TO 74
61000        70 CONTINUE
61100           GO TO 100
61200     C
61300     C           MOVE FACTORS INTO THE NARM ARRAY
61400     C             NA IS THE ACT NO.
61500     C             NP IS THE RECORD NO. IN THIS ACT
61600        74 NA=INDEX(NT,1)
61700           NP=INDEX(NT,2)
61800           INARM(NA,NP,12)=PU
61900           INARM(NA,NP,13)=PE
62000           INARM(NA,NP,14)=ACTCOD(NT)
62100           INARM(NA,NP,15)=NMCODE(NT)
62200     C             REPLICATE THE ONBOARD FACTOR ACROSS YEARS, POSITIONS 1-5
62300     C             POSITION 6 IN NARM ARRAY = BASE OPS
62400     C                        7               = TRAINING
62500     C                        6               = MEDICAL
62600     C                        9               = RECRUITING + EXAMINING
62700     C                       10               = TP+P
62800     C                       11               = PERSONNEL HOLDING ACCT.
62900           DO 80 I=1,5
63000        80 NARM(NA,NP,I)=FACTOR(1)
63100           NARM(NA,NP,6)=FACTOR(2)
63200           NARM(NA,NP,7)=FACTOR(6)
63300           NARM(NA,NP,8)=FACTOR(7)
63400           NARM(NA,NP,9)=FACTOR(4)
63500           NARM(NA,NP,10)=FACTOR(5)
63600           NARM(NA,NP,11)=FACTOR(3)
63700           GO TO 10
```

```
63800      C
63900      C         NO ACTIVITY FOR THIS PU/PE COMBINATION - SKIP IT
64000        100 WRITE (3,3000) PU,PE
64100       3000 FORMAT (36H0 NO ACTIVITY FOR THIS COMBINATION  , 2I9)
64200            GO TO 10
64300      C
64400      C         END OF FILE - PROCESS LAST PU/PE PAIR
64500        110 CLOSE(2,DISP=KEEP)
64600            IPU=999999
64700            IPE=999999
64800            IEND=1
64900            GO TO 34
65000      C
65100      C         PRINT RESULTS FOR ONBOARD MANNING
65200        111 NL=100
65300            DO 120 I=1,NM1
65400            DO 120 J=1,NM2
65500            IF (INARM(I,J,12).EQ.0) GO TO 120
65600            NL=NL+1
65700            IF(NL.LE.25)GO TO 115
65800            WRITE (6,6000) (K,K=IFYR,ILYR)
65900       6000 FORMAT (1H1,"ONBOARD MANNING FACTORS"/1X,4HNAME,6X,2HPU,6X,2HPE,
66000           *  2X,5I10/)
66100            NL=0
66200        115 WRITE (6,7000) INARM(I,J,15),  (INARM(I,J,K),  K=12,13),
66300           *                  (NARM(I,J,K),  K=1,5)
66400       7000 FORMAT(1H0,A6,2I8,2F10.0)
66500        120 CONTINUE
66600      C
66700      C          PRINT THE SUPPORT FACTORS
66800            NL=100
66900            DO 130 I=1,NTYP
67000            L=INDEX(I,1)
67100            M=INDEX(I,2)
67200            IF (INARM(L,M,12).EQ.0) GO TO 130
67300            NL=NL+1
67400            IF(NL.LE.25) GO TO 125
67500            WRITE (6,8000)
67600       8000 FORMAT (1H1/2X,4HNAME,6X,2HPU,6X,2HPE,5X,3HACT,6X,8HBASE OPS,
67700           *        8X,6HTRAINING,4X,  5X,7HMEDICAL,4X,
67800           *        1X,15HRECRUIT/EXAMING,  3X,10HTRANSIENTS,3X,
67900           *        2X,13HHOLDING ACCT.,1X/)
68000            NL=0
68100        125 WRITE (6,9000) INARM(L,M,15),(INARM(L,M,K),K=12,14),
68200           *                  (NARM(L,M,K),K=6,11)
68300       9000 FORMAT(2H0 ,A6,2I8,I6,2X,6(4X,F8.2,4X))
68400            NARM(L,M,10)=NARM(L,M,10)+NARM(L,M,11)
68500        130 CONTINUE
68600            RETURN
68700            END
68800
68900      C*****************************************************************
69000
69100            SUBROUTINE MREC
69200            COMMON /$1/ NARM(95,3),15),  BILLET(5,110,9), PROXY(35,15), MREC,
69300           *            FIND, FLAG, NTYP, MTYP, NP, PRXC, JACT, NB, JPE, NL
69400            COMMON /$A/ ACTCOD(191), NMCODE(191), PUCODE(191), PECODE(191),
69500           *           INDEX(191,2), NM1, NM2, SHIP, AIR
69600            COMMON /$3/ BILLIN(5,110,9)
69700            COMMON /$B/ JRATE(110), OK
69800            DIMENSION DIGIT(5), INARM(95,30,15), X(5), PXNARM(35,15)
69900            EQUIVALENCE (NARM(1),INARM(1)), (PROXY(1,1),PXNARM(1,1))
70000            REAL NARM, NSCALE
70100            INTEGER FLAG, PRXC, PROXY, ACTCOD, PECODE, PUCODE, FIND
```

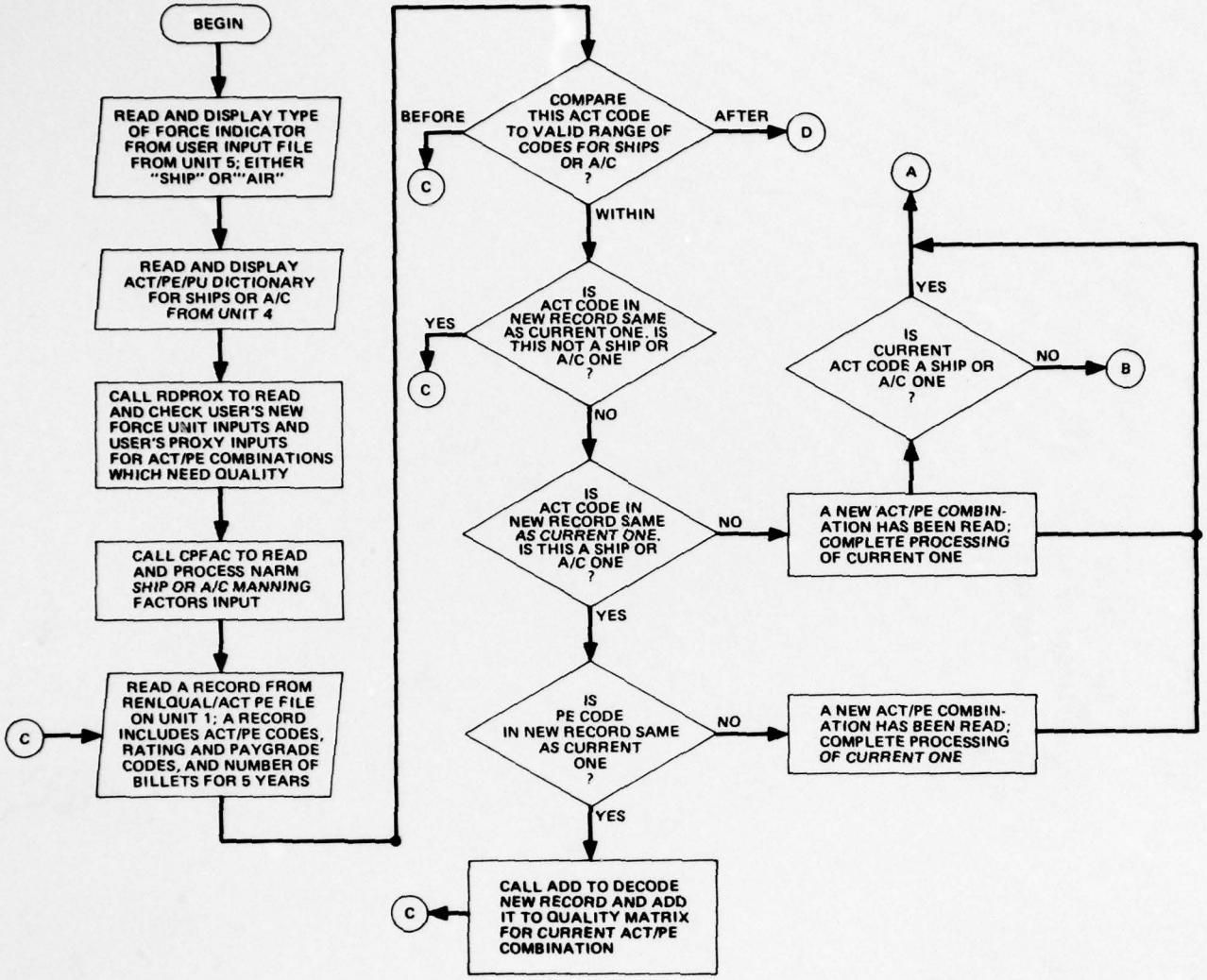
```
      INTEGER A(1),B(1),C(1), OK
C
C        THIS ROUTINE SCALES THE QUALITY MATRIX BY THE NARM/USER FACTOR
C              AND WRITES THE MATRIX ON TAPE
C
C        INITIALIZE VARIABLES - NA - DICTIONARY POSITION
C                             - IACT - ACTIVITY CODE BEING PROCESSED
C                             - IC - COUNT OF TIMES THROUGH WRREC,
C                                    FOR EACH CALL FROM THE MAIN ROUTINE
      NA=NB
      IACT=JACT
      IC=1
C
C          CONVERT JPE TO A NUMERIC REPRESENTATION
C          TO MATCH UP WITH THE NUMERIC NARM PE
C          EX. 24156N TO 241562
      A(1)=6H
      C(1)=JPE
      CALL MOVE(C(1),6,A(1),1,1)
      B(1)=6H2
      IF(A(1).EQ.1HM) B(1)=6H1
      C(1)=JPE
      CALL MOVE(B(1),1,C(1),6,1)
      READ (5,3000,DATA=10,ERR=10) IPE
 3000 FORMAT (I6)
      GO TO 12
   10 WRITE (3,3010) IACT,JPE,IPE
      RETURN
 3010 FORMAT ("0 ERROR",I6,2X,A6,I10)
   12 CONTINUE
C
C          SUM FEQ BY YEAR
      DO 20 I=1,5
      BTOTAL(I)=0.0
      DO 20 J=1,110
      DO 20 K=1,9
   20 BTOTAL(I)=BTOTAL(I)+BILLET(I,J,K)
C
C          CHECK FOR ZERO QUALITY MATRICES
      J=0
      DO 21 I=1,5
      IF(BTOTAL(I).GT.0) GO TO 21
      WRITE (3,6000) IACT,JPE,I
 6000 FORMAT(19H0 ZERO BILLETS FOR ,I4,1X,A6,4H IN ,I1)
      J=1
   21 CONTINUE
      IF(J.EQ.0) GO TO 26
C
C         A ZERO MATRIX WAS FOUND
C         REPLACE IT WITH A NON-ZERO MATRIX FROM A PREVIOUS YEAR
      DO 23 I=2,5
      IF(BTOTAL(I).GT.0.OR.BTOTAL(I-1).LE.0)GO TO 23
      DO 22 J=1,110
      DO 22 K=1,9
   22 BILLET(I,J,K)=BILLET(I-1,J,K)
      BTOTAL(I)=BTOTAL(I-1)
   23 CONTINUE
C
C          OR REPLACE IT WITH A NON-ZERO MATRIX FROM A LATER YEAR
      DO 25 I=1,4
      J=5-I
      IF(BTOTAL(J).GT.0.OR.BTOTAL(J+1).LE.0) GO TO 25
      DO 24 K=1,110
      DO 24 L=1,9
```

```
      24 BILLET(J,K,L)=BILLET(J+1,K,L)
         BTOTAL(J)=BTOTAL(J+1)
      25 CONTINUE
      26 CONTINUE
C
C           FIND INDICES INTO THE NARM ARRAY
C           EXAMINE ACTIVITY
         DO 30 N=1,NTYP
         IF(IACT.EQ.INARM(N,1,14)) GO TO 35
      30 CONTINUE
         GO TO 45
C           EXAMINE PE
      35 DO 40 M=1,NM2
         IF(IPE.EQ.INARM(N,M,13)) GO TO 50
      40 CONTINUE
C           ERROR - NO MATCH IN THE NARM FACTOR FILE
      45 WRITE (3,1000) NMCODE(NA),JPE,IACT,IPE
    1000 FORMAT(14HOTHE ACTIVITY ,A6, 9H WITH PE ,A6, 28H DOES NOT HAVE A NA
        *RM ENTRY.,I5,IE,I8)
         GO TO 70
C
C           COMPUTE SCALING FACTORS AND SCALE
      50 DO 55 I=1,5
         NSCALE=0.0
         IF (BTOTAL(I).GT.0.0) NSCALE=NARM(N,M,I)/BTOTAL(I)
         DO 55 J=1,11
         DO 55 K=1,9
      55 BILLIN(I,J,K)=BILLET(I,J,K)*NSCALE
C
C           WRITE UNIT REQ. MATRIX FOR YEARS 1-5 ON DISK 9-13 RESPECTIVELY
C           FIRST COMPUTE TOTAL FOR EACH YEAR
         IU=9
         DO 62 I=1,5
         X(I)=0.0
         DO 60 J=1,11
         DO 60 K=1,9
      60 X(I)=X(I)+BILLIN(I,J,K)
         JU=IU+I
C           WRITE - PU, PE, ACT, FIVE SUPPORT FACTORS, ONBOARD TOTAL FOR
C                   YEAR I, AND UNIT REQUIREMENTS FOR YEAR I
         WRITE(JU)   (INARM(N,M,J),J=12,14),(NARM(N,M,J),J=6,10),X(I),
        *            ((BILLIN(I,J,K),K=1,9),J=1,11)
      62 CONTINUE
C           DISPLAY PART OF THIS RECORD
         NREC=NREC+1
         MREC=MREC+1
         NL=NL+1
         IF(NL.LE.25) GO TO 64
         WRITE (6,5000) (I,I=1,5)
     5000 FORMAT(1H1/5X,6HRECORD,2(4X,8HACTIVITY),7X,2HPU,10X,2HPE,
        *            23X,23HONBOARD MANNING BY YEAR/
        *            5X,6HNUMBER,6X,4HNAME,3(8X,4HCODE),4X,6I10/)
         NL=0
      64 WRITE (6,4000) MREC,NREC, INARM(N,M,13), INARM(N,M,14),
        *              (INARM(N,M,I),I=12,13), (X(I),I=1,5)
    4000 FORMAT(1HO,I6,I4,5X,A6,7X,I4,1X,2I12,4X,6F10.1)
C           FLAG COMPLETATION OF THIS PE/PU PAIR
         INARM(N,M,11)=OK
C
C           IF IC > 1, THEN THE ACT/PE PAIR HAS BEEN PROCESSED FOR
C              EACH NARM PE/PU PAIR HAVING ITS QUALITY
C           DETERMINE IF IT IS TO BE A PROXY FOR ANY OTHER PE/PU PAIRS
         IF(IC.GT.1) GO TO 70
C
```

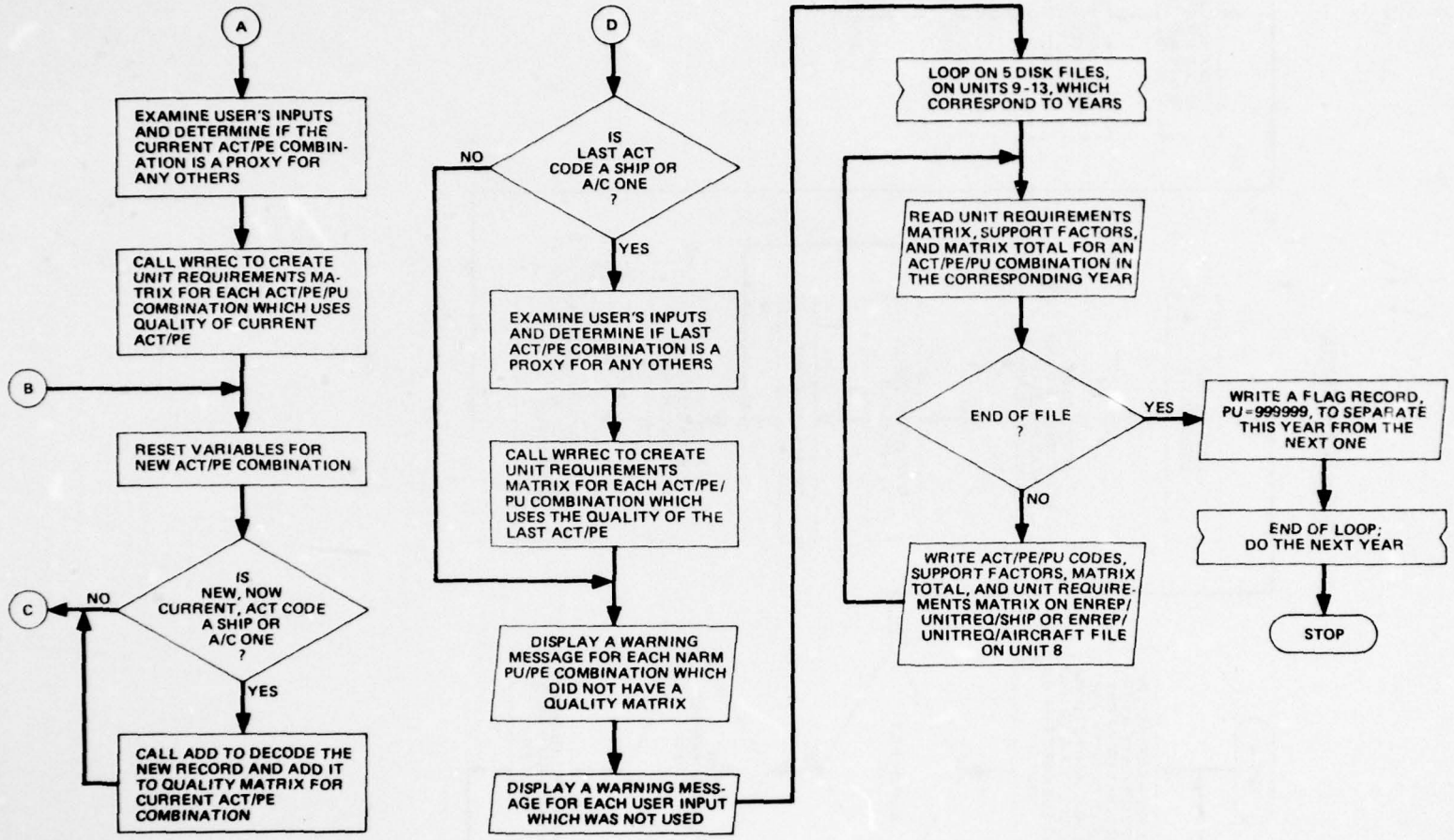
```
C          IF IC = 1, THEN STILL PROCESSING NARM PE/PU PAIRS USING
C             THIS QUALITY
           L=1
        66 IF(INARM(N,M+L,13).GT.0) GOTO 68
           L=L+1
           IF(M+L.GT.NM2) GOTO 70
           GOTO 66
        68 IF(INARM(N,M,13).NE.INARM(N,M+L,13)) GO TO 70
           M=M+L
           GO TO 50
C
C          CHECK FOR PROXIES
C          IF FLAG = IC, THEN ALL PROXY INPUTS FOR THIS ACT/PE
C              HAVE BEEN PROCESSED
C          IP IS THE INDEX TO THE PROXY ARRAY
        70 IF(FLAG.EQ.IC) RETURN
           IP=PRXC-FLAG+IC
           IC=IC+1
C          SKIP PROXY INPUTS WITH ERRORS
           IF(PROXY(IP,6).EQ.6H      ) GO TO 70
           IF (PROXY(IP,9).EQ.0) GO TO 10
C
C          THIS PROXY INPUT IS FOR A FORCE UNIT WITH NARM FACTORS,
C            BUT NO QUALITY
C          FIND INDICES INTO THE NARM ARRAY
C          EXAMINE ACTIVITY
           DO 80 N=1,NM1
           IF(PROXY(IP,2).EQ.INARM(N,1,14)) GO TO 85
        80 CONTINUE
           GO TO 110
C          EXAMINE PE AND PU CODES
        85 DO 90 M=1,NM2
           IF(PROXY(IP,3).NE.INARM(N,M,13).OR.PROXY(IP,4).NE.INARM(N,M,12))
          *    GO TO 90
           IACT=PROXY(IP,2)
           IPE=PROXY(IP,3)
           PROXY(IP,3)=0K
           GO TO 50
        90 CONTINUE
           GO TO 110
C
C          THIS PROXY INPUT IS FOR A NEW FORCE UNIT, USER SPECIFIED
C            FACTORS AND A PROXY
C          PUT FORCE UNIT ACT, PE, PU CODES AND USER FACTORS INTO THE
C            NARM ARRAY
       100 INARM(NM1+1,1,15)=PROXY(IP,1)
           INARM(NM1+1,1,14)=PROXY(IP,2)
           INARM(NM1+1,1,13)=PROXY(IP,3)
           INARM(NM1+1,1,12)=PROXY(IP,4)
           DO 105 I=1,5
       105 NARM(NM1+1,1,I)=PXNARM(IP,I0)
           DO 106 I=6,10
       106 NARM(NM1+1,1,I)=PXNARM(IP,I+5)
           N=NM1+1
           M=1
           GO TO 50
C
C          ERROR - NO NARM INPUT FOR THIS PROXY,
C            AND USER DID NOT SPECIFY FACTORS
       110 WRITE (3,2000) PROXY(IP,1),PROXY(IP,3)
      2000 FORMAT(14HOTHE ACTIVITY ,A6, 9H WITH PE ,I6,28H DOES NOT HAVE A NA
          *RM ENTRY.)
           GO TO 70
           END
```

```
89400     C
89500     C*************************************************************************
89600     C
89700           INTEGER FUNCTION NSCANX(M,L,I)
89800           DIMENSION M(1)
89900     C
90000     C            SEARCHS THE FIRST L ELEMENTS OF ARRAY M FOR THE FIRST
90100     C              OCCURANCE OF I
90200           J=L
90300         5 IF(M(J).IS.I) GO TO 10
90400           J=J-1
90500           IF (J.GT.0) GO TO 5
90600           J=0
90700        10 NSCANX=J
90800           RETURN
90900           END
```

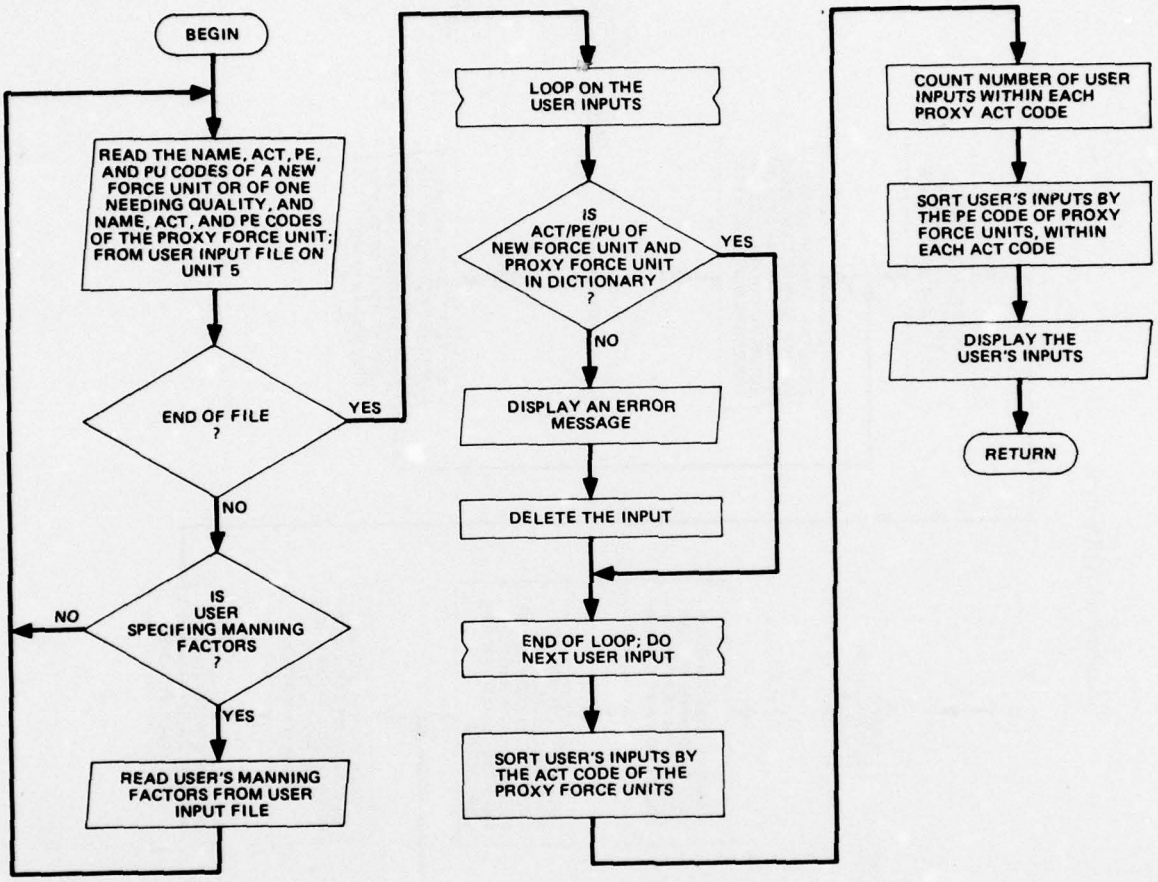
Routine FACTORS, *main*



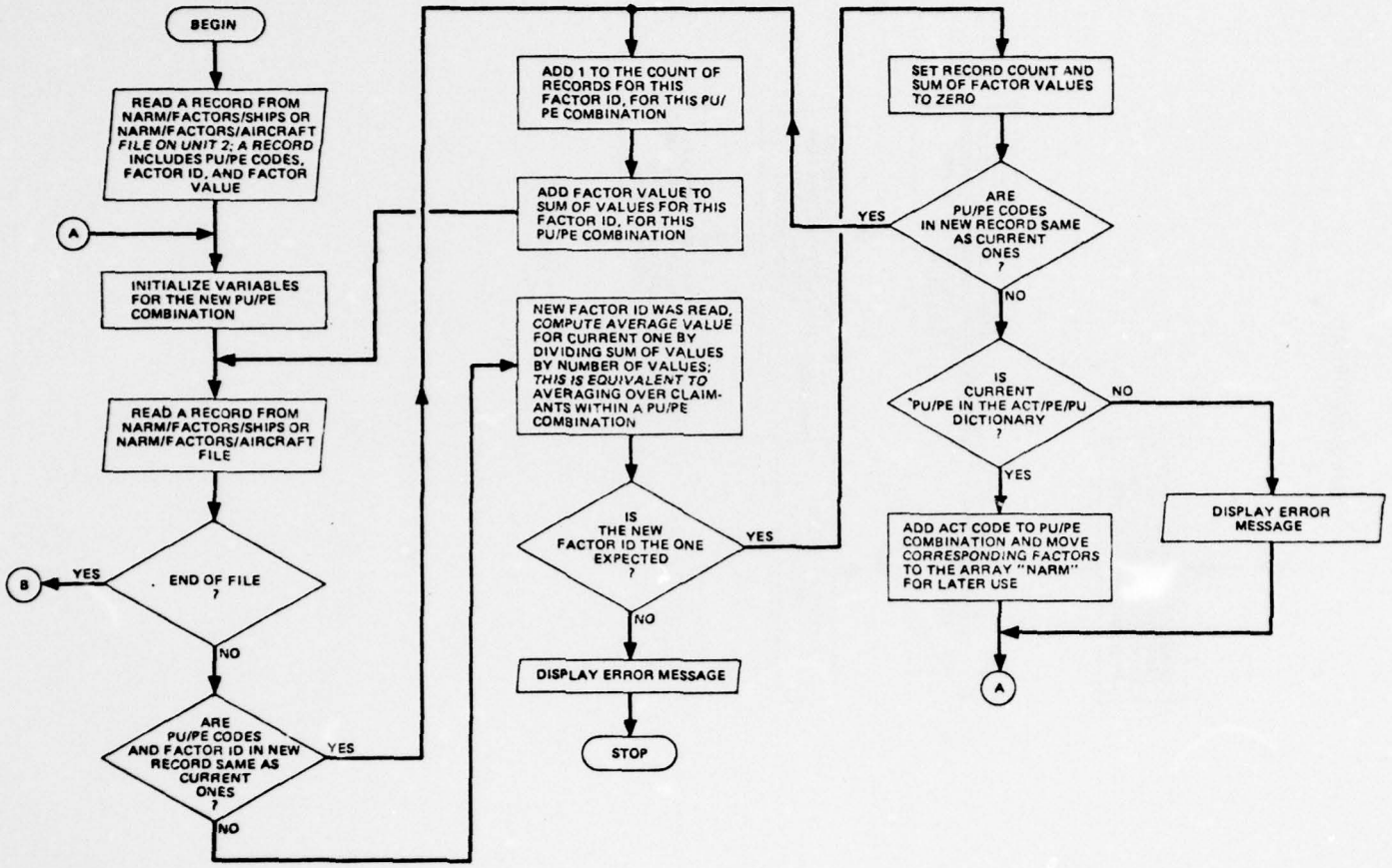
Routine FACTORS, main



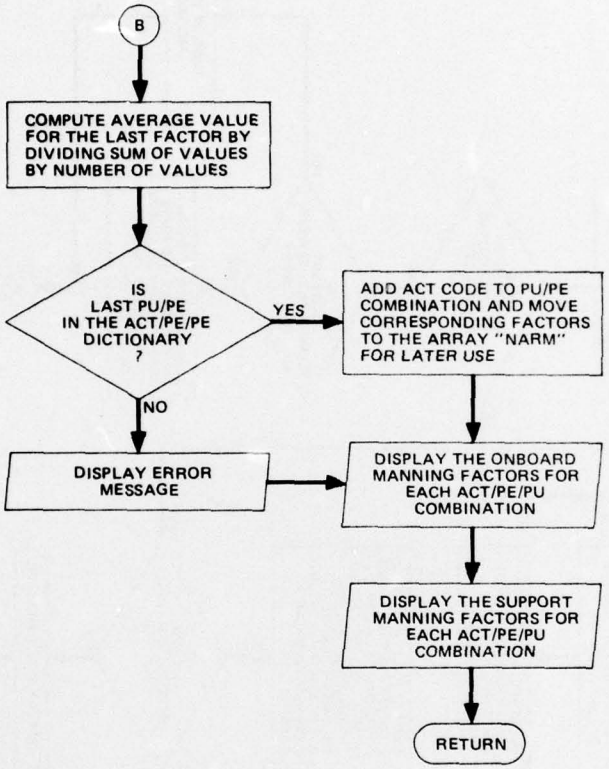
Subroutine RDPROX



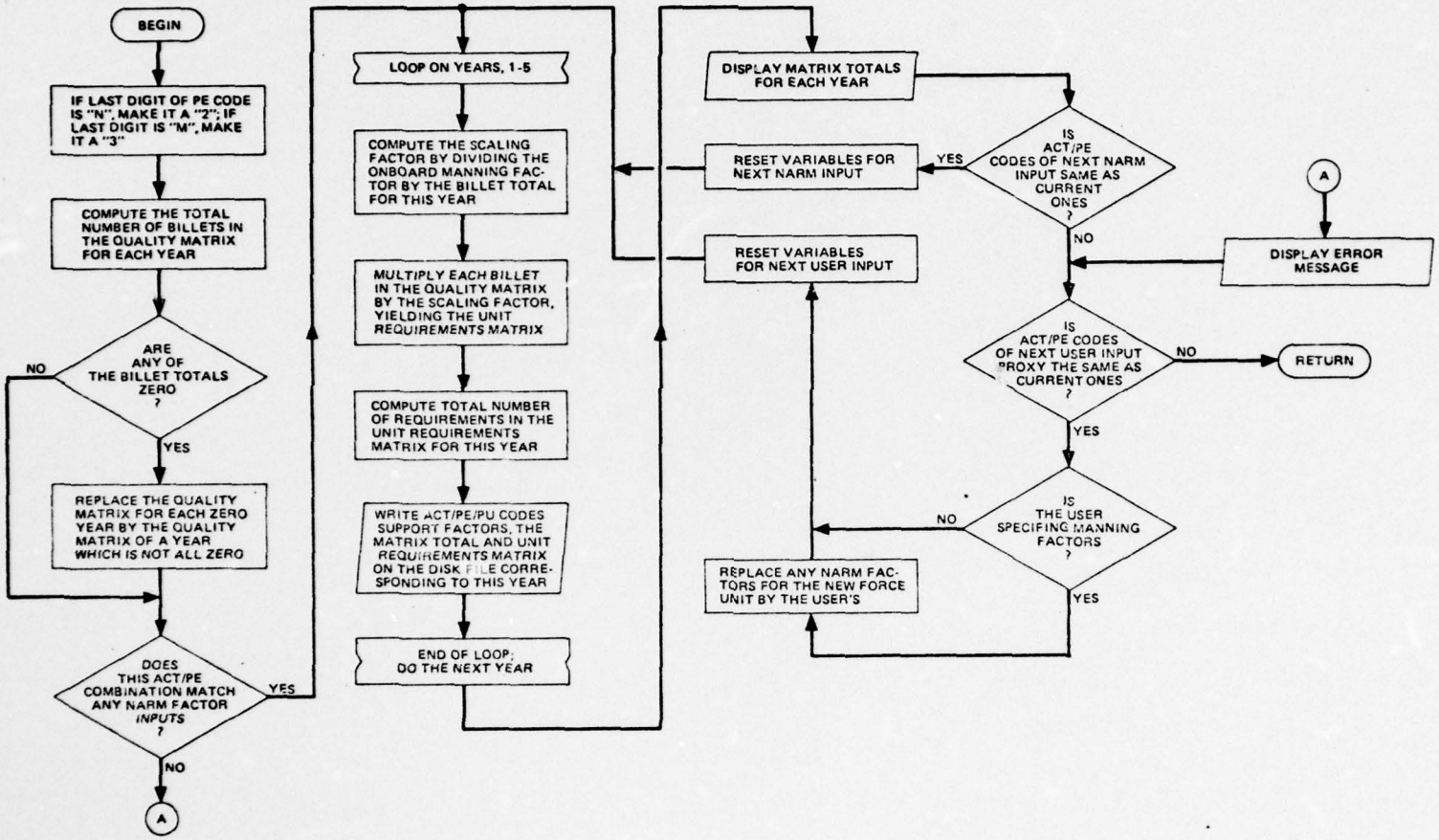
Subroutine CPFAC



Subroutine CPFAC



Subroutine WRREC



ANNEX B-7

PROGRAM FACTORS/UTILITY

```
$RESET FREE
FILE  1(TITLE="ENREP/UNITREQ/SHIP",KIND=PETAPE,SERIALNO=565,FILETYPE=8)
FILE  2(TITLE="ENREP/UNITREQ/AIR",KIND=PETAPE,SERIALNO=614,FILETYPE=8)
FILE  3(TITLE="ENREP/UNITREQ/ALL",KIND=PETAPE,BLOCKSIZE=999,MAXRECSIZE
     *  =999,SERIALNO=671)
C
C        THIS ROUTINE COMBINES THE SHIP AND THE A/C UNIT REQUIREMENTS
C        ONTO ONE TAPE
C
      DIMENSION ID(3), SPT(5), REQ(110,9)
C
C        LOOP ON YEARS 1-5
      DO 50 I=1,5
C
C        COPY A SHIP FILE FOR YEAR I
   10 READ (1,1000,END=20) ID,SPT,TOTAL,((REQ(J,K),K=1,9),J=1,110)
 1000 FORMAT (3I6,6F6.1,990F6.1)
      IF (ID(1).EQ.999999) GO TO 20
      WRITE (3,1000) ID,SPT,TOTAL,((REQ(J,K),K=1,9),J=1,110)
      GO TO 10
   20 ID(1)=999999
      WRITE (3,1000) ID,SPT,TOTAL,REQ
      WRITE (6,2000) I
 2000 FORMAT ("0 COPIED SHIP FILE FOR YEAR ",I3)
C
C        COPY A A/C FILE FOR YEAR I
   30 READ (2,1000,END=40) ID,SPT,TOTAL,((REQ(J,K),K=1,9),J=1,110)
      IF (ID(1).EQ.999999) GO TO 40
      WRITE (3,1000) ID,SPT,TOTAL,((REQ(J,K),K=1,9),J=1,110)
      GO TO 30
   40 ID(1)=999999
      WRITE (3,1000) ID,SPT,TOTAL,REQ
      WRITE (6,3000) I
 3000 FORMAT ("0 COPIED A/C FILE FOR YEAR ",I3)
C
   50 CONTINUE
      LOCK 1
      LOCK 2
      LOCK 3
      STOP
          END
```

ANNEX B-8

PROGRAM SUPPORT

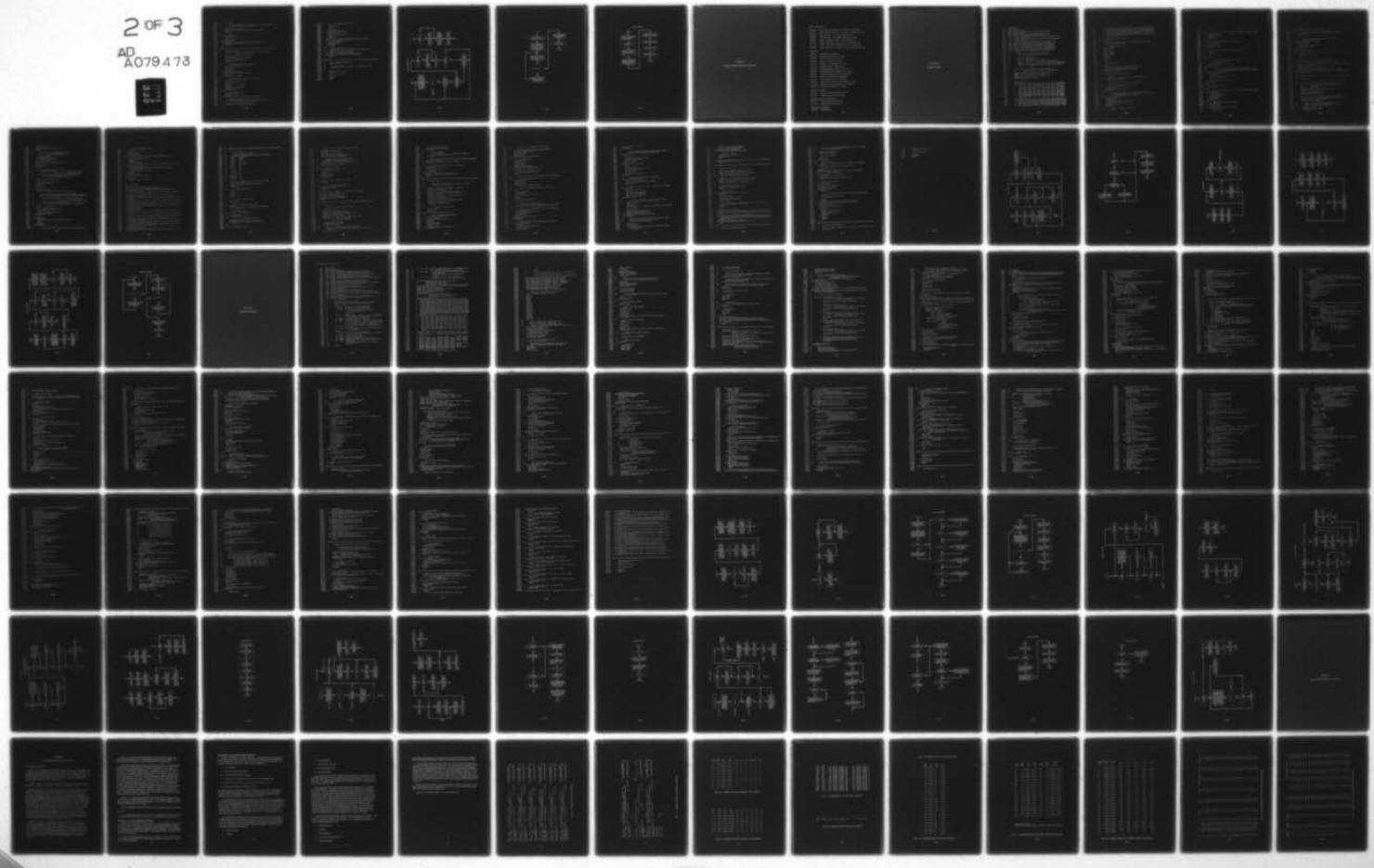
```
      $RESET FREE
      $SET AUTOBIND
      $BIND  = FROM CNA/LIB/=
      FILE  1(TITLE="RENQUAL77/PEACT",KIND=PETAPE,FILETYPE=8)
      FILE  2(TITLE="ENREP/SUPPORT/QUALITY",KIND=PETAPE,MAXRECSIZE=992,
     *    BLOCKSIZE=992)
      FILE  4(KIND=PRINTER)
      FILE  11(KIND=DISK,MAXRECSIZE=992,BLOCKSIZE=992,AREASIZE=10)
      FILE  12(KIND=DISK,MAXRECSIZE=992,BLOCKSIZE=992,AREASIZE=10)
      FILE  13(KIND=DISK,MAXRECSIZE=992,BLOCKSIZE=992,AREASIZE=10)
      FILE  14(KIND=DISK,MAXRECSIZE=992,BLOCKSIZE=992,AREASIZE=10)
      FILE  15(KIND=DISK,MAXRECSIZE=992,BLOCKSIZE=992,AREASIZE=10)
C
C          CREATES A QUALITY REQUIREMENTS MATRIX
C          FOR THE FORCE SUPPORT PROGRAM ELEMENTS
C            - RATING BY PAYGRADE FOR EACH YEAR
C
C          FILE 1  = RENLQUAL FILE SORTED BY PE
C          FILE 2  = OUTPUT FILE OF QUALITY MATRICES
C          FILES 11-15 = STORAGE OF QUALITY MATRICES BY YEAR
C
       COMMON /$1/ REQ(5,110,9), NYEAR, FLAG, NLINE
       COMMON /$3/ IPE,IRA,KPG,JREQ(5),KREQ(5),NR
       COMMON /$A/ JRATE(110), IRATE(110)
       COMMON /$2/  X(5,110), Y(5), VARPE(14,5), CHK(5), TNPE(5),
      *             TITLE(5,5), TOTAL(5,5)
       INTEGER PE, FLAG, TITLE, VARPE, CHK, TNPE,
      *        PECODE, PENAME
       DATA IBLK /6H      /
       DATA (TITLE(1,I),I=1,5) / 4HBASE, 4H OPS, 4H    , 4H    , 4H    /
      *   , (TITLE(2,I),I=1,5) / 4HTRAI, 4HNING, 4H    , 4H    , 4H    /
      *   , (TITLE(3,I),I=1,5) / 4HMEDI, 4HCAL , 4H    , 4H    , 4H    /
      *   , (TITLE(4,I),I=1,5) / 4HPECP, 4HLIT , 4H+ EX, 4HAMIN, 4HG   /
      *   , (TITLE(5,I),I=1,5) / 4HINDI, 4HVIDU, 4HAL  , 4H    , 4H    /
       DATA (VARPE(I,1),I=1,9)/  6H24611N, 6H24612N, 6H24613N, 6H24614N,
      *                  6H24615N, 6H24616N, 6H24617N, 6H24618N, 6H72827N/
       DATA (VARPE(I,2),I=1,14)/ 6H24156N, 6H24252N, 6H24633N, 6H86723N,
      *                  6H84741N, 6H84742N,
      *                  6H84711N, 6H84722N, 6H84731N, 6H84751N, 6H84752N,
      *                  6H85796N, 6H86761N, 6H89731N/
       DATA (VARPE(I,3),I=1,2)/  6H87711N, 6H87714N/
       DATA (VARPE(I,4),I=1,2)/  6H81711N, 6H81713N/
       DATA (VARPE(I,5),I=1,2)/  6H88721N, 6H88732N/
       DATA CHK / 9, 14, 2, 2, 2/
       DATA JRATE/4H0100,4H0150,4H0200,4H0250,4H0300,4H0350,4H0400,4H0401
      *   ,4H0404,4H0450,4H0500,4H0600,4H0601,4H0602,4H0604,4H0800,4H0801
      *   ,4H0802,4H0803,4H0810,4H0900,4H1000,4H1001,4H1002,4H1010,4H1090
      *   ,4H1100,4H1200,4H1400,4H1500,4H1611,4H1622,4H1633,4H1644,4H1655
      *   ,4H1666,4H1700,4H1701,4H1750,4H1800,4H1900,4H2000,4H2100,4H2200
      *   ,4H2500,4H2290,4H2300,4H2490,4H2600,4H2700,4H3100,4H3200,4H3300
      *   ,4H3700,4H3800,4H3900,4H4000,4H4020,4H4100,4H4200,4H4300,4H4600
      *   ,4H4700,4H4400,4H5080,4H5100,4H5300,4H5350,4H5410,4H5500,4H5600
      *   ,4H5700,4H5800,4H6080,4H6100,4H6200,4H6205,4H6206,4H6300,4H6310
      *   ,4H6400,4H6500,4H6520,4H6600,4H6700,4H6704,4H6705,4H6706,4H6800
      *   ,4H6900,4H6901,4H6902,4H6903,4H7000,4H7100,4H7200,4H7300,4H7500
      *   ,4H7501,4H7502,4H7503,4H7400,4H7600,4H7700,4H8000,4H9300,4H3600
      *   ,4H5000,4H6000,4H7800/
       DATA IRATE/3HBN ,3HMA ,3HQM ,3HSM ,3HOS ,3HE1 ,3HST ,3HSTG,3HSTS,
      *     3HCT ,3HTM ,3HGM ,3HGNM,3HGMT,3HGMG,3HFT ,3HFTG,3HFTB,3HFTM,
      *     3HMT ,3HMN ,3HET ,3HETN,3HETR,3HDS ,3HPI ,3HIN ,3HOM ,3HAC ,
      *     3HRM ,3HCTT,3HCTA,3HCTM,3HCTO,3HCTR,3HCTI,3HYN ,3HCYN,3HLN ,
```

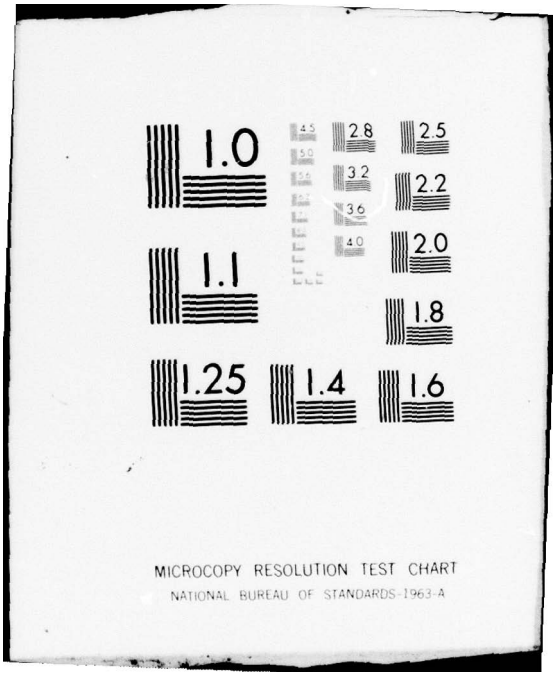
```
6200          *      3HPK ,3HPP ,3HSK ,3HDK ,3HMS ,3HSD ,3HCS ,3HIC ,3HSH ,3HJC ,
6300          *      3HPC ,3HLI ,3HDM ,3HML ,3HMM ,3HEN ,3HMP ,3HBT ,3HBR ,3HEM ,
6400          *      3HIC ,3HHT ,3HPM ,3HML ,3HGS ,3HCU ,3HEA ,3HCE ,3HEQ ,3HEC ,
6500          *      3HCM ,3HRU ,3HSW ,3HUI ,3HAF ,3HAV ,3HAD ,3HADP,3HADJ,3HAT ,
6600          *      3HAX ,3HAW ,3HAD ,3HAQ ,3HAC ,3HAB ,3HABE,3HABF,3HABH,3HAE ,
6700          *      3HAM ,3HAMS,3HAMH,3HAME,3HPR ,3HAG ,3HTD ,3HAK ,3HAS ,3HASE,
6800          *      3HASH,3HASM,3HAZ ,3HPH ,3HPT ,3HHM ,3HDT ,3HSN ,3HFN ,3HCN ,
6900          *      3HAN /
7000      C
7100      C          INITIALIZE VARIABLES
7200            WRITE(4,2000)
7300       2000 FORMAT(1H1/28H THESE RECORDS WERE DELETED:/)
7400            NYEAR=5
7500            DO 15 I=1, NYEAR
7600            DO 10 J=1,5
7700         10 TOTAL(J,I)=0.0
7800            DO 15 J=1,110
7900            DO 15 K=1,9
8000         15 REQ(I,J,K)=0.0
8100            DO 20 I=1,5
8200         20 TNPE(I)=0
8300            FLAG=0
8400            IPE=IBLK
8500            PE=IBLK
8600            IDP=IBLK
8700            NR=0
8800      C
8900      C          READ THE BILLET FILE
9000         40 NR=NR+1
9100            READ (1,900),DATA=42,ERR=42,END=110,RESULTS=IND)
9200           *       PE,IDP,IPA,KPG,(JREQ(I),KREQ(I),I=1,5)
9300          900 FORMAT (37X,A6,A2,20X,A4,9X,I1,10X,5(I4,A1))
9400            GO TO 50
9500      C          PARITY OR OTHER ERROR
9600         42 WRITE(6,3000) NR,IND,PE,IPA,KPG,(JREQ(I),KREQ(I),I=1,5)
9700       3000 FORMAT (7HOERROR ,I5,2X,A10,2X,A6,2X,A4,I3,2X,5(I4,A1,2X))
9800      C
9900      C          GOOD READ
10000     C           IF SAME PE AS PREVIOUS RECORD BUT NOT A FORCE SUPPORT PE,
10100     C              (FLAG=0), THEN READ AGAIN
10200     C           IF SAME PE AS PREVIOUS RECORD AND IS A FORCE SUPPORT PE,
10300     C              (FLAG>0), THEN ADD THIS RECORD TO THE QUALITY MATRIX
10400        50 IF(PE.EQ.IPE.AND.FLAG.EQ.0) GO TO 40
10500           IF(PE.EQ.IPE.AND.FLAG.NE.0) GO TO 100
10600     C
10700     C          NEW PE
10800     C          COMPLETE PROCESSING OF THE PREVIOUS ONE
10900           IF (FLAG.EQ.0) GO TO 80
11000           CALL WRREC
11100     C
11200     C          RESET VARIABLES
11300        80 IPE=PE
11400           DO 85 I=1, NYEAR
11500           DO 85 J=1,110
11600           DO 85 K=1,9
11700        85 REQ(I,J,K)=0.0
11800           FLAG=0
11900     C
12000     C          IS THE NEW PE PART OF FORCE SUPPORT
12100           I=NSCANX(VARPE(1,1),70,PE)
12200           IF(I.EQ.0) GO TO 40
12300           FLAG=(I-1)/14 + 1
12400     C
12500     C          ADD THIS RECORD TO THE QUALITY MATRIX FOR THIS PE
```

```
12600       100 CALL ADD
12700           GO TO 40
12800     C
12900     C         END OF FILE
13000     C         COMPLETE LAST PE
13100       110 IF(FLAG.EQ.0) GO TO 140
13200           CALL WRREC
13300     C
13400     C       WRITE END OF FILE MARK ON DISK FILES
13500       140 J=NYEAR+10
13600           DO 142 I=11,J
13700           ENDFILE I
13800       142 REWIND I
13900     C
14000     C         MAKE SURE ALL PE'S WERE COMPLETED
14100           DO 148 I=1,5
14200           IF(TNPE(I).EQ.CHK(I)) GO TO 148
14300           WRITE(6,7000) (TITLE(I,J),J=1,5),TNPE(I),CHK(I)
14400      7000 FORMAT(14HOSUPPORT ACT. ,5A4,8HCONTAINS,I2,16H PES INSTEAD OF ,I2)
14500       148 CONTINUE
14600     C
14700     C         PRINT TOTALS
14800           WRITE(6,4000) (I,I=1, NYEAR)
14900      4000 FORMAT(1H1//4X,7HSUPPORT,37X,4HYEAR/
15000          *            5X,4HAREA,7X,6I10//)
15100           DO 165 I=1,5
15200       165 WRITE(6,4050) (TITLE(I,J),J=1,5),(TOTAL(I,J),J=1, NYEAR)
15300      4050 FORMAT(2HO ,5A4,2X,6F10.0)
15400     C
15500     C         COPY  5 SUPPORT AREAS TO TAPE
15600     C         SEPARATE YEARS BY A FLAG RECORD WITH PE=999999
15700           DO 180 I=1, NYEAR
15800           WRITE(2,5000) (TOTAL(J,I),TNPE(J),J=1,5)
15900      5000 FORMAT (5(F6.0,I6))
16000           IU=I+10
16100       170 READ(IU,END=175) PE,FLAG,((REQ(I,J,K),K=1,9),J=1,110)
16200           WRITE(2,5010) PE,FLAG,((REQ(I,J,K),K=1,9),J=1,110)
16300      5010 FORMAT (2I6,990F6.0)
16400           GO TO 170
16500       175 PE=999999
16600           WRITE (2,5010) PE,FLAG,((REQ(I,J,K),K=1,9),J=1,110)
16700       180 CLOSE(IU)
16800           STOP
16900           END
17000     C
17100     C*****************************************************************************
17200     C
17300           SUBROUTINE ADD
17400           COMMON /$1/ REQ(5,110,9), NYEAR, FLAG
17500           COMMON /$3/ PE,IRA,KPG,JREQ(5),KREQ(5),NR
17600           COMMON /$A/ JRATE(110), IRATE(110)
17700           DIMENSION IVAL(9)
17800           DATA IVAL /      1HA, 1HB, 1HC, 1HD,
17900          *             1HE, 1HF, 1HG, 1HH, 1HI/
18000     C
18100     C         THIS ROUTINE DECODES A RECORD
18200     C
18300     C         FIND RATING INDEX
18400           KRA=NSCANX(JRATE(1),110,IRA)
18500           IF(KRA.EQ.0) GO TO 40
18600     C
18700     C         FIND PAYGRADE INDEX
18800     C         E9 IS IN POSITION 1, ..., E1 IS IN POSITION 9
18900           IF(KPG.LT.1.OR.KPG.GT.9) GO TO 40
```

AD-A079 473 CENTER FOR NAVAL ANALYSES ALEXANDRIA VA F/G 5/9
THE ENLISTED REQUIREMENTS PLANNER (ENREP).(U)
OCT 78 D W SCHULTE N00014-76-C-0001
UNCLASSIFIED CRC-358 NL

2 OF 3
AD A079 473

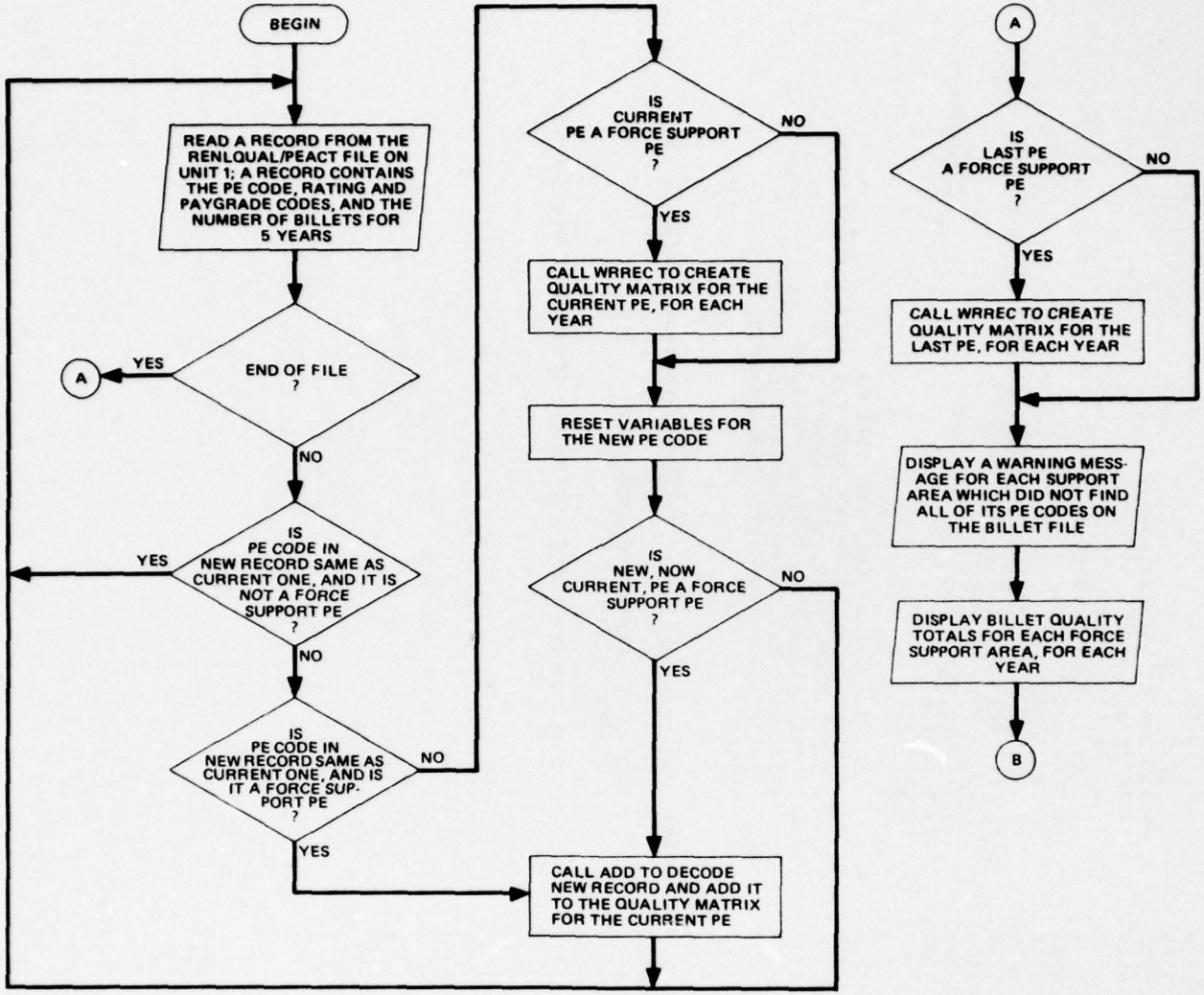


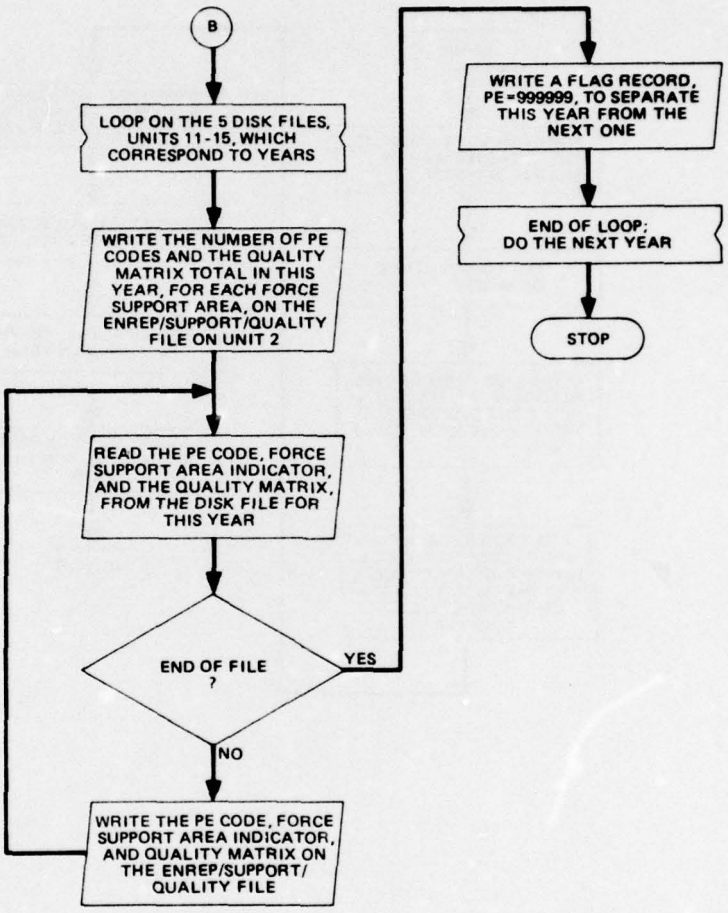

1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

```
      KPG=10-KPG
C
C          COMPUTE REQUIREMENTS - LAST CHARACTER IN THE REQ. FIELD IS A
C            LETTER, TRANSLATE IT TO A NUMBER
      DO 20 K=1,5
      K2=NSCANX (IVAL,9,KREQ(K))
   20 REQ(K,KRA,KPG)=REQ(K,KRA,KPG)+FLOAT((JREQ(K)*10)+K2)
      RETURN
C
C          ERROR
   40 NLINE=NLINE+1
      IF (NLINE.LT.33) GO TO 50
      NLINE=0
      WRITE (6,2000)
 2000 FORMAT (1H1)
   50 WRITE(4,1000) NR,PE,IRA,KPG,(JREQ(I),KREQ(I),I=1,5)
 1000 FORMAT (1H0,I8,2X,A6,2X,A4,I3,2X,5(I4,A1,2X))
      RETURN
      END
C
C*****************************************************************
C
      SUBROUTINE WRREC
      COMMON /B2/  X(5,110), Y(5), VARPE(14,5), CHK(5), TNPE(5),
     *             TITLE(5,5), TOTAL(5,5)
      COMMON /B1/ FEQ(5,110,9), NYEAR, FLAG
      COMMON /B3/ IPE
      COMMON /B4/ JRATE(110), IRATE(110)
      DIMENSION IPED(1), A(1), B(1)
      EQUIVALENCE (IPED(1),IPE)
      INTEGER A, B
C
C          SUM TOTAL REQ. FOR THIS SUPPORT AREA
C          AND FLAG COMPLETION OF THIS PE
      DO 65 I=1, NYEAR
      X(I,1)=0.0
      DO 60 J=1,110
      DO 60 K=1,9
   60 X(I,1)=X(I,1)+FEQ(I,J,K)
      TOTAL(FLAG,I)=TOTAL(FLAG,I)+X(I,1)
   65 CONTINUE
      TNPE(FLAG)=TNPE(FLAG)+1
C
C         TRANSLATE PE FROM A ALPHA TO A NUMERIC ONE
C         EX. 24156N BECOMES 241562
      A(1)=6H
      CALL MOVE(IPED,6,A(1),1,1)
      B(1)=1H2
      IF(A(1).EQ.1HN) B(1)=1H1
      A(1)=IPE
      CALL MOVE(B(1),1,A(1),6,1)
      READ(A,8060) JPE
 8060 FORMAT(I6)
C
C         WRITE MATRIX ON DISK
      DO 70 J=1, NYEAR
      IU=10+J
   70 WRITE(IU) JPE,FLAG,((REQ(J,K,L),L=1,9),K=1,110)
C
C          PRINT THE DATA FOR THIS PE
C          COLAPSE PAYGRADE AND PRINT REQ. BY RATING AND YEAR
      WRITE(6,8000) (TITLE(FLAG,J),J=1,5),IPE,
     *                  (I,I=197-,198-)
 8000 FORMAT(1H1/46X,5A4/36X,45//63X,5HYEAR S/
```

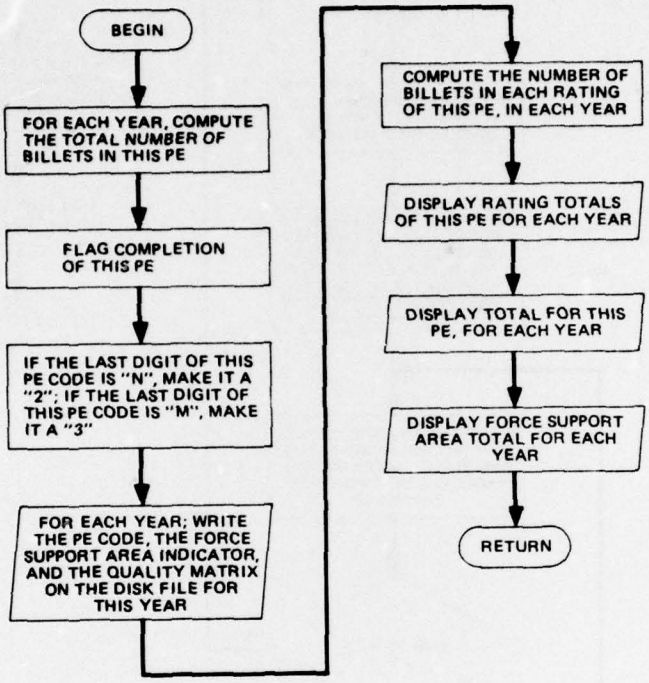
```
     *       1,X,6HHEATING,3X,6I1),I7/)
      DO 75 I=1, NYEAR
      Y(I)=0.0
      DO 75 J=1,110
      X(I,J)=0.0
      DO 75 K=1,9
   75 X(I,J)=X(I,J)+REQ(I,J,K)
      DO 78 J=1,110
      DO 76 I=1, NYEAR
      IF(X(I,J).NE.0.0) GO TO 77
   76 CONTINUE
      GO TO 78
   77 WRITE(6,8020) IRATE(J),JRATE(J),(X(I,J),I=1, NYEAR)
 8020 FORMAT(8X,A4,2X,A4,3X,6F15.0)
      DO 79 I=1, NYEAR
      Y(I)=Y(I)+X(I,J)
   79 CONTINUE
   78 CONTINUE
C
C       PRINT TOTAL BY YEAR FOR THIS PE
C       PRINT CURRENT TOTAL BY YEAR FOR THIS SUPPORT AREA
      WRITE(6,8040) (Y(I),I=1, NYEAR)
 8040 FORMAT(1HO,8X,8HPE TOTAL,4X,6F15.0)
      WRITE (6,8050) (TOTAL(FLAG,I),I=1, NYEAR)
 8050 FORMAT(1H0,6X,12HRUNING TOTAL,2X,6F15.0)
      RETURN
      END
C
C*************************************************************************
C
      INTEGER FUNCTION NSCANX(M,L,I)
      DIMENSION M(1)
C
C       SEARCHES THE FIRST L ELEMENTS OF ARRAY M FOR THE FIST
C       OCCURANCE OF I
C
      J=L
    5 IF(M(J).IS.I) GO TO 10
      J=J-1
      IF (J.GT.0) GO TO 5
      J=0
   10 NSCANX=J
      RETURN
      END
```

Routine SUPPORT, main




B
LOOP ON THE 5 DISK FILES, UNITS 11-15, WHICH CORRESPOND TO YEARS
WRITE THE NUMBER OF PE CODES AND THE QUALITY MATRIX TOTAL IN THIS YEAR, FOR EACH FORCE SUPPORT AREA, ON THE ENREP/SUPPORT/QUALITY FILE ON UNIT 2
READ THE PE CODE, FORCE SUPPORT AREA INDICATOR, AND THE QUALITY MATRIX, FROM THE DISK FILE FOR THIS YEAR
END OF FILE ?
YES
NO
WRITE THE PE CODE, FORCE SUPPORT AREA INDICATOR, AND QUALITY MATRIX ON THE ENREP/SUPPORT/ QUALITY FILE
WRITE A FLAG RECORD, PE=999999, TO SEPARATE THIS YEAR FROM THE NEXT ONE
END OF LOOP; DO THE NEXT YEAR
STOP

Subroutine WRREC



ANNEX B-9

FORCE SUPPORT PROGRAM ELEMENTS

Base Operations

24611N Sea control project, air base operations
24612N Sea control project, air base communications
24613N Sea control, air base operations
24614N Sea control, air base communications
24615N Fleet support, port, base operations
24616N Fleet support, port, base communications
24617N Fleet logistics support, base operations
24618N Fleet logistics support, base communications

Training

24156N Readiness squadrons
24262N Readiness squadrons (ASW)
24633N Fleet support training
84711N Recruit training units
84722N Officer candidate training
84731N General skill training
84741N Undergraduate pilot training
84742N Undergraduate navigator training
84751N Professional military education
84752N Other professional education
85796N Base operations, training
86761N Education and training health care
86723N Other health acquisition programs
89731N Training support to units

Medical Support

87711N Care in defense facilities
87714N Other health activities

Recruiting and Examining

81711N Recruiting activities
81713N Examining activities

Individual Support

88732N Transients

ANNEX B-10

PROGRAM TOTAL

```
      $RESET FREE
      $SET AUTOBIND
      $BIND = FPC" CNA/LIB/="
      FILE   8(TITLE="ENREP/TOTAL/DATA",KIND=DISK,FILETYPE=8)
      FILE   9(KIND=PRINTER)
      FILE   10(TITLE="FENQJUL77/PEACT",KIND=PETAPE,FILETYPE=8)
      FILE   20(TITLE="UCT77/PETOTAL",KIND=DISK,FILETYPE=8)
      FILE   30(TITLE="SCRATCH",KIND=PETAPE,MAXRECSIZE=992,BLOCKSIZE=992,
     *    SERIALNO=000408)
      FILE   41(TITLE="SCRATCH2",KIND=PETAPE,MAXRECSIZE=991,BLOCKSIZE=991,
     *    SERIALNO=000559)
      FILE   42(KIND=DISK,MAXRECSIZE=991,BLOCKSIZE=991,AREASIZE=10)
      FILE   43(KIND=DISK,MAXRECSIZE=991,BLOCKSIZE=991,AREASIZE=10)
      FILE   44(KIND=DISK,MAXRECSIZE=991,BLOCKSIZE=991,AREASIZE=10)
      FILE   45(KIND=DISK,MAXRECSIZE=991,BLOCKSIZE=991,AREASIZE=10)
      FILE   46(KIND=DISK,MAXRECSIZE=991,BLOCKSIZE=991,AREASIZE=10)
      FILE   47(KIND=DISK,MAXRECSIZE=991,BLOCKSIZE=991,AREASIZE=10)
      FILE   40(TITLE="ENREP/TOTALREQ",KIND=PETAPE,PROTECTION=SAVE,
     *    MAXRECSIZE=992,BLOCKSIZE=9920,SERIALNO=000406)
C
C           CREATES THE TOTAL REQUIREMENTS MATRICES
C           RATING BY PAYGRADE FOR EACH PE, IN EACH YEAR
C
C           FILE  8 - USER INPUTS
C           FILE  9 - OUTPUT LISTING
C           FILE 10 - REALQUAL FILE SORTED BY PE
C           FILE 20 - NARM INPUT - TOTAL NUMBER OF ENLISTED BY PE
C           FILE 30 - SCRATCH TAPE - TOTAL REQ. MATRICES BY PE THEN YEAR
C           FILE 40 - OUTPUT TAPE - TOTAL REQ. MATRICES BY YEAR THEN PE
C           FILES 41-47 - SCRATCH DISK FILES FOR SORT OF TAPE 30 TO
C                         TAPE 40
C
      COMMON /$1/  KYEAR, ICOMP, IPRNT, IDISK, NYEAR,
     *             EXCLPE(104), NEX, SHARPE(70), SHARP2(70,10),
     *           NSH(70), NSHT
      COMMON /$2/ KPA, JPG, KREQ(5), JREQ(5), NLINE, IC
      COMMON /$5/  PE, BILLET(5,110,7), QMN(6,111,10)
      COMMON /$6/  NARM(6,500), NNPE(50)), NUPE
      COMMON /RATING/ IRATE(110), JPATE(110), IBLK
      INTEGER EXCLPE, SHARPE, SHARP2,
     *        PE, BILLET
C
      DATA IBLK/6H      /
      DATA IPATE/3HBM ,3HMA ,3HQM ,3HSM ,3HOS ,3HEA ,3HST ,3HSTG,3HSTS,
     *     3HOT ,3HTM ,3HGM ,3HGMM,3HGMT,3HGMG,3HFT ,3HFTG,3HFTB,3HFTM,
     *     3HMT ,3HMN ,3HET ,3HETN,3HETR,3HDS ,3HPI ,3HIM ,3HOM ,3HAC ,
     *     3HRM ,3HCTT,3HCTA,3HCTM,3HCTO,3HCTR,3HCTI,3HYN ,3HCYN,3HLN ,
     *     3HPN ,3HDP ,3HSK ,3HDK ,3HMS ,3HSD ,3HCS ,3HIS ,3HSH ,3HJO ,
     *     3HPC ,3HLI ,3HCM ,3HML ,3HMM ,3HEN ,3HMR ,3HRT ,3HBR ,3HEM ,
     *     3HIC ,3HNT ,3HPM ,3HML ,3HGS ,3HCU ,3HEA ,3HCE ,3HEO ,3HEO ,
     *     3HCM ,3HBU ,3HSW ,3HUT ,3HAF ,3HAV ,3HAD ,3HADR,3HADJ,3HAT ,
     *     3HAX ,3HAW ,3HAO ,3HAQ ,3HAC ,3HAB ,3HABE,3HABF,3HABH,3HAE ,
     *     3HAM ,3HAMS,3HAMH,3HAME,3HPR ,3HAG ,3HTD ,3HAK ,3HAS ,3HASE,
     *     3HASH,3HASM,3HAZ ,3HPH ,3HPT ,3HHM ,3HDT ,3HSN ,3HFN ,3HCN ,
     *     3HAN /
      DATA JRATE/4H0100,4H0150,4H0200,4H0250,4H0300,4H0350,4H0400,4H0401
     *   ,4H0404,4H0450,4H0500,4H0600),4H0601,4H0602,4H0604,4H0800,4H08C1
     *   ,4H0802,4H0803,4H0810,4H0900),4H1000,4H1001,4H1002,4H1010,4H1080
     *   ,4H1100,4H1200,4H1400,4H1500),4H1611,4H1622,4H1633,4H1644,4H1655
     *   ,4H1666,4H1700,4H1701,4H1750,4H1800),4H1900,4H2000,4H2100,4H2200
     *   ,4H2500,4H2290,4H2300,4H2490,4H2600,4H2700,4H3100,4H3200,4H3300
```

```
     *    ,4H5700,4H5800,4H5900,4H4000,4H4020,4H4100,4H4200,4H4300,4H4400,
     *    ,4H4700,4H4400,4H5080,4H5100,4H5300,4H5380,4H5410,4H5500,4H5600
     *    ,4H5700,4H5800,4H6080,4H6100,4H6200,4H6205,4H6206,4H6300,4H6310
     *    ,4H6400,4H6500,4H6520,4H6600,4H6700,4H6704,4H6705,4H6706,4H6800
     *    ,4H6900,4H6701,4H6702,4H6903,4H7000,4H7100,4H7200,4H7300,4H7500
     *    ,4H7501,4H7502,4H7503,4H7400,4H7600,4H7700,4H8000,4H8300,4H5E00
     *    ,4H5000,4H6000,4H7F00/
C
C          READ AND DISPLAY USER INPUT
      CALL INPUT
C
C          READ NARM TAPE AND COMPUTE NARM REQUIREMENTS (IF ICOMP=1)
      IF (ICOMP.EQ.1) CALL NARMRD

C          INITIALIZE VARIABLES
      WRITE (6,410)
      WRITE (9,350)
      DO 30 I=1,6
      DO 30 J=1,111
      DO 30 K=1,10
   30 QMA(I,J,K)=0.0
      KRA=IBLK
      IPE=IBLK
      PE=IBLK
      KYEAR=5
      NYEAR=1978
C
C        READ BILLET FILE
      IC=0
   40 IC=IC+1
      READ (10,430,END=210,ERR=50,DATA=50,FESULTS=IND)
     *       IPE,KRA,JPG,(JREQ(I),KREQ(I),I=1,5)
  430 FORMAT (37X,A6,22X,A4,9X,I1,10X,5(I4,A1))
      GO TO 60
C       SOME KIND OF ERROR
   50 WRITE (61,360) IC,IND,IPE,KRA,JPG
C
C          GOOD READ
C          IS THIS A NEW PE (IF BLANK, IT IS THE FIRST PE)
   60 IF (PE.EQ.IPE) GO TO 140
      IF (PE.EQ.IBLK) GO TO 120
C
C          COMPUTE TOTAL REQ. MATRICES FOR CURRENT PE
C
C          IS THIS PE BEING DELETED BY THE USER?
      IF (NEX.LT.1) GO TO 82
      DO 80 I1=1,NEX
      IF (PE.EQ.EXCLPE(I1)) GO TO 120
   80 CONTINUE
C
C           IS THIS PE BEING USED AS A PROXY FOR OTHER PES?
C           OR IS THIS PE'S QUALITY BEING REPLACED BY THAT OF ANOTHER'S
C              IN WHICH CASE SKIP THIS PE FOR NOW
   82 IF (NSHT.LT.1) GO TO 94
      DO 92 I1=1,NSHT
      I4=NSH(I1)
      IF (PE.EQ.SHARPE(I1)) GO TO 10)
      DO 90 I2=1,I4
      IF (PE.EQ.SHARP2(I1,I2)) GO TO 120
   90 CONTINUE
   92 CONTINUE
C
C          NORMAL PE - PROCESS IT IN COMPUTE
   94 CALL COMPUT
```

```
12600           GO TO 120
12700     C
12800     C
12900     C         THIS PE IS BEING USED AS A PROXY FOR OTHERS, PROCESS ALL NOW
13000       100 CALL COMPUT
13100           DO 110 I2=1,I4
13200           PE=SHARP2(I1,I2)
13300           CALL COMPUT
13400       110 CONTINUE
13500     C
13600     C           INITIALIZE VARIABLES FOR THE NEXT PE
13700       120 DO 130 I1=1,5
13800           DO 130 I2=1,110
13900           DO 130 I3=1,9
14000       130 BILLET(I1,I2,I3)=0
14100           PE=IPE
14200     C
14300     C         ADD BILLET REQUIREMENTS TO TOTAL FOR THIS PE
14400       140 CALL ADD
14500           GO TO 40
14600     C
14700     C           END OF FILE
14800       210 LOCK 10
14900     C
15000     C           PROCESS LAST PE
15100     C           IS THIS PE BEING DELETED BY THE USER?
15200           IF (NEX.LT.1) GO TO 222
15300           DO 220 I1=1,NEX
15400           IF (PE.EQ.EXCLPE(I1)) GO TO 260
15500       220 CONTINUE
15600     C
15700     C            IS THIS PE BEING USED AS A PROXY FOR OTHER PES?
15800     C            OR IS THIS PE'S QUALITY BEING REPLACED BY THAT OF ANOTHER'S
15900     C                 IN WHICH CASE SKIP THIS PE
16000       222 IF (NSHT.LT.1) GO TO 234
16100           DO 232 I1=1,NSHT
16200           I4=NSH(I1)
16300           IF (PE.EQ.SHARPE(I1)) GO TO 240
16400           IF (I4.LT.1) GO TO 232
16500           DO 230 I2=1,I4
16600           IF (PE.EQ.SHARP2(I1,I2)) GO TO 260
16700       230 CONTINUE
16800       232 CONTINUE
16900     C
17000     C         NORMAL PE - PROCESS IT
17100       234 CALL COMPUT
17200           GO TO 260
17300     C
17400     C         THIS PE IS BEING USED AS A PROXY FOR OTHERS, PROCESS ALL NOW
17500       240 PE=SHARPE(I1)
17600           CALL COMPUT
17700           IF (I4.LT.1) GO TO 260
17800           DO 250 I1=1,I4
17900           PE=SHARP2(I1,I2)
18000           CALL COMPUT
18100       250 CONTINUE
18200     C
18300     C           COMPUTE TOTALS IN THE QMN ARRAY
18400       260 DO 300 J=1,6
18500           DO 300 I=1,110
18600           DO 300 K=1,9
18700       300 QMN(J,I,10)=QMN(J,I,10)+QMN(J,I,K)
18800           DO 310 I=1,6
18900           DO 310 J=1,10
```

```
      DO 51) K=1,11C
   31C QMN(I,111,J)=QMN(I,111,J)+QMN(I,K,J)
C
C               PRINT THE SUM OF ALL TOTAL MATRICES FOR ALL NAVY
      I=ICOMP*2
      CALL PRINT (I)
C
C          FIND THOSE PROGRAM ELEMENTS NOT ON THE BILLET FILE
C          AND PRINT WARNING MESSAGES
   335 IF (ICOMP.EQ.2) GO TO 345
      WRITE (6,410)
      DO 342 I=1,NOPE
      IF (NMPE(I).EQ.IBLK) GO TO 340
      WRITE (6,420) NMPE(I)
   340 CONTINUE
C
   345 IF (IDISK.EQ.0) STOP
C     .    REWRITE OUTPUT TAPE FROM A (PE THEN YEAR) ORDER TO A
C          (YEAR THEN PE) ONE
      REWIND 30
      CALL REARAN(ICOMP,KYEAR)
      STOP
C
   350 FORMAT (1H1,27HTHESE RECORDS WERE DELETED:/)
   355 FORMAT (1H1,27HTHESE RECORDS WERE OK OK  :/)
   360 FORMAT (23HOERROR FILE 10   RECORD,I7,13H   INDICATOR,
     *         A6,8H   DATA,A6,2X,A4,I3)
   380 FORMAT (1H1//32X,35HREQUIREMENTS FOR OFFICER CANDIDATES//44X,11HFI
     *SCAL YEAR/6X,7HPAYGRADE,6X,6I1)/)
   390 FORMAT (/10X,I1,9X,6I10)
   400 FORMAT (//9X,5HTOTAL,6X,6I10/1H1)
   410 FORMAT (1H1," TOTALS OF THE UNIT REQUIREMENTS MATRICES")
   420 FORMAT (1H0,21H THE PROGRAM ELEMENT ,A6,37H IS NOT INCLUDED IN THI
     *S BILLET FILE.)
      END
C
C*****************************************************************************
C
      SUBROUTINE INPUT
C
C          THIS SUBROUTINE READS, CHECKS, AND DISPLAYS USER INPUT
C
      COMMON /S1/  KYEAR, ICOMP, IPRNT, IDISK, NYEAR,
     *            EXCLPE(104), NEX, SHARPE(70), SHARP2(70,10),
     *          NSH(70), NSHT
      COMMON /S3/ UFRAC(25,111), NFRAC
      COMMON /RATING/ IRATE(110), JRATE(110), IBLK
      DIMENSION IFRAC(25,111)
      EQUIVALENCE (UFRAC(1),IFRAC(1))
      DIMENSION IIMP(10), MATRIX(2,5)
      INTEGER EXCLPE, SHARPE, SHARP2
C
      DATA (MATRIX(1,I),I=1,5)/4HNAVA,4H SCA,3HLED,1H ,1H /
      DATA (MATRIX(2,I),I=1,5)/4HBILL,4HET R,4HEQUI,4HREME,4HNTS /
      DATA HNARM/4HNARM/, HBILLT/6HBILLET/
      DATA HNO/2HNO/, HYES/3HYES/
C
C          READ COMPUTATION INDICATORS, COLS: 1-6,
C          "NARM"   - SCALE THE BILLETS BY THE NARM INPUTS
C          "BILLET" - DO NOT SCALE THE BILLETS
      READ (8,270) ICOMP
      IF (ICOMP.EQ.HNARM) ICOMP=1
      IF (ICOMP.EQ.HBILLT) ICOMP=2
```

```
      IF (ICOMP.NE.1) ICOMP=2
      WRITE (6,320)
      WRITE (6,330) (MATRIX(ICOMP,K),K=1,5)
      IPRNT=1
C
C         READ OUTPUT FILE INDICATORS, COLS: 1-6,
C         "NO"  - DO NOT SAVE OUTPUT BY PE
C         "YES" - DO SAVE OUTPUT BY PE ON A TAPE
      READ (5,270) IDISK
      IF (IDISK.EQ.HNO) IDISK=0
      IF (IDISK.EQ.HYES) IDISK=1
      IF (IDISK.EQ.0) GO TO 40
      WRITE (6,340)
      WRITE (6,330) (MATRIX(ICOMP,K),K=1,5)
      GO TO 50
   40 WRITE (6,350)
   50 CONTINUE
C
C         READ WHICH PES ARE BEING EXCLUDED
C         10 PE CODES TO A LINE
C         PE CODES GO INTO COLS: 1-6,  9-14, 17-22, 25-30, 33-38,
C                                41-46, 49-54, 57-62, 65-70, 73-78
C         THE LAST PE CODE MUST BE FOLLOWED BY A BLANK CODE, IF
C             THE LAST PE CODE IS THE LAST ONE ON A LINE THEN
C             PUT THE BLANK CODE ON THE NEXT LINE
      NEX=0
   60 READ (5,380) (ITMP(I),I=1,10)
      DO 70 I=1,10
      IF (ITMP(I).EQ.IBLK) GO TO 80
      EXCLPE(NEX+I)=ITMP(I)
   70 CONTINUE
      NEX=NEX+10
      GO TO 60
   80 NEX=NEX+(I-1)
      IF (NEX.EQ.0) WRITE (6,390)
      IF (NEX.GT.0) WRITE (6,410) (EXCLPE(I),I=1,NEX)
C
C         READ - WHICH PES ARE USING THE FIRST PE'S DATA
C         PUT THE PE CODE WHOSE QUALITY IS BEING USED ON THE FIRST LINE
C         PUT THE PE CODES WHICH WILL USE THE QUALITY OF THE ABOVE PE
C             ON THE FOLLOWING LINES, 10 PE CODES TO A LINE
C         PE CODES GO INTO COLS: 1-6,  9-14, 17-22, 25-30, 33-38,
C                                41-46, 49-54, 57-62, 65-70, 73-78
C         AS ABOVE, THE LAST PE CODE OF THOSE USING THE QUALITY OF THE
C             FIRST IS FOLLOWED BY A BLANK CODE
C         THE LAST INPUT OF THIS TYPE IS FOLLOWED BY A BLANK LINE
      N1=1
   90 READ (5,380) SHARPE(N1)
      IF (SHARPE(N1).EQ.IBLK) GO TO 120
      READ (5,380) (ITMP(I),I=1,10)
      DO 100 I=1,10
      IF (ITMP(I).EQ.IBLK) GO TO 110
      SHARP2(N1,I)=ITMP(I)
  100 CONTINUE
      I=11
  110 N2=(I-1)
      NSH(N1)=N2
      WRITE (6,430) SHARPE(N1),(SHARP2(N1,I),I=1,N2)
      N1=N1+1
      GO TO 90
  120 NSHT=N1-1
      IF (NSHT.EQ.0) WRITE (6,450)
C
C         READ FRACTION OPTION FOR BILLET REQUIREMENTS SCALING BY PE
```

```
C          FIRST SET DEFAULTS TO 1.0
C          MAX OF 5 PE CODES
      N2=0
      DO 190 I=1,5
      DO 190 J=1,110
  190 UFRAC(I,J)=1.0
C          READ A PE WHOSE QUALITY IS TO BE CHANGED, COLS: 1-6
  200 READ (5,550) I1
      IF (I1.EQ.IBLK) GO TO 240
      N2=N2+1
      IFRAC(N2,111)=I1
      WRITE (6,540) I1
C          READ THE RATING NAME AND THE SCALING FACTOR, COLS: 1-4 AND 6-10
  210 READ (5,570) I1,X3
      IF (I1.EQ.IBLK) GO TO 290
C          FIND THE POSITION IN THE RATING ARRAY FOR THIS RATING
      DO 220 I2=1,110
      IF (I1.EQ.IRATE(I2)) GO TO 230
  220 CONTINUE
      GO TO 210
  230 UFRAC(N2,I2)=X3
      WRITE (6,580) I1,UFRAC(N2,I2)
      GO TO 210
  240 NFRAC=N2
      IF (N2.EQ.0) WRITE (6,590)
C
      RETURN
C
  270 FORMAT (A6)
  280 FORMAT (I5)
  300 FORMAT (1H0,9X,16HTHE BASE YEAR IS,I5,1H./)
  310 FORMAT (1HC/10X,31HNO MATRICES ARE BEING COMPUTED.)
  320 FORMAT (1H0/10X,39HTHE FOLLOWING MATRIX IS BEING COMPUTED:/)
  330 FORMAT (15X,13A4)
  340 FORMAT (1H-/10X,46HTHE FOLLOWING PERMANENT FILE IS BEING CREATED:/
     *)
  350 FORMAT (1HC/10X,38H4 PERMANENT FILE IS NOT BEING CREATED.)
  380 FORMAT (10(A6,2X))
  390 FORMAT (1HC/10X,54HALL PROGRAM ELEMENTS ARE BEING INCLUDED IN THE
     *MATRIX.)
  410 FORMAT (1H0/10X,50HTHE FOLLOWING PROGRAM ELEMENTS ARE BEING EXCLUD
     *ED://(15X,A6))
  430 FORMAT (1H0/10X,63HTHE FOLLOWING PROGRAM ELEMENTS ARE USING THE BI
     *LLET DATA OF PE ,A6,1H://(15X,A6))
  450 FORMAT (1H0/10X,59HTHERE ARE NO PE'S WHICH ARE USING ANOTHER PE'S
     *BILLET DATA.)
  470 FORMAT (A6,4X,I5)
  480 FORMAT (10I8)
  490 FORMAT (1H1/10X,49HTHE USER HAS INPUTED A QUALITY MIX MATRIX FOR P
     *E ,A6,1H.)
  500 FORMAT (1H1/10X,43HTHE USER HAS ENTERED REQUIREMENTS FOR AUIC ,A4,
     *1H.)
  510 FORMAT (1H0/10X,49HNO QUALITY MIX MATRICES WERE INPUTED BY THE USE
     *R.)
  520 FORMAT (1H0/10X,41HNO REQUIREMENTS WERE ENTERED BY THE USER.)
  530 FORMAT (A6,4X,F5.2)
  540 FORMAT (1HC/10X,/,20HTHE BILLET REQUIREMENTS OF THE FOLLOWING RATING
     *S BELONGING TO PROGRAM ELEMENT ,A6)
  560 FORMAT (10X,52HWILL BE SCALED BY THEIR CORRESPONDING USER FRACTION
     *://20X,1HRATING NO.,3X,8HFRACTION/)
  570 FORMAT (A4,1X,F5.0)
  580 FORMAT (20X,A4,9X,F6.2)
  590 FORMAT (1HC/10X,57HNO CHANGES TO THE BILLET FILE QUALITY MIX ARE B
     *EING MADE.)
```

```
      END
C
C*****************************************************************
C
      SUBROUTINE NARMRD
C
C         FORMAT OF TAPE FROM OP-9014
C         CONTAINS ENLISTED MANPOWER TOTALS BY PE AND YEAR
C       COLUMNS     DATA ITEM
C       1-10        BLANK
C       11-16       PE
C       17-20       BLANK
C       21-30       SE
C       31-36       SEQ. NUMBER
C       37-49       76
C       50-62       77
C       63-75       78
C       76-88       79
C       89-101      80
C       102-114     81
C       115-127     82
C       128-140     83
C       141-153     84
C       154-166     85
C       167-179     86
C       180-192     86
C
      COMMON /35/  REQ(6), TOTAL(6), A(1), B(1), IPED(1)
      EQUIVALENCE (IPED(1),IPE)
      COMMON /36/  NARM(6,500), NMPE(500), NOPE
      INTEGER A, B
      INTEGER TOTAL
C
C           INITIALIZE VARIABLES
      NOPE=0
      NR=0
      IPE=IBLK
      MP=500
      IND=0
      WRITE (6,170)
C
C           SKIP THE 2 HEADER RECORDS
      READ (20)
      READ (20)
C
C       READ A RECORD FROM THE NARM TAPE
   10 NR=NR+1
      READ (20,160,END=105,ERR=20,DATA=20,RESULTS=IND)
     *       JPE,REQ
      GO TO 30
C       ERROR OF SOME KIND
   20 WRITE (6,110) NR,IND,IPE
C
C       GOOD READ
   30 IF (JPE.NE.IPE) GO TO 60
C
C         SUM NEW REQUIREMENTS TO THE OTHERS
   40 DO 50 I=1,6
   50 NARM(I,NOPE)=NARM(I,NOPE)+IFIX(REQ(I)+0.5)
      GO TO 10
C
C          NEW PE
   60 IF (IPE.EQ.IBLK) GO TO 80
C
```

```
C          CHANGE PE FROM NUMERIC TO ALPH REPRESENTATION
           A(1)=6H
           CALL MOVE (IPED,6,A(1),1,1)
           B(1)=1HN
           IF (A(1).EQ.1H3) B(1)=1HM
           CALL MOVE (IPED(1),1,NMPE(NOPE),1,5)
           CALL MOVE (B(1),1,NMPE(NOPE),6,1)
C
C              DISPLAY THE PE AND THE TOTALS BY YEAR
C              AND ADD TO  THE ALL NAVY TOTALS
           WRITE (6,140) NMPE(NOPE),(NARM(I,NOPE),I=1,6)
           DO 70 I=1,6
        70 TOTAL(I)=TOTAL(I)+NARM(I,NOPE)
           IF (IND.LT.0) GO TO 100
C
C              INITIALIZE FOR NEW PE
        80 NOPE=NOPE+1
           IF (NOPE.GT.MP) NOPE=MP
           IPE=JPE
           DO 90 I=1,6
        90 NARM(I,NOPE)=0
           NMPE(NOPE)=IBLK
           GO TO 40
C
C              END OF FILE - PROCESS THE LAST PE
       105 IND=-1
           GO TO 60
C
C               PRINT THE NARM ALL NAVY TOTALS
       100 WRITE (6,150) (TOTAL(I),I=1,6)
           CLOSE(20,DISP=KEEP)
           RETURN
C
       110 FORMAT (23H0ERROR FILE 20   RECORD,I7,13H   INDICATOR,
          *        A6,8H   DATA,A6)
       140 FORMAT (/2X,A6,4X,7I12)
       150 FORMAT (//2X,5HTOTAL,5X,7I12)
       160 FORMAT (10X,A6,59X,7(1X,F12.4))
       170 FORMAT (1H1," NARM PE TOTALS")
           END
C
C*****************************************************************************
C
           SUBROUTINE ADD
C
C              DECODES A RECORD FROM THE BILLET FILE
C
           COMMON /B1/  KYEAR
           COMMON /B5/  PE, BILLET(5,11),,)
           COMMON /RATING/ IRATE(110), JRATE(110), IBLK
           DIMENSION  IFEQ(5), IVAL(9), KRAD(1)
           EQUIVALENCE (KRA,KRAD(1))
           COMMON /B7/ KRA, JPG, NREQ(5), JREQ(5), NLINE, IC
           DATA IVAL /      1HA, 1HB, 1HC, 1HD,
          *             1HE, 1HF, 1HG, 1HH, 1HI/
C
C           EXAMINE THE RATING CODE
           K=NSCANX(JRATE(1),110,KRA)
           IF (K.EQ.0) GO TO 170
C
C              REQ. ARE  FY1,FY2,FY3,FY4,FY5, RESPECTIVELY
C              TRANSLATE THE LETTER IN THE LAST DIGIT OF THE REQ. FIELD TO A
C               NUMBER
           DO 150 K1=1,KYEAR
```

```
      K2=NSCANX (IVAL,Y,KFEQ(K1))
      IFEQ(K1)=(JFEQ(K1)*10)+K2
  150 CONTINUE
C
C         EXAMINE PAYGRADE
C         E-9 IS IN POSITION 1, . . . . , E-1 IS IN POSITION 9
      IF (JPG.LT.1.OR.JPG.GT.9) GO TO 170
      JPG=10-JPG
C
C         SUM THE BILLET REQ. FROM THIS RECORD TO OTHERS FOR THIS PE
      DO 160 K2=1,KYEAR
  160 BILLET(K2,K,JPG)=BILLET(K2,K,JPG)+IREQ(K2)
      RETURN
C
C        ERROR IN THIS RECORD - PRINT IT FOR THE USER
  170 NLINE=NLINE+1
      IF (NLINE.LT.32) GO TO 205
      NLINE=0
      WRITE (9,375)
  375 FORMAT (1H1)
  205 WRITE (9,370) IC,IPE,KRA,JPG,IREQ
  370 FORMAT (1H0,I10,2X,A6,2X,A4,I3,2X,6I6)
      END
C
C*****************************************************************************
C
      SUBROUTINE COMPUT
C
C.         CREATES THE TOTAL REQUIREMENTS MATRIX FOR THIS PE
C          WRITES THE MATRIX ON TAPE
C
      COMMON /$1/  KYEAR, ICOMP, IPRNT, IDISK, NYEAR
      COMMON /$3/ UFRAC(25,111), NFRAC
      COMMON /$4/ SAVE(110,9)
      COMMON /$5/  PE, BILLET(5,110,9), QMN(6,111,10)
      COMMON /$6/  NAFM(6,500), NMPE(500), NOPE
      COMMON /$7/ TOTAL(6)
      COMMON /RATING/ IRATE(110), JRATE(110), IBLK
      DIMENSION IFRAC(25,111)
      EQUIVALENCE (UFRAC(1),IFRAC(1))
      DIMENSION WORK(5,110,9), BTOTAL(5), NSCALE(6)
      DIMENSION A(1), B(1), IPED(1), PED(1)
      EQUIVALENCE (PED(1),PE)
      INTEGER PE, BILLET, A, B, PED
      REAL NSCALE
C
C               FLOAT BILLET REQUIREMENTS
      DO 50 I=1,KYEAR
      DO 50 J=1,110
      DO 50 K=1,9
   50 WORK(I,J,K)=FLOAT(BILLET(I,J,K))
C
C         MULTIPLY RATINGS BY USER FRACTION
      IF (NFRAC.LT.1) GO TO 100
      DO 70 L=1,NFRAC
      IF (PE.EQ.IFRAC(L,111)) GO TO 80
   70 CONTINUE
      GO TO 100
   80 DO 90 I=1,KYEAR
      DO 90 J=1,110
      DO 90 K=1,9
   90 WORK(I,J,K)=WORK(I,J,K)*UFRAC(L,J)
  100 CONTINUE
C
```

```
C          COMPUTE MATRIX NOT ADJUSTED BY THE NARM
C
C          ADD BILLETS FOR THIS PE TO ALL NAVY MATRIX
      IF (ICOMP.EQ.1) GO TO 140
      DO 110 I=1,KYEAR
      DO 110 J=1,110
      DO 110 K=1,9
  110 GMN(I,J,K)=GMN(I,J,K)+WORK(I,J,K)
C
C          WRITE OUTPUT TAPE
      DO 130 I=1,KYEAR
      TOTAL(I)=0.0
      DO 120 J=1,110
      DO 120 K=1,9
      SAVE(J,K)=WORK(I,J,K)
  120 TOTAL(I)=TOTAL(I)+SAVE(J,K)
      IF (IOTSK.EQ.1) WRITE(30) PE,I,SAVE
  130 CONTINUE
C          PRINT YEARLY TOTALS FOR THIS PE
      IF (IPRNT.EQ.1) CALL PRINT (3)
      RETURN
C
C          MATRIX ADJUSTED BY NARM REQUIREMENTS BEING COMPUTED&
C
C          SUM BILLET REQUIREMENTS BY YEAR
  140 DO 150 I=1,KYEAR
      BTOTAL(I)=0.0
      DO 150 J=1,110
      DO 150 K=1,9
  150 BTOTAL(I)=BTOTAL(I)+WORK(I,J,K)
C
C          CHECK FOR ZERO QUALITY MATRICES IN EACH YEAR
      I=0
      J=0
      DO 151 K=1,KYEAR
      L=KYEAR+1-K
      IF (BTOTAL(L).LE.0.) GO TO 151
      I=L
      J=J+1
  151 CONTINUE
      IF (J.EQ.KYEAR) GO TO 162
      IF (I.EQ.0) GO TO 162
C
C          A ZERO MATRIX HAS BEEN FOUND
      IF (BTOTAL(1).LE.0..AND.BTOTAL(KYEAR).GT.0.) GO TO 154
      IF (BTOTAL(1).LE.0..AND.BTOTAL(KYEAR).LE.0.) GO TO 157
C
C          REPLACE IT WITH A NONZERO ONE FROM A PREVIOUS YEAR
      DO 155 I=2,KYEAR
      IF (BTOTAL(I).GT.0.) GO TO 153
      BTOTAL(I)=BTOTAL(I-1)
      DO 152 J=1,110
      DO 152 K=1,9
  152 WORK(I,J,K)=WORK(I-1,J,K)
  153 CONTINUE
      GO TO 162
C
C          REPLACE IT WITH A NONZERO ONE FROM A LATER YEAR
  154 DO 156 I=1,KYEAR-1
      J=KYEAR-I
      IF (BTOTAL(J).GT.0.) GO TO 156
      BTOTAL(J)=BTOTAL(J+1)
      DO 155 K=1,110
      DO 155 L=1,9
```

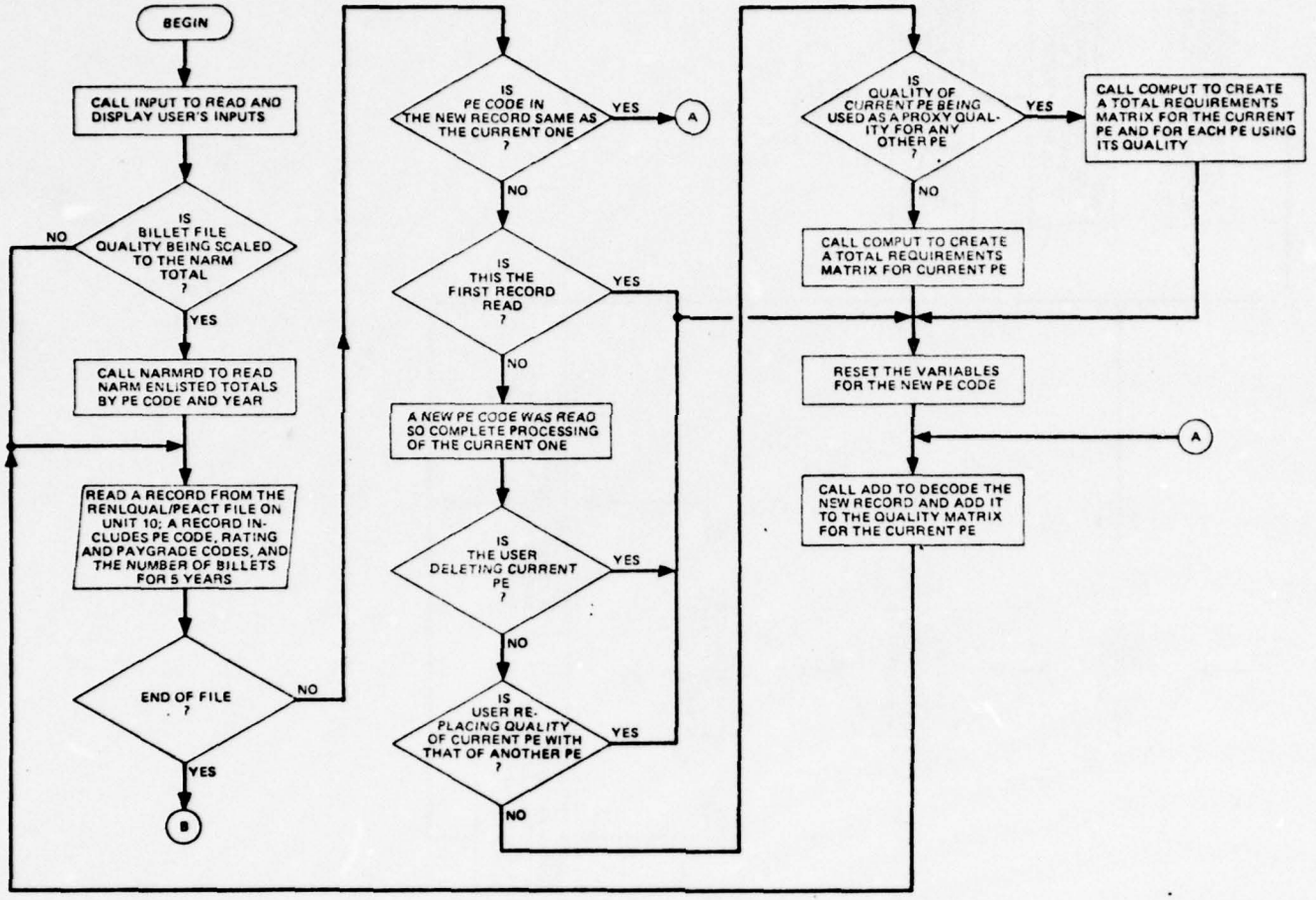
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      155 WORK(J,K,L)=WORK(J+1,K,L)
      156 CONTINUE
          GO TO 162
C
C         BOTH THE FIRST AND THE LAST YEAR HAVE ZERO MARICES -
C         REPLACE THEM WITH ONE FROM A MIDDLE YEAR
      157 J=I-1
          DO 159 K=1,J
          L=I-K
          IF (BTOTAL(L).GT.0.) GO TO 159
          BTOTAL(L)=BTOTAL(L+1)
          DO 158 M=1,110
          DO 158 N=1,9
      158 WORK(L,M,N)=WORK(L+1,M,N)
      159 CONTINUE
          I=I+1
          DO 161 J=I,KYEAR
          IF (BTOTAL(J).GT.0.) GO TO 161
          BTOTAL(J)=BTOTAL(J-1)
          DO 160 K=1,110
          DO 160 L=1,9
      160 WORK(J,K,L)=WORK(J-1,K,L)
      161 CONTINUE
C
C         FIND CORRESPONDING PE IN THE NARM ARRAY
      162 IN=NSCANX(NAPE(1),NOPE,PE)
          IF (IN.NE.0) GO TO 166
C         IF NOT FOUND, WRITE WARNING MESSAGE
          WRITE (6,210) PE
          RETURN
C
C         CONVERT THE APLH PE IN "PE" TO A NUMERIC ONE IN "IPE"
      166 A(1)=6H
          CALL MOVE (PED,6,A,1,1)
          B(1)=1H2
          IF (A(1).EQ.1HM) B(1)=1H1
          CALL MOVE (PED,1,IPED,1,5)
          CALL MOVE (B,1,IPED,6,1)
          READ  (IPED,167) IPE
      167 FORMAT (I6)
C
C         SCALE THE BILLET QUALITY MATRIX TO THE NARM TOTAL
C         FOR YEARS 1-5, AND WRITE MATRIX ON TAPE
          DO 180 I=1,KYEAR
          TOTAL(I)=0.0
          NSCALE(I)=0.0
          IF (BTOTAL(I).GT.0.0) NSCALE(I)=FLOAT(NARM(I,IN))/BTOTAL(I)
          DO 170 J=1,110
          DO 170 K=1,9
          SAVE(J,K)=WORK(I,J,K)*NSCALE(I)
          QRN(I,J,K)=QRN(I,J,K)+SAVE(J,K)
      170 TOTAL(I)=TOTAL(I)+SAVE(J,K)
          IF (IDISK.EQ.1) WRITE(30) IPE,I,SAVE
      180 CONTINUE
C
C         SCALE THE BILLET QUALITY MATRIX TO THE NARM TOTAL
C         FOR YEAR 6, USE THE QUALITY OF YEAR 5,
C         AND WRITE THE MATRIX ON TAPE
          I=6
          TOTAL(I)=0.0
          NSCALE(I)=0.0
          IF (BTOTAL(KYEAR).GT.0.0) NSCALE(I)=FLOAT(NARM(I,IN))/
         *     BTOTAL(KYEAR)
          DO 190 J=1,110
```

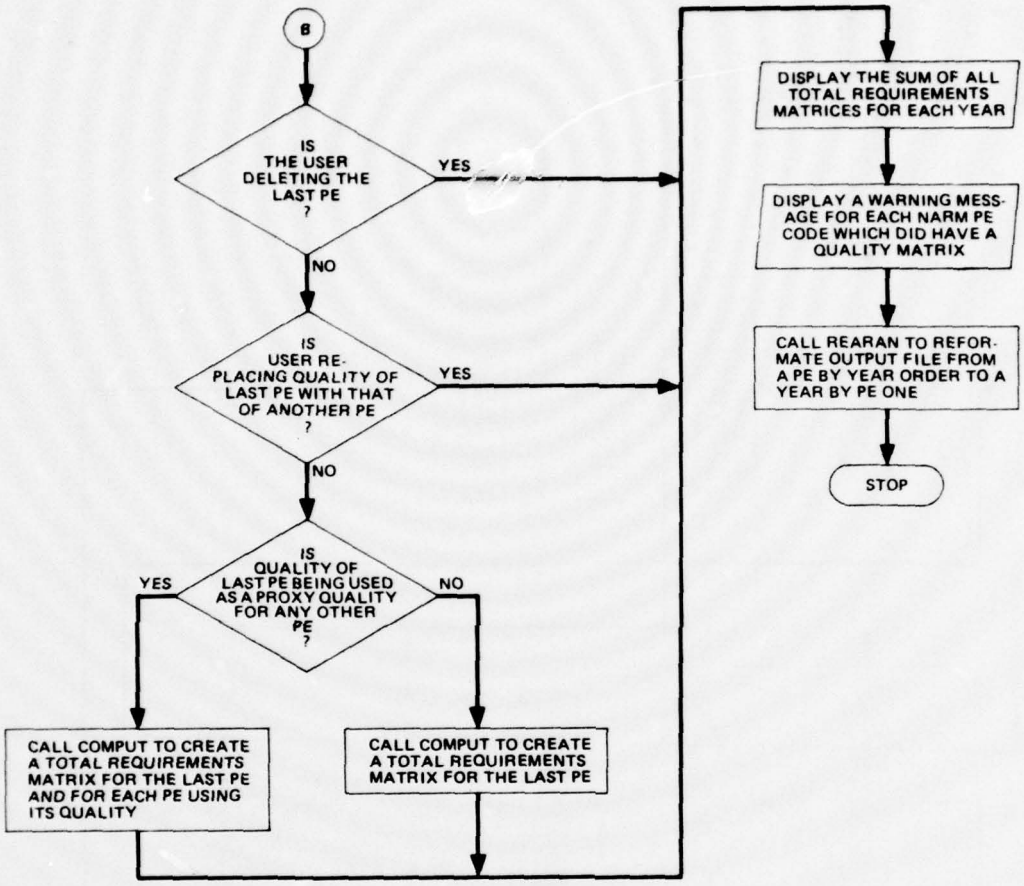
```
      DO 190 K=1,5
      SAVE(J,K)=WORK(KYEAR,J,K)*NSCALE(I)
      QMN(I,J,K)=QMN(I,J,K)+SAVE(J,K)
  190 TOTAL(I)=TOTAL(I)+SAVE(J,K)
      IF (IDISK.EQ.1) WRITE(30) IPE,I,SAVE
C
C          DISPLAY THE TOTALS
      IF (IPRNT.EQ.1) CALL PRINT (1)
      NPE(IN)=IBLK
      RETURN
C
  210 FORMAT (/10X,71HTHERE IS NO ENTRY IN THE FILE OF NARM REQUIREMENTS
     * CORRESPONDING TO PE ,A6,1H.)
      END
C
C*****************************************************************
C
      SUBROUTINE PRINT (NPR)
C
C     THIS ROUTINE PRINTS THE FOLLOWING MATRICES:
C     1 NARM SCALED TOTALS FOR EACH PE
C     2 NARM SCALED QUALITY MIX MATRIX FOR ALL NAVY.
C     3 BILLET REQUIREMENTS TOTALS FOR EACH PE
C     4 BILLET REQUIREMENTS FOR ALL NAVY.
C
      COMMON /I1/  KYEAR, ICOMP, IPRNT, IDISK, NYEAR
      COMMON /S5/  PE, BILLET(5,11),7), QMN(6,111,10)
      COMMON /S7/ TOTAL(6)
      COMMON /RATING/ IRATE(110), JRATE(110), IBLK
C
C          MATRIX 1 AND 3
      IF (NPR.NE.1.AND.NPR.NE.3) GO TO 10
      WRITE (6,80) PE,(TOTAL(I),I=1,5)
      RETURN
C
C          MATRIX 2 AND 4
   10 IF (NPR.NE.2.AND.NPR.NE.4) RETURN
      DO 20 I=1,6
      IYR=NYEAR+I-1
      WRITE (6,90) IYR
      IF (NPR.EQ.2) WRITE (6,100)
      IF (NPR.EQ.4) WRITE (6,110)
      WRITE (6,120)
C
      WRITE (6,130) (IRATE(J),JRATE(J),(QMN(I,J,K),K=1,10),J=1,110)
      WRITE (6,140) (QMN(I,111,J),J=1,10)
   20 CONTINUE
      RETURN
C
   80 FORMAT (5X,A6,5X,7F12.0/)
   90 FORMAT (1H1//50X,34HREQUIREMENTS FOR ALL NAVY IN YEAR ,I4,1H.)
  100 FORMAT (1H0,43X,49H(BILLET REQUIREMENTS SCALED BY NARM REQUIREMENT
     *S))
  110 FORMAT (1H0,54X,21H(BILLET REQUIREMENTS))
  120 FORMAT (1H0,61X,8HPAYGRADE,45X,6HRATING/9X,6HRATING,5X,7X,3HE-9,7X
     *,3HE-8,7X,3HE-7,7X,3HE-6,7X,3HE-5,7X,3HE-4,7X,3HE-3,7X,3HE-2,7X,3H
     *E-1,5X,5HTOTAL/)
  130 FORMAT (7X,A3,1X,A4,5X,10F10.0)
  140 FORMAT (7X,8HPAYGRADE/10X,5HTOTAL,5X,10F10.0)
      END
C
C*****************************************************************
C
      SUBROUTINE READAN(ICOMP,KYEAR)
```

```
C
C         THIS ROUTINE REFORMATES THE OUTPUT FROM AN (PE THEN YEAR)
C         TO A (YEAR THEN PE) FORMAT
C
      COMMON /$4/  REQ(110,9)
      COMMON /$7/ TOTAL(6)
C
C         INITIALIZE VARIABLES
      IR=0
      DO 10 I=1,6
   10 TOTAL(I)=0.0
C
C         READ THE FIRST TAPE
C         WRITE EACH MATRIX ON THE DISK CORRESPONDING TO ITS YEAR
   20 IR=IR+1
      READ (30,END=40,ERR=22,DATA=22,RESULTS=IND)
     *       IPE,IYR,REQ
      GO TO 30
   22 WRITE(6,1000) IR,IND,IPE,IYR
 1000 FORMAT (23HOERROR FILE 30   RECORD,I7,13H   INDICATOR,
     *         A6,8H   DATA,A6,I5)
   30 DO 35 K=1,9
   35 TOTAL(IYR)=TOTAL(IYR)+REQ(24,K)
      JYR=IYR+40
      WRITE(JYR) IPE,((REQ(J,K),K=1,9),J=1,110)
      GO TO 20
C
C         DISPLAY CHECK NUMBERS
   40 DO 45 I=1,6
      WRITE(6,3000) I
 3000 FORMAT(1HO,6H  YEAR,I3)
      WRITE(6,3050) TOTAL(I)
 3050 FORMAT(5X,9F10.0)
   45 TOTAL(I)=0.0
      LOCK 30
C
C         READ THE DISK FILES BY YEAR AND THEN COPY TO OUTPUT TAPE
      IEND=46
      IF (ICOMP.EQ.2) IEND=40+KYEAR
      DO 80 I=41,IEND
      L=I-40
      REWIND I
   50 READ(I,END=70) IPE,((REQ(J,K),K=1,9),J=1,110)
      WRITE(4)2000) IPE,L,((REQ(J,K),K=1,9),J=1,110)
 2000 FORMAT (2I6,990F6.1)
      DO 56 J=1,9
   56 TOTAL(L)=TOTAL(L)+REQ(24,J)
      GO TO 50
   70 IPE=999999
      WRITE (40,2000) IPE,L,REQ
      WRITE(6,3000) L
      WRITE(6,3050) TOTAL(L)
   80 CONTINUE
      LOCK 41
      LOCK 40
      RETURN
      END
C
C*****************************************************************************
C
      INTEGER FUNCTION NSCANX(M,L,I)
C
C    SEARCH THE FIRST L ELEMENTS OF ARRAY M FOR THE FIRST OCCURANCE OF I
      DIMENSION M(1)
```

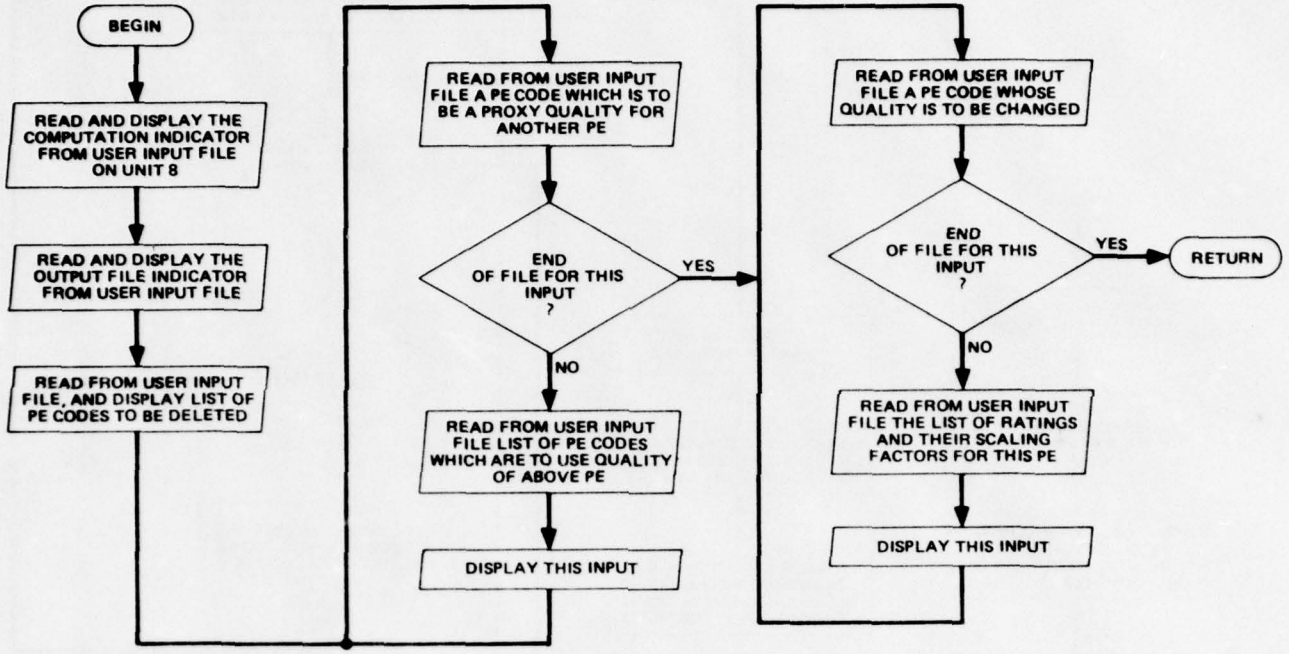
```
      J=L
    5 IF(M(J).IS.I) GO TO 10
      J=J-1
      IF (J.GT.0) GO TO 5
      J=0
   10 NSCANX=J
      RETURN
      END
```

Routine TOTAL, main

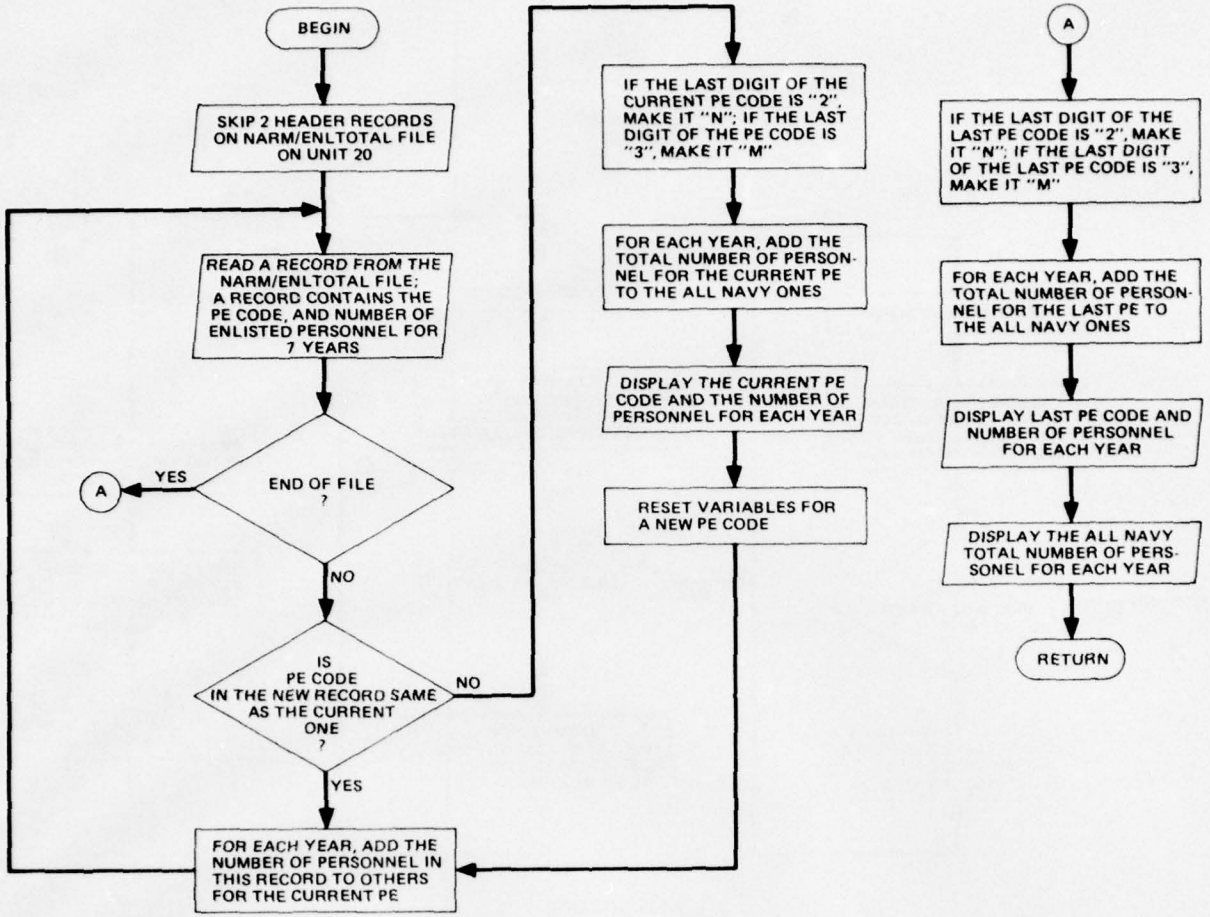



B
IS THE USER DELETING THE LAST PE ?
YES
NO
IS USER RE-PLACING QUALITY OF LAST PE WITH THAT OF ANOTHER PE ?
YES
NO
IS QUALITY OF LAST PE BEING USED AS A PROXY QUALITY FOR ANY OTHER PE ?
YES
NO
CALL COMPUT TO CREATE A TOTAL REQUIREMENTS MATRIX FOR THE LAST PE AND FOR EACH PE USING ITS QUALITY
CALL COMPUT TO CREATE A TOTAL REQUIREMENTS MATRIX FOR THE LAST PE
DISPLAY THE SUM OF ALL TOTAL REQUIREMENTS MATRICES FOR EACH YEAR
DISPLAY A WARNING MESS-AGE FOR EACH NARM PE CODE WHICH DID HAVE A QUALITY MATRIX
CALL REARAN TO REFOR-MATE OUTPUT FILE FROM A PE BY YEAR ORDER TO A YEAR BY PE ONE
STOP

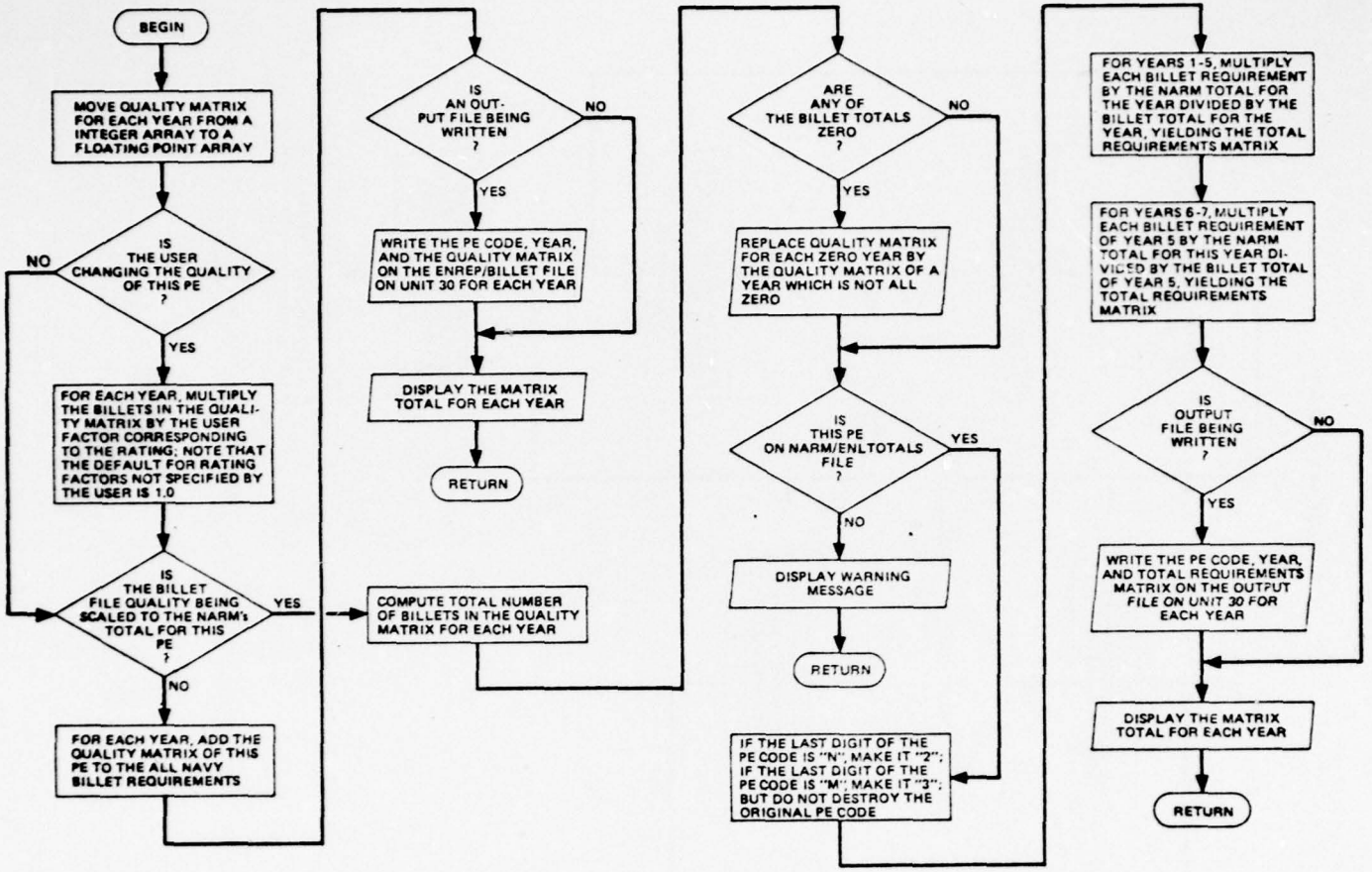
Subroutine INPUT



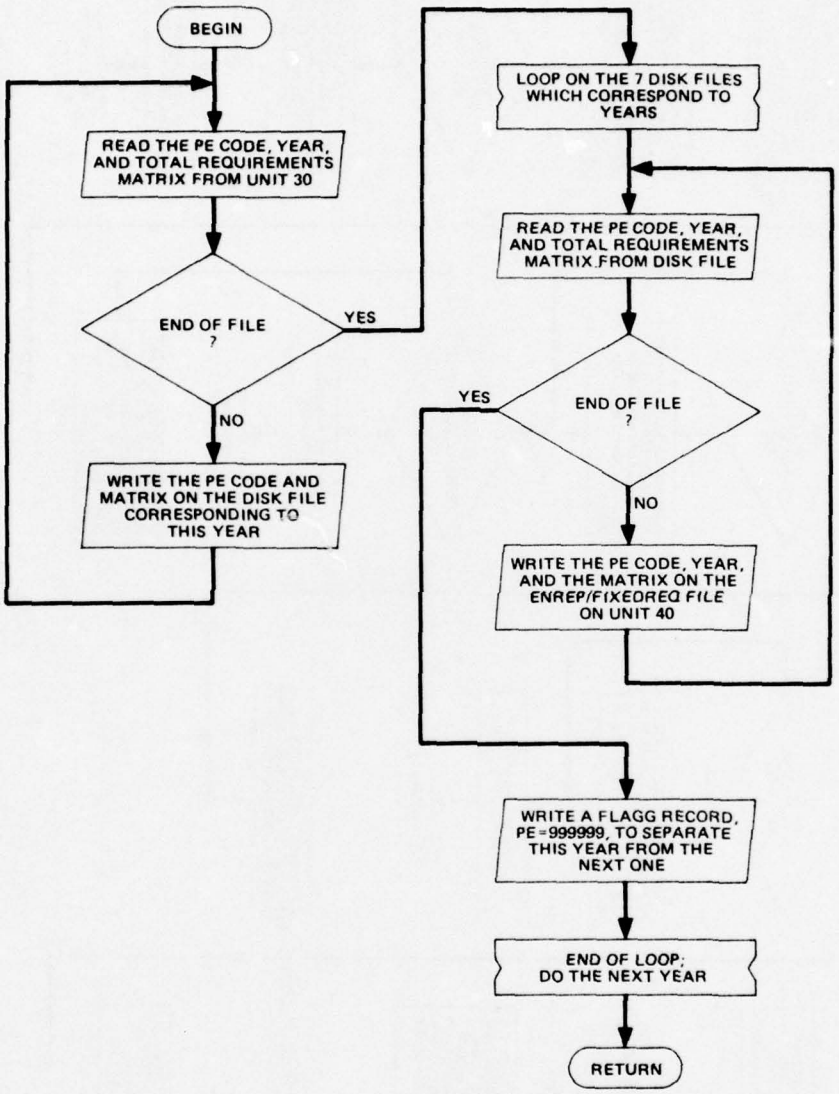
Subroutine NARMRD



Subroutine COMPUT



Subroutine REARAN



ANNEX B-11

PROGRAM PLANNER

```
      $RESET FREE
      $SET AUTOBIND
      $BIND = FROM CNA/LIB/=
      FILE  1(TITLE="OCT77NARM/SHIP/ACT",KIND=DISK,FILETYPE=8)
      FILE  2(TITLE="OCT77NARM/AIR/ACT",KIND=DISK,FILETYPE=8)
      FILE  3(TITLE="ENREP/ALL",KIND=PETAPE,FILETYPE=8,SERIALNO=671)
      FILE  4(KIND=DISK,MAXRECSIZE=999,BLOCKSIZE=999,AREASIZE=10)
      FILE  5(TITLE="ENREP/PLANNER/DATAP",FILETYPE=8,KIND=DISK)
      FILE  6(TITLE="ENREP/SUPPORT/QUALITY",KIND=PETAPE,FILETYPE=8,SERIALNO=
     *  532)
      FILE  9(TITLE="ENREP/DICT/SHIP",KIND=DISK,FILETYPE=8)
      FILE  10(TITLE="ENREP/DICT/AIR",KIND=DISK,FILETYPE=8)
      FILE  11(TITLE="ENREP/FIXEDREQ",KIND=PETAPE,FILETYPE=8,SERIALNO=690)
      FILE  12(KIND=DISK,MAXRECSIZE=4,BLOCKSIZE=32)
      FILE  13(KIND=DISK,MAXRECSIZE=4,BLOCKSIZE=32)
      FILE  14(KIND=PETAPE,MAXRECSIZE=991,BLOCKSIZE=991,SERIALNO=559,
     *    TITLE="SCRATCH2")
      FILE  15(KIND=DISK,MAXRECSIZE=990,AREASIZE=10)
      FILE  16(KIND=DISK,MAXRECSIZE=992,BLOCKSIZE=992,AREASIZE=10)
      FILE  18(TITLE="ENL/INVEN/FEB76",KIND=PETAPE,FILETYPE=8,SERIALNO=578)
      FILE  20(TITLE="ENREP/FINALREQ",MAXRECSIZE=992,BLOCKSIZE=992,SERIALNO=
     *  736,KIND=PETAPE)
      FILE  21(TITLE="ENREP/PLANNER/STATS",FILETYPE=8,KIND=DISK)
      FILE  22(TITLE="ENREP/PROPHET",KIND=DISK,MAXRECSIZE=12,BLOCKSIZE=360,
     *    PROTECTION=SAVE);
C
C         ENREP PROJECTION MODEL - PLANNER
C         COMPUTES ENLISTED REQUIREMENTS BY RATING AND PAYGRADE
C                  OR BY RATING AND LENGTH OF SERVICE (LOS)
C         INPUTS
C           1 - IUSF  - SHIP FORCES BY ACT/PE/PU (FORCES)
C           2 - IUAF  - A/C FORCES BY ACT/PE/PU (FORCES)
C           3 - IUUR1 - SHIP AND A/C UNIT REQUIREMENTS BY
C                       RATING/PAYGRADE FOR EACH ACT/PE/PU,
C                       YEARS 1-5, (FACTORS)
C           5 -         USER'S INPUT
C           6 -         PRINTER
C           8 - IUSQ  - SUPPORT QUALITY MATRIX FOR EACH FORCE SUPPORT PE
C                       BY RATING AND PAYGRADE, YEARS 1-5, (SUPPORT)
C           9 - IUSD  - SHIP DICTIONARIES  BY ACT/PE/PU
C          10 - IUAD  - AIR  DICTIONARIES  BY ACT/PE/PU
C          11 - IURQ  - FIXED REQUIREMENTS BY RATING/PAYGRADE FOR EACH
C                       PE, YEARS 1-6, (PLANNER) - IF PROJECTION MODE
C                     - TOTAL REQUIREMENTS BY RATING/PAYGRADE FOR EACH
C                       PE, YEARS 1-6, (TOTAL) - IF INPUT MODE
C          18 - IUIN - ACTUAL ENLISTED INVENTORY BY RATING/PAYGRADE/LOS
C                       (PERS2X)
C          21 - IUST - IF PROJECTION MODE - STATISTICS COMPUTED WITH THE
C                      FIXED REQUIREMENTS
C         STORAGE
C           4 - IUUR2 - SHIP AND A/C UNIT REQUIREMENTS
C                       RATING/PAYGRADE FOR EACH ACT/PE/PU, YEARS 6-16
C          12 - IURSF - REFORMATED SHIP FORCES
C          13 - IURAF - REFORMATED A/C FORCES
C          14 - IUVR  - VARIABLE REQUIREMENTS BY PE
C          15 - IURA  - FORCE REQUIREMENTS BY PE   RANDOM ACESS
C          16 - IUEPA - SUPPORT QUALITATIVE REQUIREMENTS FOR THE EPA
C                       YEARS (6-16)
C                     - ALSO FIXED REQUIREMENTS FOR THE EPA YEARS
C                       (7-16)
C         OUTPUT
```

```
C          20 - IUOUT - ALL NAVY REQUIREMENTS BY PE - IF PROJECTION MODE
C                     - FIXED REQUIREMENTS BY PE - IF INPUT MODE
C          21 - IUST -  IF INPUT MODE - STATISTICS COMPUTED FOR USE IN A
C                          PROJECTION MODE
C                     -  IF PROJECTION MODE - INPUT REQUIREMENTS FOR
C                          PROPHET
C          22-  IUPH  - IF PROJECTION MODE - OUTPUT TO PROPHET -
C                       REQUIREMENTS BY RATING FOR THE FIRST 7 YEARS
C
      COMMON /$1/ SUPPOR(5), IND, IYR, FIXR, ILOS, NYEAR,
     *            NACA, NPEA(60), NPUA(60,10),
     *            NACS, NPES(60), NPUS(60,10),
     *            FORCE(60,10,18), IDACT(60), IDPE(60,10), IDPU(60,10,18)
      COMMON /$4/ NUS, NUSPE(10,11), NUSPX(10,7), VPCUS(10), CURNT(7,16)
      COMMON /$B/ SHIP, AIR, ALL, FIX
      COMMON /$A/ PECODE(100), LOCPE(100), ND, MAXPE
      COMMON /$C/ IRATE(110), JRATE(110)
      COMMON /$D/ VSPT(95), KEY(95), NVPE
      COMMON /$E/ NAME(),3)
      COMMON /FILES/ IUSF,IUAF,IUUR1,IUUR2,IUSQ,
     *               IUSD,IUAD,IURJ,IUISF,IUIAF,IUVR,IURA,
     *               IUEPA,IUOUT,IUST,IUIN,IUPH,IBY
      INTEGER SHIP, AIR, ALL, FIX
      DATA JRATE/4H0100,4H0150,4H0200,4H0250,4H0300,4H0350,4H0400,4H0401
     *   ,4H0404,4H0450,4H0500,4H0600,4H0601,4H0602,4H0604,4H0800,4H0801
     *   ,4H0802,4H0803,4H0810,4H0900,4H1000,4H1001,4H1002,4H1010,4H1080
     *   ,4H1100,4H1200,4H1400,4H1500,4H1611,4H1622,4H1633,4H1644,4H1655
     *   ,4H1666,4H1700,4H1701,4H1750,4H1800,4H1900,4H2000,4H2100,4H2200
     *   ,4H2500,4H2290,4H2300,4H2490,4H2600,4H2700,4H3100,4H3200,4H3300
     *   ,4H3700,4H3800,4H3900,4H4000,4H4020,4H4100,4H4200,4H4300,4H4600
     *   ,4H4700,4H4400,4H5080,4H5100,4H5300,4H5390,4H5410,4H5500,4H5600
     *   ,4H5700,4H5800,4H6080,4H6180,4H6200,4H6205,4H6206,4H6300,4H6310
     *   ,4H6400,4H6500,4H6520,4H6600,4H6700,4H6704,4H6705,4H6706,4H6800
     *   ,4H6900,4H6901,4H6902,4H6903,4H7000,4H7100,4H7200,4H7300,4H7500
     *   ,4H7501,4H7502,4H7503,4H7400,4H7600,4H7700,4H4000,4H8300,4H3600
     *   ,4H5000,4H6300,4H7800/
      DATA IRATE/3HAA ,3HAA ,3HDM ,3HSM ,3HDS ,3HEM ,3HST ,3HSTG,3HSTS,
     *     3HOT ,3HTM ,3HGM ,3HGMM,3HGMT,3HGMG,3HFT ,3HFTG,3HFT9,3HFTM,
     *     3HMT ,3HMM ,3HET ,3HETM,3HETR,3HDS ,3HPI ,3HIM ,3HON ,3HNC ,
     *     3HPM ,3HCTT,3HCTA,3HCTM,3HCTO,3HCTR,3HCTI,3HYM ,3HCYM,3HLM ,
     *     3HPN ,3HOP ,3HSK ,3HDK ,3HMS ,3HSO ,3HCS ,3HIS ,3HS4 ,3HIO ,
     *     3HPC ,3HLI ,3HDM ,3HMU ,3HMM ,3HEN ,3HMR ,3HBT ,3HBR ,3HEM ,
     *     3HIC ,3HHT ,3HPM ,3HML ,3HGS ,3HCU ,3HEA ,3HCE ,3HEQ ,3HEJ ,
     *     3HCM ,3HOU ,3HSW ,3HUT ,3HAF ,3HAV ,3HAD ,3HADR,3HADJ,3HAT ,
     *     3HAX ,3HAW ,3HAO ,3HAQ ,3HAC ,3HAB ,3HABS,3HABF,3HAJH,3HAE ,
     *     3HAM ,3HAMS,3HAMH,3HAME,3HPR ,3HAG ,3HTD ,3HAK ,3HAS ,3HASE,
     *     3HASH,3HASM,3HAZ ,3HPH ,3HPT ,3HHM ,3HDT ,3HSN ,3HFN ,3HCV ,
     *     3HAN /
      DATA VSPT/ 246112, 246122, 246132, 246142, 246152, 246162, 246172,
     *  246182, 725272,         241562, 242622, 246332, 867232, 847412,
     *  847422, 847112, 847222, 847312, 847512, 847522, 357962, 867612,
     *  897312,
     *  877112, 877142,         817112, 817132,         887212, 887322,
     *  112222, 112282, 241122, 242412, 242922, 242912, 242922, 242932,
     *  242942, 242952, 242962, 242972, 421182, 244112, 244122, 244412,
     *  244512, 244522, 245612, 655012, 847432, 243022, 020022, 242812,
     *  341122, 112212, 523782, 523662, 523592, 523502,
     *  113152, 241342, 241352, 241422, 241442, 241452, 241512, 241522,
     *  241532, 241542, 241552, 242322, 242332, 242342, 242422,
     *  242432, 242442, 242512, 243052, 244552, 351122, 351312,
     *  523112, 523152, 523162, 523172, 523242, 523252, 523262, 523322,
     *  523332, 523412, 523712, 523792, 847432, 241362/
      DATA KEY / 1, 1, 1, 1, 1, 1, 1, 1, 1,
     *           2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,
```

```
     *           3, 3,
     *           4, 4,
     *           5, 5,
     *           6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6,
     *           6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6,
     *           7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7,
     *           7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7/
      DATA (NAME(1,N),N=1,3) /6HBASE O, 6HPS SUP, 6HPORT/
      DATA (NAME(2,N),N=1,3) /6HTRAINI, 6HNG SUP, 4HPORT/
      DATA (NAME(3,N),N=1,3) /6HMEDICA, 6HL SUPP, 3HORT/
      DATA (NAME(4,N),N=1,3) /6HRECRUI, 6HTING &, 6HEXAMINE/
      DATA (NAME(5,N),N=1,3) /6HINDIVI, 6HDUAL S, 6HUPPORT/
      DATA (NAME(6,N),N=1,3) /6HSHIP F, 5HORCES, 1H /
      DATA (NAME(7,N),N=1,3) /6HA/C FO, 4HRCES, 1H /
      DATA (NAME(8,N),N=1,3) /6HON BOA, 2HRD, 1H /
      DATA (NAME(9,N),N=1,3) /6HALL NA, 2HVY, 1H /
      DATA SHIP/4HSHIP/, AIR/3HAIR/, ALL/3HALL/, FIX/3HFIX/
C
C          INITIALIZE FILE NUMBERS, BASE YEAR, AND
C            MAX NUMBER OF VARIABLE PE CODES
      IUSF=1
      IUAF=2
      IUOR1=3
      IUOR2=4
      IUSQ=8
      IUSD=9
      IUAD=10
      IUXQ=11
      IURSF=12
      IUTAF=13
      IUVR=14
      IUPA=15
      IUEPA=16
      IUOUT=20
      IUST=21
      IUPH=22
      IUIN=10
      IBY=1978
      MAXPE=100
      NVPE=95
C
C        READ THE NUMBER OF YEARS TO DO, COLS: 1-2
C        READ THE OPERATION MODE, COLS: 5-10
C          "INPUT" = INPUT MODE - COMPUTE FIXED REQ.
C          "PROJECT" = PROJECTION MODE - PROJECT ALL NAVY REQ.
      READ (5,130) NYEAR,FIXR
      IF (FIXR.EQ.6HPROJEC) FIXR=0
      IF (FIXR.EQ.5HINPUT) FIXR=1
      IF (FIXR.NE.0.AND.FIXR.NE.1) FIXR=0
      IF (FIXR.EQ.0) WRITE (6,140)
      IF (FIXR.EQ.1) WRITE (6,150)
      IF (NYEAR.LE.0) NYEAR=1
      IF (NYEAR.GT.16) NYEAR=16
      WRITE (6,160) NYEAR
C
C          READ THE USER INPUTS AND OVERRIDES
      IF (FIXR.EQ.0) CALL RDINPU
C
C          READ SHIP ACT/PE/PU DICTIONARY, SHIP FORCES, AND
C            STORE THE ACT/PE/PU CODES AND THEIR FORCES
      IND=SHIP
      CALL RDFORC
      NACS=NACA
      DO 40 I=1,NACS
```

```
19000           NPES(I)=NPEA(I)
19100           K=NPES(I)
19200           DO 40 J=1,K
19300        40 NPUS(I,J)=NPUA(I,J)
19400           CLOSE (IUSD,DISP=KEEP)
19500           CLOSE (IUSF,DISP=KEEP)
19600           REWIND IURSF
19700     C
19800     C          READ A/C ACT/PE/PU DICTIONARY, A/C FORCES, AND
19900     C            STORE THE ACT/PE/PU CODES AND THEIR FORCES
20000           IND=AIR
20100           CALL RDFORC
20200           CLOSE (IUAD,DISP=KEEP)
20300           CLOSE (IUAF,DISP=KEEP)
20400           REWIND IURAF
20500     C
20600     C          LOOP ON YEARS
20700           DO 100 IYR=1,NYEAR
20800           WRITE (6,190) IYR
20900     C
21000     C          ZERO THE PE FILE ARRAY FOR VARIABLE ONES STORED ON RANDOM
21100     C           ACCESS FILE IURA
21200           ND=0
21300           DO 60 I=1,MAXPE
21400        60 PECODE(I)=0
21500     C
21600     C          ZERO THE SUPPORT ARRAY
21700           DO 70 I=1,5
21800        70 SUPPOR(I)=0.0
21900     C
22000     C          COMPUTE SHIP FORCE MANPOWER
22100           IND=SHIP
22200           DO 80 I=1,NACS
22300           N=NPES(I)
22400           DO 80 J=1,N
22500           M=NPUS(I,J)
22600           DO 80 K=1,M
22700        80 READ (IURSF) FORCE(I,J,K),IDACT(I),IDPE(I,J),IDPU(I,J,K)
22800           CALL CPFORC
22900     C
23000     C          COMPUTE A/C FORCE MANPOWER
23100           IND=AIR
23200           DO 90 I=1,NACA
23300           N=NPEA(I)
23400           DO 90 J=1,N
23500           M=NPUA(I,J)
23600           DO 90 K=1,M
23700        90 READ (IURAF) FORCE(I,J,K),IDACT(I),IDPE(I,J),IDPU(I,J,K)
23800           CALL CPFORC
23900     C
24000     C          COMPUTE VARIABLE SUPPORT MANPOWER
24100           CALL CPSUPP
24200     C
24300     C          PRINT VARIABLE REQUIREMENTS
24400           CALL PRINT
24500     C
24600     C          END OF LOOP ON YEARS
24700       100 CONTINUE
24800     C
24900     C          RELEASE FILES
25000           CLOSE (IUUR2)
25100           CLOSE (IURSF)
25200           CLOSE (IURAF)
25300           REWIND IUVR
```

```
C
C          TEST OPERATION MODE
      IF (FIXR.EQ.1) GO TO 120
C
C          IF PROJECTION MODE -
C
C          COMPUTE PERCENTAGE CHANGES BETWEEN THE VARIABILITY PROXIES
C          IN THE BASE CASE AND IN THIS CASE
      IF (NUS.GT.0) CALL CPPRXY
C
C          IF DESIRED, COMPUTE DISTRIBUTIONS FOR TRANSLATING QUALITY FROM
C           RATING/PAYGRADE TO RATING/LOS
      IF (ILOS.EQ.0) CALL TRFLOS(1)
C
C          COMPUTE VARIABLE REQUIREMENTS FOR PE CODES THE USER MADE
C          VARIABLE AND THEN ADD FIXED REQUIREMENTS TO EACH PE
      IND=ALL
      CALL ADDFIX
C
C          WRITE OUTPUT FOR PROHPET SYSTEM
      CALL PROPHT(2)
C
C          RELEASE FILES
      CLOSE (IUVR)
      LOCK IURQ
      LOCK IUOUT
      STOP
C
C          IF INPUT MODE -
C          COMPUTE FIXED REQUIREMENTS FOR EACH PE CODE
  120 IND=FIX
      CALL CPFIXR
C
C          RELEASE FILES
      CLOSE (IUVR)
      LOCK IURQ
      LOCK IUOUT
      STOP
C
  130 FORMAT (I2,2X,A6)
  140 FORMAT (1H1/6X,"PROJECTION RUN OF THE PLANNER MODEL")
  150 FORMAT (1H1/6X,"PLANNER WILL COMPUTE FIXED REQUIREMENTS")
  160 FORMAT (1H0,5X,43HENLISTED REQUIREMENTS WILL BE COMPUTED FOR ,I2,6
     *H YEARS)
  190 FORMAT (/H1 YEAR ,I3)
      END
C
C*****************************************************************************
C
      SUBROUTINE RDINPU
      COMMON /$1/ I,J,K,L,M, IND,  IYR, FIXR, ILOS, NYEAR,
     *            WASTE(5135), INPUT(6),
     *            UPDATE(200,16), UPACT(201), UPPE(201), UPPU(201), NUP,
     *            JYR(8), FORCE(8)
      COMMON /$2/ NVFS(5,16), OVFS(5,16), FIXPCT(16)
      COMMON /$3/ DFUPDT(100,10), IDFUP,
     *            PFUPDT(50,9), LPFUPD(50,20,2), NPFUP
      DIMENSION IFUPDT(100,10), JFUPDT(50,9)
      EQUIVALENCE (DFUPDT(1),IFUPDT(1)), (PFUPDT(1),JFUPDT(1))
      COMMON /$4/ NUS, NUSPE(10,11), NUSPX(10,7), VPCUS(10), CURNT(7,16)
      COMMON /$E/ NAME(9,3)
      COMMON /FILES/ IUSF,IUAF,IUUR1,IUUR2,IUSJ,
     *               IUSD,IUAD,IURQ,IURSF,IUKAF,IUVR,IURA,
     *               IUEPA,IUOUT,IUST,IUIN,IUPH,ISY
```

```
      DIMENSION KYR(10), XPC(10)
      INTEGER UPACT, UPPE, UPPU
      REAL NVFS
C
C        READ THE LOS TRANSFORMATION INDICATOR
C        IF ILOS = "LOS" TRANSFORM THE RATING/PAYGRADE QUALITY TO
C                        TO RATING/LOS QUALITY
C        IF ILOS = "   " DO NOT MAKE THE TRANSFORMATION
      READ (5,1000) ILOS
 1000 FORMAT (A3)
      IF (ILOS.NE.3HLOS) ILOS=1
      IF (ILOS.NE.1) ILOS=0
      IF (ILOS.EQ.0) WRITE (6,7000)
      IF (ILOS.NE.0) WRITE (6,7010)
 7000 FORMAT (1H0,5X,"REQUIREMENTS ARE BEING TRANSFORMED FROM RATING/PAY
     *GRADE TO RATING/LOS")
 7010 FORMAT (1H0,5X,"REQUIREMENTS ARE NOT BEING TRANSFORMED FROM RATING
     */PAYGRADE TO RATING/LOS")
C
C          READ THE USER INPUT INDICATORS
C
C     INPUT  1 - FORCES UPDATES BY PU/PE
C                IF INPUT(1)>0, USER IS USING THIS OPTION, AND INPUT(1)
C                               IS THE NUMBER OF UPDATES
C                IF INPUT(1)=0, USER IS NOT USING THIS OPTION
C                COLS: 1-4
C
C            2 - DIRECT FACTOR UPDATES BY PU/PE
C                IF INPUT(2)>0, USER IS USING THIS OPTION, AND INPUT(2)
C                               IS THE NUMBER OF UPDATES
C                IF INPUT(2)=0, USER IS NOT USING THIS OPTION
C                COLS: 5-8
C
C            3 - PERCENTAGE FACTOR UPDATES BY GROUPS OF PU/PE'S
C                IF INPUT(3)>0, USER IS USING THIS OPTION, AND INPUT(3)
C                               IS THE NUMBER OF UPDATES
C                IF INPUT(3)=0, USER IS NOT USING THIS OPTION
C                COLS: 9-12
C
C            4 - CHANGES TO THE NARM PROPORTION OF FIXED/VARIABLE FOR
C                  FORCE SUPPORT PE CODES
C                IF INPUT(4)>0, USER IS USING THIS OPTION, AND INPUT(4)
C                               IS THE NUMBER OF CHANGES
C                IF INPUT(4)=0, USER IS NOT USING THIS OPTION
C                COLS: 13-16
C
C            5 - USER CREATED SUPPORT AREAS
C                IF INPUT(5)>0, USER IS USING THIS OPTION, AND INPUT(5)
C                               IS THE NUMBER OF USER AREAS
C                IF INPUT(5)=0, USER IS NOT USING THIS OPTION
C                COLS: 17-20
C
C            6 - PERCENTAGE CHANGE FOR FIXED REQUIREMENTS YEARS 1-16
C                IF INPUT(6)>0, USER IS USING THIS OPTION
C                IF INPUT(6)=0, USER IS NOT USING THIS OPTION
C                COLS: 21-24
C
      READ (5,1010) INPUT
 1010 FORMAT (6I4)
C
C        READ FORCE UPDATES:
C        MAX OF 200 FORCE UPDATES
C        FORCES ARE IDENTIFIED BY ACT, PE, PU CODES WHICH ARE
C         IN COLS: 1-4, 7-12, 15-20
```

```
C         NEW FORCES FOR YEARS 1-NYEAR ARE IN COLS:
C           1-5,  6-10, 11-15, 16-20, 21-25, 26-30, 31-35, 36-40,
C         41-45, 46-50, 51-55, 56-60, 61-65, 66-70, 71-75, 76-80
   10 IF (INPUT(1).LE.0) GO TO 140
      IF (INPUT(1).GT.20) CALL ERROR (6,INPUT(1),0,0,0,0)
      DO 60 NUP=1,INPUT(1)
      READ (5,90) UPACT(NUP),UPPE(NUP),UPPU(NUP)
      READ (5,100) (UPDATE(NUP,K),K=1,NYEAR)
   60 CONTINUE
C           PRINT THE FORCE UPDATES
      WRITE (6,110)
      NUP=INPUT(1)
      L=10
      M=IBY-1+NYEAR
      DO 80 I=1,NUP
      L=L+1
      IF (L.LE.25) GO TO 70
      WRITE (6,120) (K,K=IBY,M)
      L=0
   70 WRITE (6,130) UPACT(I),UPPE(I),UPPU(I),(UPDATE(I,K),K=1,NYEAR)
   80 CONTINUE
   90 FORMAT (I4,I4,I9)
  100 FORMAT (8(I5,F5.0))
  110 FORMAT (/6X,69HTHE FOLLOWING UPDATES ARE REPLACING THE NARM ONES I
     *N THE INPUT FORCES/6X,45HTHESE UPDATES ARE IN EFFECT FOR THIS RUN
     *ONLY)
  120 FORMAT (1H ,11X,3HACT,4X,2HPE,6X,2HPU/11X,4HCODE,3X,4HCODE,4X,4HCO
     *DE,3X,16I6)
  130 FORMAT (1H ,10X,I4,2X,I6,2X,I6,1X,16F6.0)
C
C         READ DIRECT FACTOR UPDATES BY PU/PE
C         MAX OF 100 UPDATES
C         UPDATES ARE IDENTIFIED BY:
C           COLS:  1-6 - PU CODE
C                 9-14 - PE CODE
C                17-22 - FIRST YEAR AFFECTED
C                23-28 - LAST YEAR AFFECTED
C                   29 - NUMBER OF FACTORS AFFECTED
C          FOR EACH FACTOR AFFECTED, SPECIFY:
C           COLS:    1 - FACTOR NUMBER
C                  2-6 - FACTOR VALUE
C           FACTOR NUMBER 1 IS BASE OPS
C                         2 IS TRAINING
C                         3 IS MEDICAL SUPPORT
C                         4 IS RECRUITING + EXAMINING
C                         5 IS INDIVIDUAL
C                         6 IS ONBOARD MANNING
  140 IF (INPUT(2).LE.0) GO TO 180
      DO 150 I=1,100
      DO 150 J=1,6
  150 DFUPDT(I,J)=-100.
      DO 160 K=1,INPUT(2)
      NDFUP=K
      IF (NDFUP.GT.100) CALL ERROR(7,NDFUP,0,0,0,0)
      READ (5,2000) (IFUPDT(NDFUP,I),I=7,10), X
 2000 FORMAT (I6,I8,2I6,I3)
      DO 170 I=1,N
      READ (5,2010) J,X
 2010 FORMAT (I1,F5.0)
      IF (J.LE.0.OR.J.GT.6) CALL ERROR(8,IFUPDT(NDFUP,7),IFUPDT(NDFUP,8)
     *                                          ,J,0,0)
      IF (J.EQ.0) GO TO 170
      DFUPDT(NDFUP,J)=X
  170 CONTINUE
```

```
44600      160 CONTINUE
44700          WRITE (6,2020)
44800     2020 FORMAT (1H0,6X,"THE FOLLOWING FACTORS ARE REPLACING THE NARM ONES
44900         *IN THIS RUN ONLY"/14X,2HPU,6X,2HPE,6X,5HYEARS,4X,6HFACTOR,2X,4HNAM
45000         *E)
45100          DO 176 I=1,NOFUP
45200          IF (IFUPDT(I,10).LT.IFUPDT(I,9)) IFUPDT(I,10)=
45300         *      IFUPDT(I,9)
45400          DO 176 J=1,5
45500          IF (DFUPDT(I,J).LT.0) GO TO 176
45600          WRITE (6,2030) (IFUPDT(I,K),K=7,10),DFUPDT(I,J),(NAME(J,K),K=1,3)
45700     2030 FORMAT (12X,I6,2X,I6,2X,I4,1H-,I4,2X,F6.0,2X,3A6)
45800      176 CONTINUE
45900          IF (DFUPDT(I,6).GE.1)
46000         *WRITE (6,2030) (IFUPDT(I,K),K=7,10),DFUPDT(I,6),(NAME(8,K),K=1,3)
46100          IFUPDT(I,9)=IFUPDT(I,9)+1-IBY
46200          IFUPDT(I,10)=IFUPDT(I,10)+1-IBY
46300      178 CONTINUE
46400     C
46500     C              READ THE PERCENTAGE FACTOR UPDATES BY GROUPS OF PU/PE'S
46600     C              MAX OF 50 GROUPS
46700     C              FOR EACH UPDATE, SPECIFY:
46800     C                COLS: 1-4 - FIRST YEAR AFFECTED
46900     C                      7-10 - LAST YEAR AFFECTED
47000     C                     13-14 - NUMBER OF PU/PE COMBINATIONS IN THE GROUP
47100     C                        17 - NUMBER OF FACTORS AFFECTED
47200     C                THEN SPECIFY THE MEMBERS OF THE GROUP, ONE TO A LINE
47300     C                MAX OF 20 PE CODES PER GROUP:
47400     C                 COLS: 1-6 - PU CODE
47500     C                       7-14 - PE CODE
47600     C                THEN FOR EACH FACTOR AFFECTED, SPECIFY:
47700     C                 COLS:    1 - FACTOR NUMBER (SAME AS DIRECT FACTOR UPDATES)
47800     C                        2-6 - PERCENTAGE CHANGE
47900          IF (INPUT(3).LE.0) GO TO 210
48000          DO 185 I=1,50
48100          DO 185 J=1,6
48200      185 PFUPDT(I,J)=-999999.
48300          DO 190 K=1,INPUT(3)
48400          NPFUP=K
48500          IF (NPFUP.GT.50) CALL ERROR(9,NPFUP,0,0,0,0)
48600          READ (5,3000) (JFUPDT(NPFUP,I),I=7,9), N
48700     3000 FORMAT (I4,I6,I4,I3)
48800          IF (JFUPDT(NPFUP,9).GT.20) CALL ERROR (3,JFUPDT(NPFUP,9),0,0,0,0)
48900          DO 200 I=1,JFUPDT(NPFUP,9)
49000      200 READ (5,3010) (LPFUPD(NPFUP,I,J),J=1,2)
49100     3010 FORMAT (I6,I6)
49200          DO 202 I=1,N
49300          READ (5,2010) J,X
49400          IF (J.LE.0.OR.J.GT.6) CALL ERROR(9,LPFUPD(NPFUP,1,1),
49500         *      LPFUPD(NPFUP,1,2),J,0,0)
49600          IF (J.EQ.0) GO TO 202
49700          PFUPDT(NPFUP,J)=X
49800      202 CONTINUE
49900      190 CONTINUE
50000          WRITE (6,3020)
50100     3020 FORMAT (1H0,6X,"THE FOLLOWING FACTORS ARE BEING INCREASED/DECREASE
50200         *D BY THE SPECIFIED PERCENT FOR THIS RUN ONLY"/23X,7HPERCENT/
50300         *14X,5HYEARS,5X,6HCHANGE,3X,6HFACTOR,14X,5HPU/PE)
50400          DO 209 I=1,NPFUP
50500          IF (JFUPDT(I,8).LT.JFUPDT(I,7)) JFUPDT(I,9)=JFUPDT(I,7)
50600          DO 207 J=1,5
50700          IF (JFUPDT (I,J).EQ.-999999.) GO TO 207
50800          WRITE (6,3030) (JFUPDT(I,K),K=7,8),PFUPDT(I,J),(NAME(J,K),K=1,3),
50900         *                 (LPFUPD(I,1,K),K=1,2)
```

```
 3030 FORMAT (12X,I4,1H=,I4,3X,F5.2,3X,3A6,2X,I6,1H/,I6)
      PFUPDT(I,J)=PFUPDT(I,J)*.01
      IF (JFUPDT(I,9).LT.2) GO TO 207
      DO 206 K=2,JFUPDT(I,9)
      WRITE (6,3040) (LPFUPD(I,K,L),L=1,2)
 3040 FORMAT (52X,I6,1H/,I6)
  206 CONTINUE
  207 CONTINUE
      IF (JFUPDT (I,6).NE.-999999.)
     *WRITE (6,3030) (JFUPDT(I,K),K=7,8),PFUPDT(I,6),(NAME(8,K),K=1,3),
     *                (LPFUPD(I,1,K),K=1,2)
      IF (JFUPDT (I,6).NE.-999999.)
     *PFUPDT(I,6)=PFUPDT(I,6)*.01
      JFUPDT(I,7)=JFUPDT(I,7)+1-IBY
      JFUPDT(I,8)=JFUPDT(I,6)+1-IBY
      IF (JFUPDT(I,9).LT.2) GO TO 209
      DO 208 K=2,JFUPDT(I,9)
      WRITE (6,3040) (LPFUPD(I,K,L),L=1,2)
  208 CONTINUE
  209 CONTINUE
C
C       READ THE USER CHANGES TO THE NARM FIXED/VARIABLE SPLIT
C       FOR EACH CHANGE, SPECIFY:
C         COLS:       1 - FORCE SUPPORT AREA NUMBER
C                   4-5 - NUMBER OF YEARS AFFECTED
C        FORCE SUPPORT AREA NUMBER 1 IS BASE OPS
C                                  2 IS TRAINING
C                                  3 IS MEDICAL SUPPORT
C                                  4 IS RECRUITING + EXAMINING
C                                  5 IS INDIVIDUAL SUPPORT
C       THEN FOR EACH YEAR AFFECTED, SPECIFY:
C         COLS:   1-4 - YEAR
C                5-10 - PERCENTAGE CHANGE
  210 DO 215 I=1,5
      READ (IUST,4050) (NVFS(I,J),J=1,6)
      DO 215 J=7,16
  215 NVFS(I,J)=NVFS(I,6)
 4050 FORMAT (6F5.0)
      DO 220 I=1,5
      DO 220 J=1,16
  220 OVFS(I,J)=NVFS(I,J)
      IF (INPUT(4).LE.0) GO TO 260
      DO 230 M=1,INPUT(4)
      I=M
      IF (I.GT.5) CALL ERROR(10,I,0,0,0,0)
      READ (5,4000) J,N
 4000 FORMAT (I1,I4)
      IF (J.LT.1.OR.J.GT.5) CALL ERROR(11,J,0,0,0,0)
      IF (J.EQ.0) GO TO 230
      READ (5,4010) (KYR(I),XPC(I),I=1,N)
 4010 FORMAT (I4,F6.0)
      DO 225 K=1,N
      L=KYR(K)+1-IBY
      IF (L.LT.1.OR.L.GT.NYEAR) CALL ERROR(12,L,J,0,0,0)
      IF (L.EQ.0) GO TO 225
      OVFS(J,L)=XPC(K)
  225 CONTINUE
  230 CONTINUE
      WRITE (6,4030)
 4030 FORMAT (1HO,6X,"THE USER IS CHANGING THE PERCENT THE NARM VARIES T
     *HE FOLLOWING SUPPORT AREAS WITH THE FORCES:"/
     *39X,4HNARM,5X,4HUSER/11X,12HSUPPORT AREA,9X,4HYEAR,   2(2X,7HPERCE
     *NT))
      DO 250 I=1,5
```

```
57400           DO 240 J=1,16
57500           IF (NVFS(I,J).EQ.OVFS(I,J)) GO TO 240
57600           K=J+18Y-1
57700           WRITE (6,4020) (NAME(I,L),L=1,3),K,NVFS(I,J),OVFS(I,J)
57800      4020 FORMAT (11X,3A6,I7,2X,F7.2,2X,F7.2)
57900           GO TO 242
58000       240 CONTINUE
58100           GO TO 250
58200       242 IF (J.GE.16) GO TO 250
58300           DO 244 K= J+1,16
58400           IF (NVFS(I,K).EQ.OVFS(I,K)) GO TO 244
58500           L=K+18Y-1
58600           WRITE (6,4040) L,NVFS(I,K),OVFS(I,K)
58700      4040 FORMAT (31X,I5,2X,F7.2,2X,F7.2)
58800       244 CONTINUE
58900       250 CONTINUE
59000           DO 252 I=1,5
59100           DO 252 J=1,16
59200           NVFS(I,J)=NVFS(I,J)*.01
59300       252 OVFS(I,J)=OVFS(I,J)*.01
59400      C
59500      C
59600      C        READ USER SUPPORT AREAS - (A GROUP OF PES WHICH ARE NOT FORCE OR
59700      C                                    FORCE SUPPORT)
59800      C        MAX OF 10 USER SUPPORT AREAS
59900      C        FOR EACH USER SUPPORT AREA, SPECIFY:
60000      C          COLS:   1-2 - NUMBER OF PE CODES IN THE AREA
60100      C                  3-4 - PERCENT OF THE AREA WHICH IS TO BE VARIABLE
60200      C         PLANNER ALLOWS FOR THE PROXY TO HAVE UP TO 7 COMPONENTS:
60300      C          ID   COMPONENT
60400      C           1 - BASE OPS
60500      C           2 - TRAINING
60600      C           3 - MEDICAL SUPPORT
60700      C           4 - RECRUITING + EXAMINING
60800      C           5 - INDIVIDUAL
60900      C           6 - SHIP FORCES
61000      C           7 - A/C FORCES
61100      C         PLACE THE ID NUMBER OF THE PROXY COMPONENTS IN COLS:
61200      C           10, 12, 14, 16, 18, 20, 22
61300      C        THEN LIST THE PE CODES WHICH WILL CONSTITUTE THE AREA,
61400      C         MAX OF 10 IN COLS:   1-6,  9-14, 17-22, 25-30, 33-38,
61500      C                             41-46, 49-54, 57-62, 65-70, 73-78
61600       260 IF (INPUT(5).LE.0) GO TO 330
61700           NUS=INPUT(5)
61800           DO 320 M=1,NUS
61900           I=M
62000           IF (I.GT.10) CALL ERROR(13,I,0,0,0,0)
62100           READ (5,5000) NUSPE(I,11), VPCUS(I), (NUSPX(I,K),K=1,7)
62200      5000 FORMAT (I2,F6.0,7I2)
62300           READ (5,5010) (NUSPE(I,K),K=1,NUSPE(I,11))
62400      5010 FORMAT (I6,9I8)
62500           WRITE (6,5030) (NUSPE(I,J),J=1,NUSPE(I,11))
62600      5030 FORMAT (1H0,6X,"THE USER IS CREATING A VARIABLE SUPPORT AREA COMPR
62700          *ISING THE FOLLOWING PROGRAM ELEMENTS:"/10X,10(I8))
62800           WRITE (6,5040) VPCUS(I)
62900      5040 FORMAT (1H ,6X,"THIS SUPPORT AREA IS",F6.2," PERCENT VARIABLE")
63000           VPCUS(I)=VPCUS(I)*.01
63100           WRITE (6,5050)
63200      5050 FORMAT (1H ,6X,"THE SUPPORT AREA WILL VARY WITH THE FOLLOWING PROX
63300          *IES:")
63400           DO 310 J=1,7
63500           IF (NUSPX(I,J).LE.0) GO TO 320
63600           K=NUSPX(I,J)
63700       310 WRITE (6,5060) (NAME(K,L),L=1,3)
```

```
 5061 FORMAT (12X,3A6)
  320 CONTINUE
      NUS=I
  330 CONTINUE
C
C             READ THE PERCENTAGE CHANGES FOR YEARS 1-NYEAR
C             COLS: 1-5,  6-10, 11-15, 16-20, 21-25, 26-30, 31-35, 36-40,
C                   41-45, 46-50, 51-55, 56-60, 61-65, 66-70, 71-75, 76-80
      IF (INPUT(6).EQ.0) GO TO 430
      READ (5,6000) (FIXPCT(I),I=1,NYEAR)
 6000 FORMAT (16F5.0)
      WRITE (6,6010)
 6010 FORMAT (1H0,5X,"FIXED REQUIREMENTS ARE BEING CHANGED BY THE FOLLOW
     * PERCENTAGES:"/11X,4HYEAR,2X,7HPERCENT)
      DO 420 I=1,NYEAR
      IF (FIXPCT(I).EQ.0.0) GO TO 420
      K=I+1BY-1
      WRITE (6,6020) K, FIXPCT(I)
      FIXPCT(I)=FIXPCT(I)*.01
  420 CONTINUE
 6020 FORMAT (11X,I4,F8.2)
  430 CONTINUE
      RETURN
C
      END
C
C*****************************************************************************
C
      SUBROUTINE RDFORC
      COMMON /$1/ IR,NR,LIM,XHOLD,IHOLD, IND, IU, X, ILOS,  NYEAR,
     *            NAC, NPE(61), NPU(61,10),
     *            WASTE(661),
     *            IFORCE(201,16), ACT(201), PE(201), PU(201),
     *            UPDATE(200,16), UPACT(201), UPPE(201), JPPU(201), NUP,
     *            NMCODE(191), PUCODE(191), NCODE,
     *            I,J,K,L,M,N,I1,I2,I3,J1,J2,J3,IPE,JPE,JJ,N1,N2,N3,N4,
     *            D,NL
      COMMON /$B/ SHIP, AIR, ALL, FIX
      COMMON /FILES/ IUSF,IUAF,IUUR1,IUUR2,IUSO,
     *               IUSD,IUAD,IURO,IURSF,IURAF,IUVR,IURA,
     *               IUFPA,IUOUT,IUST,IUIN,IUPH,IBY
      INTEGER ACT, PE, PUCODE, UPACT, UPPE, UPPU, PU, SHIP, AIR
C
C         INITIALIZE VARIABLES - N1 - 60 ACT CODES
C                                N2 - 10 PE CODES PER ACT
C                                N3 - 18 PU CODES PER ACT/PE
C                                N4 - 200 INPUT RECORDS
      IR=0
      N1=60
      N2=10
      N3=18
      N4=200
      NAC=0
      DO 10 I=1,N1
      NPE(I)=0
      DO 10 J=1,N2
   10 NPU(I,J)=0
      IU=IUAF
      IF (IND.EQ.SHIP) IU=IUSF
C
C         READ THE NAME AND PU CODE FROM THE ACT/PE/PU DICTIONARY
      JU=IUAD
      IF (IND.EQ.SHIP) JU=IUSD
      READ (JU,170) NCODE
```

```
      DO 30 I=1,NCODE
   30 READ (JU,180) NMCODE(I),PUCODE(I)
C
C          READ THE ENREP FORCES
   20 IR=IR+1
      IF (IR.GT.N4) CALL ERROR (4,IR,ACT(IR-1),PE(IR-1),PU(IR-1),N4)
      READ (IU,240,END =60) ACT(IR),PE(IR),PU(IR),(IFORCE(IR,I),I=1,
     *         NYEAR)
C
C          LOOK FOR AN UPDATE
      IF (NUP.EQ.0) GO TO 20
      I=NUP+1
   40 J=I-1
      I=NSCANX(UPACT(1),J,ACT(IR))
      IF (I.EQ.0) GO TO 20
      IF (PE(IR).NE.UPPE(I).OR.PU(IR).NE.UPPU(I)) GO TO 40
      UPACT(I)=0
      DO 50 J=1,NYEAR
   50 IFORCE(IR,J)=UPDATE(I,J)
      GO TO 20
C
C               ADD ANY NEW FORCE UNITS
   60 NR=IR-1
      DO 80 J=1,NUP
      IF (UPACT(J).EQ.J) GO TO 80
      IF (UPACT(J).GT.6000.AND.IND.EQ.SHIP ) GO TO 80
      NR=NR+1
      IF (NR.GT.N4) CALL ERROR(4,NR,ACT(NR-1),PE(NR-1),PU(NR-1),N4)
      ACT(NR)=UPACT(J)
      PE(NR)=UPPE(J)
      PU(NR)=UPPU(J)
      UPACT(J)=0.0
      DO 70 K=1,NYEAR
   70 IFORCE(NR,K)=UPDATE(J,K)
   80 CONTINUE
C
C          COUNT NUMBER OF ACTIVITY AND RECORDS PER ACTIVITY
      IACT=0
      DO 100 I=1,NR
      IF (ACT(I).EQ.IACT) GO TO 100
      NAC=NAC+1
      IF (NAC.GT.N1) CALL ERROR(17,NAC,N1,0,0,0)
      IACT=ACT(I)
  100 NPE(NAC)=NPE(NAC)+1
C
C          COUNT THE NUMBER OF PE'S IN EACH ACTIVITY
C               AND WITHIN EACH THE NUMBER OF PU'S
      I3=0
      DO 160 I=1,NAC
      I1=I3+1
      I3=I1+NPE(I)-1
      NPE(I)=0
      IPE=0
      JPE=0
      IF (I1.GT.I3) GO TO 155
      DO 152 J=I1,I3
      IF (IPE.EQ.PE(J)) GO TO 150
      JPE=JPE+1
      IF (JPE.GT.N2) CALL ERROR(18,JPE,N2,0,0,0)
      IPE=PE(J)
  150 NPU(I,JPE)=NPU(I,JPE)+1
  152 IF (NPU(I,JPE).GT.N3) CALL ERROR (19,NPU(I,JPE),N3,0,0,0)
  155 NPE(I)=JPE
  160 CONTINUE
```

```
C
C          FIND NAME FROM DICTIONARY AND WRITE FORCES ON PRINT-OUT
      NL=100
      DO 200 I=1,NR
      J=NSCANX(PUCODE,NCODE,PU(I))
      IF (J.EQ.0) J=NCODE+1
      NL=NL+1
      IF (NL.LE.25) GO TO 190
      L=IBY-1+NYEAR
      WRITE (6,220) IND,(K,K=IBY,L)
      NL=0
  190 WRITE (6,230) NMCODE(J),ACT(I),PE(I),PU(I),(FORCE(I,K),K=1,NYEAR
     *)
  200 CONTINUE
C
C          COPY THE FORCES TO TAPE, ORDERED BY YEAR
      JU=IURAF
      IF (IND.EQ.SHIP) JU=IURSF
      DO 215 I=1,NYEAR
      DO 215 J=1,NR
  215 WRITE (JU) FORCE(J,I),ACT(J),PE(J),PU(J)
      RETURN
C
  170 FORMAT (2I5)
  180 FORMAT (14X,A6,2X,I8)
  220 FORMAT (1H1/4X,A4,4X,3HACT,3X,2HPE,6X,2HPU/4X,4HNAME,3X,4HCODE,2X,
     *4HCODE,4X,4HCODE,3X,16I6/)
  230 FORMAT (1H0,2X,A6,2X,I4,2X,I6,2X,I6,1X,16F6.0)
  240 FORMAT (I4,I6,I6,16F6.0)
      END
C
C*****************************************************************************
C
      SUBROUTINE CPFORC
      COMMON /B1/ SUPPOR(5), IND, IYR, FIXR, ILOS, NYEAR,
     *            NACA, NPEA(60), NPUA(60,10),
     *            NACS, NPES(60), NPUS(60,10),
     *            FORCE(60,10,18), IDACT(60), IDPE(60,10), IDPU(60,10,18)
      COMMON /$B/ SHIP, AIR, ALL, FIX
      COMMON /$A/ PECODE(100), LOCPE(100), NO, MAXPE
      COMMON /FILES/ IUSF,IUAF,IUUR1,IUUR2,IUSQ,
     *               IUSD,IUAD,IURQ,IURSF,IURAF,IUVR,IURA,
     *               IUEPA,IUOUT,IUSI,IUIN,IUPH,IBY
      DIMENSION UNITR(110,9), PEREQ(110,9), X(2), SPEAC(5),
     *          NUM(60), NUM(60,10), INC(100)
      INTEGER PU, PE, ACT, D, FIXR,
     *        PECODE, SHIP, AIR
C
C          SET UP CONTROL VARIABLES
      TOTAL=0.0
      IF (IND.NE.SHIP) GO TO 20
      NAC=NACS
      DO 10 I=1,NACS
      NUM(I)=NPES(I)
      N=NPES(I)
      DO 10 J=1,N
   10 NUM(I,J)=NPUS(I,J)
      GO TO 40
   20 NAC=NACA
      DO 30 I=1,NACA
      NUM(I)=NPEA(I)
      N=NPEA(I)
      DO 30 J=1,N
   30 NUM(I,J)=NPUA(I,J)
```

```
C
C          READ SUPPORT FACTORS, MATRIX TOTAL, AND THE UNIT REQUIREMENTS
C          MATRIX FOR A FORCE ACT/PE/PU
C         SAVE THE 5TH YEAR INPUT FOR YEARS 6-16
   40 IF (IYR.LE.5) READ (IUUR1,270,END=200) PU,PE,ACT,(SPFAC(K),K=1,5),
     *                    YRTOTA,((UNITR(K,L),L=1,9),K=1,110)
      IF (IYR.EQ.5) WRITE (IUUR2) PU,PE,ACT,SPFAC,YRTOTA,UNITR
      IF (IYR.GE.6) READ  (IUUR2) PU,PE,ACT,SPFAC,YRTOTA,UNITR
      IF (PU.EQ.999999) GO TO 200
C
C          LOOK FOR THIS ACT/PE/PU IN THE FORCES
      N=NAC
   50 I=NSCANX(IDACT(1),N,ACT)
      IF (I.EQ.0) GO TO 40
      M=1
   58 DO 60 J=1,NU1(I)
      IF (PE.EQ.IDPE(I,J)) GO TO 70
   60 CONTINUE
   62 N=I-1
      IF (N.GE.1) GO TO 50
      GO TO 40
   70 DO 80 K=1,NU1(I,J)
      IF (PU.EQ.IDPU(I,J,K)) GO TO 90
   80 CONTINUE
      M=M+1
      IF (M.GT.NUM(I)) GO TO 62
      GO TO 58
C
C          GOOD MATCH - COMPUTE MANPOWER
C          LOOK FOR THIS PE IN THE FILE
   90 KD=0
      IF (ND.LT.1) GO TO 100
      L=NSCANX(PECODE(1), ND,PE)
      IF (L.EQ.0) GO TO 100
      ID=L
      GO TO 120
C
C          NEW PE
  100 ND=ND+1
      IF (ND.GT.MAXPE) CALL ERROR (2, ND,PE,MAXPE,0,0)
      PECODE(ND)=PE
      LOCPE(ND)=ND
      ID=ND
      KD=1
C          ZERO PEREQ ARRAY
      DO 110 M=1,9
      DO 110 L=1,110
  110 PEREQ(L,M)=0.0
C
C          IF PROJECTION MODE -
C          ADJUST FOR ANY USER OVERRIDES TO NARM FACTORS
  120 IF (FIXR.EQ.0) CALL OVERN (IYR,PU,PE,YRTOTA,SPFAC,UNITR)
C
C          MULTIPLY BY THE FORCES
      DO 130 M=1,9
      DO 130 L=1,110
  130 UNITR(L,9)=UNITR(L,M)*FORCE(I,J,K)
      DO 140 N=1,5
  140 SUPPOR(N)=SUPPOR(N)+SPFAC(N)*FORCE(I,J,K)
      YRTOTA=YRTOTA*FORCE(I,J,K)
      TOTAL=TOTAL+YRTOTA
C
C          UPDATE THE PE FILE
      IF (KD.EQ.0) READ (IURA=ID) PEREQ
```

```
      DO 170 N=1,9
      DO 170 M=1,110
  170 PEREQ(M,N)=PEREQ(M,N)+UNITR(M,N)
      WRITE (IUR4=ID) PEREQ
C          SIGNAL COMPLETION
      IDPU(I,J,K)=999999
      GO TO 40
C
C          END OF UNIT REQ. MATRICES FOR THIS YEAR
C          CHECK THAT ALL FORCES WERE COMPLETED
C          (SAME RESULTS FOR ALL YEARS)
  200 IF (IYR.NE.1) GO TO 215
      DO 210 I=1,NAC
      N=NU1(I)
      DO 210 J=1,N
      M=NUM(I,J)
      DO 210 K=1,M
      IF (IDPU(I,J,K).NE.999999)
     *CALL ERROR (1,IDAC(I),IDPE(I,J),IDPU(I,J,K),0,0)
  210 CONTINUE
C
C          CHANGE MARINE CORP INDICATOR FROM 3 TO 1 TO DO A PROPER SORT
  215 DO 220 I=1, ND
      IMC(I)=0
      J=PECODE(I)-(PECODE(I)/10)*10
      IF (J.NE.3) GO TO 220
      PECODE(I)=PECODE(I)-2
      IMC(I)=2
  220 CONTINUE
C          SORT PE FILE ARRAYS BY PE
      K=ND+1
      DO 235 I=1, ND
      LIM=K-I
      IF (LIM.LT.2) GO TO 235
      DO 230 J=2,LIM
      IF (PECODE(J-1).LE.PECODE(J)) GO TO 230
      IHOLD=PECODE(J-1)
      PECODE(J-1)=PECODE(J)
      PECODE(J)=IHOLD
      IHOLD=LOCPE(J-1)
      LOCPE(J-1)=LOCPE(J)
      LOCPE(J)=IHOLD
      IHOLD=IMC(J-1)
      IMC(J-1)=IMC(J)
      IMC(J)=IHOLD
  230 CONTINUE
  235 CONTINUE
C          CHANGE MARINE COPR INDICATORS BACK TO 3
      DO 240 I=1, ND
  240 PECODE(I)=PECODE(I)+IMC(I)
C
C          NORMAL END
      IF (IYR.EQ.NYEAR.AND.IND.EQ.AIR) LOCK IUUR1
      IF (IYR.GE.5.AND.IND.EQ.AIR) REWIND IUUR2
      RETURN
C
  270 FORMAT (3I6,6F6.1,990F6.1)
      END
C
C*****************************************************************************
C
      SUBROUTINE CPSUPP
      COMMON /S1/ SUPPOR(5), IND, IYR, FIXR, ILOS, NYEAR,
     *            NACA, NPEA(60), NPUA(60,10),
```

```
     *           NACS, NPES(60), NPUS(60,10),
     *           NAVREQ(111,10),
     *           VARREQ(111,10,7),
     *           UNITR(110,9), PEREQ(110,9), Y(2),
     *           TOTAL(5), NPE(5), SCALE(5), CPE(5), ADJ(5)
      COMMON /$A/ PECODE(100), LOCPE(100), NO, MAXPE
      COMMON /$D/ VSPT(95), KEY(95), NVPE
      COMMON /$E/ NAME(9,3)
      COMMON /$4/ NUS, NUSPE(10,11), NUSPX(10,7), VPCUS(10), CURNT(7,16)
      COMMON /$2/ NVFS(5,16), OVFS(5,16)
      COMMON /FILES/ IUSF,IUAF,IUUR1,IUUR2,IUSO,
     *               IUSD,IUAD,IURQ,IURSF,IURAF,IUVR,IUPA,
     *               IUEPA,IUOUT,IUST,IUIN,IUPH,IBY
      REAL NVFS, NAVREQ
      INTEGER PECODE, PE, E, CPE, FIXR, VSPT
C
C          SET UP VARIABLES FOR THIS YEAR
C             - READ FILE IUSO FOR YEARS 1-5, FILE IUEPA FOR YEARS 6-16
C             - MANPOWER TOTAL PER AREA - TOTAL
C             - NUMBER OF PE'S PER AREA - NPE
C             - CHECK ON NUMBER OF PE'S PER AREA - CPE
C             - FIXED/VARIABLE ADJUSTMENT PER AREA (IF PROJECTION MODE)
C                 - ADJ
C             - SCALING CONSTANT PER AREA -SCALE
      E=IUSO
      IF (IYR.GE.6) E=IUEPA
      READ (E,230) (TOTAL(I),NPE(I),I=1,5)
      IF (IYR.EQ.5) WRITE (IUEPA,230)
     *      (TOTAL(I),NPE(I),I=1,5)
      DO 20 I=1,5
      CPE(I)=0
      SCALE(I)=0.0
      IF (TOTAL(I).GT.0.0) SCALE(I)=SUPPOR(I)/TOTAL(I)
      ADJ(I)=0.0
      IF (FIXR.EQ.0.AND.NVFS(I,IYR).NE.OVFS(I,IYR)) ADJ(I)=((OVFS(I,IYR)
     *    -NVFS(I,IYR))/NVFS(I,IYR))
      X=ADJ(I)*100.
      IF (ADJ(I).NE.0.0) WRITE (6,25) (NAME(I,K),K=1,3), X
   25 FORMAT ("0  VARIABLE REQUIREMENTS FOR FORCE SUPPORT AREA ",3A6,
     *        " IS BEING CHANGED ",F8.2," PERCENT")
   20 CONTINUE
C
C          ZERO ALL NAVY VARIABLE REQUIREMENTS ARRAY
C          AND ZERO THE TOTAL REQ ARRAY FOR PROXIES
      DO 30 J=1,10
      DO 30 I=1,111
   30 NAVREQ(I,J)=0.0
      DO 32 K=1,7
      DO 32 J=1,10
      DO 32 I=1,111
   32 VARREQ(I,J,K)=0.0
      DO 35 I=1,7
   35 CURNT(I,IYR)=0.0
C
C          READ THE SUPPORT QUALITY MATRIX
      ISKIP=0
      IF (NO.LE.0) ISKIP=1
      ID=1
   60 READ (E,240,END=170) PE,JD,((UNITR(L,M),M=1,9),L=1,110)
      IF (IYR.EQ.5) WRITE (IUEPA,240) PE,JD,((UNITR(L,M),M=1,9),L=1,110)
      IF (PE.EQ.999999) GO TO 170
      CPE(JD)=CPE(JD)+1
C
C          COMPARE THE SUPPORT PE TO THE FORCE PE
```

```
102200           IF (ISKIP.EQ.1) GO TO 70
102300        60 IF (PE-PECODE(ID)) 70,90,130
102400     C
102500     C          WRITE SUPPORT PE ON DISK - NO FORCES IN THIS PE
102600        70 DO 80 N=1,9
102700           DO 80 M=1,110
102800           X=UNITR(M,N)*SCALE(JD)
102900           PEREQ(M,N)=X+X*ADJ(JD)
103000        80 NAVREQ(M,N)=NAVREQ(M,N)+PEREQ(M,N)
103100           J=NSCANX(VSPI(1),NVPE,PE)
103200           IF (J.EQ.0) GO TO 85
103300           J=KEY(J)
103400           DO 82 N=1,9
103500           DO 82 M=1,110
103600        82 VARREQ(M,N,J)=VARREQ(M,N,J)+PEREQ(M,N)
103700        85 WRITE (IUVR) PE,PEREQ
103800           GO TO 60
103900     C
104000     C          REQ. IN THIS PE FROM FORCES AND SUPPORT
104100     C          COMBINE PE'S AND WRITE ON DISK
104200        90 KD=LOCPE(ID)
104300           READ (IURA=KD) PEREQ
104400           DO 120 N=1,9
104500           DO 120 M=1,110
104600           X=UNITR(M,N)*SCALE(JD)
104700           PEREQ(M,N)=PEREQ(M,N)+X+X*ADJ(JD)
104800       120 NAVREQ(M,N)=NAVREQ(M,N)+PEREQ(M,N)
104900           J=NSCANX(VSPI(1),NVPE,PE)
105000           IF (J.EQ.0) GO TO 125
105100           J=KEY(J)
105200           DO 123 N=1,9
105300           DO 123 M=1,110
105400       123 VARREQ(M,N,J)=VARREQ(M,N,J)+PEREQ(M,N)
105500       125 WRITE (IUVR) PE,PEREQ
105600           ID=ID+1
105700           IF (ID.GT.ND) ISKIP=1
105800           GO TO 60
105900     C
106000     C          COPY FORCE PE TO DISK - NO SUPPORT REQ. IN THIS PE
106100       130 KD=LOCPE(ID)
106200           READ (IURA=KD) PEREQ
106300           WRITE (IUVR) PECODE(ID),PEREQ
106400           DO 150 N=1,9
106500           DO 150 M=1,110
106600       150 NAVREQ(M,N)=NAVREQ(M,N)+PEREQ(M,N)
106700           J=NSCANX(VSPI(1),NVPE,PECODE(ID))
106800           IF (J.EQ.0) GO TO 165
106900           J=KEY(J)
107000           DO 163 N=1,9
107100           DO 163 M=1,110
107200       163 VARREQ(M,N,J)=VARREQ(M,N,J)+PEREQ(M,N)
107300       165 ID=ID+1
107400           IF (ID.LE.ND) GO TO 60
107500           ISKIP=1
107600           GO TO 70
107700     C
107800     C          END OF FILE ON SUPPORT TAPE
107900     C          COPY REST OF FORCE PE'S TO DISK IF NECCESARY
108000       170 IF (ID.GT.ND) GO TO 210
108100           DO 205 K=ID, ND
108200           KD=LOCPE(K)
108300           READ (IURA=KD) PEREQ
108400           WRITE (IUVR) PECODE(K),PEREQ
108500           DO 200 N=1,9
```

```
      DO 200 M=1,110
  200 NAVREQ(M,N)=NAVREQ(M,N)+PEREQ(M,N)
      J=NSCANX(VSPI(1),NVPE,PE)
      IF (J.EQ.0) GO TO 205
      J=KEY(J)
      DO 204 N=1,9
      DO 204 M=1,110
  204 VARREQ(M,N,J)=VARREQ(M,N,J)+PEREQ(M,N)
  205 CONTINUE
C
C         CHECK THAT ALL PE'S WERE READ
  210 DO 220 I=1,5
      IF (CPE(I).NE.NPE(I)) CALL ERROR (5,I,CPE(I),NPE(I),0,0)
  220 CONTINUE
C
C         NORMAL END
C       SUM TO GET TOTALS IN THE 5 FORCE SUPPORT AREAS AND IN SHIP + A/C
      DO 255 I=1,7
      DO 250 J=1,9
      DO 250 K=1,110
  250 PEREQ(K,J)=VARREQ(K,J,I)
      CALL SUM (PEREQ,X)
  255 CURNT(I,IYR)=X
      IF (IYR.EQ.NYEAR) LOCK IUSQ
      IF (IYR.GE.5) REWIND IUEPA
      PE=99999.
      WRITE (IUVR) PE,PEREQ
      RETURN
  230 FORMAT (5(F6.0,I6))
  240 FORMAT (2I6,990F6.0)
      END
C
C*****************************************************************************
C
      SUBROUTINE PRINT
      COMMON /$1/ I,J,K,IU,JYR, IND, IYR, FIXR, ILOS, NYEAR,
     *            WASTE1(661),
     *            WASTE2(661),
     *            NAVREQ(111,10),
     *            VARREQ(111,10,7),
     *            WASTE4(110,9,31),
     *            RTPERC(110)
      COMMON /$B/ SHIP, AIR, ALL, FIX
      COMMON /$C/ IRATE(110), JRATE(110)
      COMMON /$E/ NAME(9,3)
      COMMON /FILES/ IUSF,IUAF,IUUR1,IUUR2,IUSQ,
     *               IUSD,IUAD,IURQ,IURSF,IURAF,IUVR,IURA,
     *               IUEPA,IUOUT,IUST,IUIN,IUPH,IBY
      DIMENSION LABLE(3,2)
      REAL NAVREQ
      INTEGER FIXR, ALL, FIX
      DATA LABLE/ 6HVARIAB, 6HTOTAL , 6HFIXED ,
     *            2HLE    , 2H      , 2H      /
C
C         INITIALIZE VARIABLES
      JYR=IYR+IBY-1
      JND=1
      IF (IND.EQ.ALL) JND=2
      IF (IND.EQ.FIX) JND=3
C
C     PRINT REQ. FOR THE FORCES AND FORCE SUPPORT AREAS, SEPARATELY
      DO 250 K=1,7
      WRITE (6,90) (LABLE(JND,I),I=1,2),JYR
      WRITE (6,200) (NAME(K,J),J=1,3)
```

```
      200 FORMAT (40X,3A6/)
          WRITE (6,100)
          DO 230 I=1,11
          DO 220 J=1,9
      220 VARREQ(I,10,K)=VARREQ(I,10,K)+VARREQ(I,J,K)
          WRITE (6,110) IRATE(I),JRATE(I),(VARREQ(I,J,K),J=1,10)
      230 CONTINUE
          DO 240 J=1,10
          DO 240 I=1,110
      240 VARREQ(111,J,K)=VARREQ(111,J,K)+VARREQ(I,J,K)
          WRITE (6,120) (VARREQ(111,I,K),I=1,10)
      250 CONTINUE
C
C         WRITE ALL NAVY TOTALS
          WRITE (6,90) (LABLE(JND,I),I=1,2),JYR
          WRITE (6,200) (NAME(9,J),J=1,3)
          WRITE (6,100)
          TOTAL=0.0
          DO 20 I=1,110
          DO 10 J=1,9
          TOTAL=TOTAL+NAVREQ(I,J)
       10 NAVREQ(I,10)=NAVREQ(I,10)+NAVREQ(I,J)
          WRITE (6,110) IRATE(I),JRATE(I),(NAVREQ(I,J),J=1,10)
       20 CONTINUE
          DO 30 J=1,10
          DO 30 I=1,110
       30 NAVREQ(111,J)=NAVREQ(111,J)+NAVREQ(I,J)
          WRITE (6,120) (NAVREQ(111,I),I=1,10)
C
C         PRINT PERCENTAGES
          WRITE (6,90) (LABLE(JND,I),I=1,2),JYR
          WRITE (6,130)
          DO 40 I=1,110
       40 RTPERC(I)=(NAVREQ(I,10)/TOTAL)*100.
          DO 50 I=1,36
          J=I+37
          K=I+74
          WRITE (6,140) IRATE(I),NAVREQ(I,10),RTPERC(I),IRATE(J),NAVREQ(J,1
         *0),RTPERC(J),IRATE(K),NAVREQ(K,10),RTPERC(K)
       50 CONTINUE
          WRITE (6,140) IRATE(37),NAVREQ(37,10),RTPERC(37),IRATE(74),NAVREQ
         *(74,10),RTPERC(74)
          WRITE (6,90) (LABLE(JND,I),I=1,2),JYR
          WRITE (6,150)
          DO 60 I=1,9
          PGPERC=(NAVREQ(111,I)/TOTAL)*100.
          J=10-I
          WRITE (6,160) J,NAVREQ(111,I),PGPERC
       60 CONTINUE
          WRITE (6,170)
          STOTAL=0.0
          DO 70 I=1,6
       70 STOTAL=STOTAL+NAVREQ(111,I)
          PGPERC=(STOTAL/TOTAL)*100.
          WRITE (6,180) STOTAL,PGPERC
          STOTAL=0.0
          DO 80 I=7,9
       80 STOTAL=STOTAL+NAVREQ(111,I)
          PGPERC=(STOTAL/TOTAL)*100.
          WRITE (6,190) STOTAL,PGPERC
          RETURN
C
       90 FORMAT (1H1//40X,A6,A2,29H ENLISTED REQUIREMENTS FOR FY,I4/)
      100 FORMAT (1HO,61X,8HPAYGRADE,45X,6HRATING/9X,6HRATING,5X,7X,3HE-9,7X
```

```
121400         *,3HE-3,7X,3HE-7,7X,3HE-6,7X,3HE-5,7X,3HE-4,7X,3HE-3,7X,3HE-2,7X,3H
121500         *E-1,5X,5HTOTAL/)
121600       110 FORMAT (7X,A5,1X,A6,5X,10F10.0)
121700       120 FORMAT (7X,8HPAYGRADE/10X,5HTOTAL,5X,10F10.0)
121800       130 FORMAT (53X,13HSUMMARY TABLE///3(7X,6HRATING,4X,5HTOTAL,4X,7HPERCE
121900         *NT,7X)/)
122000       140 FORMAT (3(9X,A5,4X,F6.0,5X,F5.2,8X))
122100       150 FORMAT (50X,13HSUMMARY TABLE///42X,8HPAYGRADE,3X,5HTOTAL,5X,7HPERC
122200         *ENT/)
122300       160 FORMAT (1HO,44X,2HE-,I1,2X,F8.0,5X,F5.2)
122400       170 FORMAT (//)
122500       180 FORMAT (1HO,43X,4HP.O.,2X,F8.0,5X,F5.2)
122600       190 FORMAT (1HO,41X,8HNON P.O.,F8.0,5X,F5.2)
122700           END
122800     C
122900     C*****************************************************************
123000     C
123100           SUBROUTINE CPPRXY
123200           COMMON /$1/ WASTE1(5), IND,IYR, FIXR, ILOS,NYEAR,
123300          *            PRXPC(7,16,2), WASTE2(437), WASTE3(661),
123400          *            WASTE4(111,10), BASE(7), VREQ(110,9)
123500           COMMON /FILES/ IUSF,IUAF,IUUR1,IUUR2,IUSO,
123600          *               IUSO,IUAD,IURQ,IURSF,IURAF,IUVR,IUPA,
123700          *               IUEPA,IUOUT,IUST,IUIN,IUPH,IBY
123800           COMMON /$4/ NUS, NUSPE(10,11), NUSPX(10,7), VPCUS(10), CURNT(7,16)
123900     C
124000           DO 50 IYR=1,NYEAR
124100     C
124200     C          READ TOTALS FOR BASE CASE
124300           READ (IUST,100)) BASE
124400      1000 FORMAT (7F9.0)
124500     C
124600     C          COMPUTE PERCENTAGES
124700           DO 40 I=1,7
124800           PRXPC(I,IYR,1)=(CURNT(I,IYR)-BASE(I))/BASE(I)
124900        40 PRXPC(I,IYR,2)=BASE(I)
125000     C
125100        50 CONTINUE
125200           RETURN
125300           END
125400     C
125500     C*****************************************************************
125600     C
125700           SUBROUTINE CPUSER(IPE,VREQ)
125800           COMMON /$1/ WASTE1(5), IND,IYR, FIXR, ILOS,NYEAR,
125900          *            PRXPC(7,16,2), WASTE2(437), WASTE3(661),
126000          *            WASTE4(111,10), WASTE5(111,10,7), WASTE6(110,9,31),
126100          *            FREQ(110,9)
126200           COMMON /$4/ NUS, NUSPE(10,11), NUSPX(10,7), VPCUS(10), CURNT(7,16)
126300           DIMENSION VREQ(110,9)
126400     C
126500     C       MAKE THE VARIABLE ARRAY ZERO, NO MATTER WHAT HAPPENS
126600           DO 5 I=1,9
126700           DO 5 J=1,110
126800         5 VREQ(J,I)=0.0
126900     C
127000     C       IS THIS PE TO BE MADE VARIABLE (FIXED IN THE NARM)?
127100     C       IF SO,  THEN ADJUST IT BY THE USER PERCENTS AND PROXIES
127200     C
127300           DO 10 I=1,10
127400           DO 10 J=1,NUS
127500           IF (IPE.EQ.NUSPE(J,I)) GO TO 15
127600        10 CONTINUE
127700           RETURN
```

```
C
C            COMPUTE THE PERCENTAGE CHANGE
   15 X=VPCUS(J)*1)).
      WRITE (6,100) NUSPE(J,I), X
  100 FORMAT ("0 PE ",I6," IS BEING MADE ",F8.2," PERCENT VARIABLE")
      X=0
      PC=0
      DO 20 K=1,7
      L=NUSPX(J,K)
      IF (L.EQ.0) GO TO 30
      PC=PC+PRXPC(L,IYR,1)*PRXPC(L,IYR,2)
   20 X=X+PRXPC(L,IYR,2)
   30 PC=(PC/X)
      X=PC*100.
      WRITE (6,110) X
  110 FORMAT (" ITS PROXY CHANGED ",F8.2," PERCENT")
C
C       FIND THE NARM TOTAL ENDSTRENGTH
      CALL SUM (FREQ,XT)
      WRITE (6,120) XT
  120 FORMAT(" TOTAL ENDSTRENGTH IS ",F12.2)
C      FIND THE PERCENT VARIABLE, AS DETERMINED BY THE USER
      XV=XT*VPCUS(J)
      WRITE (6,130) XV
  130 FORMAT (" BASE CASE VARIABLE ENDSTRENGTH IS ",F12.2)
C       COMPUTE THE NEW FIXED ENDSTRENGTH
      XF=XT-XV
      WRITE (6,140) XF
  140 FORMAT (" FIXED ENDSTRENGTH IS ",F12.2)
C       MODIFY THE VARIABLE ENDSTRENGTH TO REFLECT THIS RUN
      XV=XV*(XV+PC)
      WRITE (6,150) XV
  150 FORMAT (" CURRENT CASE VARIABLE ENDSTRENGTH IS ",F12.2)
C        USE THE QUALITY OF THE TOTAL REQ. AND SCALE IT TO THE NEW
C             VARIABLE ENDSTRENGTH
      SCALE=XV/XT
      DO 40 J=1,9
      DO 40 K=1,110
   40 VREQ(K,J)=FREQ(K,J)*SCALE
C       USE THE QUALITY OF THE TOTAL REQ. AND SCALE IT TO THE FIXED
C                  ENDSTRENGTH
      SCALE=XF/XT
      DO 50 J=1,9
      DO 50 K=1,110
   50 FREQ(K,J)=FREQ(K,J)*SCALE
C
      RETURN
      END
C
C*****************************************************************************
C
      SUBROUTINE SUM (REQ,X)
      DIMENSION REQ(110,9)
      X=0.0
      DO 10 J=1,9
      DO 10 I=1,110
   10 X=X+REQ(I,J)
      RETURN
      END
C
C*****************************************************************************
C
      SUBROUTINE CPFIXR
C
```

```
C          COMPUTES FIXED REQUIREMENTS BY PE BY SUBTRACTING THE VARIABLE
C          ONES JUST COMPUTED FROM THE NARM'S TOTAL ONES
C
      COMMON /$1/ WASTE(5), END, IYR, FIXR, ILOS, NYEAR,
     *            WASTE1(661),WASTE2(661),
     *            NAVREQ(111,10),
     *            FIXREQ(111,10,7),
     *            REPORT(300,17),
     *            VREQ(110,9), TREQ(110,9),
     *            PROXPC(5,16), PRXTOT(7,16), TOTAL(7)
      COMMON /FILES/ IUSF,IUAF,IUUR1,IUUR2,IUSQ,
     *               IUSD,IUAD,IURQ,IURSF,IURAF,IUVR,IURA,
     *               IUEPA,IUOUT,IUST,IUIN,IUPH,IBY
      COMMON /$D/ VSPT(95), KEY(95), NVPE
      INTEGER SKIP
      REAL NAVREQ
C
      MPE=300
      ILY=IBY+NYEAR-1
      DO 2 I=1,16
      DO 2 J=1,7
    2 PRXTOT(J,I)=0.0
C
C          LOOP ON YEARS
      DO 174 IYR=1,NYEAR
      DO 4 I=1,MPE
    4 REPORT(I,IYR)=0.0
      DO 6 I=1,7
      TOTAL(I)=0.0
      DO 6 K=1,10
      DO 6 J=1,111
    6 FIXREQ(J,K,1)=0.0
      NPE=0
      WRITE (6,180) IYR
      SKIP=0
      DO 10 J=1,10
      DO 10 I=1,111
   10 NAVREQ(I,J)=0.0
C
C          READ THE VARIABLE REQUIREMENTS
   20 READ (IUVR,END=140) IPE,VREQ
      IF (IPE.EQ.999999) GO TO 140
C
C          READ THE TOTAL REQUIREMENTS
   30 IF (SKIP.NE.0) GO TO 40
      READ (IURQ,210,END=150) JPE,I,((TREQ(I,J),J=1,9),I=1,110)
      IF (JPE.EQ.999999) GO TO 150
C
C          COMPARE PE'S
   40 IF (IPE-JPE) 50,70,120
C
C          NO TOTAL REQ. FOR IPE
   50 CALL SUM (VREQ,W)
      DO 60 J=1,9
      DO 60 I=1,110
      VREQ(I,J)=-VREQ(I,J)
   60 NAVREQ(I,J)=NAVREQ(I,J)+VREQ(I,J)
      NP=NSCANX(VSPT,NVPE,IPE)
      IF (NP.EQ.0) GO TO 65
      NP=KEY(NP)
      DO 62 K=1,9
      DO 62 J=1,110
   62 FIXREQ(J,K,NP)=FIXREQ(J,K,NP)+VREQ(J,K)
      PRXTOT(NP,IYR)=PRXTOT(NP,IYR)+W
```

```
140600        65 WRITE (IUOUT,210) IPE,IYR,VREQ
140700           NPE=NPE+1
140800           IF (NPE.GT.MPE) CALL ERROR(20,NPE,MPE,0,0,0)
140900           REPORT(NPE,17)=IPE
141000           REPORT(NPE,IYR)=100.
141100           SKIP=1
141200           IF (W.NE.0.0) WRITE (6,190) IPE,W
141300           GO TO 20
141400     C
141500     C          MATCHING PE S
141600        70 CALL SUM (TREQ,X)
141700           CALL SUM (VREQ,Y)
141800           NPE=NPE+1
141900           IF (NPE.GT.MPE) CALL ERROR(20,NPE,MPE,0,0,0)
142000           REPORT(NPE,17)=IPE
142100           IF (X.GT.0.0) REPORT(NPE,IYR)=(Y/X)*100.
142200           IF (X.LT.Y) REPORT(NPE,IYR)=100.
142300           NP=NSCANX(VSPT,NVPE,IPE)
142400           IF (NP.EQ.0) GO TO 78
142500           NP=KEY(NP)
142600           PRXTOT(NP,IYR)=PRXTOT(NP,IYR)+Y
142700           TOTAL(NP)=TOTAL(NP)+X
142800        78 CONTINUE
142900           W=Y-X
143000           IF (W.GT.0) WRITE (6,200) IPE,W,X,Y
143100           W=-W
143200           IF (X.EQ.0.0) GO TO 90
143300           SCALE=W/X
143400           DO 80 J=1,9
143500           DO 80 I=1,110
143600           VREQ(I,J)=TREQ(I,J)*SCALE
143700        80 NAVREQ(I,J)=NAVREQ(I,J)+VREQ(I,J)
143800           GO TO 110
143900        90 DO 100 J=1,9
144000           DO 100 I=1,110
144100           VREQ(I,J)=-VREQ(I,J)
144200       100 NAVREQ(I,J)=NAVREQ(I,J)+VREQ(I,J)
144300       110 IF (NP.EQ.0) GO TO 118
144400           DO 114 J=1,9
144500           DO 114 K=1,110
144600       114 FIXREQ(K,J,NP)=FIXREQ(K,J,NP)+VREQ(K,J)
144700       118 WRITE (IUOUT,210) IPE,IYR,VREQ
144800           SKIP=0
144900           GO TO 20
145000     C
145100     C          NO VARIABLE REQUIREMENTS
145200       120 WRITE (IUOUT,210) JPE,IYR,TREQ
145300           NPE=NPE+1
145400           IF (NPE.GT.MPE) CALL ERROR(20,NPE,MPE,0,0,0)
145500           NP=NSCANX(VSPT,NVPE,JPE)
145600           IF (NP.EQ.0) GO TO 128
145700           NP=KEY(NP)
145800           CALL SUM(TREQ,X)
145900           TOTAL(NP)=TOTAL(NP)+X
146000           DO 122 J=1,9
146100           DO 122 K=1,110
146200       122 FIXREQ(K,J,NP)=FIXREQ(K,J,NP)+TREQ(K,J)
146300       128 CONTINUE
146400           REPORT(NPE,17)=JPE
146500           REPORT(NPE,IYR)=0.
146600           SKIP=0
146700           DO 130 J=1,9
146800           DO 130 I=1,110
146900       130 NAVREQ(I,J)=NAVREQ(I,J)+TREQ(I,J)
```

```
147000           GO TO 30
147100     C
147200     C           END OF FILE ON UNIT IUVR
147300       140 IF (IPE.EQ.99999999) GO TO 160
147400           IPE=99999999
147500           GO TO 30
147600     C           END OF FILE ON UNIT IURQ
147700       150 IF (IPE.EQ.99999999) GO TO 160
147800           IPE=99999999
147900           GO TO 40
148000     C           END OF YEAR IYR
148100       160 IPE=999999
148200           WRITE (IUOUT,210) IPE,IYR,VREQ
148300           CALL PRINT
148400     C
148500     C           COMPUTE THE PERCENT VARIABLE FOR EACH PROXY AREA
148600       170 DO 172 I=1,5
148700       172 PROXPC(I,IYR)=(PRXTOT(I,IYR)/TOTAL(I))*100.
148800       174 CONTINUE
148900           REWIND IUOUT
149000     C
149100     C           PRINT THE PERCENT OF EACH PE WHICH IS VARIABLE
149200           NL=100
149300           DO 230 I=1,NPE
149400           NL=NL+1
149500           IF (NL.LE.28) GO TO 230
149600           NL=0
149700           WRITE (6,220) (J,J=IBY,ILY)
149800       220 FORMAT (1H1," VARIABLE PERCENTS OF PROGRAM ELEMENTS BY YEAR"
149900          *///4X,2HPE,5X,16I7//)
150000       230 WRITE (6,240) REPORT(I,17),(REPORT(I,J),J=1,NYEAR)
150100       240 FORMAT (1H0,1X,I6,3X,16F7.2)
150200     C
150300     C           WRITE THE PERCENT VARIABLE ON DISK - IUST
150400           IF (NYEAR.GE.16) GO TO 243
150500           DO 246 I=1,5
150600           DO 246 J=NYEAR+1,16
150700       246 PROXPC(I,J)=PRJXPC(I,NYEAR)
150800       248 DO 250 I=1,5
150900       250 WRITE (IUST,260) (PROXPC(I,J),J=1,16)
151000       260 FORMAT (16F6.2)
151100     C
151200     C           WRITE THE VARIABLE TOTALS ON DISK
151300           IF (NYEAR.GE.16) GO TO 268
151400           DO 266 I=1,7
151500           DO 266 J=NYEAR+1,16
151600       266 PRXTOT(I,J)=PRXTOT(I,NYEAR)
151700       268 DO 270 I=1,16
151800       270 WRITE (IUST,280) (PRXTOT(J,I),J=1,7)
151900       280 FORMAT (7F9.0)
152000           CLOSE (IUST,DISP=CRUNCH)
152100           RETURN
152200     C
152300       180 FORMAT (1H1,3X,4HYEAR,I3)
152400       190 FORMAT (30H  NO TOTAL REQUIREMENTS FOR PE,I7,5X,F12.2)
152500       200 FORMAT ("0 VARIABLE REQUIREMENTS EXCEED WARM TOTAL FOR PE ",I6,
152600          *        " BY ",F6.0,4X," TOTAL = ",F10.0,5X," VARIABLE = ",F10.0)
152700       210 FORMAT (216,990F6.1)
152800           END
152900     C
153000     C*************************************************************************
153100     C
153200           SUBROUTINE ADDFIX
153300     C
```

```
C          ADJS THE FIXED ENLISTED REQUIREMENTS, RATING/PAYGRADE,
C            TO THOSE COMPUTED BY THE ENREP MODEL
C          AND COMPUTES VARIABLE REQUIREMENTS FOR THOSE PE THE USER
C            HAS MADE VARIABLE
      COMMON /S1/ WASTE(5), IND, IYR, FIAR, ILOS, NYEAR,
     *            PRAPC(7,16,2), WASTE2(328), PRHREQ(110,7),
     *            NAVREQ(111,10),
     *            TOTREQ(111,10,7),
     *            WASTE3(110,9,31),
     *            FREQ(110,9), VREQ(110,9), UVREQ(110,9)
      COMMON /S2/ NVFS(5,16), OVFS(5,16), FIXPCT(16)
      COMMON /S0/ VSPT(25), KEY(25), NVPE
      COMMON /FILES/ IUSF,IUAF,IUUR1,IUUR2,IUSO,
     *               IUSO,IUAO,IURQ,IURSF,IURAF,IUVR,IURA,
     *               IUEPA,IUOUT,IUSI,IUIN,IUPH,IBY
      INTEGER VSPT, SKIP
      REAL NVFS, NAVREQ
      IF (NYEAR.GE.7) REWIND IUEPA
      IU=IURQ
C
C          LOOP ON YEARS
      DO 150 IYR=1,NYEAR
      WRITE (6,170) IYR
      IF (IYR.GE.7) IU=IUEPA
      SKIP=0
      DO 10 J=1,10
      DO 10 I=1,111
      NAVREQ(I,J)=0.0
      DO 10 K=1,7
   10 TOTREQ(I,J,K)=0.0
C
C          READ VARIABLE REQUIREMENTS
   20 READ (IUVR,END=130) IPE,VREQ
      IF (IPE.EQ.999999) GO TO 130
C
C          READ FIXED REQUIREMENTS
   30 IF (SKIP.NE.0) GO TO 50
      READ (IU,190,END=140) JPE,I,FREQ
      IF (IYR.EQ.6.AND.NYEAR.GT.6) WRITE (IUEPA,190) JPE,IYR,FREQ
      IF (JPE.EQ.999999) GO TO 140
C
C          COMPARE PE'S
   50 IF (IPE-JPE) 60,80,110
C
C          NO FIXED REQUIREMENTS
   60 WRITE (IUOUT,190) IPE,IYR,VREQ
      SKIP=1
      DO 70 J=1,9
      DO 70 I=1,110
   70 NAVREQ(I,J)=NAVREQ(I,J)+VREQ(I,J)
      WRITE (6,190) IPE
      NP=NSCANX(VSPT,NVPE,IPE)
      IF (NP.EQ.0) GO TO 20
      NP=KEY(NP)
      DO 72 J=1,9
      DO 72 I=1,110
   72 TOTREQ(I,J,NP)=TOTREQ(I,J,NP)+VREQ(I,J)
      GO TO 20
C
C          MATCHED PE'S
   80 NP=NSCANX(VSPT(1),NVPE,JPE)
      ADJ=0.0
      IF (NP.EQ.0) GO TO 90
      J=KEY(NP)
```

```
      IF (NVFS(J,IYR).NE.OVFS(J,IYR)) ADJ=((NVFS(J,IYR)-OVFS(J,IYR))/
     *                                      (1.0-NVFS(J,IYR)))
   90 DO 100 J=1,9
      DO 100 I=1,110
      FREQ(I,J)=FREQ(I,J)+(FREQ(I,J)*ADJ)
      FREQ(I,J)=FREQ(I,J)+FIXPCT(IYR)*FREQ(I,J)
      FREQ(I,J)=FREQ(I,J)+VREQ(I,J)
  100 NAVREQ(I,J)=NAVREQ(I,J)+FREQ(I,J)
      WRITE (IUOUT,170) JPE,IYR,FREQ
      SKIP=0
      IF (NP.EQ.0) GO TO 20
      NP=KEY(NP)
      DO 102 J=1,9
      DO 102 I=1,110
  102 TOTREQ(I,J,NP)=TOTREQ(I,J,NP)+FREQ(I,J)
      GO TO 20
C
C          NO VARIABLE REQUIREMENTS
  110 CALL CPUSER(JPE,UVREQ)
      SKIP=0
      DO 120 J=1,9
      DO 120 I=1,110
      FREQ(I,J)=FREQ(I,J)+FIXPCT(IYR)*FREQ(I,J)+UVREQ(I,J)
  120 NAVREQ(I,J)=NAVREQ(I,J)+FREQ(I,J)
      WRITE (IUOUT,190) JPE,IYR,FREQ
      NP=NSCANX(VSPI,NVPE,JPE)
      IF (NP.EQ.0) GO TO 30
      NP=KEY(NP)
      DO 122 J=1,9
      DO 122 I=1,110
  122 TOTREQ(I,J,NP)=TOTREQ(I,J,NP)+FREQ(I,J)
      GO TO 30
C
C          END OF FILE ON VARIABLE
  130 IF (JPE.EQ.99999999) GO TO 150
      JPE=99999999
      GO TO 30
C          END OF FILE ON FIXED
  140 IF (IPE.EQ.99999999) GO TO 150
      JPE=99999999
      GO TO 30
C          END OF YEAR IYR
  150 IPE=999999
      WRITE (IUOUT,190) IPE,IYR,FREQ
      IF (IYR.GE.6.AND.NYEAR.GT.6) REWIND IUEPA
C
C          PRINT ENREP TOTAL REQUIREMENTS FOR THIS YEAR
      CALL PRINT
C
C          WRITE REQUIREMENTS ON DISK FOR PROPHET SYSTEM
      CALL PROPHT(1)
C
C          IF DESIRED, TRANSLATE FROM RATING/PAYGRADE TO RATING/LOS
      IF (ILOS.EQ.0) CALL TRFLOS(2)
C
  160 CONTINUE
      REWIND IUTOT
      RETURN
C
  170 FORMAT (1H1,3X,4HYEAR,I3)
  180 FORMAT (21H  NO FIXED REQ FOR PE,I7)
  190 FORMAT (2I6,9UF6.1)
      END
C
```

```
C*****************************************************************
C
      SUBROUTINE PROPHT(INDC)
      COMMON /$1/ WASTE(5), IND, IYR, FIXR, ILOS, NYEAR,
     *            WASTE1(552), PRHREQ(110,7),
     *            NAVREQ(111,10)
      COMMON /$C/ IRATE(110), JRATE(110)
      COMMON /FILES/ IUSF,IUAF,IUUR1,IUUR2,IUSQ,
     *               IUSD,IUAD,IURQ,IURSF,IURAF,IUVR,IURA,
     *               IUEPA,IUOUT,IUST,IUIN,IUPH,IBY
      DIMENSION KYRATE(110)
      DATA KYRATE / 1, 1, 1, 1, 1, 1, 3, 0, 0,
     *              1, 1, 4, 0, 0, 0, 4, 0, 0, 0,
     *              1, 1, 3, 0, 0, 1, 1, 1, 1, 1,
     *              1, 6, 0, 0, 0, 0, 0, 3, 0, 0,
     *              1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
     *              1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
     *              1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
     *              1, 1, 1, 1, 1, 1, 3, 0, 0, 1,
     *              1, 1, 1, 1, 1, 4, 0, 0, 0, 1,
     *              4, 0, 0, 0, 1, 1, 1, 1, 4, 0,
     *              0, 0, 1, 1, 1, 1, 1, 1, 1, 1,
     *              1/
C
      IF (INDC.GT.1) GO TO 50
C
C       ADD REQUIREMENTS TO PRHREQ FOR THIS YEAR
C       SUM ACROSS SERVICE RATINGS TO GENERAL RATINGS
      IF (IYR.GT.7) RETURN
      DO 10 I=1,110
   10 PRHREQ(I,IYR)=0.0
      DO 30 I=1,110
      IF (KYRATE(I).EQ.0) GO TO 30
      DO 20 J=1,KYRATE(I)
   20 PRHREQ(I,IYR)=PRHREQ(I,IYR)+NAVREQ(I+J-1,10)
   30 CONTINUE
      RETURN
C
C       WRITE REQUIREMENTS ON DISK FOR PROPHET
   50 DO 60 I=1,110
      IF (KYRATE(I).EQ.0) GO TO 60
      WRITE (IUPH,1000) IRATE(I),(PRHREQ(I,J),J=1,7)
 1000 FORMAT (2X,A2,2X,7F9.0)
   60 CONTINUE
      CLOSE (IUPH,DISP=CRUNCH)
      RETURN
      END
C
C*****************************************************************
C
      SUBROUTINE TRFLOS(INDC)
      COMMON /$1/ WASTE(5), IND, IYR, FIXR, ILOS, NYEAR,
     *            WASTE1(1002), X(10,32),
     *            NAVREQ(111,10), WASTE2(111,10,7), TRANSF(110,9,31),
     *            NAVLOS(111,32)
      COMMON /FILES/ IUSF,IUAF,IUUR1,IUUR2,IUSQ,
     *               IUSD,IUAD,IURQ,IURSF,IURAF,IUVR,IURA,
     *               IUEPA,IUOUT,IUST,IUIN,IUPH,IBY
      DIMENSION IPROXY(110)
      COMMON /$C/ IRATE(110), JRATE(110)
      REAL NAVLOS, NAVREQ
C
      IF (INDC.GT.1) GO TO 60
C
```

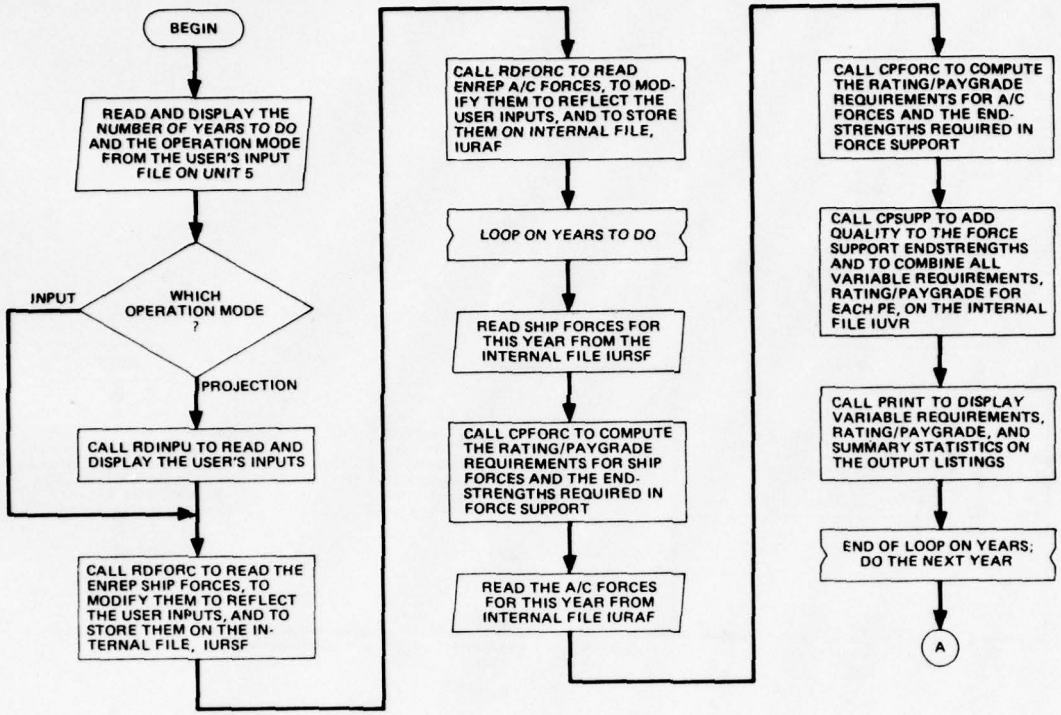
```
C         READ INVENTORY TAPE FROM PERS2X AND COMPUTE TRANSFORMATION
C              PERCENTS BY LOS FOR EACH PAYGRADE FOR THE NEXT RATING
      WRITE (6,5)
    5 FORMAT (1HL)
      DO 15 I=1,31
      DO 15 J=1,9
      DO 15 K=1,110
   15 TRANSF(K,J,I)=0.0
C
   10 DO 20 I=1,32
      READ (IUIN,1000,END=50) ICODE,X(9,I),X(8,I),X(7,I),X(6,I),X(5,I),
     *    X(4,I),X(3,I),X(2,I),X(1,I),IY
 1000 FORMAT (4X,A4,9I7,7X,I2)
      IF (IY.NE.I) CALL ERROR(15,ICODE,IY,I,0,0)
   20 CONTINUE
C
C           LOOK FOR MATCH IN ARRAY JRATE
      JR=NSCANX(JRATE(1),110,ICODE)
      IF (JR.GT.0) GO TO 30
      CALL ERROR(16,ICODE,0,0,0,0)
      GO TO 10
C
C           COMPUTE TRANSFORMATION PERCENTAGES
   30 DO 40 I=1,9
      DO 40 J=1,31
   40 IF (X(I,32).GT.0.0) TRANSF(JR,I,J)=X(I,J)/X(I,32)
      GO TO 10
C
C           END OF FILE
   50 LOCK IUIN
      RETURN
C
C         APPLY PERCENTAGES TO THE REQUIREMENTS
C
C         SOME RATINGS ARE SPLIT IN ENREP, AS ELSEWHERE IN THE NAVY,
C         BY PAYGRADE, BUT THEY ARE NOT SPLIT IN THE ENLISTED INVENTORY
C         FILE. THEREFORE, THE FOLLOWING HIGH PAYGRADE RATINGS ARE USING
C         THE INVENTORY DATA OF THEIR CORRESPONDING RATING.
C                ST (3400) AND STG (0401) - CELL 7 AND CELL 8
C                PI (1080) AND IM (1100) - CELL 26 AND CELL 27
C                CU (5080) AND CE (5300) - CELL 65 AND CELL 67
C                EO (5330) AND EO (5410) - CELL 68 AND CELL 69
C                AF (6080) AND AD (6200) - CELL 74 AND CELL 76
C                AV (6180) AND AD 96200) - CELL 75 AND CELL 76
   60 DO 62 I=1,110
   62 IPROXY(I)=0
      IPROXY(7)=8
      IPROXY(26)=27
      IPROXY(65)=67
      IPROXY(68)=69
      IPROXY(74)=76
      IPROXY(75)=76
      DO 70 J=1,32
      DO 70 I=1,111
   70 NAVLOS(I,J)=0.0
      DO 90 I=1,110
      II=I
      IF (IPROXY(I).GT.0) II=IPROXY(I)
      DO 80 J=1,9
      DO 80 K=1,31
   80 NAVLOS(I,K)=NAVLOS(I,K)+NAVREQ(I,J)*TRANSF(II,J,K)
   90 CONTINUE
C
C         PRINT RESULTS
```

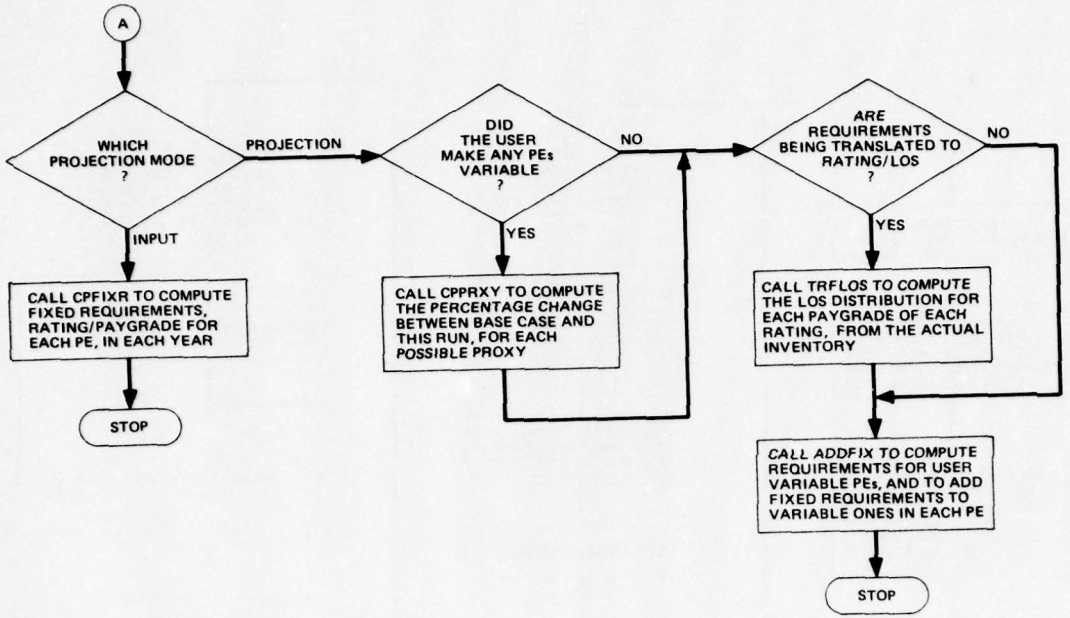
```
      I=IYR+IBY-1
      WRITE (6,2000) I,(J,J=1,16)
 2000 FORMAT (1H1//40X,"ALL NAVY ENLISTED REQUIREMENTS FOR FY",I4//
     *56X,"LENGTH OF SERVICE"//X,6HRATING,5X,16(I7)/)
      DO 100 I=1,110
      WRITE (6,2010) IRATE(I),JRATE(I),(NAVLOS(I,J),J=1,16)
 2010 FORMAT (5X,A3,1X,A4,5X,16F7.0)
      DO 130 J=1,31
  100 NAVLOS(111,J)=NAVLOS(111,J)+NAVLOS(I,J)
      WRITE (6,2020) (NAVLOS(111,I),I=1,16)
 2020 FORMAT (10X,3HLOS/8X,5HTOTAL,5X,16F7.0)
      DO 110 J=1,31
      DO 110 I=1,111
  110 NAVLOS(I,32)=NAVLOS(I,32)+NAVLOS(I,J)
      WRITE (6,2030) (I,I=17,31)
 2030 FORMAT (1H1/55X,"LENGTH OF SERVICE",55X,6HRATING/7X,6HRATING,
     *5X,15(I7),5X,5HTOTAL/)
      DO 120 I=1,110
  120 WRITE (6,2040) IRATE(I),JRATE(I),(NAVLOS(I,J),J=17,32)
 2040 FORMAT (5X,A3,1X,A4,5X,15F7.0,F10.0)
      WRITE (6,2050) (NAVLOS(111,I),I=17,32)
 2050 FORMAT (10X,3HLOS/8X,5HTOTAL,5X,15F7.0,F10.0)
      RETURN
      END
C
C*****************************************************************************
C
      SUBROUTINE OVERN (IYR,PU,PE,YRTOTA,SPEAC,UNITR)
C
C          THIS SUBROUTINE PERFORMS THE USER OVERRIDES
C              TO NAVM ONBOARD AND SUPPORT FACTORS
C              FOR PARTICULAR COMBINATIONS OF YEAR/ACI/PE/PU
C
      DIMENSION SPEAC(5), UNITR(110,9)
      COMMON /63/ OFUPDT(100,10), NOFUP,
     *            PFUPDT(50,9), LPFUPD(50,20,2), NPFUP
      DIMENSION IFUPDT(100,10), JFUPDT(50,9)
      EQUIVALENCE (OFUPDT(1),IFUPDT(1)), (PFUPDT(1),JFUPDT(1))
      INTEGER PU,PE
C
C            CHECK DIRECT OVERRIDES
      DO 10 I=1,NOFUP
      IF (PU.NE.IFUPDT(I,7)) GO TO 10
      IF (PE.EQ.IFUPDT(I,8)) GO TO 20
   10 CONTINUE
      GO TO 60
C
C              MATCH FOUND
   20 IF (IYR.LT.IFUPDT(I,9).OR.IYR.GT.IFUPDT(I,10)) GO TO 60
      WRITE (6,21) PU,PE
   21 FORMAT (1H0,"MATCH ON DIRECT FACTOR UPDATE  - PU/PE = ",I6,1H/,I6)
      IF (OFUPDT(I,6).LT.0.0) GO TO 40
C
C          ONBOARD MANNING
      IF (YRTOTA.LE.0) CALL ERROR (14,PU,PE,1,0,0)
      SCALE=0.0
      IF (YRTOTA.GT.0) SCALE=OFUPDT(I,6)/YRTOTA
      DO 30 K=1,9
      DO 30 J=1,110
   30 UNITR(J,K)=UNITR(J,K)*SCALE
      WRITE (6,22) YRTOTA,OFUPDT(I,6)
   22 FORMAT (" ONBOARD FACTOR CHANGED FROM ",F9.2," TO ",F9.2)
      YRTOTA=OFUPDT(I,6)
C
```

```
C          SUPPORT MANNING
   40 DO 50 J=1,5
      IF (OFUPDT(I,J).LT.0.0) GO TO 50
      WRITE (6,23) J,SPFAC(J),OFUPDT(I,J)
   23 FORMAT (" FACTOR ",I1," CHANGED FROM ",F9.2," TO ",F9.2)
      SPFAC(J)=OFUPDT(I,J)
   50 CONTINUE
      RETURN
C
C          CHECK THE PERCENTAGE FACTORS
   60 DO 80 I=1,NPFUP
      DO 70 J=1,JFUPDT(I,9)
      IF (PU.NE.LPFUPD(I,J,1)) GO TO 70
      IF (PE.NE.LPFUPD(I,J,2)) GO TO 70
      IF (IYR.GE.JFUPDT(I,7).AND.IYR.LE.JFUPDT(I,8)) GO TO 90
   70 CONTINUE
   80 CONTINUE
      RETURN
C
C            MATCH FOUND
   90 WRITE (6,91) PU,PE
   91 FORMAT (1H0,"MATCH ON PERCENTAGE FACTOR UPDATE - PU/PE = ",I6,1H/,
     *I6)
      IF (PFUPDT(I,6).EQ.-999999.) GO TO 110
C
C             ONBOARD MANNING
      X=YRTOTA+Y(TOTA*PFUPDT(I,6)
      SCALE=X/YRTOTA
      DO 100 K=1,9
      DO 100 J=1,110
  100 UNITR(J,K)=UNITR(J,K)*SCALE
      WRITE (6,93) YRTOTA,X
   93 FORMAT (" ONBOARD FACTOR CHANGED FROM ",F9.2," TO ",F9.2)
      YRTOTA=X
C
C             SUPPORT MANNING
  110 DO 120 J=1,5
      IF (PFUPDT(I,J).EQ.-999999.) GO TO 120
      X=SPFAC(J)+PFUPDT(I,J)*SPFAC(J)
      WRITE (6,95) J,SPFAC(J),X
   95 FORMAT (" FACTOR ",I1," CHANGED FROM ",F9.2," TO ",F9.2)
      SPFAC(J)=X
  120 CONTINUE
      RETURN
      END
C
C*****************************************************************************
C
      SUBROUTINE ERROR (TYPE,PARM1,PARM2,PARM3,PARM4,PARM5)
      INTEGER TYPE, PARM1, PARM2, PARM3, PARM4, PARM5
      GO TO (10,20,30,40,50,60,70,80,90,100,110,120,130,140,150,160,
     *       170,180,190,200), TYPE
C          1 - NO UNIT REQUIREMENTS FOR THIS ACT AND PE
   10 WRITE (6,700) PARM1,PARM2,PARM3
      RETURN
C          2 - NUMBER OF PE'S NUMBER MORE THAN PARM3
   20 WRITE (6,800) PARM2
      PARM1=PARM3
      RETURN
C          3 - TOO MANY PE CODES IN A PERCENTAGE UPDATE GROUP
   30 WRITE (6,900)
      PARM1=20
      RETURN
C          4 - INPUT FORCE RECORDS NUMBER MORE THAN PARM5
```

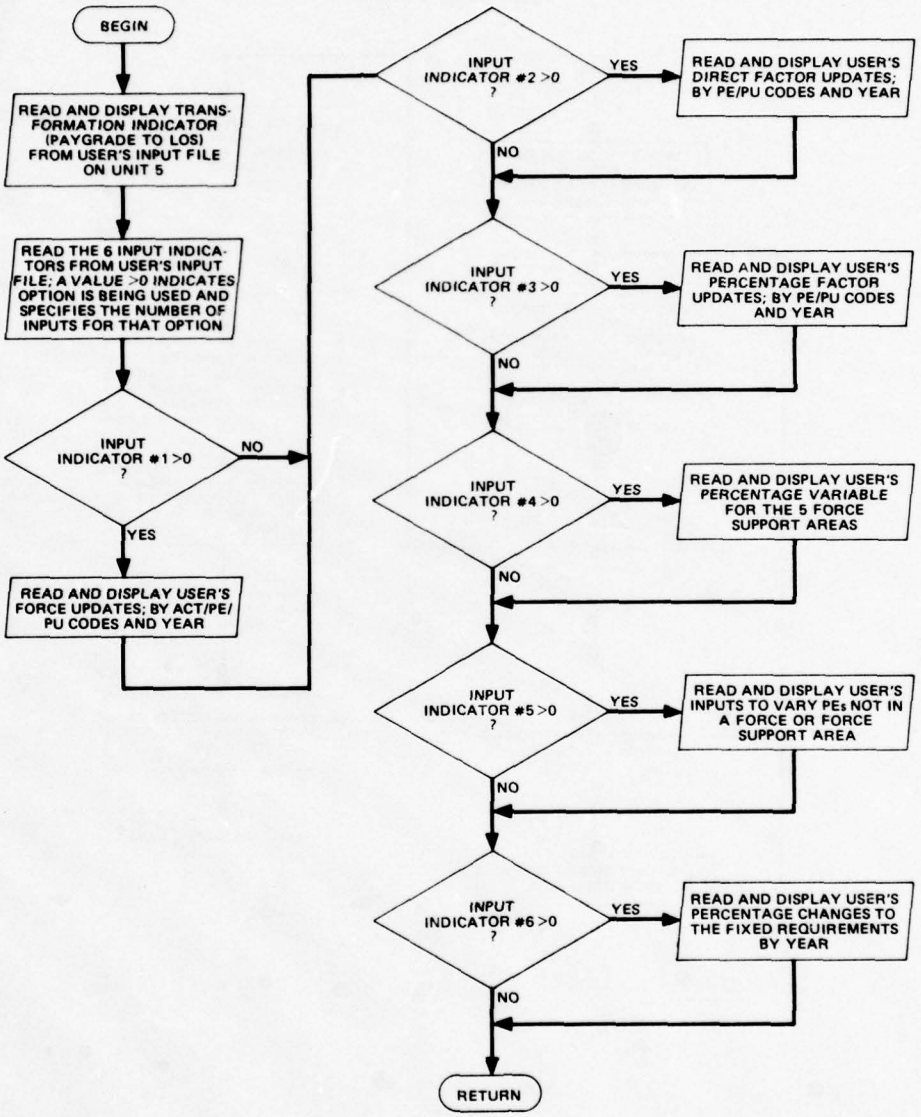
```
      40 WRITE (6,1000) PARM5,PARM2,PARM3,PARM4
         PARM1=PARM5
         RETURN
C             5 - WRONG NUMBER OF SUPPORT PE'S READ
      50 WRITE (6,1100) PARM1,PARM2,PARM3
         RETURN
C             6 - TOO MANY FORCE UPDATES ENTERED
      60 WRITE (6,1200)
         PARM1=200
         RETURN
C             7 - TOO MANY DIRECT FACTOR UPDATES
      70 WRITE (6,1300)
         PARM1=100
         RETURN
C             8 - INVALID SUPPORT AREA IDENTIFIER
      80 WRITE (6,1400) PARM3,PARM1,PARM2
         PARM3=0
C             9 - TOO MANY PERCENTAGE FACTOR UPDATES
      90 WRITE (6,1500)
         PARM1=50
         RETURN
C             10 - TOO MANY CHANGES TO THE NARM VARIABLE PERCENTS
     100 WRITE (6,1600)
         PARM1=5
         RETURN
C             11 - INVALID SUPPORT AREA IDENTIFIER - VARIABLE PERCENT CHANGE
     110 WRITE (6,1700)
         PARM1=0
         RETURN
C             12 - INVALID YEAR SPECIFIED - VARIABLE PERCENT CHANGE
     120 WRITE (6,1800) PARM2
         PARM1=0
         RETURN
C             13 - TOO MANY USER SUPPORT AREAS
     130 WRITE (6,1900)
         PARM1=10
         RETURN
C             14 - ALL ZERO PE - USER OVERRIDE TO FACTORS
     140 WRITE (6,2000) PARM1,PARM2,PARM3
         RETURN
C             15 - LOST A RECORD ON THE ENLISTED INVENTORY TAPE
     150 WRITE (6,2100) PARM1,PARM2,PARM3
         RETURN
C             16 - UNKNOWN RATING APPEARS ON THE ENLISTED INVEN. TAPE
     160 WRITE (6,2200) PARM1
         RETURN
C             17 - ARRAY TOO SMALL - TOO MANY ACT CODES
     170 WRITE (6,2300) PARM2
         PARM1=PARM2
         RETURN
C             18 - ARRAY TOO SMALL - TOO MANY PE'S IN AN ACT CODE
     180 WRITE (6,2400) PARM2
         PARM1=PARM2
         RETURN
C             19 - ARRAY TOO SMALL - TOO MANY PU'S IN AN ACT/PE PAIR
     190 WRITE (6,2500) PARM2
         PARM1=PARM2
         RETURN
C
C             20 - ARRAY TOO SMALL - TOO MANY PE CODES
     200 WRITE (6,2600) PARM2
         PARM1=PARM2
C
     700 FORMAT (53HO THERE IS NO UNIT REQUIREMENTS MATRIX FOR ACT/PE/PU ,I
```

```
198200           *4,1H/,I5,1H/,I6)
198300        800 FORMAT (31H0 THERE ARE TOO MANY PE'S.  PE ,I6,28H IS INCLUDED IN T
198400           *HE LAST PE.)
198500        900 FORMAT ("0 THERE ARE TOO MANY PE CODES IN A PERCENTAGE FACTOR UPDA
198600           *TE - LIMIT IS 20")
198700       1000 FORMAT("0 THERE ARE MORE THAN ",I4," FORCES RECORDS. FORCES FOR AC
198800           *T/PE/PU ",I4,1H/,I6,1H/,I6,30H ARE INCLUDED IN THE LAST ONE.)
198900       1100 FORMAT (26H0 ERROR IN SUPPORT SECTOR ,I1,1H.,2X,I3,27H PE'S WERE R
199000           *EAD INSTEAD OF ,I3,1H.)
199100       1200 FORMAT (1H0,39HTHERE ARE TOO MANY INPUT FORCE UPDATES.)
199200       1300 FORMAT (1H0,"THERE ARE TOO MANY DIRECT FACTOR UPDATES - LIMIT IS 1
199300           *00")
199400       1400 FORMAT (1H0,"INVALID SUPPORT AREA IDENTIFIER -",I2," IN PU/PE ",
199500           *I6,1H/,I6)
199600       1500 FORMAT (1H0,"THERE ARE TOO MANY PERCENTAGE FACTOR UPDATES - LIMIT
199700           *IS 50")
199800       1600 FORMAT (1H0,"TOO MANY CHANGES TO THE NARM VARIABLE PERCENTS")
199900       1700 FORMAT (1H0,"INVALID SUPPORT AREA IDENTIFIER FOR A CHANGE TO THE N
200000           *ARM VARIABLE PERCENTS")
200100       1800 FORMAT (1H0,"INVALID YEAR SPECIFIED FOR A CHANGE TO VARIABLE PERCE
200200           *NT IN SUPPORT AREA",I2)
200300       1900 FORMAT (1H0,"TOO MANY USER SUPPORT AREAS - LIMIT OF 10")
200400       2000 FORMAT (1H0,"NO BILLETS FOR PU/PE ",I6,1H/,I6," WHICH USER IS ATTE
200500           *MPTING TO UPDATE FACTOR",I2)
200600       2100 FORMAT (1H0,"LOST RECORD ON THE ENLISTED INVENTORY TAPE, ",
200700           *"RATING IS ",A4," AND LOS CELL IS ",I2," AND SHOULD BE ",I2)
200800       2200 FORMAT (1H0,"UNKNOWN RATING ON THE ENLISTED INVENTORY TAPE,",
200900           *" ",A4)
201000       2300 FORMAT (1H0,"INCREASE ARRAY SIZE - MORE THAN",I3," ACT CODES")
201100       2400 FORMAT (1H0,"INCREASE ARRAY SIZE - MORE THAN",I3," PE CODES IN AN
201200           *ACT CODE")
201300       2500 FORMAT (1H0,"INCREASE ARRAY SIZE - MORE THAN",I3," PU CODES IN AN
201400           *ACT/PE PAIR")
201500       2600 FORMAT (1H0,"INCREASE ARRAY SIZE - MORE THAN",I4," PE CODES")
201600            END
201700     C
201800     C*******************************************************************
201900     C
202000            INTEGER FUNCTION NSCANX(M,L,I)
202100            DIMENSION M(1)
202200            J=L
202300          5 IF(M(J).IS.I) GO TO 10
202400            J=J-1
202500            IF (J.GT.0) GO TO 5
202600            J=0
202700         10 NSCANX=J
202800            RETURN
202900            END
```

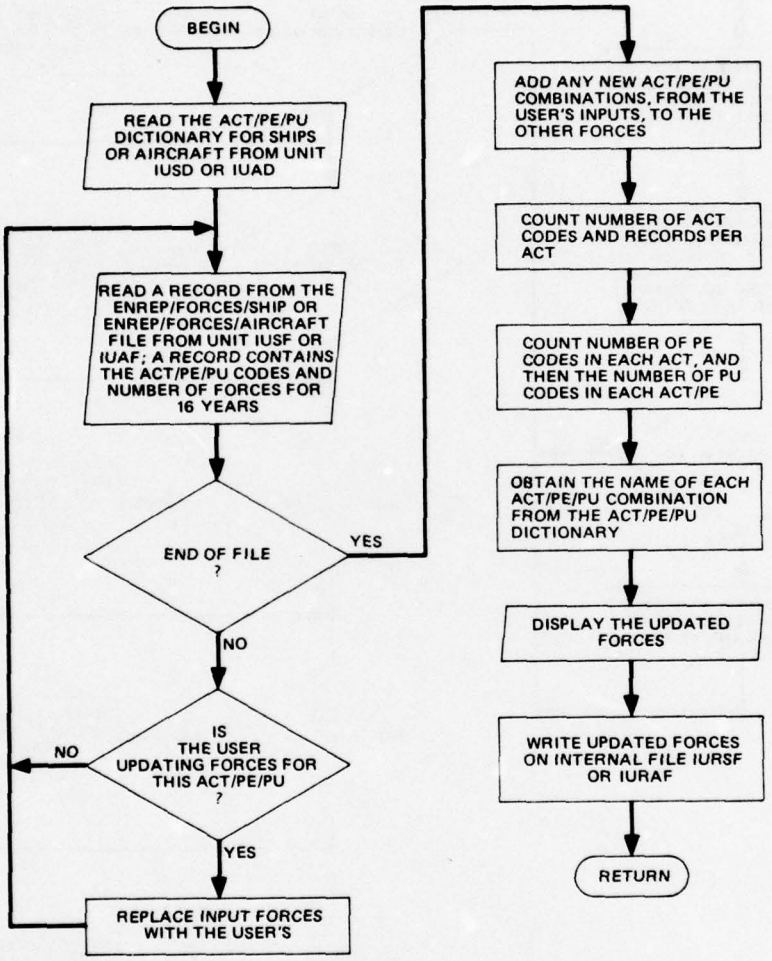

BEGIN
READ AND DISPLAY THE NUMBER OF YEARS TO DO AND THE OPERATION MODE FROM THE USER'S INPUT FILE ON UNIT 5
WHICH OPERATION MODE ?
INPUT
PROJECTION
CALL RDINPU TO READ AND DISPLAY THE USER'S INPUTS
CALL RDFORC TO READ THE ENREP SHIP FORCES, TO MODIFY THEM TO REFLECT THE USER INPUTS, AND TO STORE THEM ON THE INTERNAL FILE, IURSF
CALL RDFORC TO READ ENREP A/C FORCES, TO MODIFY THEM TO REFLECT THE USER INPUTS, AND TO STORE THEM ON INTERNAL FILE, IURAF
LOOP ON YEARS TO DO
READ SHIP FORCES FOR THIS YEAR FROM THE INTERNAL FILE IURSF
CALL CPFORC TO COMPUTE THE RATING/PAYGRADE REQUIREMENTS FOR SHIP FORCES AND THE END-STRENGTHS REQUIRED IN FORCE SUPPORT
READ THE A/C FORCES FOR THIS YEAR FROM INTERNAL FILE IURAF
CALL CPFORC TO COMPUTE THE RATING/PAYGRADE REQUIREMENTS FOR A/C FORCES AND THE END-STRENGTHS REQUIRED IN FORCE SUPPORT
CALL CPSUPP TO ADD QUALITY TO THE FORCE SUPPORT ENDSTRENGTHS AND TO COMBINE ALL VARIABLE REQUIREMENTS, RATING/PAYGRADE FOR EACH PE, ON THE INTERNAL FILE IUVR
CALL PRINT TO DISPLAY VARIABLE REQUIREMENTS, RATING/PAYGRADE, AND SUMMARY STATISTICS ON THE OUTPUT LISTINGS
END OF LOOP ON YEARS; DO THE NEXT YEAR
A


A
WHICH PROJECTION MODE ?
PROJECTION
INPUT
CALL CPFIXR TO COMPUTE FIXED REQUIREMENTS, RATING/PAYGRADE FOR EACH PE, IN EACH YEAR
STOP
DID THE USER MAKE ANY PEs VARIABLE ?
NO
YES
CALL CPPRXY TO COMPUTE THE PERCENTAGE CHANGE BETWEEN BASE CASE AND THIS RUN, FOR EACH POSSIBLE PROXY
ARE REQUIREMENTS BEING TRANSLATED TO RATING/LOS ?
NO
YES
CALL TRFLOS TO COMPUTE THE LOS DISTRIBUTION FOR EACH PAYGRADE OF EACH RATING, FROM THE ACTUAL INVENTORY
CALL ADDFIX TO COMPUTE REQUIREMENTS FOR USER VARIABLE PEs, AND TO ADD FIXED REQUIREMENTS TO VARIABLE ONES IN EACH PE
STOP

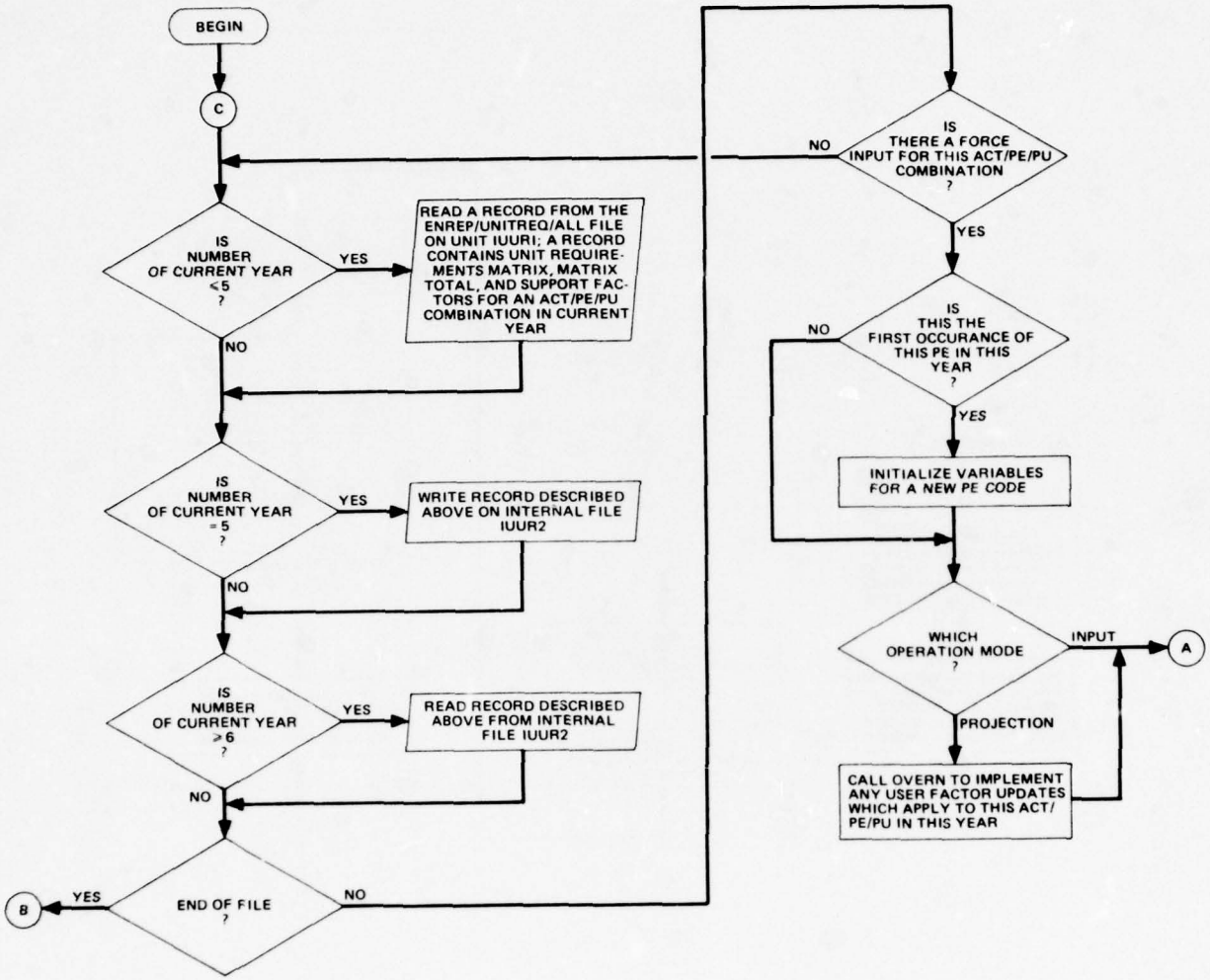
Subroutine RDINPU

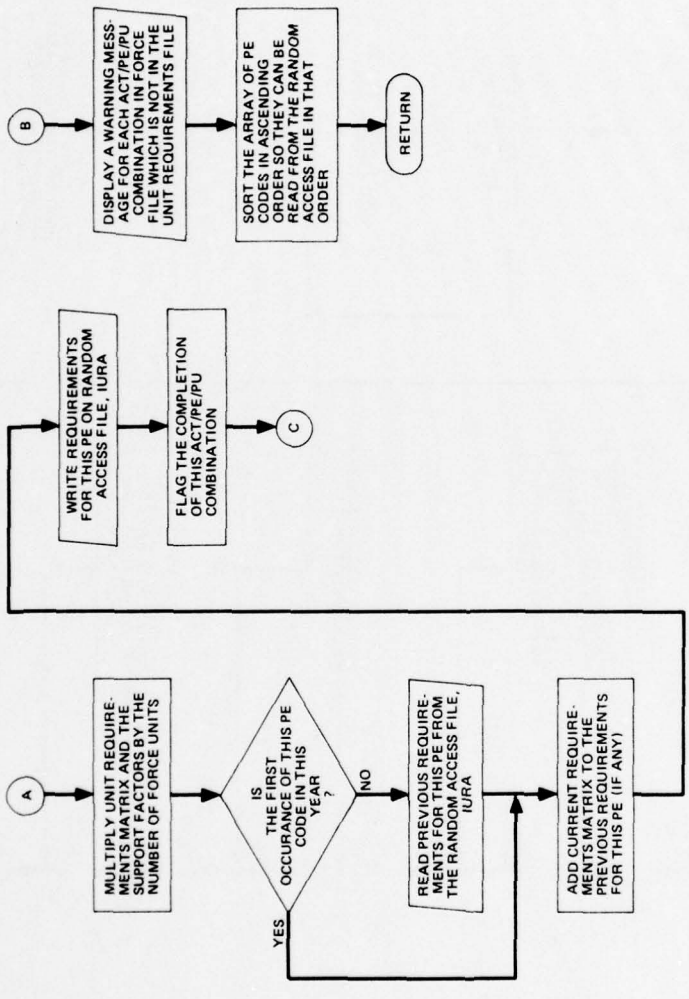


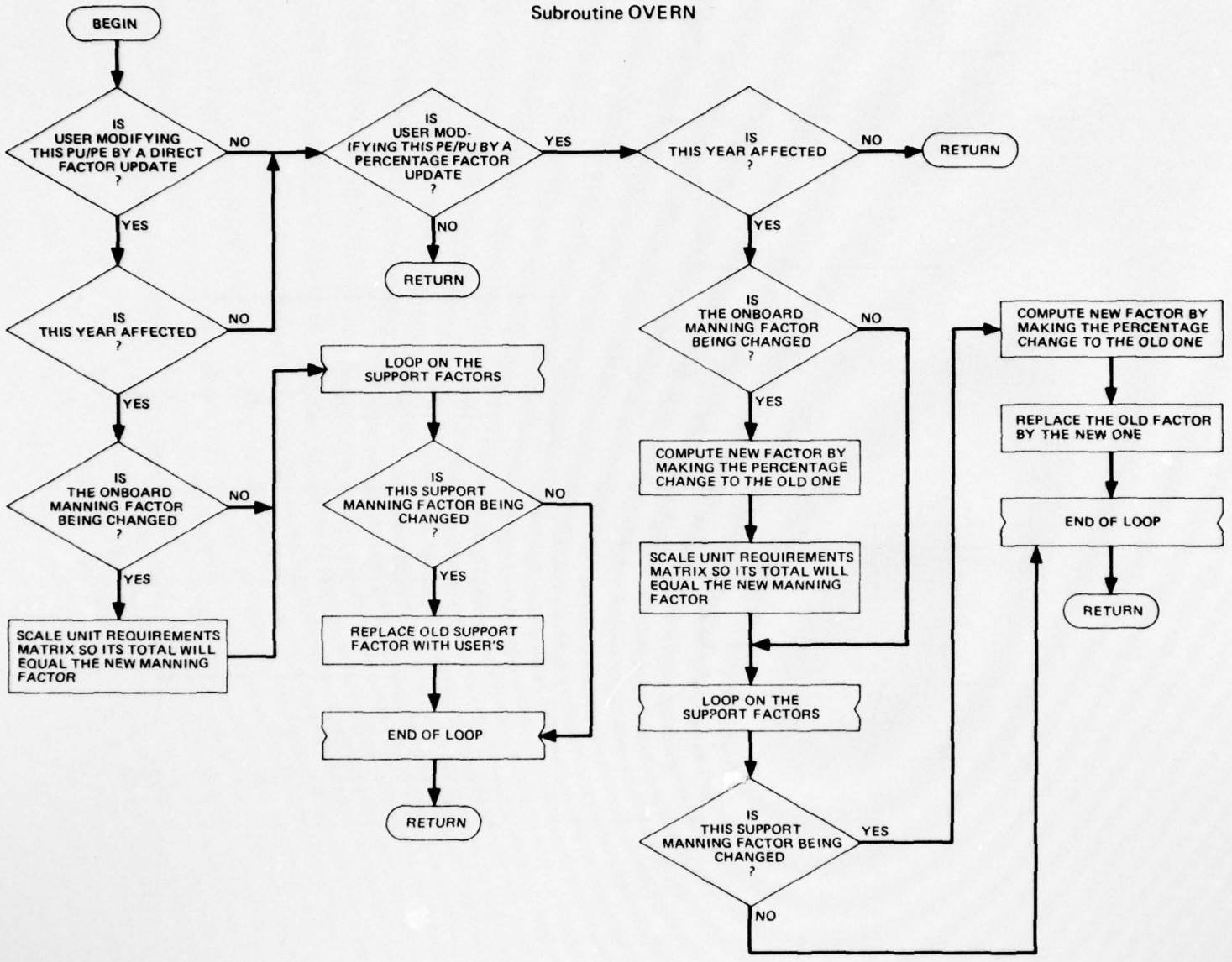
Subroutine RDFORC



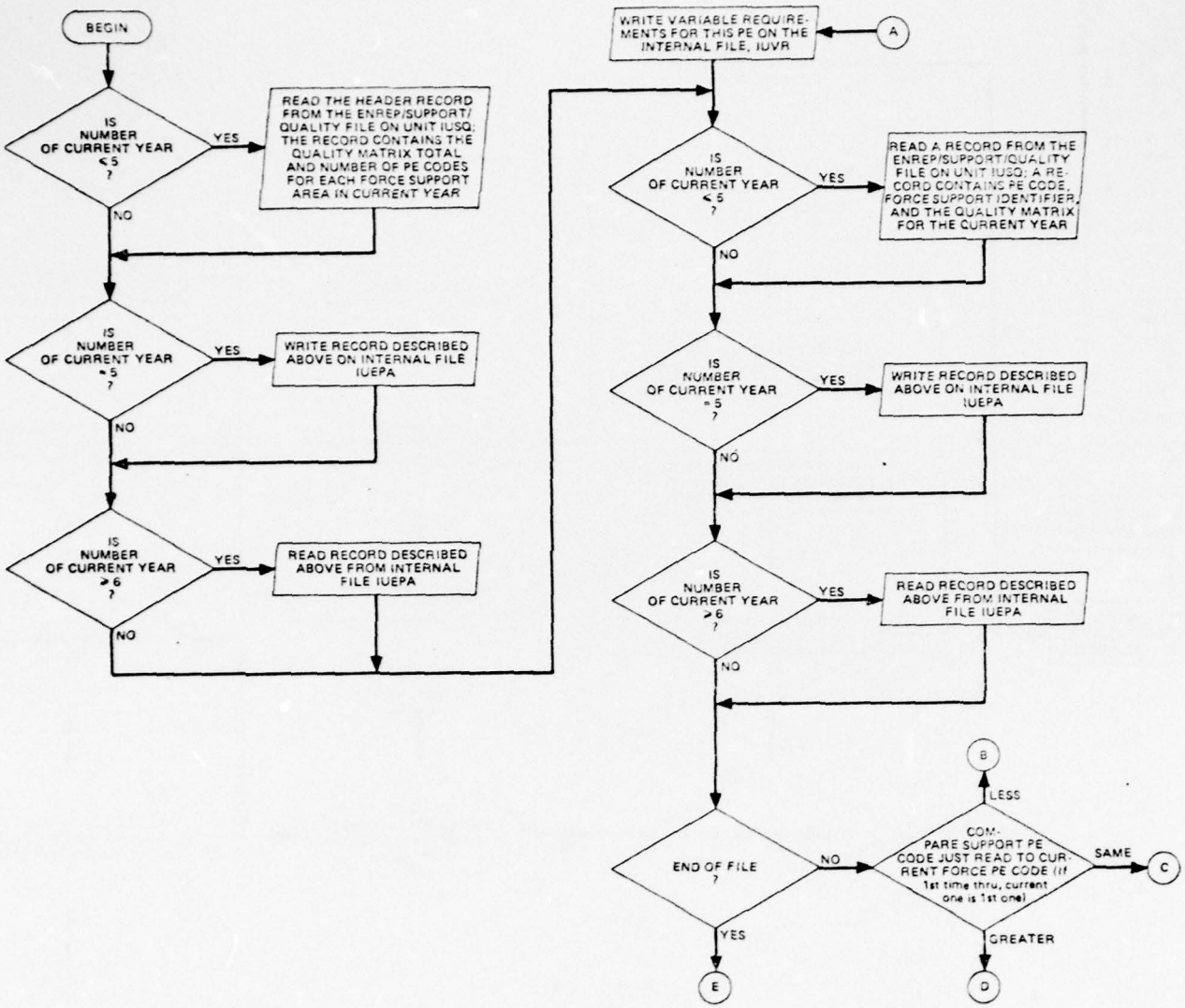
Subroutine CPFORC

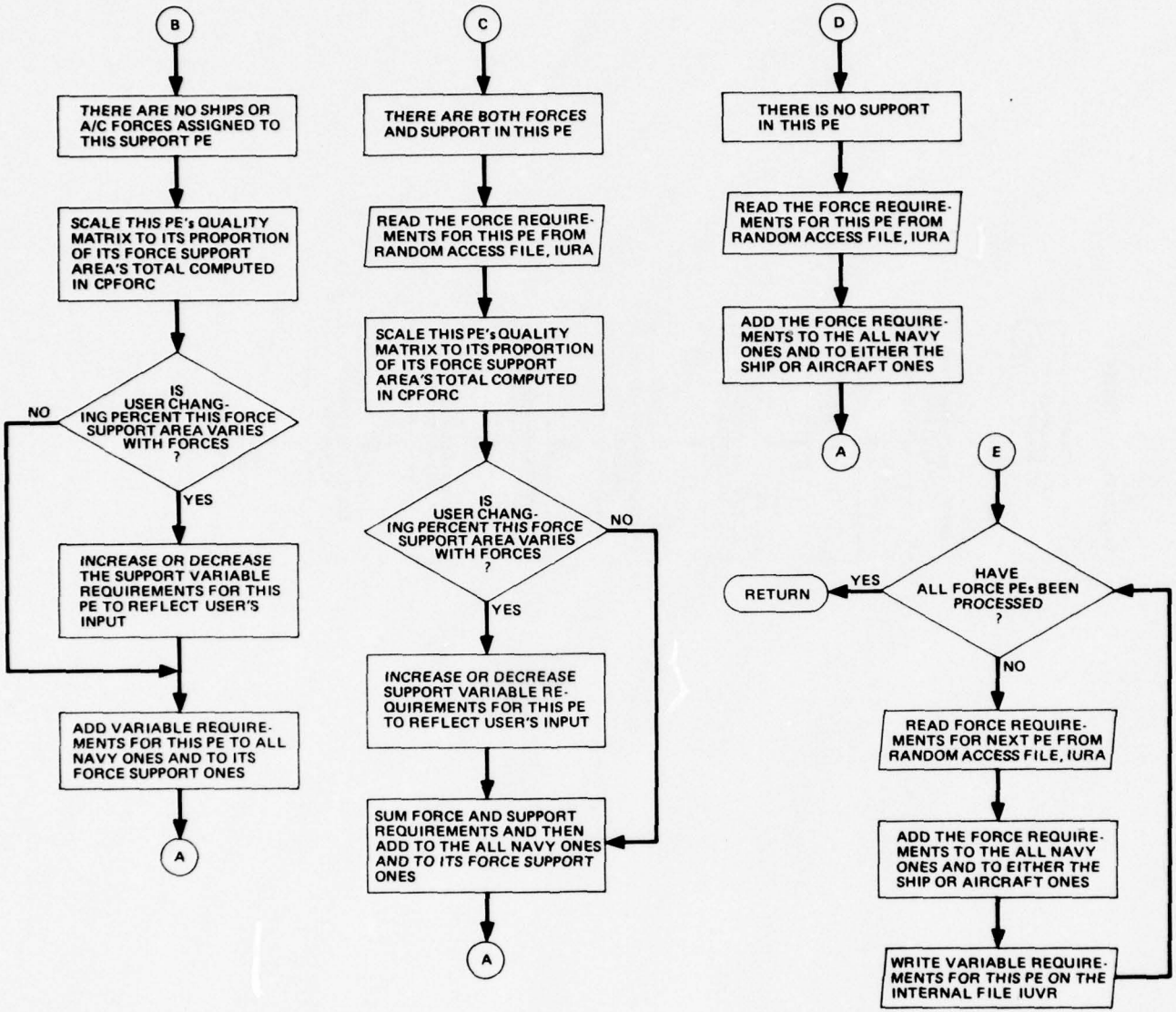



A
MULTIPLY UNIT REQUIREMENTS MATRIX AND THE SUPPORT FACTORS BY THE NUMBER OF FORCE UNITS
IS THE FIRST OCCURANCE OF THIS PE CODE IN THIS YEAR ?
YES
NO
READ PREVIOUS REQUIREMENTS FOR THIS PE FROM THE RANDOM ACCESS FILE, IURA
ADD CURRENT REQUIREMENTS MATRIX TO THE PREVIOUS REQUIREMENTS FOR THIS PE (IF ANY)
WRITE REQUIREMENTS FOR THIS PE ON RANDOM ACCESS FILE, IURA
FLAG THE COMPLETION OF THIS ACT/PE/PU COMBINATION
C
B
DISPLAY A WARNING MESSAGE FOR EACH ACT/PE/PU COMBINATION IN FORCE FILE WHICH IS NOT IN THE UNIT REQUIREMENTS FILE
SORT THE ARRAY OF PE CODES IN ASCENDING ORDER SO THEY CAN BE READ FROM THE RANDOM ACCESS FILE IN THAT ORDER
RETURN

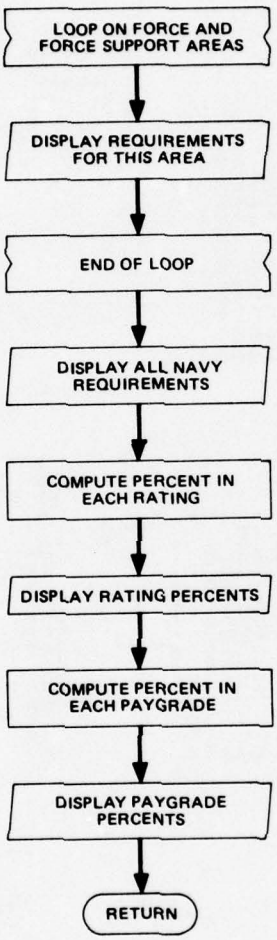

Subroutine OVERN
BEGIN
IS USER MODIFYING THIS PU/PE BY A DIRECT FACTOR UPDATE ?
NO
YES
IS USER MODIFYING THIS PE/PU BY A PERCENTAGE FACTOR UPDATE ?
YES
NO
RETURN
IS THIS YEAR AFFECTED ?
NO
YES
RETURN
IS THIS YEAR AFFECTED ?
NO
YES
IS THE ONBOARD MANNING FACTOR BEING CHANGED ?
NO
YES
SCALE UNIT REQUIREMENTS MATRIX SO ITS TOTAL WILL EQUAL THE NEW MANNING FACTOR
LOOP ON THE SUPPORT FACTORS
IS THIS SUPPORT MANNING FACTOR BEING CHANGED ?
NO
YES
REPLACE OLD SUPPORT FACTOR WITH USER'S
END OF LOOP
RETURN
IS THE ONBOARD MANNING FACTOR BEING CHANGED ?
NO
YES
COMPUTE NEW FACTOR BY MAKING THE PERCENTAGE CHANGE TO THE OLD ONE
SCALE UNIT REQUIREMENTS MATRIX SO ITS TOTAL WILL EQUAL THE NEW MANNING FACTOR
LOOP ON THE SUPPORT FACTORS
IS THIS SUPPORT MANNING FACTOR BEING CHANGED ?
YES
NO
COMPUTE NEW FACTOR BY MAKING THE PERCENTAGE CHANGE TO THE OLD ONE
REPLACE THE OLD FACTOR BY THE NEW ONE
END OF LOOP
RETURN

Subroutine CPSUPP

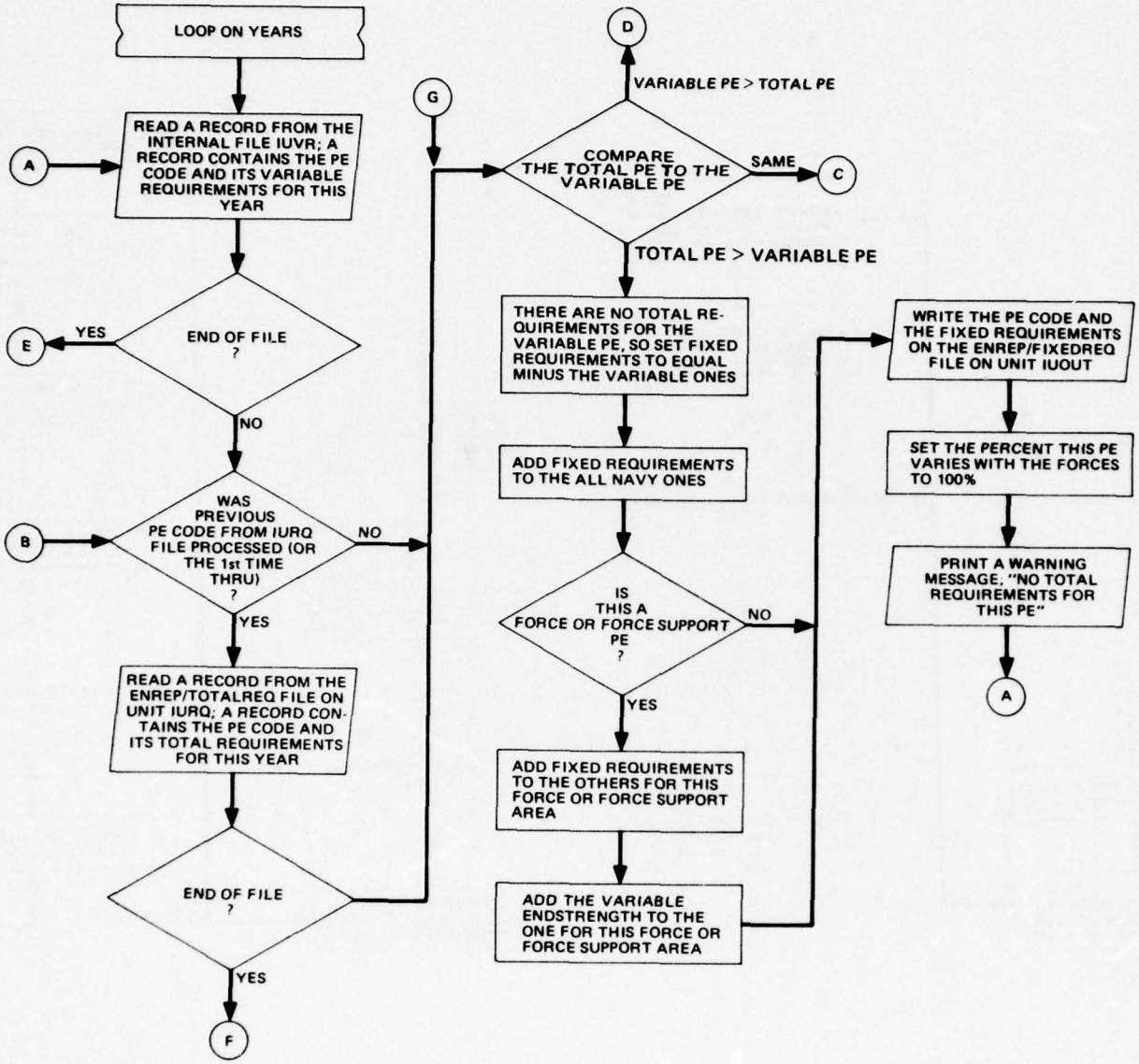


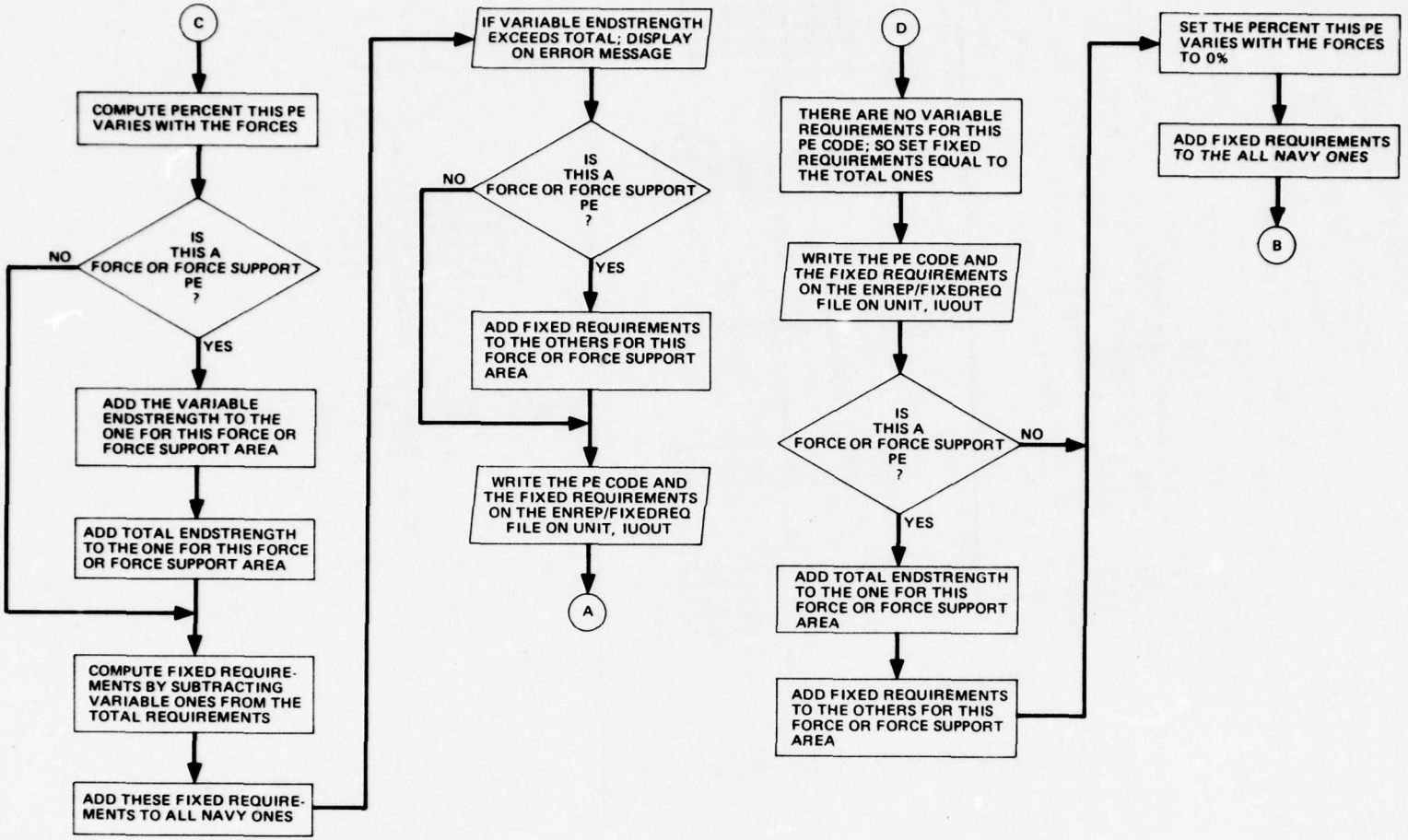

B
THERE ARE NO SHIPS OR A/C FORCES ASSIGNED TO THIS SUPPORT PE
SCALE THIS PE's QUALITY MATRIX TO ITS PROPORTION OF ITS FORCE SUPPORT AREA'S TOTAL COMPUTED IN CPFORC
IS USER CHANG-ING PERCENT THIS FORCE SUPPORT AREA VARIES WITH FORCES ?
NO
YES
INCREASE OR DECREASE THE SUPPORT VARIABLE REQUIREMENTS FOR THIS PE TO REFLECT USER'S INPUT
ADD VARIABLE REQUIRE-MENTS FOR THIS PE TO ALL NAVY ONES AND TO ITS FORCE SUPPORT ONES
A
C
THERE ARE BOTH FORCES AND SUPPORT IN THIS PE
READ THE FORCE REQUIRE-MENTS FOR THIS PE FROM RANDOM ACCESS FILE, IURA
SCALE THIS PE's QUALITY MATRIX TO ITS PROPORTION OF ITS FORCE SUPPORT AREA'S TOTAL COMPUTED IN CPFORC
IS USER CHANG-ING PERCENT THIS FORCE SUPPORT AREA VARIES WITH FORCES ?
NO
YES
INCREASE OR DECREASE SUPPORT VARIABLE RE-QUIREMENTS FOR THIS PE TO REFLECT USER'S INPUT
SUM FORCE AND SUPPORT REQUIREMENTS AND THEN ADD TO THE ALL NAVY ONES AND TO ITS FORCE SUPPORT ONES
A
D
THERE IS NO SUPPORT IN THIS PE
READ THE FORCE REQUIRE-MENTS FOR THIS PE FROM RANDOM ACCESS FILE, IURA
ADD THE FORCE REQUIRE-MENTS TO THE ALL NAVY ONES AND TO EITHER THE SHIP OR AIRCRAFT ONES
A
E
HAVE ALL FORCE PEs BEEN PROCESSED ?
YES
RETURN
NO
READ FORCE REQUIRE-MENTS FOR NEXT PE FROM RANDOM ACCESS FILE, IURA
ADD THE FORCE REQUIRE-MENTS TO THE ALL NAVY ONES AND TO EITHER THE SHIP OR AIRCRAFT ONES
WRITE VARIABLE REQUIRE-MENTS FOR THIS PE ON THE INTERNAL FILE IUVR

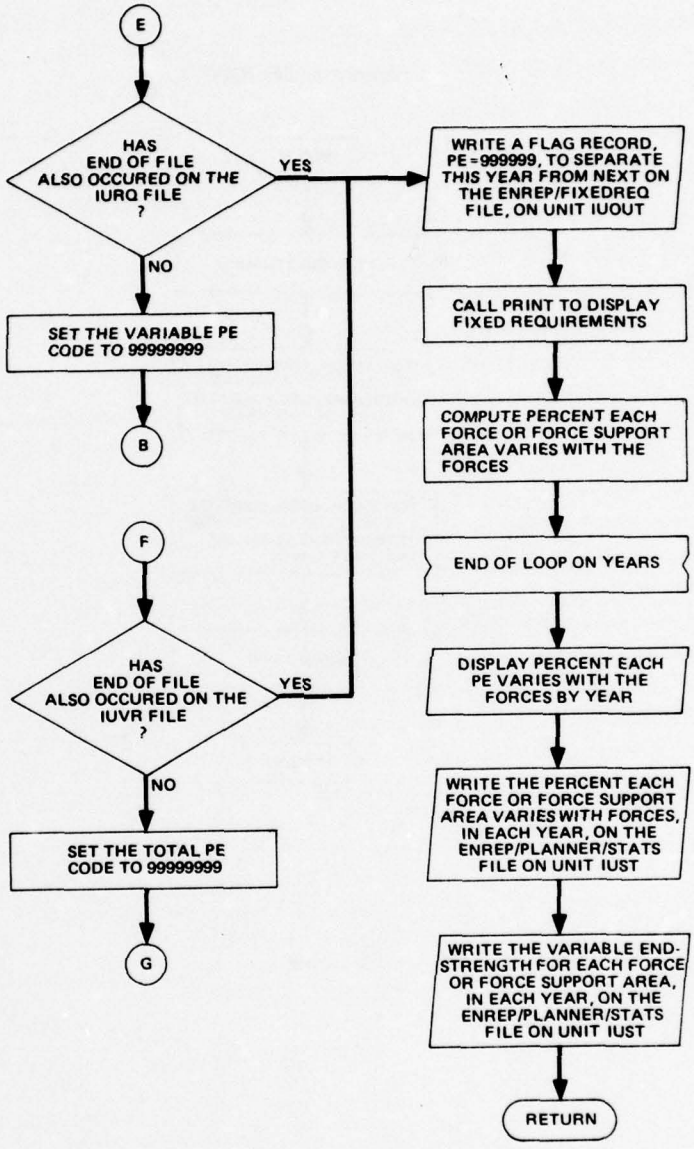
Subroutine PRINT



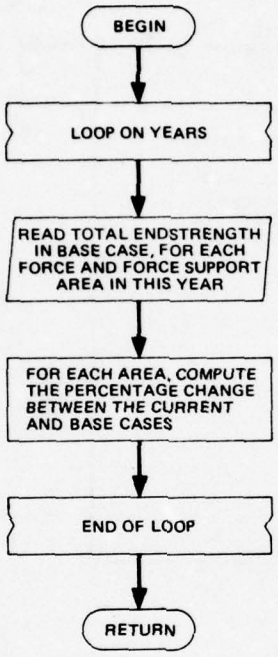
Subroutine CPFIXR



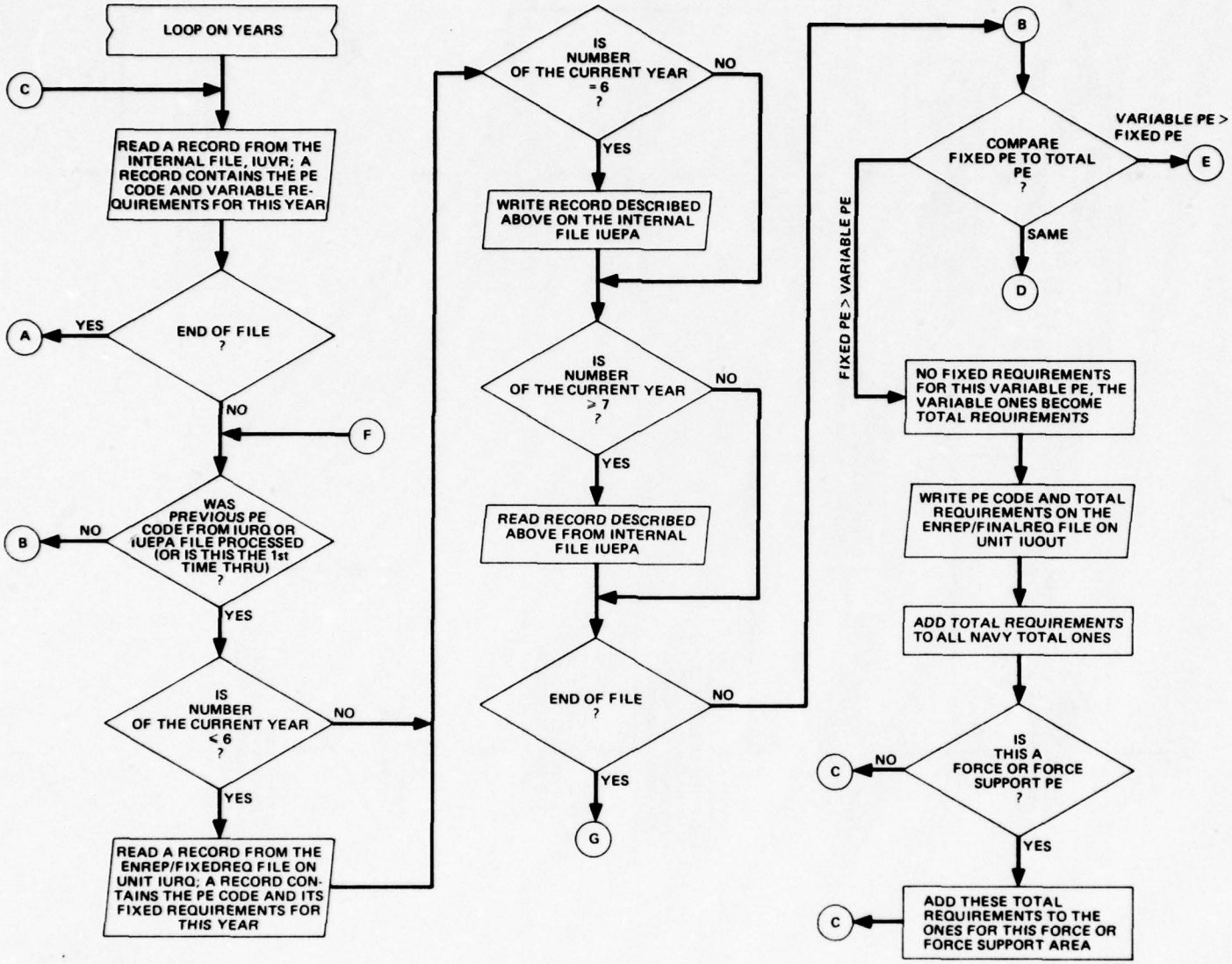

C
COMPUTE PERCENT THIS PE VARIES WITH THE FORCES
IS THIS A FORCE OR FORCE SUPPORT PE ?
NO
YES
ADD THE VARIABLE ENDSTRENGTH TO THE ONE FOR THIS FORCE OR FORCE SUPPORT AREA
ADD TOTAL ENDSTRENGTH TO THE ONE FOR THIS FORCE OR FORCE SUPPORT AREA
COMPUTE FIXED REQUIREMENTS BY SUBTRACTING VARIABLE ONES FROM THE TOTAL REQUIREMENTS
ADD THESE FIXED REQUIREMENTS TO ALL NAVY ONES
IF VARIABLE ENDSTRENGTH EXCEEDS TOTAL; DISPLAY ON ERROR MESSAGE
IS THIS A FORCE OR FORCE SUPPORT PE ?
NO
YES
ADD FIXED REQUIREMENTS TO THE OTHERS FOR THIS FORCE OR FORCE SUPPORT AREA
WRITE THE PE CODE AND THE FIXED REQUIREMENTS ON THE ENREP/FIXEDREQ FILE ON UNIT, IUOUT
A
D
THERE ARE NO VARIABLE REQUIREMENTS FOR THIS PE CODE; SO SET FIXED REQUIREMENTS EQUAL TO THE TOTAL ONES
WRITE THE PE CODE AND THE FIXED REQUIREMENTS ON THE ENREP/FIXEDREQ FILE ON UNIT, IUOUT
IS THIS A FORCE OR FORCE SUPPORT PE ?
NO
YES
ADD TOTAL ENDSTRENGTH TO THE ONE FOR THIS FORCE OR FORCE SUPPORT AREA
ADD FIXED REQUIREMENTS TO THE OTHERS FOR THIS FORCE OR FORCE SUPPORT AREA
SET THE PERCENT THIS PE VARIES WITH THE FORCES TO 0%
ADD FIXED REQUIREMENTS TO THE ALL NAVY ONES
B

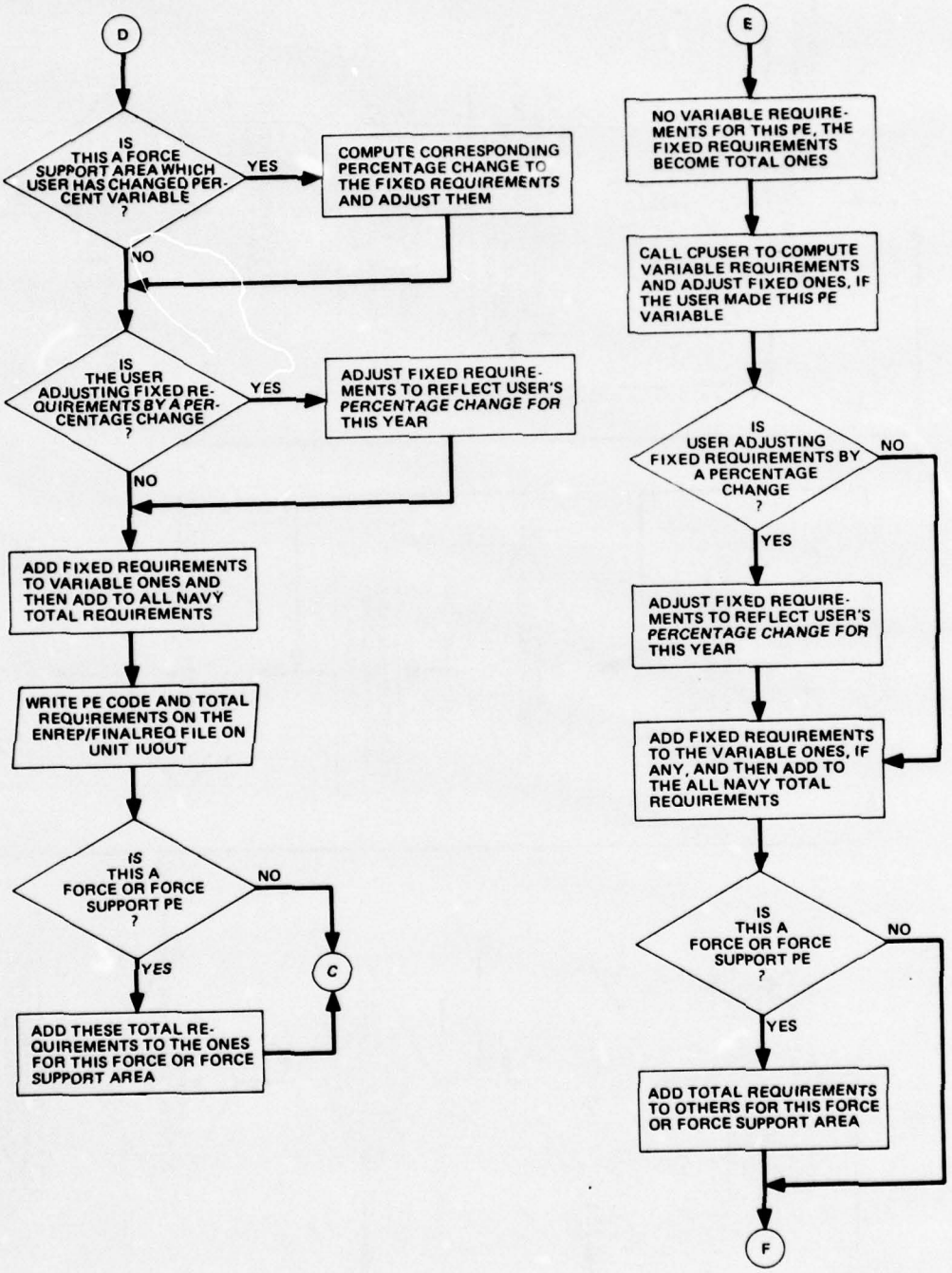

E
HAS END OF FILE ALSO OCCURED ON THE IURQ FILE ?
YES
NO
WRITE A FLAG RECORD, PE=999999, TO SEPARATE THIS YEAR FROM NEXT ON THE ENREP/FIXEDREQ FILE, ON UNIT IUOUT
SET THE VARIABLE PE CODE TO 99999999
CALL PRINT TO DISPLAY FIXED REQUIREMENTS
B
COMPUTE PERCENT EACH FORCE OR FORCE SUPPORT AREA VARIES WITH THE FORCES
F
END OF LOOP ON YEARS
HAS END OF FILE ALSO OCCURED ON THE IUVR FILE ?
YES
DISPLAY PERCENT EACH PE VARIES WITH THE FORCES BY YEAR
NO
WRITE THE PERCENT EACH FORCE OR FORCE SUPPORT AREA VARIES WITH FORCES, IN EACH YEAR, ON THE ENREP/PLANNER/STATS FILE ON UNIT IUST
SET THE TOTAL PE CODE TO 99999999
WRITE THE VARIABLE END-STRENGTH FOR EACH FORCE OR FORCE SUPPORT AREA, IN EACH YEAR, ON THE ENREP/PLANNER/STATS FILE ON UNIT IUST
G
RETURN

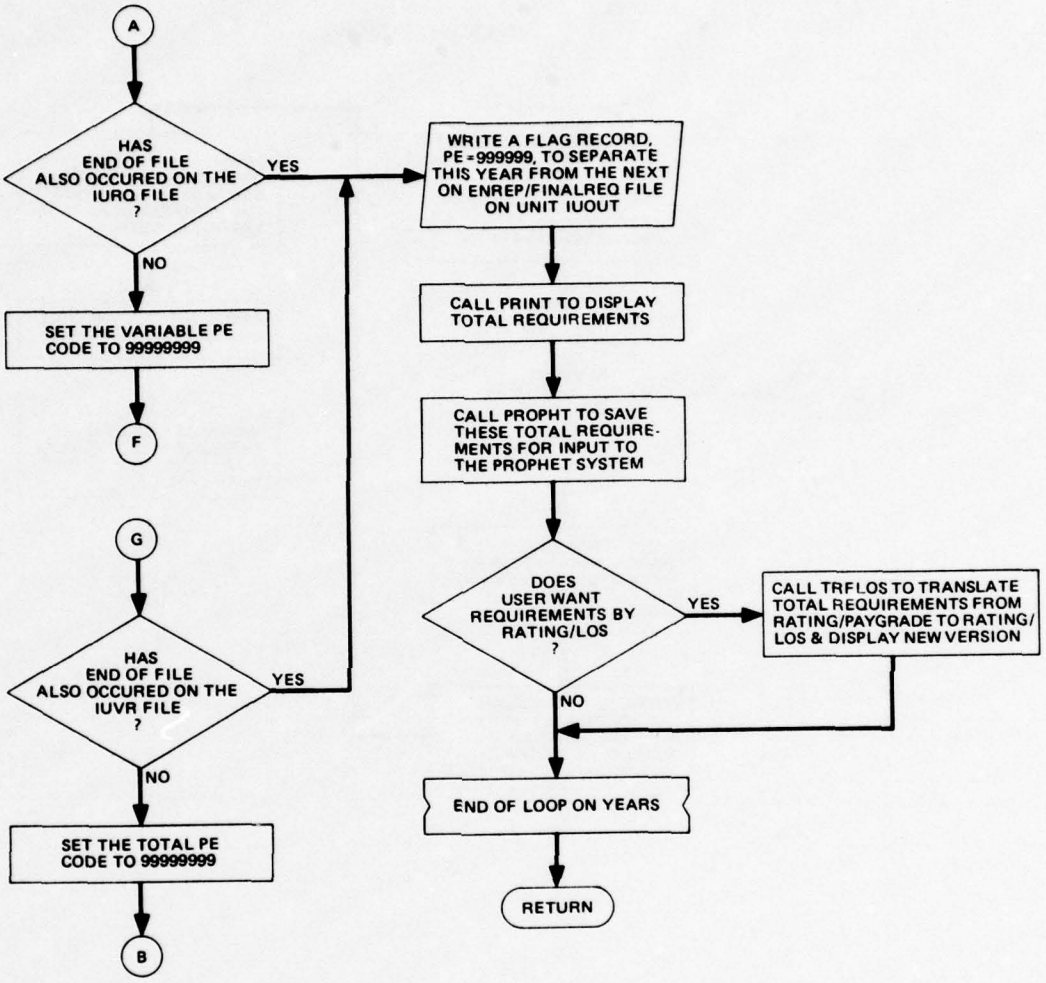
Subroutine CPPRXY



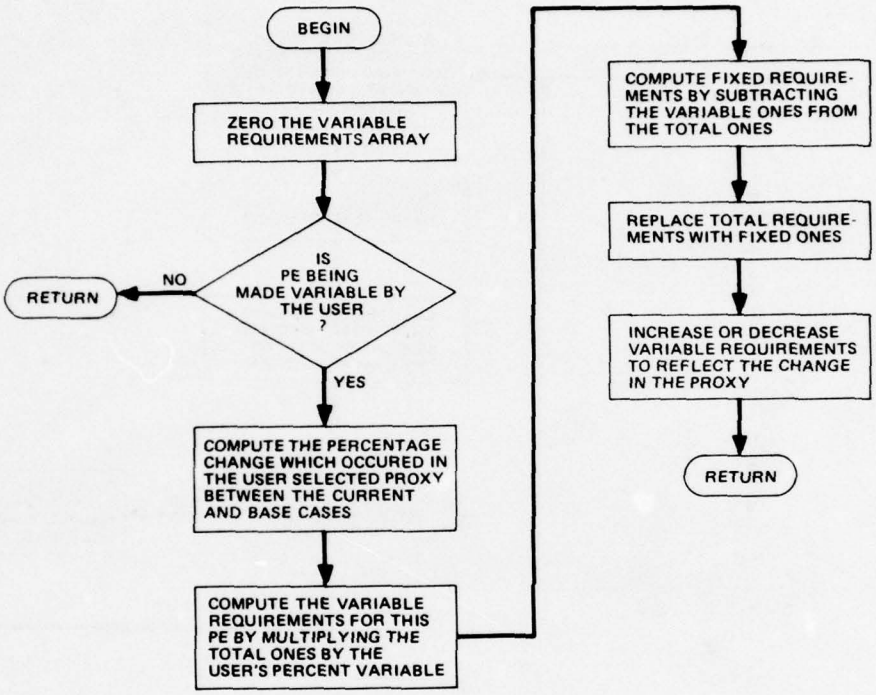
Subroutine ADDFIX



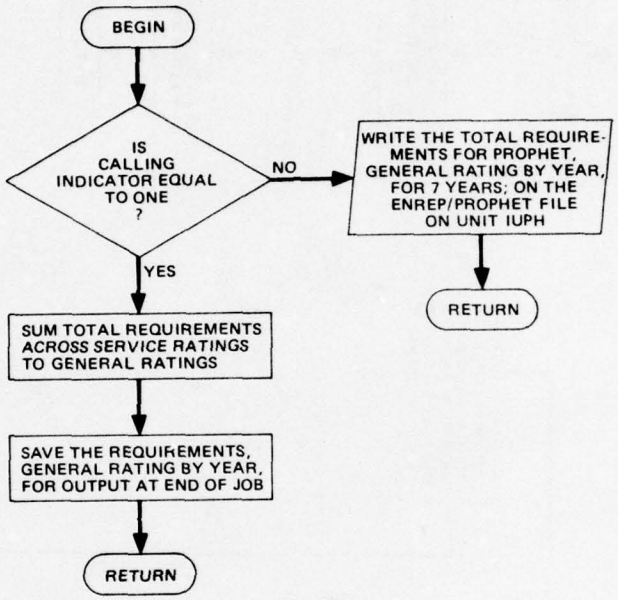

D
IS THIS A FORCE SUPPORT AREA WHICH USER HAS CHANGED PERCENT VARIABLE ?
YES
COMPUTE CORRESPONDING PERCENTAGE CHANGE TO THE FIXED REQUIREMENTS AND ADJUST THEM
NO
IS THE USER ADJUSTING FIXED REQUIREMENTS BY A PERCENTAGE CHANGE ?
YES
ADJUST FIXED REQUIREMENTS TO REFLECT USER'S PERCENTAGE CHANGE FOR THIS YEAR
NO
ADD FIXED REQUIREMENTS TO VARIABLE ONES AND THEN ADD TO ALL NAVY TOTAL REQUIREMENTS
WRITE PE CODE AND TOTAL REQUIREMENTS ON THE ENREP/FINALREQ FILE ON UNIT IUOUT
IS THIS A FORCE OR FORCE SUPPORT PE ?
NO
YES
C
ADD THESE TOTAL REQUIREMENTS TO THE ONES FOR THIS FORCE OR FORCE SUPPORT AREA
E
NO VARIABLE REQUIREMENTS FOR THIS PE, THE FIXED REQUIREMENTS BECOME TOTAL ONES
CALL CPUSER TO COMPUTE VARIABLE REQUIREMENTS AND ADJUST FIXED ONES, IF THE USER MADE THIS PE VARIABLE
IS USER ADJUSTING FIXED REQUIREMENTS BY A PERCENTAGE CHANGE ?
NO
YES
ADJUST FIXED REQUIREMENTS TO REFLECT USER'S PERCENTAGE CHANGE FOR THIS YEAR
ADD FIXED REQUIREMENTS TO THE VARIABLE ONES, IF ANY, AND THEN ADD TO THE ALL NAVY TOTAL REQUIREMENTS
IS THIS A FORCE OR FORCE SUPPORT PE ?
NO
YES
ADD TOTAL REQUIREMENTS TO OTHERS FOR THIS FORCE OR FORCE SUPPORT AREA
F


A
HAS END OF FILE ALSO OCCURED ON THE IURQ FILE ?
YES
NO
WRITE A FLAG RECORD, PE=999999, TO SEPARATE THIS YEAR FROM THE NEXT ON ENREP/FINALREQ FILE ON UNIT IUOUT
SET THE VARIABLE PE CODE TO 99999999
F
CALL PRINT TO DISPLAY TOTAL REQUIREMENTS
CALL PROPHT TO SAVE THESE TOTAL REQUIREMENTS FOR INPUT TO THE PROPHET SYSTEM
G
DOES USER WANT REQUIREMENTS BY RATING/LOS ?
YES
CALL TRFLOS TO TRANSLATE TOTAL REQUIREMENTS FROM RATING/PAYGRADE TO RATING/LOS & DISPLAY NEW VERSION
HAS END OF FILE ALSO OCCURED ON THE IUVR FILE ?
YES
NO
NO
SET THE TOTAL PE CODE TO 99999999
END OF LOOP ON YEARS
B
RETURN

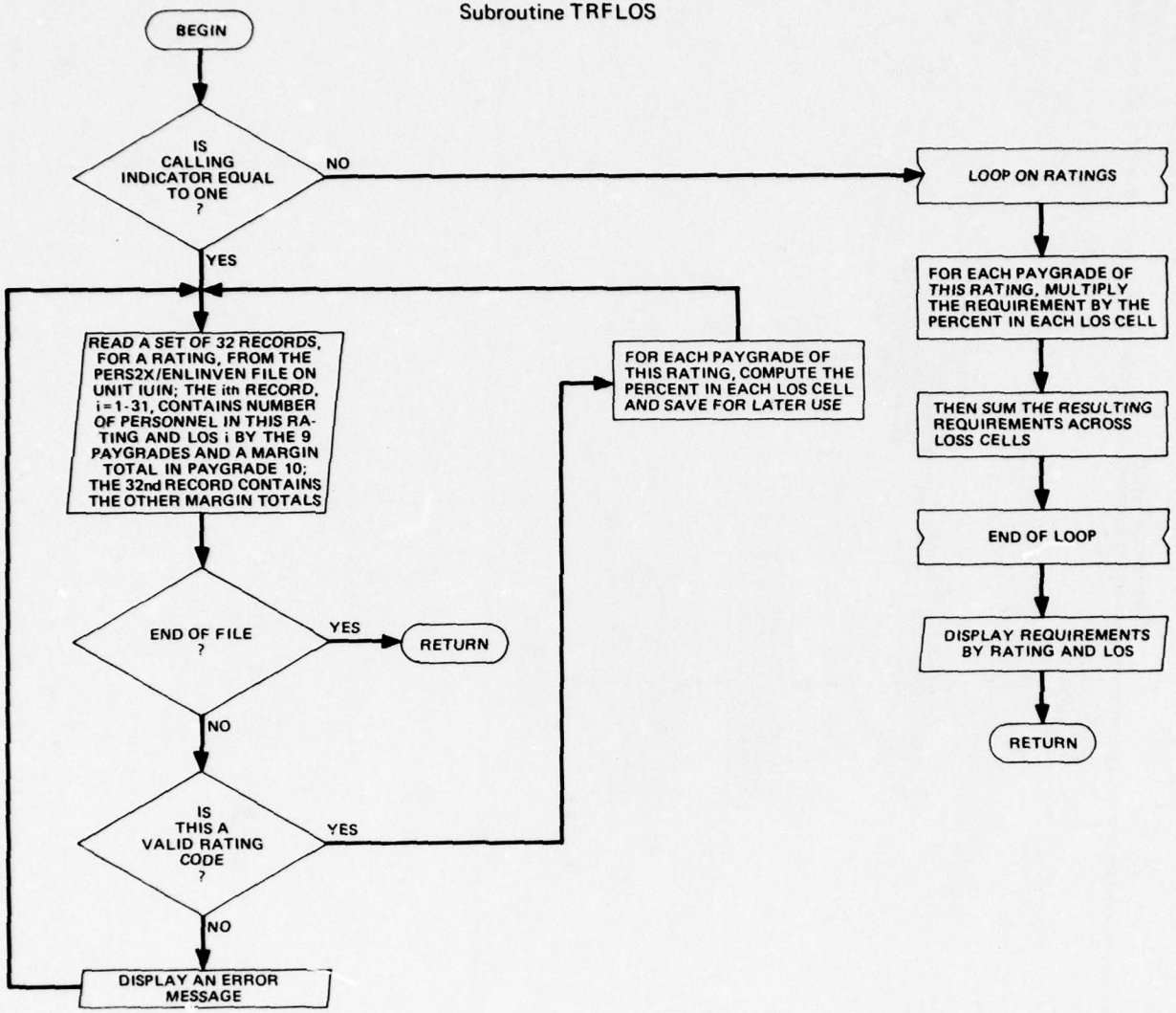
Subroutine CPUSER



Subroutine PROPHT



Subroutine TRFLOS



APPENDIX C

ILLUSTRATIVE INPUTS AND OUTPUTS

APPENDIX C

ILLUSTRATIVE INPUTS AND OUTPUTS

PRELIMINARY ROUTINES

Figure C-1 is a sample of the output of the EXTRACT routine. The printed output contains the header record of the RENLQUAL/SPECIAL file, the input and output versions of every thousandth record, and counts of the input and output records. The number of input records exceeds that of output records because the input file also contains update records, which are ignored. The user can expect approximately 350,000 records on the RENLQUAL/SPECIAL file.

Figures C-2 and C-3 are samples of the printed outputs of the FORCES routine, ship and air versions, respectively. Arbitrary numbers have been used.

Figures C-4 and C-5 are samples of inputs to the FACTORS routine. On each file, line 100 specifies whether a ship or aircraft unit requirements file is being created. The remaining lines specify quality proxies for ACT/PE/PU combinations not in the RENLQUAL file. A run of the FACTORS routine will inform the user of any combinations which are in the NARM factor file but not in the RENLQUAL file, so that the appropriate action can be taken in the second run. For example, in line 900 of figure C-4 the DD ships with ACT/PE/PU codes of 441/242922/112213 are using the quality of DD ships with ACT/PE codes of 441/242932. The PE code must be specified twice, first with the NARM convention of ending the code in a numeral, 2, and then with the RENLQUAL convention of ending the code in a letter, N. The number 1 ending the line indicates that NARM factors exist for this combination and are not being changed. In line 200 of figure C-5, the A-18 aircraft with ACT/PE/PU codes of 6705/241362/280680 are using the quality matrix of the A-7 aircraft with ACT/PE codes of 6705/241352. And on the next line the user has specified values for onboard manning, base operations, training, medical support, recruiting and examining, and individual support, in that order.

Figures C-6 and C-7 are samples of the printed outputs of the FACTORS routine and correspond to the input files of figures C-4 and C-5, respectively. FACTORS first displays the ACT/PE/PU dictionary as a convenient reference. Then it displays the user's inputs and the NARM manning factors to document the run. (Note that the onboard factors are displayed by year although they are constant across time.) As FACTORS proceeds through the creation of unit requirements matrices, it sums each matrix and displays the total, by year, with its identifying ACT/PE/PU codes. These matrix totals should equal the onboard factors.

Figure C-8 is a sample of the printed output of the SUPPORT routine. The rating totals (nonzero) by year are displayed for each PE in a force support area. Then the total for each area, by year, is displayed at the end of the job.

Figure C-9 is a sample of user input to the TOTAL routine. Line 100 specifies that the NARM PE totals are being used with the RENLQUAL quality matrices to create total requirements matrices. If line 100 contained the word "billet", the RENLQUAL file would be used unchanged. Line 200 can contain the word "yes" or the word "no" and specifies whether an output file is to be created. Line 300 can contain a list of PEs to be deleted; a blank line, as in this sample, specifies that none is being deleted in this run. Lines 400-2500 specify quality matrix proxies for PEs not in the RENLQUAL file. A run of the TOTAL routine will inform the user of any PE codes which are in the NARM file but not in the RENLQUAL file, so that the appropriate action can be taken in the second run. Each of these inputs requires two lines; the first contains the PE whose quality matrix is being used by those in the second line. In lines 400 and 500, for example, the quality matrix of PE 21118N (airborne command post, CINCPAC) is being used for PE 21117N (airborne command post, CINCEUR). Line 2600, a blank line, ends this type of input. Lastly, line 2700 can contain changes to the quality of specified PEs; a blank indicates that this option is not being used.

Figure C-10 is a sample of the printed output of the TOTAL routine. It first displays the user's inputs to document the run. As it proceeds through the computations, it displays the PE codes and their totals by year. Then, it displays the sum of all total requirements for each year.

Format specifications are well defined in the program listings of each routine.

PLANNER

Two examples will be presented. In the first, PLANNER has been executed with no use made of the input options. In the second, all options have been exercised.

Example One: No User Input Options Exercised

Figure C-11 illustrates the user's input file. Line 100 indicates that a projection will be made for six years. (The number of years specified always includes the current year.) Line 200 indicates that the total requirements will be displayed by rating and LOS in addition to the standard rating by paygrade. Line 300, a blank line, indicates that no user inputs follow. (Format specifications are well defined in the program listing.)

Figure C-12 is partial output of one year's projection. The ship and aircraft force tables are incomplete and contain arbitrary numbers to preserve the unclassified nature of this paper.

Example Two: All User Input Options Exercised

Figure C-13 illustrates the user's input file. Line 100 indicates that a projection will be made for six years. Line 200, a blank line, indicates that requirements will not be translated from paygrade to LOS. Line 300 is the key to the user inputs. The numbers in that line refer to the following inputs, respectively:

1. force updates,
2. direct manning factor updates,
3. percentage manning factor updates,
4. changes in the variable percentage of the five force support areas,
5. inputs to vary PEs not in a force or force support area, and
6. percentage changes in fixed requirements.

For types of input one through five, the corresponding number in line 300 specifies how many inputs of that type are to follow. For the sixth input type, the number is a flag; a value of 1 indicates it is being used. Note that these user inputs do not change the data base produced by the preliminary routines.

Lines 400-1100 describe the force updates for the four ACT/PE/PU combinations of 123/242972/117201 (AD-26CL), 410/242412/110602 (CVV-1CL), 6705/241352/230620 (A-7E), and 6709/242622/222408 (P-3C). The number of force units by year is contained on the line following the identification. These inputs override the force levels in the data base, or supplement the data base, for the AD-26CL ships serving in the support forces PE, the CVV-1CL ships serving in the VSTOL support ships PE, the A-7E aircraft serving in the A-7 squadrons PE, and the P-3C aircraft serving in the ASW readiness squadrons PE.

Lines 1200-1900 describe direct manning factor updates for PU/PE combinations 116901/242822 (AS-11CL) and 230620/241562 (A-7E). Lines 1200 and 1500 identify the PU/PE combinations, the first and last year affected, and the number of factors affected, respectively, for the two combinations. Following each identification line is the factor number and the new value for each factor affected. The factor names and their corresponding numbers are:

1. base operations,
2. training,

3. medical support,

4. recruiting and examining,

5. individual support, and

6. onboard manning.

The first input of this type overrides the base operations and the recruiting and examining factors for the AS-11CL ships serving in the support forces PE, for years 1978-1980. The second input updates the base operations, training, recruiting and examining, and onboard factors for the A-7E aircraft serving in the readiness squadrons PE, for years 1978-1984.

Lines 2000-3100 describe percentage manning factor updates for two groups of PU/PE combinations. Lines 2000 and 2700 identify the first and last year affected, the number of PU/PE combinations in the group, and the number of factors affected, respectively, for each input. Following these identification lines are lines which contain the PU and PE codes for each PU/PE combination in the group. Lines 2100-2200 are for the first input and lines 2800-2900 are for the second. Following these lines are lines which contain the factor number and the percentage change for each factor affected. Lines 2300-2600 are for the first input and lines 3000-3100 are for the second. The first input of this type overrides the base operations, training, medical support, and recruiting and examining factors for the LSD-28CL and LSD-36CL ships serving in the amphibious support ships PE, for years 1978-1985. The second input overrides the medical support and onboard manning factors for the EA-6B aircraft serving in the sea based electronic warfare squadrons PE and in the shore based electronic warfare squadrons PE, for years 1978-1985.

Lines 3200-3400 change the percentage of the base operations force support area that varies with forces in years 1979 and 1980. Line 3200 identifies the force support area and the number of years affected. The force support area names and their corresponding numbers are:

1. base operations,

2. training,

3. medical support,

4. recruiting and examining, and

5. individual support.

Lines 3300 and 3400 specify the year and the new variable percentage. This input makes base operations 20 percent variable in 1979 and 25 percent variable in 1980.

Lines 3500-3600 describe a group of PEs, not in a force or force support area, which the user wants to vary with the forces. Line 3500 identifies the number of PEs in the group, the percentage the group is to vary, and up to seven proxy identifiers. A proxy is any combination of the seven force and force support areas and measures changes in the variable requirements. The proxy identifiers are numbers 1-7. The numbers 1-5 identify the five force support areas as shown above, the number 6 is the ship forces, and the number 7 is the aircraft forces. The following line contains the PE code of each member of the group. This input varies two logistics PEs with the forces. The PEs will be 25 percent variable and use ship forces and base operations as a proxy.

Lastly, line 3700 contains the percentage changes in fixed requirements by year. Fixed requirements are to be increased by 2.5, 5.0, 7.5, and 9.5 percent in years 1980, 1981, 1982, and 1983, respectively.

Figure C-14 is a partial output of one year's projection.

```
NO.                          1,000
C1004301244G     US 04637046371C11012301700AD      17 PIEDMONT              AD 17 PIEDMONT  402BAPFN  4
920LJH HABE303   1 122602C1025117600NORVA I05FND24297NBC33                      0011190401770708IE0  11
1113 FN   50005     9770     0     30000A0000C0000A0000C0A0000A0000A                                  99

C1004046371011012340 17 PIEDMONT  BA224297NBC               FN   500059770     30000A0000A0000A0000A0
000A0000C0000CA

NO.                          2,000
C1006001579D     US 04639046391011012300190DAD      19 YOSEMITE              AD 19 YOSEMITE  402BAPET  4
920LJH H  0303   1 122602010212197ZMAYPRTL06GMY24297NBC33                      0011190401770708IE0  11
1113 ETN3 10014     1599     0     40000800C0080000800000800008000C8000C8                             99

C1006046351011012340 19 YOSEMITE  BA224297NBC               ETN3 100141598    40000800008000080000B0
000300C0800C8

NO.                          3,001
D1013D063400     US 04646046461011025600200AR      28 GRAND CANYON          AR 28 GR CANYCN 402BFPSN  4
120LJH H  0203   1 125602010212197ZMAYPRTL06GMY24451NBE33                      0011118888770527IE0  11
1113 SN   36005     0     30000A0000CA0000<0000<0000<0000<0000<                                      99

C1013046461011025640 28 GR CANYON 3F524451NBE               SN   36005        30000A0000A0000?000070
0000000?00007

NO.                          4,001
D1017D024400     US 04648046481012012300370DAD      37 SAMUEL GOMPERS        AD 37 S GOMPERS 403BBPHT  4
930PSD H  0303   1 222702010206326005DG0  Y11KSD24297NBC33                      0011190402770610IE0  11
1113 HT1  43002     4956     0     60000C0000CC0000C0000C0000C0000C0000C                              99
HULL MAINT TECH
D1017046481012012340 37 S GOMPERS B8224297NBC               HT1  430024956    60000C0000C0000C0000C0
C0000000C0000C

NO.                          5,001
D1043000E410     US 0F8220882210120120002200AE      22 MAUNA KEA             AE 22 MAUNA KEA403BGPFN  4
130PSG H  0203   1 222702010206082000NCFDW12LCE24441NBE33                      0011120527703011E0  11
1113 FN   50005     0     30000A0000A0000A0000A0000A0000A0000A                               99

C1043088221012012BAE 22 MAUNA KEAPG224441NBE               FN   50005        30000A0000A0000A0000A0
000A0000CA0000CA

NO.                          6,001
C1050D011E0C     US 2D1122011210120120002900AE      29 MOUNT HOOD            AE 29 MT HOOD  403BGPRM  4
130PSG H  0203   1 222702010206082000NCFDW12LCE24441NBE33                      0011120527703011E0  11
1113 RMC  15001     2313     0     70000A0000A0000A0000A0000A0000CA0000A                              99
SUPVR/ELEC COMM TECH
C1050201121012012BAE 29 MT HOOD  BG224441NBE               RMC  150012313    70000A0000A0000A0000A0
000A0000CA0000A
```

C-6

FIG. C-1: SAMPLE OUTPUT OF EXTRACT

```
NO.                          7,001
C1C810018100    US 0583405834101201340003004FS     3 NIAGARA FALLS        AFS   3 N FALLS 4038GPSN  4
133PSG H  0203  1 2227020102060010ALAMEDN12LAL24441NBE33                      00111791137707261E0  11
1118 SN   36005    9750     0    300001000CFJ00F0000FC000F000CF0000F                                99

C1C81058341012013 4AFS   3 N FALLS BG224441NBE              SN   360059750    30000F000JFJ000F0000FJ
C00F000LF000CF

NO.                          8,001


01094G002700    US 0500305003104101380003004FD8    3                      AFDB  3             PYN
       h  D2C4    12 6                                 11222NAA                    0000045001750190E0  JJ
0013 YN2  17003            0    50000<000(<0000<0000<0000<0000<0000<                               99

C1094C5C031041013 AFDE   3           11222NAA               YN2  17003        50C00300007000070000?0
0CC?000C?00003

NC.                          9,001
C1140001512C    US 0584005840101204880019000LCC    19 BLUE RIDGE          LCC 19 B RIDGE  4038IPFTG 4
73JPSH H  0213  1 2227020102063260SOGD  Y11KSD24411NBD33                      00111782287610261E0  11
1118 FTG2 C8C13    1126     0   450000B0000C90000<0000<0000<0000<0000<                             99

C1140058401012048 ELCC 19 B RIDGE  BI224411NBD              FTG2 080131126    500008000JBJ0007000070
C00?000C?00JC1

JCB COMPLETED

INPUT RECORDS              10,011

CUTPUT RECORDS              9,240
```

FIG. C-1: SAMPLE OUTPUT OF EXTRACT (Continued)

ACT NAME	ACT CODE	PE CODE	PU CODE	1978	1979	1980	1981	1982	1983
AD	123	242972	117201	8.	5.	3.	0.	0.	0.
AD	123	242972	117203	10.	0.	0.	0.	0.	0.
CGN	382	242912	111601	1.	1.	1.	1.	1.	1.
CGN	382	242912	111605	2.	6.	6.	6.	6.	6.
CV	403	241122	110205	1.	1.	1.	1.	1.	1.
CVN	407	241122	110303	1.	1.	1.	1.	1.	1.
DD	441	242932	112210	17.	18.	19.	22.	22.	22.
DD	441	242932	112212	8.	14.	15.	12.	12.	12.
SS	693	242812	110918	2.	2.	7.	7.	8.	9.
SSN	697	242812	111004	3.	2.	2.	1.	1.	1.

FIG. C-2: SAMPLE OUTPUT OF FORCES, SHIP VERSION

ACT NAME	ACT CODE	PE CODE	PU CODE	1978	1979	1980	1981	1982	1983
SH-2	6635	242432	267275	47.	49.	59.	65.	80.	85.
UH-46	6635	242622	217619	15.	15.	12.	10.	10.	10.
A-6	6705	241342	220810	25.	30.	40.	50.	55.	60.
A-7	6705	241352	230620	130.	115.	100.	85.	50.	25.
F-14	6710	241442	220210	103.	113.	115.	117.	118.	119.
EA-6B	6766	241542	211820	76.	79.	71.	70.	70.	70.
EA-6B	6766	241562	211820	2.	5.	15.	20.	25.	30.
EA-4	6766	244532	221632	43.	34.	30.	30.	30.	30.

FIG. C-3: SAMPLE OUTPUT OF FORCES, AIR VERSION

```
100    SHIP
200    AS2      292   112222   116801   AS1      293   112222   11222N   1
300    AS2      292   242822   116801   AS1      293   242822   24282N   1
400    AS2      292   112222   116802   AS1      293   112222   11222N   1
500    AS2      292   112222   116803   AS1      293   112222   11222N   1
600    AIFR    1306   523782   128503   AIF      306   244522   24452N   1
700    CG2      384   242912   111802   CG1      381   242912   24291N   1
800    CG2      384   242912   111803   CG1      381   242912   24291N   1
900    DD       441   242922   112213   DD       441   242932   24293N   1
1000   DDR     1441   523502   122208   DD       441   523502   52350N   1
1100   DDR     1441   523502   122211   DD       441   523502   52350N   1
1200   FFG1     458   242942   112501   FFG7     457   242942   24294N   1
1300   LKAR    1558   523662   123905   LKA      558   523662   52366N   1
1400   LPAR    1559   523662   124002   LPA      559   523662   52366N   1
1500   LPAR    1559   523662   124003   LPA      559   523662   52366N   1
1600   MCM      625   243022   115401   MSO      623   243022   24302N   1
1700   MSOR    1623   523592   125601   MSO      623   523592   52359N   1
1800   MSOR    1623   523592   125602   MSO      623   523592   52359N   1
1900   MSOR    1623   523592   125603   MSO      623   523592   52359N   1
2000   MCMR    1625   523592   125401   MSO      623   523592   52359N   1
```

FIG. C-4: SAMPLE INPUT TO FACTORS, SHIP RUN

```
100    AIR
200    A-18     6705   241362   280680   A-7      6705   241352   24135N
300       18     0    2    0    0    1
```

FIG. C-5: SAMPLE INPUT TO FACTORS, AIR RUN

SHIP UNIT REQUIREMENTS MATRICES ARE BEING CREATED.

ACT. CODE	PE CODE	SHIP NAME	PU CODE
123	242572	AD	117201
123	242572	AD	117203
123	242572	AD	117205
123	242572	AD	117206
128	244412	AE	116005
128	244412	AE	116006
128	244412	AE	116007
133	244412	AF	116104
134	244412	AFS	116201
142	243132	AG	116701
142	243132	AG	116703
142	421182	AG	156701
149	245612	AGDS	116601
152	655012	AGEH	119401
158	244122	AGF	117302
159	655012	AGSS	110711
159	655012	AGSS	110713
210	244412	AO	116304
210	244412	AO	116306
210	244412	AO	116307
210	244412	AO	116308
212	244412	AOE	116401
216	244412	AOR	116501
216	244412	AOR	116502
256	244512	AR	117801
256	244512	AR	117804

FIG. C-6: SAMPLE OUTPUT OF FACTORS, SHIP RUN

NEW NAME	NEW ACT. CODE	NEW PE CODE	NEW PU CODE	PROXY NAME	PROXY ACT CODE	PROXY PE CODES	
AS2	292	112222	116801	AS1	293	112222	11222N
AS2	292	112222	116802	AS1	293	112222	11222N
AS2	292	112222	116803	AS1	293	112222	11222N
AS2	292	242822	116801	AS1	293	242822	24282N
ATFR	1306	523782	128903	ATF	306	244522	24452N
CG2	384	242912	111802	CC1	381	242912	24291N
CG2	384	242912	111803	CC1	381	242912	24291N
DD	441	242922	112213	DD	441	242932	24293N
DDR	1441	523502	122208	DD	441	523502	52350N
DDR	1441	523502	122211	DD	441	523502	52350N
FFG1	458	242942	112901	FFG7	457	242942	24294N
LKAR	1558	523662	123905	LKA	558	523662	52366N
LPAR	1559	523662	124002	LPA	559	523662	52366N
LPAR	1559	523662	124003	LPA	559	523662	52366N
MCM	625	243022	115401	MSO	623	243022	24302N
MSOR	1623	523592	125601	MSO	623	523592	52359N
MSOR	1623	523592	125602	MSO	623	523592	52359N
MSOR	1623	523592	125603	MSO	623	523592	52359N
MCMR	1625	523592	125401	MSO	623	523592	52359N

USER MANNING FACTORS
ON-BOARD BASE CPS TRAINING MEDICAL RECRUIT INDIVIDUAL

FIG. C-6: SAMPLE OUTPUT OF FACTORS, SHIP RUN (Continued)

ONBOARD NAME	MANNING FACTORS PO	PE	1978	1979	1980	1981	1982
AD	117201	242972	683.	683.	683.	683.	683.
AD	117203	242972	875.	875.	875.	875.	875.
AD	117205	242972	1208.	1208.	1208.	1208.	1208.
AD	117206	242972	1015.	1015.	1015.	1015.	1015.
AE	116005	244412	315.	315.	315.	315.	315.
AE	116006	244412	312.	312.	312.	312.	312.
AE	116007	244412	335.	335.	335.	335.	335.
AFS	116201	244412	405.	405.	405.	405.	405.
AG	116703	243132	63.	63.	63.	63.	63.
AGDS	116601	245612	240.	240.	240.	240.	240.
AGF	117302	244122	468.	468.	468.	468.	468.
AO	116304	244412	337.	337.	337.	337.	337.
AO	116306	244412	287.	287.	287.	287.	287.
AO	116307	244412	204.	204.	204.	204.	204.
AOE	116401	244412	549.	549.	549.	549.	549.
AOR	116501	244412	407.	407.	407.	407.	407.
AOR	116502	244412	405.	405.	405.	405.	405.
AR	117801	244512	773.	773.	773.	773.	773.
AR	117804	244512	678.	678.	678.	678.	678.
ARS	118701	244522	77.	77.	77.	77.	77.
ARS	118702	244522	79.	79.	79.	79.	79.
AS2	116801	112222	1263.	1263.	1263.	1263.	1263.
AS2	116802	112222	1200.	1200.	1200.	1200.	1200.
AS2	116803	112222	1172.	1172.	1172.	1172.	1172.
AS2	116801	242822	1000.	1000.	1000.	1000.	1000.
AS1	116901	242822	948.	948.	948.	948.	948.

FIG. C-6: SAMPLE OUTPUT OF FACTORS, SHIP RUN (Continued)

NAME	PU	PE	ACT	BASE OPS	TRAINING	MEDICAL	RECRUIT/EXAMING	TRANSIENTS	HOLDING ACCT.
AD	117201	242972	123	13.00	89.50	13.00	5.00	30.50	8.50
AD	117203	242972	123	16.00	114.00	17.00	6.50	38.50	10.50
AD	117205	242972	123	22.50	157.50	23.50	9.00	53.00	14.50
AD	117206	242972	123	19.00	132.00	19.50	7.00	44.50	12.00
AE	116005	244412	128	6.00	41.00	6.00	2.00	14.00	4.00
AE	116006	244412	128	6.00	41.00	6.00	2.00	14.00	4.00
AE	116007	244412	128	6.00	44.00	7.00	2.00	15.00	4.00
AFS	116201	244412	134	8.00	53.00	8.00	3.00	18.00	5.00
AG	116703	243132	142	1.00	8.00	1.00	0.00	3.00	1.00
AGDS	116601	245612	149	4.00	31.00	5.00	2.00	11.00	3.00
AGF	117302	244122	158	9.00	61.00	9.00	3.00	21.00	6.00
AO	116304	244412	210	6.00	44.00	7.00	2.00	15.00	4.00
AO	116306	244412	210	5.00	37.50	6.00	2.00	13.00	3.00
AO	116307	244412	210	4.00	27.00	4.00	1.00	9.00	2.00
AOE	116401	244412	212	10.00	72.00	11.00	4.00	24.00	7.00
AOR	116501	244412	216	8.00	53.00	8.00	3.00	18.00	5.00
AOR	116502	244412	216	8.00	53.00	8.00	3.00	18.00	5.00
AR	117801	244512	256	14.00	100.50	15.00	5.50	34.50	9.50
AR	117804	244512	256	13.00	89.00	13.00	5.00	30.00	8.00
ARS	118701	244522	284	1.00	10.00	2.00	1.00	3.00	1.00
ARS	118702	244522	284	1.50	10.50	2.00	1.00	3.50	1.00
AS2	116801	112222	292	23.00	165.00	24.00	9.00	56.00	15.00
AS2	116802	112222	292	22.50	156.50	23.50	9.00	53.00	14.50
AS2	116803	112222	292	22.00	153.00	23.00	8.00	52.00	14.00
AS2	116801	242822	292	19.00	131.00	19.00	7.00	44.00	12.00
AS1	116901	242822	293	17.50	123.50	18.50	7.00	42.00	11.50

FIG. C-6: SAMPLE OUTPUT OF FACTORS, SHIP RUN (Continued)

RECORD NUMBER		ACTIVITY NAME	ACTIVITY CODE	PU CODE	PE CODE	ONBOARD MANNING BY YEAR 1	2	3	4	5
1	1	AD	123	117201	242972	683.0	683.0	683.0	683.0	683.0
2	2	AD	123	117203	242972	874.5	874.5	874.5	874.5	874.5
3	3	AD	123	117205	242972	1208.0	1208.0	1208.0	1208.0	1208.0
4	4	AD	123	117206	242972	1015.0	1015.0	1015.0	1015.0	1015.0
5	1	AE	128	116005	244412	315.0	315.0	315.0	315.0	315.0
6	2	AE	128	116006	244412	312.0	312.0	312.0	312.0	312.0
7	3	AE	128	116007	244412	334.5	334.5	334.5	334.5	334.5
8	1	AFS	134	116201	244412	405.0	405.0	405.0	405.0	405.0
9	1	AG	142	116703	243132	63.0	63.0	63.0	63.0	63.0
10	1	AGDS	149	116601	245612	240.0	240.0	240.0	240.0	240.0
11	1	AGF	158	117302	244122	468.0	468.0	468.0	468.0	468.0
12	1	AO	210	116304	244412	337.0	337.0	337.0	337.0	337.0
13	2	AO	210	116306	244412	286.5	286.5	286.5	286.5	286.5
14	3	AO	210	116307	244412	204.0	204.0	204.0	204.0	204.0
15	1	AOE	212	116401	244412	549.0	549.0	549.0	549.0	549.0
16	1	AOR	216	116501	244412	407.0	407.0	407.0	407.0	407.0
17	2	AOR	216	116502	244412	405.0	405.0	405.0	405.0	405.0
18	1	AR	256	117801	244512	772.5	772.5	772.5	772.5	772.5
19	2	AR	256	117804	244512	678.0	678.0	678.0	678.0	678.0
20	1	ARS	284	118701	244522	77.0	77.0	77.0	77.0	77.0
21	2	ARS	284	118702	244522	78.5	78.5	78.5	78.5	78.5
22	1	AS2	292	116801	112222	1263.0	1263.0	1263.0	1263.0	1263.0
23	2	AS2	292	116802	112222	1200.0	1200.0	1200.0	1200.0	1200.0
24	3	AS2	292	116803	112222	1172.0	1172.0	1172.0	1172.0	1172.0

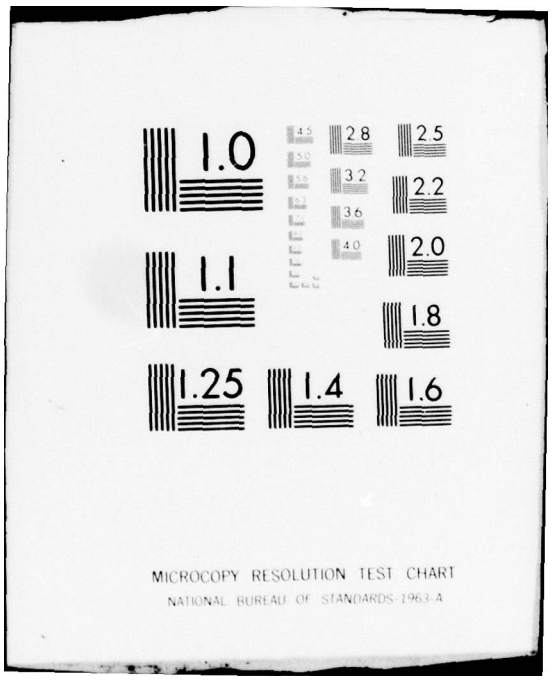
FIG. C-6: SAMPLE OUTPUT OF FACTORS, SHIP RUN (Continued)

AD-A079 473 CENTER FOR NAVAL ANALYSES ALEXANDRIA VA F/G 5/9
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

A/C UNIT REQUIREMENTS MATRICES ARE BEING CREATED.

ACT. CODE	PE CODE	A/C NAME	PU CODE
6628	523712	HH-1	217815
6629	244532	UH-46	217616
6629	244532	UH-46	217619
6629	244532	UH-46A	217631
6629	244532	HH-3	226830
6629	244532	SH-3	227235
6629	244532	SH-3D	227250
6629	244532	CH-53E	227469
6629	244532	VH-3	228230
6629	244532	SH-3	237233
6629	244532	CH-46	277613
6629	523752	HH-3	226830
6631	242332	SH-3	227235
6631	242332	SH-3	227250
6631	242332	SH-3	227251
6631	242622	SH-3	227235
6631	242622	SH-3	227250
6631	242622	SH-3	227251
6631	242622	RH-53X	227499
6631	523322	SH-3	227235
6631	523322	SH-3	227250
6631	523322	SH-3	237253
6632	243032	CH-53E	227485
6632	243032	RH-53X	227499
6635	242432	SH-2	267275
6635	242432	HSX(L)	277249

FIG. C-7: SAMPLE OUTPUT OF FACTORS, AIR RUN

NEW NAME	NEW ACT. CODE	NEW PE CODE	NEW PU CODE	PROXY NAME	PROXY ACT CODE	PROXY PE CODES	
A-18	6705	241362	280680	A-7	6705	241352	24135N

USER MANNING FACTORS

ON-BOARD	BASE CPS	TRAINING	MEDICAL	RECRUIT	INDIVIDUAL
18.	0.	2.	0.	0.	1.

FIG. C-7: SAMPLE OUTPUT OF FACTORS, AIR RUN (Continued)

ONBOARD NAME	MANNING FACTORS PC	PE	1978	1979	1980	1981	1982
HH-1	217815	523712	5.	5.	5.	5.	5.
UH-46	217616	244532	15.	15.	15.	15.	15.
UH-46	217619	244532	15.	15.	15.	15.	15.
HH-3	226830	244532	17.	17.	17.	17.	17.
SH-3	227235	244532	17.	17.	17.	17.	17.
CH-53E	227469	244532	22.	22.	22.	22.	22.
VH-3	228230	244532	16.	16.	16.	16.	16.
SH-3	237233	244532	20.	20.	20.	20.	20.
CH-46	277613	244532	15.	15.	15.	15.	15.
HH-3	226830	523792	10.	10.	10.	10.	10.
SH-3	227235	242332	21.	21.	21.	21.	21.
SH-3	227250	242332	24.	24.	24.	24.	24.
SH-3	227251	242332	24.	24.	24.	24.	24.
SH-3	227235	242622	14.	14.	14.	14.	14.
SH-3	227250	242622	14.	14.	14.	14.	14.
SH-3	227251	242622	15.	15.	15.	15.	15.
SH-3	227235	523322	6.	6.	6.	6.	6.
SH-3	227250	523322	9.	9.	9.	9.	9.
SH-3	237233	523322	6.	6.	6.	6.	6.
CH-53E	227485	243032	23.	23.	23.	23.	23.
SH-2	267275	242432	12.	12.	12.	12.	12.
HSX(L)	277249	242432	12.	12.	12.	12.	12.
UH-46	217615	242622	15.	15.	15.	15.	15.
UH-46	217631	242622	15.	15.	15.	15.	15.
CH-53E	227469	242622	22.	22.	22.	22.	22.
CH-53E	227485	242622	26.	26.	26.	26.	26.

FIG. C-7: SAMPLE OUTPUT OF FACTORS, AIR RUN (Continued)

NAME	PU	PE	ACT	BASE OPS	TRAINING	MEDICAL	RECRUIT/EXAMING	TRANSIENTS	HOLDING ACCT.
HH-1	217815	523712	6628	0.00	1.00	0.00	0.00	0.00	0.00
UH-46	217616	244532	6629	0.00	2.00	0.00	0.00	1.00	0.00
UH-46	217619	244532	6629	0.00	2.00	0.00	0.00	1.00	0.00
HH-3	226836	244532	6629	0.00	2.00	0.00	0.00	1.00	0.00
SH-3	227235	244532	6629	0.00	2.00	0.00	0.00	1.00	0.00
CH-53E	227465	244532	6629	0.00	3.00	0.00	0.00	1.00	0.00
VH-3	228236	244532	6629	0.00	2.00	0.00	0.00	1.00	0.00
SH-3	237233	244532	6629	0.00	3.00	0.00	0.00	1.00	0.00
CH-46	277613	244532	6629	0.00	2.00	0.00	0.00	1.00	0.00
HH-3	226836	523792	6629	0.00	1.00	0.00	0.00	0.00	0.00
SH-3	227235	242332	6631	0.00	3.00	0.00	0.00	1.00	0.00
SH-3	227250	242332	6631	0.00	3.00	1.00	0.00	1.00	0.00
SH-3	227251	242332	6631	0.00	3.00	1.00	0.00	1.00	0.00
SH-3	227235	242622	6631	0.00	7.00	0.00	0.00	1.00	0.00
SH-3	227250	242622	6631	0.00	7.00	0.00	0.00	1.00	0.00
SH-3	227251	242622	6631	0.00	7.00	0.00	0.00	1.00	0.00
SH-3	227235	523322	6631	0.00	1.00	0.00	0.00	0.00	0.00
SH-3	227250	523322	6631	0.00	1.00	0.00	0.00	0.00	0.00
SH-3	237233	523322	6631	0.00	1.00	0.00	0.00	0.00	0.00
CH-53E	227465	243032	6632	0.00	3.00	0.00	0.00	1.00	0.00
SH-2	267279	242432	6635	0.00	2.00	0.00	0.00	1.00	0.00
HSX(L)	277249	242432	6635	0.00	2.00	0.00	0.00	1.00	0.00
UH-46	217615	242622	6635	0.00	8.00	0.00	0.00	1.00	0.00
UH-46	217631	242622	6635	0.00	8.00	0.00	0.00	1.00	0.00
CH-53E	227465	242622	6635	0.00	11.00	1.00	0.00	1.00	0.00
CH-53E	227485	242622	6635	1.00	13.00	1.00	0.00	2.00	0.00

FIG. C-7: SAMPLE OUTPUT OF FACTORS, AIR RUN (Continued)

RECORD NUMBER		ACTIVITY NAME	ACTIVITY CODE	PU CODE	PE CODE	DAECARD MANNING BY YEAR 1	2	3	4	5
1	1	HH-1	6628	217815	523712	5.0	5.0	5.0	5.0	5.0
2	1	UH-46	6629	217616	244532	15.0	15.0	15.0	15.0	15.0
3	2	UH-46	6629	217619	244532	15.0	15.0	15.0	15.0	15.0
4	3	HH-3	6629	226830	244532	17.0	17.0	17.0	17.0	17.0
5	4	SH-3	6629	227235	244532	17.0	17.0	17.0	17.0	17.0
6	5	CH-53E	6629	227469	244532	22.0	22.0	22.0	22.0	22.0
7	6	VH-3	6629	228230	244532	16.0	16.0	16.0	16.0	16.0
8	7	SH-3	6629	237233	244532	20.0	20.0	20.0	20.0	20.0
9	8	CH-46	6629	277613	244532	15.0	15.0	15.0	15.0	15.0
10	1	HH-3	6629	226830	523792	10.0	10.0	10.0	10.0	10.0
11	1	SH-3	6631	227235	242332	21.0	21.0	21.0	21.0	21.0
12	2	SH-3	6631	227250	242332	24.0	24.0	24.0	24.0	24.0
13	3	SH-3	6631	227251	242332	24.0	24.0	24.0	24.0	24.0
14	1	SH-3	6631	227235	242622	14.0	14.0	14.0	14.0	14.0
15	2	SH-3	6631	227250	242622	14.0	14.0	14.0	14.0	14.0
16	3	SH-3	6631	227251	242622	15.0	15.0	15.0	15.0	15.0
17	1	SH-3	6631	227235	523322	6.0	6.0	6.0	6.0	6.0
18	2	SH-3	6631	227250	523322	9.0	9.0	9.0	9.0	9.0
19	3	SH-3	6631	237233	523322	6.0	6.0	6.0	6.0	6.0
20	1	CH-53E	6632	227485	243032	23.0	23.0	23.0	23.0	23.0
21	1	SH-2	6635	267275	242432	12.0	12.0	12.0	12.0	12.0
22	2	HSXCL)	6635	277249	242432	12.0	12.0	12.0	12.0	12.0
23	1	UH-46	6635	217619	242622	15.0	15.0	15.0	15.0	15.0
24	2	UH-46	6635	217631	242622	15.0	15.0	15.0	15.0	15.0
25	3	CH-53E	6635	227469	242622	22.0	22.0	22.0	22.0	22.0
26	4	CH-53E	6635	227485	242622	26.0	26.0	26.0	26.0	26.0

FIG. C-7: SAMPLE OUTPUT OF FACTORS, AIR RUN (Continued)

TRAINING

84742A

RATING		YEARS 1978	1979	1980	1981	1982
BM	0100	13.	13.	13.	13.	13.
QM	0200	1.	1.	1.	1.	1.
SM	0250	2.	2.	2.	2.	2.
OS	0300	1.	1.	1.	1.	1.
GMG	0604	6.	6.	6.	6.	6.
ET	1020	9.	9.	9.	9.	9.
STN	1001	12.	12.	12.	12.	12.
STR	1002	18.	18.	18.	18.	18.
YN	1700	50.	50.	49.	49.	49.
PN	1800	14.	14.	15.	15.	15.
SK	2000	5.	5.	5.	5.	5.
MS	2200	1.	2.	3.	3.	3.
SH	2400	1.	1.	1.	1.	1.
PC	2700	1.	1.	1.	1.	1.
DM	3200	1.	1.	1.	1.	1.
EN	3800	12.	12.	12.	12.	12.
MR	3900	2.	2.	2.	2.	2.
EM	4100	6.	6.	6.	6.	6.
HT	4300	5.	5.	5.	5.	5.
AF	6000	5.	5.	5.	5.	5.
AV	6100	2.	2.	2.	2.	2.
AD	6200	208.	220.	219.	218.	218.
AT	6300	80.	80.	80.	80.	80.
AC	6500	10.	10.	10.	10.	10.
AQ	6520	14.	14.	14.	14.	14.
AO	6600	61.	65.	65.	65.	65.
AR	6700	1.	1.	1.	1.	1.
ABE	6704	18.	23.	23.	23.	23.
ABF	6705	2.	2.	2.	2.	2.
ABH	6706	31.	34.	34.	34.	34.
AE	6800	90.	94.	94.	94.	94.
AM	6900	1.	1.	1.	1.	1.
AMS	6901	91.	96.	96.	96.	96.
AMH	6902	71.	71.	71.	71.	71.
AME	6903	44.	46.	46.	46.	46.
PR	7000	38.	38.	38.	38.	38.
TD	7200	73.	75.	75.	75.	75.
AK	7300	25.	25.	25.	25.	25.
AS	7500	8.	8.	9.	8.	8.
ASE	7501	11.	11.	11.	11.	11.
ASH	7502	13.	13.	13.	13.	13.
ASM	7503	5.	5.	5.	5.	5.
AZ	7400	44.	44.	43.	44.	44.
PH	7600	17.	19.	19.	19.	19.
HM	8000	3.	3.	3.	3.	3.
SA	3600	17.	17.	17.	17.	17.
AN	7800	75.	75.	77.	77.	77.
PE TOTAL		1218.	1255.	1259.	1259.	1259.
RUNING TOTAL		84335.	83585.	85537.	85578.	84678.

FIG. C-8: SAMPLE OUTPUT OF SUPPORT

SUPPORT AREA	YEAR 1	2	3	4	5
BASE OPS	29985.	30081.	30569.	30681.	30754.
TRAINING	93516.	92344.	94231.	94641.	93911.
MEDICAL	14684.	14650.	14735.	14755.	14756.
RECRUIT + EXAMING	5014.	5014.	5014.	5014.	5014.
INDIVIDUAL	25708.	26361.	26254.	26204.	25634.

FIG. C-8: SAMPLE OUTPUT OF SUPPORT (Continued)

```
 100    NAHN
 200    YES
 300
 400    21118N
 500    21117N
 600    35120N
 700    35160N
 800    35809N
 900    35807N  35805N
1000    52371N
1100    52373N
1200    59523N
1300    59498N
1400    83736N
1500    84702N  84703N  84704N  84705N  84706N
1600    85796N
1700    85704N  85705N
1800    88733N
1900    88721N
2000    89712N
2100    89703N
2200    89731N
2300    89730N
2400    88732N
2500    88721N  88722N
2600
2700
```

FIG. C-9: SAMPLE INPUT TO TOTAL

```
THE FOLLOWING MATRIX IS BEING COMPUTED:

     NARM SCALED

THE FOLLOWING PERMANENT FILE IS BEING CREATED:

     NARM SCALED

ALL PROGRAM ELEMENTS ARE BEING INCLUDED IN THE MATRIX.

THE FOLLOWING PROGRAM ELEMENTS ARE USING THE BILLET DATA OF PE 21118N:

     21117N

THE FOLLOWING PROGRAM ELEMENTS ARE USING THE BILLET DATA OF PE 35128N:

     35160N

THE FOLLOWING PROGRAM ELEMENTS ARE USING THE BILLET DATA OF PE 35809N:

     35807N
     35805N

THE FOLLOWING PROGRAM ELEMENTS ARE USING THE BILLET DATA OF PE 52371N:

     52373N

THE FOLLOWING PROGRAM ELEMENTS ARE USING THE BILLET DATA OF PE 59523N:

     59498N

THE FOLLOWING PROGRAM ELEMENTS ARE USING THE BILLET DATA OF PE 83736N:

     84702N
     84703N
     84704N
     84705N
     84706N

THE FOLLOWING PROGRAM ELEMENTS ARE USING THE BILLET DATA OF PE 85796N:

     85704N
     85705N

THE FOLLOWING PROGRAM ELEMENTS ARE USING THE BILLET DATA OF PE 88733N:

     88721N

THE FOLLOWING PROGRAM ELEMENTS ARE USING THE BILLET DATA OF PE 89712N:
```

FIG. C-10: SAMPLE OUTPUT OF TOTAL

89703N

THE FOLLOWING PROGRAM ELEMENTS ARE USING THE BILLET DATA OF PE 89731N:

89730N

THE FOLLOWING PROGRAM ELEMENTS ARE USING THE BILLET DATA OF PE 88732N:

88721N
88722N

NO CHANGES TO THE BILLET FILE QUALITY MIX ARE BEING MADE.

FIG. C-10: SAMPLE OUTPUT OF TOTAL (Continued)

[illegible]	56.	56.	56.	56.	56.	56.	56.
78012N	321.	320.	320.	321.	321.	321.	321.
78014N	20.	20.	20.	20.	20.	20.	20.
78015N	240.	234.	234.	234.	234.	234.	234.
78016N	28.	28.	28.	28.	28.	28.	28.
78017N	255.	263.	275.	279.	279.	279.	279.
78110N	20.	20.	20.	20.	20.	20.	20.
81711M	73.	72.	72.	72.	72.	72.	72.
81711N	4662.	4661.	4661.	4661.	4661.	4661.	4661.
81713N	342.	342.	342.	342.	342.	342.	342.

THERE IS NO ENTRY IN THE FILE OF NARM REQUIREMENTS CORRESPONDING TO PE 83736N.

84702N	2541.	3199.	3644.	3574.	3548.	3495.	3445.
84703N	125.	128.	168.	168.	175.	175.	175.
84704N	11.	11.	11.	11.	11.	11.	11.
84705N	7330.	8671.	8931.	8665.	8500.	8450.	8362.
84706N	15.	15.	18.	18.	18.	18.	18.
84711M	2.	2.	2.	2.	2.	2.	2.
84711N	13830.	13643.	12262.	12727.	13431.	12974.	15344.
84721N	509.	513.	514.	514.	514.	514.	514.
84722N	375.	375.	375.	464.	496.	496.	496.
84723N	194.	195.	192.	192.	192.	192.	192.
84724N	1010.	490.	310.	205.	95.	5.	5.
84731M	35.	35.	35.	35.	35.	35.	35.
84731N	29926.	34269.	32794.	33986.	34153.	33539.	33093.
84733N	119.	120.	120.	119.	119.	119.	119.
84734N	1239.	1628.	1605.	1582.	1521.	1440.	1392.
84741N	5773.	5248.	3894.	3947.	3883.	3847.	3847.
84742N	1247.	1312.	1353.	1353.	1353.	1353.	1353.
84743N	1375.	1377.	3.	3.	3.	3.	3.
84751M	14.	14.	14.	14.	14.	14.	14.
84751N	103.	100.	84.	84.	84.	84.	84.
84752N	167.	147.	147.	147.	147.	147.	147.

FIG. C-10: SAMPLE OUTPUT OF TOTAL (Continued)

REQUIREMENTS FOR ALL NAVY IN YEAR 1980.

(BILLET REQUIREMENTS SCALED BY NARM REQUIREMENTS)

RATING		PAYGRADE E-9	E-8	E-7	E-6	E-5	E-4	E-3	E-2	E-1	RATING TOTAL
BM	0100	164.	306.	1270.	2061.	2588.	2795.	287.	0.	0.	9491.
MA	0150	40.	90.	293.	535.	0.	0.	0.	0.	0.	968.
QM	0200	67.	115.	765.	834.	867.	1030.	283.	0.	0.	3961.
SK	0250	23.	53.	237.	624.	773.	825.	602.	0.	0.	3207.
QS	0300	89.	210.	590.	1523.	1775.	2148.	2262.	0.	0.	8597.
EM	0350	9.	47.	220.	359.	586.	403.	278.	0.	0.	1901.
ST	0400	59.	0.	0.	0.	0.	0.	0.	0.	0.	59.
STG	0401	0.	113.	367.	812.	973.	1060.	702.	0.	0.	3966.
STS	0404	0.	140.	249.	537.	662.	900.	162.	0.	0.	2648.
OT	0450	14.	37.	110.	284.	349.	359.	218.	0.	0.	1372.
TM	0500	76.	84.	353.	784.	1048.	1134.	318.	0.	0.	3796.
GM	0600	56.	138.	0.	0.	0.	0.	0.	0.	0.	194.
GMM	0601	0.	0.	130.	357.	359.	337.	170.	0.	0.	1354.
GMT	0602	12.	47.	151.	450.	517.	547.	184.	0.	0.	1948.
GMG	0604	0.	0.	449.	938.	1229.	997.	657.	0.	0.	4270.
FT	0900	167.	336.	0.	0.	0.	0.	0.	0.	0.	503.
FTG	0901	0.	0.	467.	753.	875.	733.	347.	0.	0.	3216.
FTB	0902	0.	0.	361.	815.	867.	1221.	331.	0.	0.	3535.
FTM	0903	0.	0.	104.	222.	286.	314.	0.	0.	0.	926.
MT	0310	0.	0.	160.	404.	615.	889.	0.	0.	0.	2068.
YN	0900	13.	24.	45.	88.	125.	171.	49.	0.	0.	515.
ET	1000	170.	394.	1388.	3261.	0.	0.	0.	0.	0.	5213.
ETN	1001	0.	0.	0.	0.	2532.	2688.	521.	0.	0.	5741.
ETR	1002	0.	0.	0.	0.	2293.	2379.	281.	0.	0.	4953.
OS	1310	12.	45.	181.	550.	727.	701.	16.	0.	0.	2231.
PI	1380	7.	0.	0.	0.	0.	0.	0.	0.	0.	7.
IC	1100	0.	14.	44.	112.	143.	126.	28.	0.	0.	468.
UT	1200	0.	8.	37.	76.	87.	85.	15.	0.	0.	308.
MC	1400	38.	95.	331.	589.	0.	0.	0.	0.	0.	1051.
RM	1500	151.	429.	1355.	2725.	4190.	4956.	3146.	0.	0.	16951.
CTT	1611	15.	43.	164.	405.	407.	447.	222.	0.	0.	1703.
CTA	1622	15.	30.	105.	201.	278.	196.	102.	0.	0.	926.
CTM	1633	26.	49.	140.	385.	700.	569.	0.	0.	0.	1868.
CTO	1644	16.	34.	144.	268.	387.	471.	251.	0.	0.	1570.
CTR	1655	24.	59.	195.	332.	421.	570.	403.	0.	0.	2005.
CTI	1666	10.	17.	104.	228.	301.	184.	79.	0.	0.	923.
YN	1700	116.	319.	1260.	2457.	2915.	2964.	1935.	0.	0.	12005.
CYN	1701	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LN	1750	12.	23.	77.	138.	170.	0.	0.	0.	0.	420.
PN	1900	115.	205.	615.	1574.	1741.	1331.	972.	0.	0.	6753.
DP	1900	30.	57.	274.	603.	796.	851.	501.	0.	0.	3112.
SK	2000	159.	317.	1121.	1846.	2357.	2194.	920.	0.	0.	8914.
DK	2100	16.	53.	151.	708.	573.	415.	277.	0.	0.	2190.
MS	2200	138.	295.	1125.	3372.	4185.	4394.	3334.	0.	0.	16843.
SD	8500	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CS	2290	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
ES	2300	13.	28.	164.	321.	12326.	236.	104.	0.	0.	13194.
SH	2490	76.	125.	292.	1056.	1291.	1458.	1046.	0.	0.	5343.
JO	2600	7.	25.	83.	132.	193.	233.	42.	0.	0.	714.
PC	2700	15.	18.	42.	125.	260.	434.	144.	0.	0.	1047.
LI	3100	2.	6.	30.	80.	120.	153.	62.	0.	0.	455.
DN	3200	1.	3.	20.	66.	126.	80.	22.	0.	0.	337.
MU	3500	24.	41.	96.	188.	177.	287.	85.	0.	0.	899.
MN	3700	363.	790.	1845.	5007.	5630.	6995.	1344.	0.	0.	21974.
EN	3800	109.	176.	761.	1651.	1944.	1939.	620.	0.	0.	7239.

FIG C-10: SAMPLE OUTPUT OF TOTAL (Continued)

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.	0.	[illegible]
BT	4300	159.	241.	790.	1755.	2341.	2924.	1760.	0.	0.	9970.
BR	4320	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CM	4100	175.	325.	1090.	2383.	2798.	3729.	1069.	0.	0.	11548.
IC	4200	0.	61.	465.	1156.	1591.	1790.	600.	0.	0.	5704.
MT	4300	87.	283.	1029.	2297.	2836.	3051.	806.	0.	0.	10389.
PM	4600	0.	0.	17.	45.	32.	34.	3.	0.	0.	130.
ML	4700	3.	6.	24.	41.	47.	44.	9.	0.	0.	174.
SS	4400	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU	5300	41.	0.	0.	0.	0.	0.	0.	0.	0.	41.
EA	5100	0.	8.	22.	74.	89.	77.	43.	0.	0.	313.
CE	5300	0.	24.	104.	249.	397.	324.	171.	0.	0.	1268.
ED	5380	37.	0.	0.	0.	0.	0.	0.	0.	0.	37.
ED	5410	0.	35.	130.	357.	443.	490.	340.	0.	0.	1791.
CM	5500	0.	26.	103.	279.	362.	362.	197.	0.	0.	1329.
BU	5600	0.	65.	223.	453.	648.	601.	430.	0.	0.	2421.
SW	5700	0.	24.	78.	187.	173.	225.	143.	0.	0.	815.
UT	5800	26.	28.	78.	236.	363.	300.	154.	0.	0.	1186.
AF	6180	372.	0.	0.	0.	0.	0.	0.	0.	0.	372.
AV	6190	297.	0.	0.	0.	0.	0.	0.	0.	0.	297.
AI	6200	0.	482.	1020.	2525.	2855.	3435.	2379.	0.	0.	12696.
AIR	6205	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AII	6206	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AT	6300	0.	299.	839.	2157.	3459.	3664.	1457.	0.	0.	11915.
AA	6310	0.	68.	188.	480.	626.	590.	184.	0.	0.	2134.
AA	6400	22.	122.	295.	605.	758.	721.	479.	0.	0.	3003.
AJ	6500	57.	68.	452.	1159.	1417.	1549.	1387.	0.	0.	6091.
AJ	6520	0.	125.	251.	670.	922.	986.	394.	0.	0.	3348.
AC	6600	19.	72.	254.	655.	836.	750.	237.	0.	0.	2824.
AB	6700	61.	93.	0.	0.	0.	0.	0.	0.	0.	154.
ABE	6704	0.	0.	110.	219.	334.	460.	423.	0.	0.	1545.
ABF	6705	0.	0.	131.	203.	337.	456.	327.	0.	0.	1455.
ABH	6706	0.	0.	196.	431.	571.	859.	602.	0.	0.	2659.
AE	6400	0.	182.	581.	1659.	2669.	2257.	1462.	0.	0.	8850.
AM	6900	0.	366.	0.	0.	0.	0.	0.	0.	0.	366.
AMS	6901	0.	0.	555.	1360.	1805.	1818.	1887.	0.	0.	7424.
AMH	6902	0.	0.	424.	1125.	1414.	2065.	1331.	0.	0.	6370.
AME	6903	0.	0.	162.	535.	683.	670.	591.	0.	0.	2642.
PW	7300	12.	18.	95.	329.	556.	503.	255.	0.	0.	1769.
AS	7100	14.	44.	152.	358.	376.	502.	109.	0.	0.	1556.
TD	7200	17.	40.	145.	501.	668.	590.	132.	0.	0.	2096.
AR	7300	45.	50.	318.	734.	1036.	1109.	724.	0.	0.	4015.
AS	7500	20.	36.	116.	348.	0.	0.	0.	0.	0.	519.
ASE	7501	0.	0.	0.	0.	188.	205.	111.	0.	0.	504.
ASH	7502	0.	0.	0.	0.	165.	174.	112.	0.	0.	451.
ASM	7503	0.	0.	0.	0.	279.	278.	178.	0.	0.	735.
AZ	7400	24.	53.	239.	603.	787.	880.	615.	0.	0.	3201.
PH	7600	6.	47.	138.	346.	495.	461.	166.	0.	0.	1658.
PT	7700	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
HA	8000	179.	400.	1662.	3038.	4351.	5206.	8008.	0.	625.	23470.
DT	8500	20.	50.	168.	389.	586.	832.	1281.	0.	75.	3402.
SX	3600	0.	0.	0.	0.	0.	0.	46263.	0.	6806.	53069.
FN	5000	0.	0.	0.	0.	0.	0.	18528.	0.	2984.	21512.
CN	6000	0.	0.	0.	0.	0.	0.	473.	0.	348.	821.
AN	7800	0.	0.	0.	0.	0.	0.	15715.	0.	3410.	19125.
PAYGRADE TOTAL		4169.	9234.	31330.	71651.	102855.	98853.	135025.	0.	14248.	467365.

FIG. C-10: SAMPLE OUTPUT OF TOTAL (Continued)

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100      6  PROJECT
200     LOS
300
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FIG. C-11: SAMPLE INPUT TO PLANNER, NO OPTIONS USED

PROJECTION RUN OF THE PLANNER MODEL

ENLISTED REQUIREMENTS WILL BE COMPUTED FOR 6 YEARS

REQUIREMENTS ARE BEING TRANSFORMED FROM RATING/PAYGRADE TO RATING/LCS

SHIP NAME	ACT CODE	PE CODE	PU CODE	1978	1979	1980	1981	1982	1983
AD	123	242972	117201	8.	5.	3.	0.	0.	0.
AD	123	242972	117203	10.	0.	0.	0.	0.	0.
CGN	382	242912	111601	1.	1.	1.	1.	1.	1.
CGN	382	242912	111605	2.	6.	6.	6.	6.	6.
CV	403	241122	110205	1.	1.	1.	1.	1.	1.
CVN	407	241122	110303	1.	1.	1.	1.	1.	1.
DD	441	242932	112210	17.	18.	19.	22.	22.	22.
DD	441	242932	112212	8.	14.	15.	12.	12.	12.
SS	693	242812	110918	2.	2.	7.	7.	8.	9.
SSN	697	242812	111004	3.	2.	2.	1.	1.	1.

AIR NAME	ACT CODE	PE CODE	PU CODE	1978	1979	1980	1981	1982	1983
SH-2	6635	242432	267275	47.	49.	59.	65.	60.	65.
UH-46	6635	242022	217619	15.	15.	12.	10.	10.	10.
A-6	6705	241342	220810	25.	30.	40.	50.	55.	60.
A-7	6705	241352	230620	130.	115.	100.	85.	50.	25.
F-14	6710	241442	220210	103.	113.	115.	117.	118.	119.
EA-6B	6766	241542	211820	76.	79.	71.	70.	70.	70.
EA-6B	6766	241562	211820	2.	5.	15.	20.	25.	30.
EA-4	6766	244532	221632	43.	34.	30.	30.	30.	30.

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED

VARIABLE ENLISTED REQUIREMENTS FOR FY1979

TRAINING SUPPORT

RATING		PAYGRADE E-9	E-8	E-7	E-6	E-5	E-4	E-3	E-2	E-1	RATING TOTAL
AM	0100	11.	16.	63.	82.	77.	25.	2.	0.	0.	276.
MA	0150	3.	7.	16.	31.	0.	0.	0.	0.	0.	58.
AN	0200	2.	4.	43.	30.	19.	11.	4.	0.	0.	114.
SM	0250	0.	3.	16.	35.	26.	2.	3.	0.	0.	85.
AS	0300	5.	11.	93.	127.	49.	36.	13.	0.	0.	335.
EN	0350	2.	3.	31.	71.	49.	2.	0.	0.	0.	158.
ST	0400	7.	0.	0.	0.	0.	0.	0.	0.	0.	7.
STG	0401	0.	6.	49.	105.	53.	92.	0.	0.	0.	305.
STS	0404	0.	10.	45.	85.	44.	92.	0.	0.	0.	275.
OT	0450	0.	1.	3.	11.	4.	1.	0.	0.	0.	21.
IM	0500	3.	6.	30.	41.	13.	49.	6.	0.	0.	149.
GM	0600	5.	12.	0.	0.	0.	0.	0.	0.	0.	17.
GMM	0601	0.	0.	9.	30.	16.	0.	0.	0.	0.	55.
GMI	0602	1.	4.	22.	26.	4.	0.	0.	0.	0.	57.
GMG	0604	0.	0.	40.	125.	43.	20.	0.	0.	0.	229.
FT	0800	10.	35.	0.	0.	0.	0.	0.	0.	0.	45.
FTG	0801	0.	0.	57.	110.	61.	28.	4.	0.	0.	259.
FTB	0802	0.	0.	51.	109.	35.	104.	2.	0.	0.	301.
FTM	0803	0.	0.	15.	32.	21.	49.	0.	0.	0.	117.
MT	0810	0.	0.	22.	51.	33.	83.	0.	0.	0.	190.
MN	0900	0.	1.	6.	3.	1.	4.	0.	0.	0.	16.
ET	1000	17.	36.	189.	393.	0.	0.	0.	0.	0.	635.
ETN	1001	0.	0.	0.	0.	132.	221.	9.	0.	0.	362.
ETR	1002	0.	0.	0.	0.	165.	451.	21.	0.	0.	637.
DS	1010	3.	2.	27.	83.	60.	84.	0.	0.	0.	259.
PI	1020	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
IN	1100	0.	1.	7.	6.	5.	0.	0.	0.	0.	20.
ON	1200	0.	0.	5.	5.	1.	0.	0.	0.	0.	12.
NC	1400	0.	0.	1.	0.	0.	0.	0.	0.	0.	2.
AN	1500	4.	10.	63.	108.	98.	52.	35.	0.	0.	370.
CTI	1611	0.	1.	3.	5.	2.	2.	0.	0.	0.	14.
CTA	1622	0.	0.	1.	1.	0.	0.	0.	0.	0.	4.
CTM	1633	0.	0.	4.	5.	2.	18.	0.	0.	0.	30.
CTO	1644	0.	0.	0.	0.	0.	1.	0.	0.	0.	1.
CTR	1655	0.	0.	1.	0.	0.	0.	0.	0.	0.	1.
CTI	1666	0.	0.	1.	10.	11.	0.	0.	0.	0.	22.
YN	1700	3.	12.	47.	148.	221.	272.	233.	0.	0.	937.
CYN	1701	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LN	1750	0.	1.	2.	4.	5.	0.	0.	0.	0.	12.
PN	1800	6.	14.	32.	123.	181.	169.	122.	0.	0.	648.
OP	1900	0.	2.	10.	23.	19.	20.	5.	0.	0.	78.
SK	2000	4.	8.	28.	48.	52.	40.	10.	0.	0.	190.
OK	2100	1.	1.	9.	17.	22.	16.	7.	0.	0.	74.
AS	2200	7.	10.	42.	125.	162.	183.	81.	0.	0.	610.
SD	8500	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CS	2290	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
IS	2300	0.	0.	1.	3.	3.	3.	0.	0.	0.	12.
SH	2490	0.	1.	12.	27.	19.	4.	3.	0.	0.	66.
JO	2600	0.	1.	3.	4.	7.	1.	1.	0.	0.	19.
PC	2700	0.	1.	3.	2.	3.	5.	3.	0.	0.	16.
LI	3100	0.	0.	0.	2.	4.	4.	1.	0.	0.	12.
DN	3200	0.	0.	2.	6.	8.	10.	4.	0.	0.	31.
MU	3300	1.	1.	3.	5.	1.	1.	17.	0.	0.	29.
MM	3700	14.	27.	170.	269.	166.	491.	14.	0.	0.	1152.

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

LN	3800	2.	8.	52.	78.	106.	56.	5.	0.	0.	287.
MR	3900	1.	3.	11.	21.	9.	4.	0.	0.	0.	48.
BT	4000	7.	19.	78.	70.	56.	12.	11.	0.	0.	252.
dR	4020	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
EM	4100	11.	15.	101.	122.	101.	320.	1.	0.	0.	676.
IC	4200	0.	9.	70.	73.	82.	119.	6.	0.	0.	350.
MT	4300	5.	19.	88.	131.	61.	33.	0.	0.	0.	337.
PM	4600	0.	0.	1.	1.	0.	0.	0.	0.	0.	2.
ML	4700	0.	0.	2.	1.	2.	0.	0.	0.	0.	5.
GS	4400	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU	5080	4.	0.	0.	0.	0.	0.	0.	0.	0.	4.
EA	5100	0.	1.	2.	6.	2.	2.	0.	0.	0.	13.
CE	5300	0.	1.	7.	13.	6.	10.	0.	0.	0.	38.
EQ	5380	1.	0.	0.	0.	0.	0.	0.	0.	0.	1.
EO	5410	0.	2.	14.	26.	10.	8.	2.	0.	0.	61.
CM	5500	0.	1.	6.	15.	8.	3.	1.	0.	0.	34.
JU	5600	0.	4.	13.	30.	21.	12.	1.	0.	0.	82.
SW	5700	0.	2.	7.	13.	11.	3.	0.	0.	0.	36.
UT	5800	1.	3.	5.	15.	6.	2.	0.	0.	0.	32.
AF	6080	69.	0.	0.	0.	0.	0.	0.	0.	0.	69.
AV	6180	59.	0.	0.	0.	0.	0.	0.	0.	0.	59.
AO	6200	0.	78.	222.	460.	550.	604.	713.	0.	0.	2626.
AOR	6205	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AOJ	6206	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AT	6300	0.	43.	157.	406.	488.	463.	287.	0.	0.	1844.
AX	6310	0.	11.	32.	80.	54.	108.	37.	0.	0.	323.
AN	6400	5.	19.	56.	127.	132.	42.	21.	0.	0.	401.
AQ	6500	4.	7.	68.	208.	185.	164.	190.	0.	0.	826.
AS	6520	0.	19.	53.	152.	143.	229.	119.	0.	0.	714.
AC	6600	3.	9.	30.	59.	51.	47.	19.	0.	0.	217.
AB	6700	6.	8.	0.	0.	0.	0.	0.	0.	0.	14.
ABE	6704	0.	0.	12.	19.	14.	43.	9.	0.	0.	96.
ABF	6705	0.	0.	10.	11.	13.	7.	9.	0.	0.	51.
AHH	6706	0.	0.	19.	45.	55.	38.	27.	0.	0.	184.
AE	6800	0.	32.	108.	405.	557.	417.	404.	0.	0.	1924.
AH	6900	0.	57.	0.	0.	0.	0.	0.	0.	0.	57.
AHS	6901	0.	0.	108.	276.	366.	393.	499.	0.	0.	1622.
AHH	6902	0.	0.	84.	239.	313.	392.	413.	0.	0.	1442.
AHE	6903	0.	0.	48.	148.	182.	165.	156.	0.	0.	700.
PR	7000	1.	3.	11.	68.	95.	80.	65.	0.	0.	324.
AG	7100	1.	1.	6.	12.	9.	31.	0.	0.	0.	60.
TD	7200	5.	14.	46.	165.	212.	176.	36.	0.	0.	654.
AK	7300	2.	2.	26.	62.	77.	97.	104.	0.	0.	371.
AS	7500	3.	3.	14.	29.	0.	0.	0.	0.	0.	49.
ASE	7501	0.	0.	0.	0.	9.	10.	8.	0.	0.	27.
ASH	7502	0.	0.	0.	0.	9.	10.	9.	0.	0.	28.
ASM	7503	0.	0.	0.	0.	13.	14.	8.	0.	0.	35.
AZ	7400	1.	5.	44.	108.	141.	151.	184.	0.	0.	634.
PH	7600	0.	4.	15.	17.	17.	15.	7.	0.	0.	75.
PT	7700	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MM	8000	6.	6.	23.	59.	152.	102.	515.	0.	286.	1151.
DT	8300	0.	0.	4.	5.	5.	21.	54.	0.	35.	123.
SN	3600	0.	0.	0.	0.	0.	0.	3712.	0.	3128.	6840.
FN	5000	0.	0.	0.	0.	0.	0.	1146.	0.	1369.	2516.
CN	6000	0.	0.	0.	0.	0.	0.	115.	0.	159.	274.
AN	7800	0.	0.	0.	0.	0.	0.	2071.	0.	1565.	3636.
PAYGRADE TOTAL		311.	664.	2935.	6304.	6202.	7034.	11565.	0.	6542.	41557.

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

VARIABLE ENLISTED REQUIREMENTS FOR FY1979

ALL NAVY

RATING		PAYGRADE E-9	E-8	E-7	E-6	E-5	E-4	E-3	E-2	E-1	RATING TOTAL
BM	0100	46.	112.	527.	1003.	1435.	2134.	226.	0.	0.	5482.
MA	0150	18.	53.	188.	231.	0.	0.	0.	0.	0.	490.
QM	0200	18.	25.	383.	466.	595.	932.	252.	0.	0.	2672.
SM	0250	17.	23.	159.	344.	546.	827.	582.	0.	0.	2498.
OS	0300	28.	137.	326.	1016.	1440.	1984.	2182.	0.	0.	7112.
EW	0350	2.	23.	120.	194.	431.	397.	275.	0.	0.	1442.
ST	0400	14.	0.	0.	0.	0.	0.	0.	0.	0.	14.
STG	0401	0.	71.	172.	580.	817.	955.	720.	0.	0.	3315.
STS	0404	0.	91.	142.	375.	527.	764.	156.	0.	0.	2055.
DT	0450	0.	1.	6.	23.	23.	22.	11.	0.	0.	87.
IM	0500	54.	35.	213.	488.	737.	791.	222.	0.	0.	2539.
GN	0600	17.	62.	0.	0.	0.	0.	0.	0.	0.	79.
GMM	0601	0.	0.	75.	218.	248.	292.	172.	0.	0.	1004.
GMT	0602	3.	16.	51.	306.	344.	430.	143.	0.	0.	1292.
GMG	0604	0.	0.	261.	516.	843.	844.	626.	0.	0.	3090.
FT	0800	102.	200.	0.	0.	0.	0.	0.	0.	0.	302.
FTG	0801	0.	0.	287.	552.	689.	691.	335.	0.	0.	2554.
FTB	0802	0.	0.	180.	570.	747.	1053.	339.	0.	0.	2889.
FTM	0803	0.	0.	68.	155.	225.	246.	0.	0.	0.	694.
NT	0810	0.	0.	87.	272.	440.	685.	0.	0.	0.	1483.
MN	0900	0.	2.	7.	6.	5.	10.	1.	0.	0.	32.
ET	1000	76.	192.	714.	1854.	0.	0.	0.	0.	0.	2836.
ETN	1001	0.	0.	0.	0.	1192.	1419.	255.	0.	0.	2867.
ETR	1002	0.	0.	0.	0.	1636.	1683.	229.	0.	0.	3548.
DS	1010	3.	30.	102.	351.	494.	525.	11.	0.	0.	1517.
PI	1020	3.	0.	0.	0.	0.	0.	0.	0.	0.	3.
IM	1100	0.	7.	29.	71.	109.	119.	28.	0.	0.	363.
QM	1200	0.	6.	24.	54.	72.	78.	14.	0.	0.	247.
NC	1400	19.	23.	124.	322.	0.	0.	0.	0.	0.	488.
RM	1500	49.	130.	589.	1108.	1618.	2444.	1739.	0.	0.	7677.
CTT	1611	1.	2.	16.	31.	21.	14.	7.	0.	0.	92.
CTA	1622	1.	1.	4.	5.	13.	5.	4.	0.	0.	32.
CTM	1633	1.	0.	7.	25.	24.	32.	0.	0.	0.	89.
CTO	1644	1.	0.	4.	13.	14.	22.	7.	0.	0.	65.
CTR	1655	1.	1.	4.	14.	16.	23.	12.	0.	0.	73.
CTI	1666	0.	0.	2.	14.	18.	7.	3.	0.	0.	46.
YN	1700	15.	77.	424.	714.	900.	1563.	1445.	0.	0.	5138.
CYN	1701	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LN	1750	0.	1.	9.	25.	33.	0.	0.	0.	0.	69.
PN	1800	31.	53.	361.	537.	699.	791.	779.	0.	0.	3250.
OP	1900	1.	8.	70.	149.	238.	344.	340.	0.	0.	1150.
SK	2000	49.	119.	482.	781.	1149.	1458.	735.	0.	0.	4764.
DK	2100	2.	30.	35.	367.	281.	155.	228.	0.	0.	1099.
MS	2200	50.	96.	560.	1699.	2329.	3023.	2791.	0.	0.	10549.
SO	8530	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CS	2290	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
IS	2300	0.	5.	16.	53.	113.	134.	107.	0.	0.	429.
SH	2490	17.	23.	85.	480.	642.	1366.	1028.	0.	0.	3640.
JO	2600	0.	3.	10.	27.	38.	168.	18.	0.	0.	264.
PC	2700	1.	3.	20.	62.	156.	294.	52.	0.	0.	588.
LI	3100	0.	5.	17.	46.	68.	83.	29.	0.	0.	248.
DM	3200	0.	0.	3.	21.	43.	33.	6.	0.	0.	106.
HU	3300	2.	2.	5.	8.	4.	5.	18.	0.	0.	43.
MM	3700	206.	511.	1171.	3595.	4763.	6263.	1262.	0.	0.	17771.

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

EM	3900	68.	76.	378.	782.	980.	1263.	438.	0.	0.	4035.
MR	3900	5.	24.	110.	338.	571.	541.	158.	0.	0.	1747.
BT	4000	95.	144.	451.	1165.	1918.	2240.	1720.	0.	0.	8334.
BR	4020	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
EM	4100	102.	205.	641.	1534.	1902.	3076.	1003.	0.	0.	8469.
IC	4200	0.	36.	303.	827.	1230.	1582.	578.	0.	0.	4555.
MT	4300	49.	142.	590.	1401.	1999.	2715.	756.	0.	0.	7653.
PM	4600	0.	0.	11.	27.	25.	30.	3.	0.	0.	96.
ML	4700	0.	5.	18.	27.	31.	39.	10.	0.	0.	129.
GS	4400	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU	5000	6.	0.	0.	0.	0.	0.	0.	0.	0.	6.
EA	5100	0.	1.	4.	11.	6.	6.	2.	0.	0.	30.
CE	5300	0.	2.	13.	28.	31.	31.	7.	0.	0.	112.
EQ	5380	2.	0.	0.	0.	0.	0.	0.	0.	0.	2.
EO	5410	0.	3.	22.	46.	40.	38.	17.	0.	0.	166.
CM	5500	0.	2.	12.	36.	30.	24.	9.	0.	0.	112.
BU	5600	0.	6.	25.	57.	52.	39.	14.	0.	0.	193.
SW	5700	0.	3.	10.	25.	20.	14.	5.	0.	0.	77.
UT	5800	2.	4.	10.	29.	29.	22.	6.	0.	0.	102.
AF	6080	257.	0.	0.	0.	0.	0.	0.	0.	0.	257.
AV	6130	186.	0.	0.	0.	0.	0.	0.	0.	0.	186.
AD	6200	0.	315.	631.	1773.	1957.	2157.	1868.	0.	0.	8702.
ADR	6205	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
ADJ	6206	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AT	6300	0.	186.	484.	1349.	2389.	2277.	1140.	0.	0.	7825.
AX	6310	0.	41.	110.	366.	441.	413.	143.	0.	0.	1514.
AW	6400	6.	83.	199.	384.	548.	611.	413.	0.	0.	2243.
AO	6500	9.	21.	287.	824.	1074.	1307.	1168.	0.	0.	4690.
AQ	6520	0.	105.	175.	502.	743.	761.	320.	0.	0.	2610.
AC	6600	4.	23.	70.	173.	279.	200.	136.	0.	0.	886.
AB	6700	35.	51.	0.	0.	0.	0.	0.	0.	0.	87.
ABE	6704	0.	0.	69.	133.	236.	359.	366.	0.	0.	1163.
ABF	6705	0.	0.	64.	107.	184.	367.	250.	0.	0.	972.
ABH	6706	0.	0.	90.	245.	332.	612.	408.	0.	0.	1687.
AE	6800	0.	134.	423.	1145.	1886.	1727.	1225.	0.	0.	6540.
AM	6900	0.	272.	0.	0.	0.	0.	0.	0.	0.	272.
AMS	6901	0.	0.	397.	975.	1338.	1504.	1596.	0.	0.	5811.
AMH	6902	0.	0.	274.	842.	1081.	1368.	1138.	0.	0.	4702.
AME	6903	0.	0.	124.	451.	551.	522.	513.	0.	0.	2161.
PR	7000	1.	4.	28.	185.	366.	364.	167.	0.	0.	1115.
AG	7100	3.	8.	27.	71.	72.	147.	62.	0.	0.	388.
TO	7200	5.	14.	50.	181.	236.	196.	45.	0.	0.	727.
AK	7300	16.	6.	91.	350.	523.	636.	475.	0.	0.	2097.
AS	7500	10.	14.	34.	127.	0.	0.	0.	0.	0.	186.
ASE	7501	0.	0.	0.	0.	78.	98.	43.	0.	0.	219.
ASH	7502	0.	0.	0.	0.	71.	75.	42.	0.	0.	187.
ASM	7503	0.	0.	0.	0.	150.	135.	103.	0.	0.	388.
AZ	7400	1.	15.	120.	400.	535.	678.	497.	0.	0.	2246.
PH	7600	1.	16.	33.	104.	184.	228.	77.	0.	0.	642.
PT	7700	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
HM	5000	35.	116.	586.	891.	1259.	1568.	2528.	0.	286.	7268.
OT	8300	5.	11.	68.	130.	206.	270.	480.	0.	35.	1205.
SN	3600	0.	0.	0.	0.	0.	0.	35172.	0.	3128.	38300.
FN	5000	0.	0.	0.	0.	0.	0.	14899.	0.	1369.	16269.
CN	6000	0.	0.	0.	0.	0.	0.	154.	0.	159.	313.
AN	7800	0.	0.	0.	0.	0.	0.	12146.	0.	1565.	13710.
PAYGRADE TOTAL		1758.	4272.	15174.	37783.	52363.	65953.	99736.	0.	6542.	283582.

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

VARIABLE ENLISTED REQUIREMENTS FOR FY1979

SUMMARY TABLE

RATING	TOTAL	PERCENT	RATING	TOTAL	PERCENT	RATING	TOTAL	PERCENT
BM	5482.	1.93	CYN	0.	0.00	AV	186.	0.07
MA	490.	0.17	LN	69.	0.02	AO	8702.	3.07
QM	2672.	0.94	PN	3250.	1.15	AOR	0.	0.00
SM	2498.	0.88	DP	1150.	0.41	AOJ	0.	0.00
OS	7112.	2.51	SK	4784.	1.69	AT	7825.	2.76
EW	1442.	0.51	DK	1099.	0.39	AX	1514.	0.53
ST	14.	0.00	MS	10549.	3.72	AW	2243.	0.79
STG	3315.	1.17	SD	0.	0.00	AO	4690.	1.65
STS	2055.	0.72	CS	0.	0.00	AQ	2610.	0.92
OT	87.	0.03	IS	429.	0.15	AC	886.	0.31
TM	2539.	0.90	SH	3640.	1.28	AB	87.	0.03
GM	79.	0.03	JO	264.	0.09	ABE	1163.	0.41
GMM	1004.	0.35	PC	588.	0.21	ABF	972.	0.34
GMT	1292.	0.46	LI	248.	0.09	ABH	1687.	0.59
GMG	3090.	1.09	DM	106.	0.04	AE	6540.	2.31
FT	302.	0.11	MU	43.	0.02	AM	272.	0.10
FTG	2554.	0.90	MM	17771.	6.27	AMS	5811.	2.05
FTB	2889.	1.02	EN	4035.	1.42	AMH	4702.	1.66
FTM	694.	0.24	MR	1747.	0.62	AME	2161.	0.76
MT	1483.	0.52	BT	8334.	2.94	PR	1115.	0.39
MN	32.	0.01	BR	0.	0.00	AG	388.	0.14
ET	2836.	1.00	EM	8469.	2.99	TD	727.	0.26
ETN	2867.	1.01	IC	4555.	1.61	AK	2097.	0.74
ETR	3548.	1.25	HT	7653.	2.70	AS	186.	0.07
DS	1517.	0.53	PM	96.	0.03	ASE	219.	0.08
PI	3.	0.00	ML	129.	0.05	ASH	187.	0.07
IM	363.	0.13	GS	0.	0.00	ASM	388.	0.14
DM	247.	0.09	CU	6.	0.00	AZ	2246.	0.79
NC	488.	0.17	EA	30.	0.01	PH	642.	0.23
RM	7677.	2.71	CE	112.	0.04	PT	0.	0.00
CTT	92.	0.03	EO	2.	0.00	HM	7268.	2.56
CTA	32.	0.01	EO	166.	0.06	DT	1205.	0.42
CTM	89.	0.03	CM	112.	0.04	SN	38300.	13.51
CTO	65.	0.02	BU	193.	0.07	FN	16269.	5.74
CTR	73.	0.03	SW	77.	0.03	CN	313.	0.11
CTI	46.	0.02	UT	102.	0.04	AN	13710.	4.83
YN	5138.	1.81	AF	257.	0.09			

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

VARIABLE ENLISTED REQUIREMENTS FOR FY1979

SUMMARY TABLE

PAYGRADE	TOTAL	PERCENT
E-9	1758.	0.62
E-8	4272.	1.51
E-7	15174.	5.35
E-6	37783.	13.32
E-5	52362.	18.46
E-4	65953.	23.26
E-3	99736.	35.17
E-2	0.	0.00
E-1	6542.	2.31
P.O.	177303.	62.52
NON P.C.	106279.	37.48

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

TOTAL ENLISTED REQUIREMENTS FOR FY1979

SHIP FORCES

RATING		PAYGRADE E-9	E-8	E-7	E-6	E-5	E-4	E-3	E-2	E-1	RATING TOTAL
BM	0100	52.	122.	589.	1011.	1435.	2244.	238.	0.	0.	5692.
MA	0150	15.	45.	157.	179.	0.	0.	0.	0.	0.	396.
QM	0200	16.	36.	353.	443.	606.	935.	241.	0.	0.	2630.
SM	0250	17.	19.	141.	281.	521.	844.	576.	0.	0.	2399.
OS	0300	21.	125.	220.	821.	1370.	1900.	2118.	0.	0.	6574.
EM	0350	2.	24.	108.	132.	376.	378.	265.	0.	0.	1284.
ST	0400	16.	0.	0.	0.	0.	0.	0.	0.	0.	16.
STG	0401	0.	82.	152.	478.	733.	824.	685.	0.	0.	2954.
STS	0404	0.	98.	113.	308.	541.	694.	165.	0.	0.	1919.
QT	0450	13.	54.	92.	240.	321.	353.	209.	0.	0.	1262.
IM	0500	52.	31.	195.	457.	729.	741.	213.	0.	0.	2418.
GM	0600	18.	76.	0.	0.	0.	0.	0.	0.	0.	93.
GMM	0601	0.	0.	69.	169.	230.	277.	163.	0.	0.	907.
GME	0602	2.	14.	37.	292.	365.	416.	135.	0.	0.	1260.
GMG	0604	0.	0.	270.	463.	881.	854.	607.	0.	0.	3073.
FT	0800	116.	209.	0.	0.	0.	0.	0.	0.	0.	325.
FTG	0801	0.	0.	283.	476.	652.	639.	311.	0.	0.	2359.
FTB	0802	0.	0.	134.	453.	684.	903.	320.	0.	0.	2495.
FTM	0803	0.	0.	54.	130.	216.	205.	0.	0.	0.	605.
NT	0810	0.	0.	74.	243.	430.	624.	0.	0.	0.	1371.
HM	0900	8.	17.	26.	62.	98.	144.	46.	0.	0.	401.
ET	1000	82.	215.	656.	1624.	0.	0.	0.	0.	0.	2577.
ETN	1001	0.	0.	0.	0.	1171.	1238.	236.	0.	0.	2646.
ETR	1002	0.	0.	0.	0.	1514.	1205.	201.	0.	0.	2921.
DS	1010	3.	33.	90.	285.	455.	461.	10.	0.	0.	1336.
PI	1080	3.	0.	0.	0.	0.	0.	0.	0.	0.	3.
IC	1100	0.	6.	26.	82.	116.	125.	29.	0.	0.	385.
DM	1200	0.	8.	22.	57.	78.	85.	15.	0.	0.	265.
MC	1400	14.	13.	84.	138.	0.	0.	0.	0.	0.	250.
AM	1500	47.	143.	579.	1141.	1702.	2559.	1760.	0.	0.	7931.
CTI	1611	0.	0.	8.	19.	1.	-0.	0.	0.	0.	30.
CTA	1622	0.	0.	1.	3.	9.	2.	0.	0.	0.	14.
CTM	1633	0.	0.	0.	10.	9.	0.	0.	0.	0.	20.
CTO	1644	0.	0.	0.	8.	11.	9.	0.	0.	0.	28.
CTR	1655	0.	0.	1.	9.	9.	9.	0.	0.	0.	27.
CTT	1666	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
YN	1700	23.	81.	435.	532.	689.	1160.	833.	0.	0.	3754.
CYN	1701	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LN	1750	0.	0.	2.	16.	22.	0.	0.	0.	0.	39.
PN	1800	25.	31.	249.	244.	32..	413.	480.	0.	0.	1765.
OP	1900	0.	6.	62.	123.	228.	320.	336.	0.	0.	1074.
SK	2000	58.	151.	492.	842.	1196.	1552.	750.	0.	0.	5039.
DK	2100	0.	28.	16.	324.	164.	121.	223.	0.	0.	876.
MS	2200	38.	80.	490.	1446.	1967.	2557.	2459.	0.	0.	9038.
SO	8500	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CS	2290	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
IS	2300	0.	6.	19.	45.	89.	102.	66.	0.	0.	327.
SH	2490	16.	20.	65.	432.	611.	1360.	1003.	0.	0.	3506.
JO	2600	0.	1.	8.	16.	28.	157.	19.	0.	0.	229.
PC	2700	0.	0.	14.	65.	137.	282.	35.	0.	0.	533.
LI	3100	0.	5.	20.	48.	69.	80.	28.	0.	0.	251.
DM	3200	1.	0.	3.	26.	50.	39.	1.	0.	0.	120.
HU	3300	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
HM	3700	211.	565.	1033.	3672.	4851.	5755.	1231.	0.	0.	17302.

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

EN 3800	66.	79.	346.	845.	1081.	1369.	522.	0.	0.	4308.
MR 3900	4.	27.	120.	400.	637.	570.	164.	0.	0.	1922.
UT 4000	89.	135.	399.	1191.	1940.	2785.	1642.	0.	0.	8180.
UR 4020	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
EM 4100	97.	215.	572.	1625.	1946.	2764.	986.	0.	0.	8206.
IC 4200	0.	31.	269.	867.	1235.	1464.	560.	0.	0.	4422.
MT 4300	53.	147.	598.	1590.	2224.	2781.	759.	0.	0.	8152.
PM 4600	0.	0.	10.	31.	32.	35.	3.	0.	0.	111.
ML 4700	1.	4.	18.	31.	38.	43.	11.	0.	0.	147.
GS 4400	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 5080	15.	0.	0.	0.	0.	0.	0.	0.	0.	15.
EA 5100	0.	3.	9.	14.	49.	38.	33.	0.	0.	146.
CE 5300	0.	9.	22.	79.	127.	151.	132.	0.	0.	521.
EQ 5320	16.	0.	0.	0.	0.	0.	0.	0.	0.	16.
EO 5410	0.	16.	32.	144.	193.	268.	237.	0.	0.	890.
CM 5500	0.	14.	40.	91.	165.	210.	158.	0.	0.	678.
MU 5600	0.	25.	78.	171.	336.	395.	374.	0.	0.	1378.
SM 5700	0.	12.	37.	70.	87.	148.	127.	0.	0.	481.
UT 5800	11.	10.	19.	71.	129.	140.	123.	0.	0.	504.
AF 6080	26.	0.	0.	0.	0.	0.	0.	0.	0.	26.
AV 6180	13.	0.	0.	0.	0.	0.	0.	0.	0.	13.
AO 6200	0.	15.	34.	78.	104.	56.	18.	0.	0.	305.
AOR 6205	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AOJ 6206	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AT 6300	0.	30.	54.	125.	187.	117.	23.	0.	0.	536.
AX 6310	0.	0.	0.	19.	45.	27.	0.	0.	0.	91.
AW 6400	0.	9.	14.	29.	38.	33.	0.	0.	0.	121.
AD 6500	5.	25.	75.	291.	226.	422.	252.	0.	0.	1187.
AB 6520	0.	17.	25.	53.	78.	62.	6.	0.	0.	239.
AC 6600	1.	11.	30.	77.	189.	125.	104.	0.	0.	538.
AR 6700	19.	38.	0.	0.	0.	0.	0.	0.	0.	56.
ARE 6704	0.	0.	53.	104.	209.	301.	341.	0.	0.	1007.
ARF 6705	0.	0.	47.	83.	149.	339.	224.	0.	0.	842.
ARH 6706	0.	0.	60.	166.	219.	511.	308.	0.	0.	1264.
AE 6800	0.	0.	18.	67.	119.	57.	19.	0.	0.	280.
AM 6900	0.	10.	0.	0.	0.	0.	0.	0.	0.	10.
AMS 6901	0.	0.	22.	46.	57.	31.	19.	0.	0.	174.
AMH 6902	0.	0.	14.	32.	45.	31.	15.	0.	0.	136.
AME 6903	0.	0.	3.	5.	15.	10.	8.	0.	0.	40.
PR 7000	0.	1.	16.	19.	43.	13.	18.	0.	0.	112.
AG 7100	2.	6.	19.	51.	56.	103.	59.	0.	0.	294.
ID 7200	0.	0.	0.	2.	1.	0.	3.	0.	0.	6.
AK 7300	13.	2.	32.	96.	201.	182.	153.	0.	0.	679.
AS 7500	7.	9.	14.	54.	0.	0.	0.	0.	0.	83.
ASE 7501	0.	0.	0.	0.	44.	55.	17.	0.	0.	116.
ASH 7502	0.	0.	0.	0.	50.	37.	24.	0.	0.	111.
ASM 7503	0.	0.	0.	0.	65.	67.	31.	0.	0.	163.
AZ 7400	0.	9.	32.	27.	50.	79.	29.	0.	0.	227.
PH 7600	1.	21.	33.	122.	187.	194.	65.	0.	0.	622.
PT 7700	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MM 8000	2.	57.	397.	393.	354.	395.	426.	0.	0.	2023.
OT 8500	0.	0.	35.	64.	101.	99.	128.	0.	0.	427.
SN 3600	0.	0.	0.	0.	0.	0.	29590.	0.	0.	29590.
FN 5000	0.	0.	0.	0.	0.	0.	12698.	0.	0.	12698.
CN 6000	0.	0.	0.	0.	0.	0.	26.	0.	0.	26.
AN 7800	0.	0.	0.	0.	0.	0.	5597.	0.	0.	5597.
PAYGRADE TOTAL	1307.	3302.	11032.	26962.	38716.	49072.	72039.	0.	0.	202429.

FIG C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

TOTAL ENLISTED REQUIREMENTS FOR FY1979

ALL NAVY

RATING		PAYGRADE E-9	E-8	E-7	E-6	E-5	E-4	E-3	E-2	E-1	RATING TOTAL
AN	0100	160.	303.	1236.	2018.	2525.	2050.	296.	0.	0.	9388.
NA	0150	39.	89.	300.	526.	0.	0.	0.	0.	0.	954.
AN	0200	67.	118.	723.	849.	892.	1072.	283.	0.	0.	4005.
SM	0250	24.	54.	239.	611.	767.	919.	617.	0.	0.	3251.
OS	0300	87.	207.	592.	1519.	1787.	2191.	2312.	0.	0.	8685.
EM	0350	9.	47.	225.	348.	576.	415.	243.	0.	0.	1991.
ST	0400	56.	0.	0.	0.	0.	0.	0.	0.	0.	56.
STG	0401	0.	113.	306.	600.	978.	1072.	729.	0.	0.	3999.
STS	0404	0.	144.	252.	545.	707.	934.	172.	0.	0.	2755.
JT	0450	15.	39.	110.	296.	363.	374.	221.	0.	0.	1419.
FA	0500	29.	85.	374.	824.	1110.	1210.	359.	0.	0.	4026.
GM	0600	55.	138.	0.	0.	0.	0.	0.	0.	0.	193.
GMM	0601	0.	0.	129.	356.	356.	338.	173.	0.	0.	1352.
GMT	0602	12.	48.	192.	500.	531.	571.	197.	0.	0.	2001.
GMG	0604	0.	0.	465.	918.	1211.	1029.	674.	0.	0.	4277.
FT	0650	172.	349.	0.	0.	0.	0.	0.	0.	0.	521.
FTG	0801	0.	0.	469.	792.	889.	759.	352.	0.	0.	3261.
FTB	0802	0.	0.	298.	805.	869.	1230.	343.	0.	0.	3545.
FTM	0803	0.	0.	104.	229.	298.	323.	0.	0.	0.	954.
AT	0810	0.	0.	164.	423.	669.	939.	0.	0.	0.	2195.
MN	0900	13.	24.	45.	87.	125.	171.	49.	0.	0.	514.
ET	1000	161.	394.	1372.	3201.	0.	0.	0.	0.	0.	5131.
ETN	1001	0.	0.	0.	0.	2431.	2608.	503.	0.	0.	5542.
ETR	1002	0.	0.	0.	0.	2295.	2388.	289.	0.	0.	4972.
OS	1010	13.	47.	180.	555.	747.	715.	16.	0.	0.	2272.
PI	1060	7.	0.	0.	0.	0.	0.	0.	0.	0.	7.
EM	1100	0.	14.	46.	114.	152.	139.	31.	0.	0.	495.
GM	1200	0.	10.	38.	80.	95.	94.	17.	0.	0.	334.
MC	1400	38.	98.	336.	607.	0.	0.	0.	0.	0.	1077.
HM	1500	146.	412.	1792.	2633.	3997.	4815.	3055.	0.	0.	16749.
CTI	1611	15.	42.	156.	385.	389.	431.	215.	0.	0.	1633.
CTA	1622	15.	25.	101.	194.	267.	190.	100.	0.	0.	896.
CTM	1633	25.	47.	136.	376.	488.	556.	0.	0.	0.	1828.
CTO	1644	16.	34.	146.	269.	391.	474.	255.	0.	0.	1586.
CTR	1655	23.	58.	190.	323.	412.	556.	391.	0.	0.	1954.
CTI	1665	10.	17.	103.	224.	256.	183.	78.	0.	0.	910.
YN	1700	117.	314.	1254.	2500.	2900.	3001.	2005.	0.	0.	12092.
CYN	1701	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LN	1750	12.	23.	77.	136.	169.	0.	0.	0.	0.	417.
PN	1800	112.	156.	785.	1526.	1731.	1327.	997.	0.	0.	6675.
OP	1900	29.	56.	270.	600.	781.	569.	527.	0.	0.	3131.
SK	2000	157.	310.	1107.	1605.	2329.	2239.	544.	0.	0.	8991.
UR	2100	16.	55.	149.	704.	561.	397.	230.	0.	0.	2161.
NS	2200	135.	291.	1127.	3341.	4131.	4380.	3344.	0.	0.	16750.
SO	2500	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CS	2290	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
IS	2300	15.	32.	178.	343.	13076.	242.	113.	0.	0.	13899.
SH	2490	76.	225.	291.	1068.	1305.	1511.	1075.	0.	0.	5451.
JO	2600	7.	25.	82.	130.	169.	235.	40.	0.	0.	707.
PC	2700	15.	18.	42.	158.	269.	439.	141.	0.	0.	1081.
LI	5100	2.	7.	33.	82.	121.	154.	60.	0.	0.	459.
DK	5200	1.	3.	20.	85.	126.	80.	18.	0.	0.	333.
MU	5300	24.	41.	96.	188.	177.	287.	84.	0.	0.	898.
HM	5700	364.	788.	1835.	4976.	5736.	7147.	1392.	0.	0.	22234.

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

EN 1800	112.	170.	766.	1661.	1997.	1965.	651.	0.	0.	7194.
HM 1900	10.	44.	198.	540.	809.	495.	178.	0.	0.	2674.
MF 4000	157.	232.	762.	1678.	2292.	2983.	1745.	0.	0.	9999.
MM 4020	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
EN 4100	172.	332.	1071.	2328.	2801.	3780.	1099.	0.	0.	11584.
IC 4200	0.	64.	467.	1167.	1595.	1864.	622.	0.	0.	5779.
MT 4300	87.	294.	1006.	2226.	2825.	3134.	834.	0.	0.	10356.
MN 4600	0.	0.	19.	45.	33.	37.	3.	0.	0.	137.
ML 4700	2.	7.	26.	41.	47.	47.	11.	0.	0.	181.
GS 4400	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 5080	40.	0.	0.	0.	0.	0.	0.	0.	0.	40.
EA 5100	0.	8.	21.	72.	87.	74.	43.	0.	0.	306.
CE 5300	0.	23.	101.	244.	389.	319.	171.	0.	0.	1265.
EO 5380	36.	0.	0.	0.	0.	0.	0.	0.	0.	36.
ED 5410	0.	34.	126.	346.	430.	484.	337.	0.	0.	1756.
CM 5500	0.	26.	101.	272.	356.	358.	196.	0.	0.	1309.
IU 5600	0.	93.	218.	442.	636.	592.	428.	0.	0.	2379.
SW 5700	0.	24.	77.	164.	179.	224.	143.	0.	0.	811.
UT 5800	25.	28.	77.	230.	356.	297.	154.	0.	0.	1167.
AF 6000	356.	0.	0.	0.	0.	0.	0.	0.	0.	356.
AV 6180	288.	0.	0.	0.	0.	0.	0.	0.	0.	288.
AO 6200	0.	475.	1033.	2585.	2935.	2974.	2451.	0.	0.	12453.
AOA 6205	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AOJ 6206	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AT 6300	0.	252.	828.	2161.	3386.	3070.	1448.	0.	0.	11184.
AX 6310	0.	66.	195.	502.	625.	581.	175.	0.	0.	2147.
AW 6400	22.	120.	313.	599.	790.	708.	450.	0.	0.	3001.
AO 6500	41.	64.	447.	1149.	1395.	1544.	1376.	0.	0.	6015.
AQ 6520	0.	139.	251.	674.	896.	939.	385.	0.	0.	3285.
AC 6600	17.	68.	238.	612.	789.	705.	214.	0.	0.	2642.
AB 6700	55.	89.	0.	0.	0.	0.	0.	0.	0.	144.
ABE 6704	0.	0.	104.	209.	321.	444.	412.	0.	0.	1491.
ABF 6705	0.	0.	127.	196.	324.	453.	319.	0.	0.	1419.
ABH 6706	0.	0.	185.	416.	536.	820.	578.	0.	0.	2536.
AE 6800	0.	175.	600.	1708.	2655.	2215.	1517.	0.	0.	8874.
AN 6900	0.	370.	0.	0.	0.	0.	0.	0.	0.	370.
ANS 6901	0.	0.	577.	1373.	1812.	1869.	1530.	0.	0.	7562.
ANH 6902	0.	0.	410.	1165.	1458.	1684.	1396.	0.	0.	6114.
ANE 6903	0.	0.	173.	563.	709.	663.	589.	0.	0.	2696.
PR 7000	8.	16.	85.	329.	536.	495.	238.	0.	0.	1706.
AG 7100	14.	44.	154.	359.	377.	501.	111.	0.	0.	1560.
ID 7200	13.	30.	109.	373.	477.	403.	91.	0.	0.	1497.
AK 7300	36.	47.	302.	718.	1007.	1097.	715.	0.	0.	3921.
AS 7500	18.	35.	110.	329.	0.	0.	0.	0.	0.	492.
ASE 7501	0.	0.	0.	0.	179.	193.	101.	0.	0.	472.
ASH 7502	0.	0.	0.	0.	155.	168.	99.	0.	0.	422.
ASN 7503	0.	0.	0.	0.	263.	247.	172.	0.	0.	682.
AZ 7400	12.	51.	231.	615.	800.	930.	645.	0.	0.	3285.
PH 7600	6.	45.	127.	334.	477.	461.	146.	0.	0.	1597.
PT 7700	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MM 8000	181.	408.	1666.	3038.	4391.	5296.	8057.	0.	562.	23598.
OT 9500	20.	51.	174.	400.	601.	850.	1304.	0.	68.	3468.
SN 3503	0.	0.	0.	0.	0.	0.	46567.	0.	6151.	52717.
FN 5000	0.	0.	0.	0.	0.	0.	18718.	0.	2689.	21407.
GN 6000	0.	0.	0.	0.	0.	0.	463.	0.	313.	775.
AN 7200	0.	0.	0.	0.	0.	0.	15586.	0.	3072.	18658.
PAYGRADE TOTAL	4863.	9175.	31063.	70695.	103024.	97955.	135909.	0.	12854.	464965.

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

TOTAL ENLISTED REQUIREMENTS FOR FY1979

SUMMARY TABLE

RATING	TOTAL	PERCENT	RATING	TOTAL	PERCENT	RATING	TOTAL	PERCENT
BM	9388.	2.62	CYN	0.	0.00	AV	288.	0.06
MA	956.	0.21	LN	417.	0.09	AD	12453.	2.68
QM	4005.	0.86	PN	6675.	1.44	ADR	0.	0.00
SM	3231.	0.69	OP	3131.	0.67	ADJ	0.	0.00
OS	8645.	1.87	SK	8891.	1.91	AT	11184.	2.41
EW	1891.	0.41	OK	2161.	0.46	AX	2147.	0.46
ST	56.	0.01	MS	16750.	3.60	AW	3001.	0.65
STG	3999.	0.86	SO	0.	0.00	AO	6015.	1.29
STS	2755.	0.59	CS	0.	0.00	AQ	3285.	0.71
OT	1419.	0.31	IS	13999.	3.01	AC	2642.	0.57
FN	4026.	0.87	SH	5451.	1.17	AR	144.	0.03
GM	193.	0.04	JO	707.	0.15	ABE	1491.	0.32
GMM	1352.	0.29	PC	1061.	0.23	ABF	1419.	0.31
GMT	2001.	0.43	LI	459.	0.10	ABH	2536.	0.55
GMG	4277.	0.92	DM	335.	0.07	AE	8874.	1.91
FT	521.	0.11	HU	896.	0.19	AM	370.	0.08
FTG	3261.	0.70	MM	22234.	4.78	AMS	7562.	1.63
FTB	3545.	0.76	EN	7194.	1.55	AMH	6114.	1.31
FTM	954.	0.21	MR	2451.	0.53	AME	2696.	0.58
MT	2196.	0.47	BT	9890.	2.13	PR	1706.	0.37
MN	514.	0.11	BR	0.	0.00	AG	1560.	0.34
ET	5131.	1.10	EM	11584.	2.49	IO	1497.	0.32
ETN	5542.	1.19	IC	5759.	1.24	AK	3921.	0.84
ETR	4972.	1.07	HT	10396.	2.24	AS	492.	0.11
DS	2272.	0.49	PM	157.	0.03	ASE	472.	0.10
PI	7.	0.00	ML	181.	0.04	ASH	422.	0.09
IM	495.	0.11	GS	0.	0.00	ASM	682.	0.15
QM	334.	0.07	CU	40.	0.01	AZ	3285.	0.71
NC	1077.	0.23	EA	306.	0.07	PR	1597.	0.34
RM	16349.	3.52	CE	1245.	0.27	PT	0.	0.00
CTT	1633.	0.35	EQ	36.	0.01	HM	23598.	5.08
CTA	896.	0.19	EO	1756.	0.38	DT	3468.	0.75
CTM	1828.	0.39	CM	1309.	0.28	SN	52717.	11.34
CTO	1586.	0.34	AU	2379.	0.51	FN	21407.	4.60
CTR	1954.	0.42	SW	811.	0.17	CN	776.	0.17
CTI	910.	0.20	UT	1167.	0.25	AN	18658.	4.01
YN	12092.	2.60	AF	356.	0.08			

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

TOTAL ENLISTED REQUIREMENTS FOR FY1979

SUMMARY TABLE

PAYGRADE	TOTAL	PERCENT
E-9	4063.	0.87
E-8	9179.	1.97
E-7	31063.	6.68
E-6	70895.	15.25
E-5	103024.	22.16
E-4	97955.	21.07
E-3	135909.	29.23
E-2	0.	0.00
E-1	12854.	2.76
P.O.	316180.	68.00
NON P.O.	148763.	32.00

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

ALL NAVY ENLISTED REQUIREMENTS FOR FY1979

RATING		LENGTH OF SERVICE 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
BP	0100	7.	118.	920.	1107.	829.	879.	629.	456.	472.	282.	240.	264.	327.	318.	315.	339.
MA	0150	0.	C.	0.	1.	4.	10.	12.	21.	24.	32.	32.	54.	88.	87.	77.	98.
QM	0200	49.	276.	598.	538.	221.	288.	272.	174.	198.	116.	59.	120.	74.	88.	125.	140.
SM	0250	72.	397.	517.	457.	241.	240.	186.	81.	95.	61.	37.	40.	61.	73.	54.	67.
DS	0300	185.	1505.	1921.	1053.	553.	550.	368.	329.	261.	186.	119.	110.	163.	151.	114.	140.
EN	0350	8.	292.	326.	205.	224.	71.	155.	52.	66.	46.	39.	52.	61.	62.	43.	44.
ST	0400	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.
SIG	0401	327.	827.	541.	307.	309.	299.	130.	161.	133.	108.	69.	71.	114.	124.	71.	79.
STS	0404	188.	443.	474.	284.	253.	179.	123.	92.	80.	75.	71.	51.	46.	53.	56.	51.
QT	0450	10.	185.	287.	209.	79.	76.	81.	51.	65.	38.	49.	41.	33.	45.	32.	29.
IM	0500	22.	309.	771.	588.	148.	249.	258.	141.	149.	135.	83.	93.	55.	102.	140.	147.
GM	0600	0.	0.	0.	0.	0.	0.	0.	0.	0.	C.	0.	1.	1.	4.	2.	3.
GMN	0601	15.	177.	220.	155.	91.	113.	93.	99.	74.	54.	41.	20.	30.	26.	13.	25.
GMT	0602	20.	153.	455.	245.	109.	105.	146.	106.	78.	42.	42.	26.	52.	40.	52.	58.
GMG	0604	51.	470.	590.	480.	307.	370.	314.	190.	177.	92.	105.	113.	123.	111.	106.	108.
FT	0700	0.	C.	0.	0.	0.	0.	1.	0.	0.	0.	1.	0.	4.	10.	19.	65.
FTG	0701	36.	355.	636.	401.	267.	261.	192.	124.	148.	133.	110.	65.	62.	65.	75.	68.
FTB	0702	141.	610.	677.	378.	411.	220.	81.	99.	121.	103.	60.	85.	147.	127.	80.	54.
FTM	0703	32.	140.	149.	181.	36.	37.	38.	72.	72.	39.	29.	4.	4.	6.	24.	31.
MT	0810	128.	461.	281.	498.	64.	90.	91.	126.	107.	94.	31.	26.	11.	25.	42.	36.
MN	0930	3.	47.	80.	64.	26.	41.	59.	21.	20.	16.	14.	10.	6.	7.	13.	7.
ET	1000	2.	4.	0.	1.	22.	199.	183.	348.	395.	381.	338.	334.	306.	321.	352.	331.
ETN	1001	407.	1175.	986.	964.	582.	653.	274.	246.	153.	69.	38.	21.	9.	5.	0.	3.
ETR	1002	372.	946.	1134.	757.	469.	544.	300.	200.	145.	45.	26.	8.	11.	4.	4.	1.
DS	1010	13.	282.	342.	349.	316.	238.	79.	70.	83.	64.	70.	59.	52.	62.	64.	48.
PI	1080	C.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	C.
IP	1130	2.	19.	76.	73.	28.	35.	50.	38.	26.	35.	14.	18.	14.	9.	6.	9.
QM	1200	3.	18.	41.	52.	24.	39.	15.	22.	6.	14.	9.	7.	14.	11.	5.	6.
NC	1400	0.	0.	0.	3.	3.	5.	10.	24.	38.	43.	34.	31.	70.	55.	79.	98.
MN	1500	455.	2313.	3072.	1824.	896.	882.	744.	716.	575.	352.	226.	287.	359.	400.	350.	442.
CTI	1611	13.	196.	287.	263.	44.	54.	79.	70.	55.	53.	38.	53.	49.	45.	52.	73.
CTA	1622	16.	84.	139.	118.	74.	63.	39.	46.	36.	17.	18.	19.	22.	29.	30.	19.
CTN	1653	87.	182.	273.	240.	203.	55.	43.	34.	83.	93.	96.	75.	31.	37.	39.	44.
CTO	1644	18.	219.	292.	223.	106.	80.	79.	91.	69.	56.	44.	32.	37.	32.	25.	37.
CTR	1655	16.	260.	469.	178.	58.	53.	70.	80.	84.	31.	22.	55.	93.	74.	74.	63.
CTI	1666	1.	60.	151.	119.	43.	31.	45.	52.	72.	50.	26.	44.	70.	29.	30.	32.
YN	1730	290.	1462.	1571.	1287.	978.	884.	719.	574.	450.	326.	258.	245.	268.	257.	247.	310.
CYN	1731	0.	C.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LN	1750	2.	C.	6.	18.	28.	35.	27.	33.	32.	26.	13.	16.	19.	17.	17.	28.
PN	1800	177.	741.	870.	780.	526.	491.	276.	264.	195.	182.	133.	133.	173.	138.	153.	216.
OP	1900	54.	358.	452.	468.	203.	196.	124.	105.	99.	80.	64.	90.	90.	81.	83.	110.
SN	2000	87.	653.	1291.	1065.	690.	604.	372.	283.	309.	277.	241.	255.	336.	244.	226.	207.
DK	2130	36.	136.	226.	285.	177.	105.	70.	40.	102.	117.	113.	101.	119.	57.	41.	15.
MS	2200	138.	1698.	1969.	1345.	664.	598.	432.	545.	646.	1092.	639.	709.	1036.	592.	501.	464.
SD	4500	0.	C.	0.	0.	0.	0.	0.	0.	0.	0.	0.	C.	0.	C.	0.	0.
CS	2270	0.	0.	0.	0.	0.	0.	0.	C.	0.	C.	C.	C.	0.	C.	0.	0.
IS	2300	83.	97.	757.	3001.	1887.	1771.	2345.	1616.	1320.	263.	219.	157.	96.	101.	43.	41.
SH	2490	53.	539.	910.	763.	343.	367.	302.	209.	239.	247.	122.	120.	193.	121.	118.	113.
JO	2600	5.	43.	86.	128.	66.	55.	49.	47.	13.	25.	18.	12.	19.	5.	26.	21.
PC	2700	18.	94.	147.	164.	66.	83.	77.	41.	32.	23.	14.	19.	28.	32.	32.	16.
LI	3100	0.	23.	72.	79.	41.	41.	33.	21.	23.	16.	6.	12.	10.	7.	4.	12.
OM	3200	0.	11.	27.	45.	25.	26.	17.	14.	13.	8.	3.	8.	6.	12.	12.	14.
MU	3500	28.	105.	67.	53.	80.	101.	50.	43.	35.	30.	21.	20.	19.	17.	16.	25.
MM	3700	972.	2390.	3239.	3002.	1964.	2591.	1408.	1091.	560.	480.	317.	378.	468.	427.	385.	398.
EA	3800	104.	418.	1104.	1084.	451.	411.	379.	305.	273.	288.	199.	205.	222.	227.	220.	212.
MR	3900	18.	166.	384.	419.	188.	166.	172.	122.	93.	112.	56.	68.	65.	51.	31.	40.
BT	4000	72.	1052.	1843.	1765.	695.	635.	570.	356.	288.	211.	145.	166.	244.	195.	182.	220.

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

SR	4020	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
EM	4100	360.	1428.	1939.	1692.	919.	894.	493.	447.	378.	321.	235.	214.	260.	225.	172.	213.	
EC	4200	170.	736.	1027.	895.	366.	457.	406.	299.	197.	159.	97.	93.	71.	103.	89.	114.	
MT	4300	157.	902.	1586.	1657.	777.	798.	715.	482.	437.	301.	239.	254.	281.	187.	207.	223.	
PM	4400	0.	1.	9.	21.	3.	10.	5.	10.	15.	9.	9.	2.	6.	6.	5.	4.	
ML	4700	0.	5.	24.	31.	8.	17.	11.	9.	8.	6.	6.	6.	4.	6.	3.	4.	
GS	4400	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
CU	5010	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
EA	5110	4.	8.	32.	47.	19.	16.	22.	21.	23.	14.	16.	10.	5.	12.	9.	11.	
CE	5310	9.	75.	177.	205.	59.	56.	82.	74.	52.	40.	30.	56.	51.	54.	78.	44.	
EB	5190	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
EO	5410	13.	198.	232.	248.	85.	71.	64.	39.	58.	54.	49.	118.	81.	95.	79.	68.	
CW	5500	11.	126.	157.	215.	62.	70.	47.	38.	41.	57.	37.	63.	65.	53.	47.	45.	
BU	5600	24.	266.	314.	440.	111.	137.	143.	131.	101.	92.	98.	74.	86.	74.	62.	67.	
SW	5700	14.	91.	87.	154.	51.	37.	41.	53.	38.	26.	19.	41.	25.	23.	29.	26.	
UT	5800	1.	88.	120.	214.	76.	84.	69.	78.	36.	38.	25.	26.	46.	41.	29.	25.	
AF	6010	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	4.	0.	0.	0.	0.	
AV	6140	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	
AD	6200	172.	1472.	1602.	1428.	632.	812.	728.	497.	511.	427.	297.	229.	294.	247.	312.	523.	
ADR	6205	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
ADJ	6206	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
AI	6300	346.	1536.	1688.	1156.	694.	710.	555.	588.	474.	322.	267.	182.	296.	222.	201.	242.	
AR	6310	46.	231.	425.	259.	133.	122.	133.	152.	76.	67.	54.	42.	51.	29.	44.	41.	
AN	6400	56.	424.	505.	377.	174.	191.	149.	122.	120.	49.	48.	53.	52.	87.	77.	78.	
AO	6500	151.	793.	1206.	799.	326.	499.	299.	175.	209.	168.	138.	102.	106.	108.	101.	166.	
AO	6520	54.	358.	388.	286.	244.	250.	245.	365.	242.	136.	105.	50.	76.	62.	69.	71.	
AC	6630	32.	229.	401.	489.	194.	232.	189.	111.	124.	95.	57.	44.	38.	34.	33.	39.	
AB	6730	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	2.	5.	
ATE	6706	12.	167.	319.	287.	119.	135.	111.	42.	59.	24.	21.	19.	17.	11.	17.	21.	
ADF	6705	35.	161.	226.	251.	105.	106.	91.	55.	29.	27.	20.	18.	22.	21.	25.	19.	
ABN	6736	26.	289.	426.	458.	179.	210.	166.	87.	65.	40.	27.	17.	31.	38.	75.	130.	
AE	6800	141.	1065.	1476.	1243.	436.	722.	485.	497.	400.	261.	209.	154.	194.	163.	126.	200.	
AM	6900	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	2.	2.	7.	
AMS	6901	178.	1231.	1408.	927.	407.	544.	403.	254.	237.	243.	159.	106.	154.	128.	122.	196.	
AMH	6902	97.	938.	1126.	761.	341.	476.	404.	309.	244.	186.	151.	100.	100.	75.	79.	121.	
AME	6903	64.	384.	513.	371.	127.	179.	121.	114.	98.	72.	60.	49.	70.	76.	57.	85.	
PR	7000	26.	172.	267.	248.	121.	126.	103.	65.	58.	52.	29.	34.	32.	38.	34.	42.	
AG	7100	9.	115.	255.	255.	112.	89.	55.	61.	35.	40.	38.	21.	45.	33.	19.	41.	
IO	7200	7.	91.	304.	112.	124.	139.	108.	87.	74.	54.	27.	28.	47.	33.	19.	27.	
AR	7330	68.	454.	404.	487.	295.	334.	265.	129.	111.	161.	127.	101.	156.	80.	79.	102.	
AS	7520	0.	0.	0.	1.	0.	1.	4.	18.	26.	40.	27.	26.	23.	28.	20.	38.	
ASE	7501	6.	67.	70.	83.	40.	55.	41.	36.	26.	9.	10.	10.	6.	2.	3.	1.	
ASH	7502	3.	78.	70.	65.	45.	53.	28.	25.	22.	13.	8.	3.	8.	0.	2.	1.	
ASM	7503	31.	74.	64.	115.	68.	82.	57.	37.	44.	31.	17.	8.	13.	16.	6.	4.	
AZ	7430	101.	434.	362.	386.	235.	258.	222.	127.	115.	103.	103.	69.	108.	107.	73.	123.	
PH	7600	26.	113.	81.	119.	108.	70.	56.	94.	85.	56.	57.	53.	30.	36.	47.	59.	
PT	7730	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
MM	8400	1481.	4787.	4340.	2841.	1337.	1027.	986.	1068.	986.	604.	337.	356.	246.	223.	255.	327.	
DT	8330	220.	756.	540.	511.	235.	123.	136.	137.	97.	84.	52.	51.	33.	49.	32.	57.	
SM	3600	26405.	11721.	9013.	3613.	1116.	405.	141.	95.	54.	52.	32.	30.	10.	6.	8.	6.	
FN	5000	3894.	7931.	5744.	2745.	653.	211.	68.	38.	34.	53.	11.	8.	4.	4.	4.	4.	
GN	6000	590.	150.	33.	0.	0.	3.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
AM	7800	4822.	6791.	3540.	2145.	837.	243.	83.	85.	45.	24.	19.	19.	3.	3.	0.	0.	
	LUS																	
	TOTAL	44658.	69429.	74414.	56825.	28282.	27214.	21147.	17269.	14943.	11349.	8142.	7962.	9282.	8056.	7636.	8971.	

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

RATING		LENGTH OF SERVICE 17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	RATING TOTAL
BM	0100	384.	405.	301.	239.	90.	72.	78.	36.	26.	65.	33.	13.	26.	45.	28.	5388.
MA	0150	86.	88.	81.	40.	37.	28.	26.	6.	4.	9.	5.	3.	3.	5.	0.	954.
QM	0200	125.	158.	146.	73.	34.	39.	25.	26.	11.	9.	11.	5.	13.	7.	4.	4005.
SM	0250	74.	133.	112.	73.	47.	35.	27.	10.	5.	12.	8.	0.	5.	8.	1.	3731.
OS	0300	185.	207.	156.	150.	55.	47.	58.	18.	12.	14.	8.	1.	6.	5.	2.	8605.
EN	0350	36.	32.	40.	23.	7.	7.	1.	0.	0.	0.	1.	0.	0.	0.	0.	1691.
ST	0400	1.	4.	3.	5.	0.	3.	7.	7.	0.	2.	4.	3.	1.	1.	0.	56.
STG	0401	85.	77.	75.	54.	18.	7.	2.	5.	0.	3.	1.	1.	2.	0.	0.	3959.
STS	0404	55.	64.	59.	29.	10.	6.	7.	1.	0.	2.	2.	0.	0.	0.	0.	2753.
QT	0450	22.	25.	28.	21.	4.	6.	1.	0.	0.	0.	0.	0.	0.	0.	0.	1417.
TM	0500	124.	120.	126.	106.	48.	36.	26.	23.	9.	8.	3.	2.	3.	4.	1.	4026.
GM	0600	10.	22.	25.	18.	19.	12.	24.	8.	5.	7.	11.	3.	2.	6.	3.	193.
GMM	0601	17.	16.	27.	14.	6.	6.	10.	3.	1.	4.	1.	0.	0.	1.	0.	1352.
GMI	0602	63.	70.	52.	43.	15.	12.	5.	3.	0.	3.	3.	0.	2.	1.	1.	2001.
GMG	0604	125.	125.	97.	71.	35.	43.	25.	12.	7.	8.	6.	1.	4.	6.	1.	4277.
FI	0900	75.	75.	72.	49.	46.	22.	33.	17.	9.	6.	11.	3.	10.	4.	4.	521.
FIG	0901	95.	70.	47.	28.	11.	5.	3.	3.	2.	1.	2.	0.	1.	0.	0.	3761.
FIM	0902	41.	32.	40.	24.	7.	2.	0.	1.	1.	3.	0.	1.	0.	0.	0.	3547.
FIM	0903	19.	14.	13.	6.	2.	2.	2.	1.	0.	0.	0.	0.	0.	0.	1.	954.
MT	0810	29.	17.	15.	10.	4.	4.	0.	1.	1.	0.	1.	0.	0.	0.	0.	2196.
MN	0700	4.	10.	6.	4.	1.	9.	3.	5.	6.	9.	3.	3.	0.	0.	0.	514.
EI	1000	422.	414.	337.	214.	82.	49.	41.	20.	15.	8.	3.	7.	2.	4.	5.	5131.
ETN	1001	3.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	5542.
ETA	1002	2.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	4972.
OS	1010	16.	24.	19.	15.	4.	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	2272.
PI	1030	0.	2.	1.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	7.
EM	1100	14.	13.	8.	3.	2.	3.	1.	1.	0.	0.	0.	0.	0.	0.	0.	495.
QM	1200	4.	15.	13.	5.	1.	4.	1.	2.	1.	0.	0.	0.	0.	0.	0.	334.
NC	1400	129.	116.	89.	82.	56.	46.	27.	12.	9.	5.	6.	1.	1.	1.	0.	1077.
AM	1500	470.	447.	456.	473.	222.	124.	91.	53.	23.	22.	14.	9.	9.	7.	5.	16349.
CTI	1611	64.	36.	19.	34.	16.	11.	7.	3.	2.	0.	1.	0.	0.	0.	0.	1635.
CTA	1622	20.	30.	10.	37.	10.	8.	2.	3.	1.	2.	0.	0.	0.	0.	0.	894.
CTM	1633	54.	42.	58.	26.	16.	14.	1.	0.	0.	1.	0.	0.	0.	1.	0.	1828.
CTO	1644	38.	18.	29.	24.	18.	14.	7.	1.	0.	1.	0.	0.	0.	3.	0.	1586.
CTR	1655	48.	62.	62.	43.	27.	7.	7.	7.	1.	2.	2.	1.	0.	5.	0.	1954.
CTE	1666	23.	29.	28.	22.	10.	6.	2.	1.	2.	0.	1.	0.	1.	0.	0.	910.
YN	1700	380.	440.	446.	205.	111.	95.	83.	58.	35.	41.	26.	6.	12.	21.	10.	12092.
CYN	1701	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LN	1750	27.	17.	21.	11.	7.	7.	4.	2.	0.	0.	1.	0.	0.	0.	0.	417.
PN	1800	244.	244.	242.	119.	104.	85.	72.	42.	20.	15.	7.	4.	10.	10.	7.	6675.
OP	1900	125.	90.	113.	60.	23.	9.	6.	5.	2.	1.	0.	1.	1.	0.	0.	3131.
SK	2000	264.	326.	287.	295.	142.	139.	101.	69.	33.	34.	19.	10.	12.	17.	4.	8851.
OK	2100	54.	55.	61.	71.	37.	15.	33.	30.	8.	3.	3.	1.	4.	2.	3.	2161.
MS	2200	895.	934.	894.	527.	86.	78.	90.	53.	35.	34.	24.	1.	8.	17.	6.	16750.
SO	6500	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CS	2250	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
IS	2300	44.	55.	38.	14.	15.	11.	11.	3.	2.	4.	3.	0.	0.	2.	2.	13959.
SH	2400	131.	124.	87.	61.	56.	52.	68.	32.	13.	29.	17.	7.	5.	10.	4.	5451.
JO	2600	20.	20.	15.	14.	4.	2.	4.	2.	1.	0.	0.	0.	0.	0.	0.	707.
PC	2700	41.	37.	22.	14.	6.	4.	5.	4.	6.	5.	6.	2.	1.	4.	0.	1061.
LI	5100	19.	11.	12.	4.	6.	3.	2.	0.	0.	2.	0.	0.	0.	1.	0.	459.
DM	3200	20.	16.	24.	15.	7.	1.	3.	0.	1.	2.	0.	0.	0.	1.	0.	335.
MU	3300	36.	29.	45.	25.	16.	16.	4.	6.	3.	0.	1.	1.	1.	1.	1.	c95.
MM	3700	415.	402.	401.	351.	173.	112.	59.	30.	16.	13.	12.	5.	6.	5.	3.	22234.
EN	3800	177.	262.	233.	143.	85.	61.	50.	14.	10.	17.	10.	6.	5.	12.	4.	7154.
MR	3900	48.	74.	71.	45.	23.	19.	12.	4.	3.	3.	0.	0.	0.	1.	0.	2451.
MT	4000	278.	275.	246.	210.	67.	80.	43.	18.	5.	9.	7.	1.	5.	4.	1.	9690.
AR	4020	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
EM	4100	225.	283.	311.	255.	133.	80.	33.	22.	20.	9.	8.	5.	2.	5.	1.	11584.
IC	4230	111.	103.	108.	76.	32.	22.	5.	4.	0.	0.	1.	0.	0.	1.	1.	5759.

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

HT	4300	251.	246.	244.	126.	85.	65.	68.	58.	17.	19.	12.	5.	6.	1.	9.	1034.
PN	4600	7.	5.	3.	2.	4.	0.	3.	0.	0.	0.	0.	0.	0.	0.	0.	137.
ML	4700	4.	6.	7.	4.	2.	1.	4.	1.	5.	0.	0.	0.	0.	0.	0.	181.
GS	4400	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU	5080	0.	0.	0.	10.	0.	5.	0.	5.	5.	15.	0.	0.	0.	0.	0.	40.
EA	5100	13.	6.	11.	1.	5.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	306.
CE	5300	41.	25.	26.	27.	14.	10.	2.	2.	0.	0.	3.	1.	0.	0.	0.	1245.
EP	5310	0.	2.	2.	0.	4.	2.	0.	4.	4.	5.	2.	4.	0.	0.	0.	36.
EC	5410	51.	34.	37.	27.	13.	9.	10.	5.	1.	5.	6.	0.	3.	1.	1.	1756.
CM	5500	36.	32.	39.	24.	13.	16.	4.	5.	1.	3.	1.	0.	1.	0.	0.	1309.
BU	5600	38.	43.	54.	29.	12.	21.	7.	3.	1.	4.	0.	3.	1.	0.	0.	2379.
SW	5700	15.	9.	6.	11.	5.	2.	4.	2.	0.	1.	2.	0.	0.	0.	0.	311.
UT	5800	32.	27.	24.	25.	12.	12.	8.	8.	5.	2.	4.	5.	0.	0.	0.	1167.
AF	6080	0.	20.	28.	38.	36.	38.	38.	26.	20.	32.	22.	8.	12.	27.	10.	356.
AV	6180	0.	16.	23.	31.	29.	31.	31.	21.	16.	26.	18.	7.	10.	18.	8.	288.
AD	6200	477.	519.	401.	251.	129.	142.	118.	35.	23.	40.	20.	9.	5.	15.	5.	12455.
ADH	6205	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
ADJ	6206	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AI	6300	236.	295.	333.	265.	144.	78.	60.	28.	17.	19.	17.	6.	6.	6.	1.	11194.
AX	6310	40.	57.	44.	38.	22.	13.	6.	0.	1.	4.	0.	0.	1.	0.	0.	2147.
AW	6400	85.	86.	84.	87.	33.	23.	20.	7.	4.	2.	3.	1.	3.	0.	1.	3001.
AO	6500	107.	132.	109.	96.	52.	54.	54.	15.	14.	13.	14.	1.	1.	6.	1.	6315.
AQ	6520	62.	62.	65.	44.	19.	14.	1.	1.	6.	3.	4.	0.	0.	4.	0.	3285.
AC	6600	47.	40.	78.	65.	45.	44.	30.	13.	4.	5.	6.	2.	3.	4.	2.	2642.
AB	6700	6.	14.	13.	13.	12.	7.	27.	8.	7.	7.	5.	7.	7.	5.	1.	144.
ABE	6704	14.	23.	13.	15.	11.	12.	10.	3.	0.	1.	3.	3.	0.	1.	0.	1491.
ABF	6705	29.	29.	25.	25.	3.	15.	15.	6.	0.	0.	0.	0.	0.	2.	0.	1419.
ABH	6706	97.	63.	46.	24.	9.	12.	12.	7.	1.	0.	0.	0.	1.	1.	0.	2536.
AE	6800	174.	217.	208.	216.	99.	83.	41.	24.	10.	7.	10.	2.	2.	5.	1.	8374.
AM	6900	21.	41.	58.	66.	49.	49.	40.	5.	5.	13.	4.	2.	1.	2.	0.	370.
AMS	6901	185.	221.	200.	142.	66.	53.	30.	10.	3.	4.	0.	0.	0.	1.	0.	7562.
AMH	6902	108.	136.	140.	94.	45.	27.	32.	12.	5.	4.	0.	1.	1.	2.	0.	6114.
AME	6903	76.	78.	56.	16.	8.	12.	3.	1.	3.	1.	0.	0.	0.	2.	0.	2696.
PR	7000	51.	47.	60.	38.	16.	12.	13.	3.	5.	5.	4.	0.	2.	4.	1.	1706.
AG	7100	38.	66.	76.	75.	21.	24.	15.	9.	3.	4.	1.	0.	2.	4.	0.	1569.
TD	7200	26.	31.	47.	45.	19.	14.	10.	10.	5.	7.	1.	0.	0.	1.	1.	1497.
AK	7300	97.	112.	100.	72.	46.	41.	52.	19.	6.	10.	6.	3.	2.	4.	0.	3921.
AS	7500	39.	55.	41.	40.	18.	21.	10.	3.	4.	2.	1.	1.	1.	1.	0.	492.
ASE	7501	2.	3.	3.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	472.
ASH	7502	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	422.
ASM	7503	6.	4.	3.	3.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	682.
AZ	7400	113.	71.	69.	36.	20.	14.	14.	6.	6.	6.	0.	0.	3.	0.	0.	3285.
PH	7600	60.	65.	64.	36.	20.	21.	16.	9.	4.	3.	6.	1.	1.	4.	1.	1597.
PT	7700	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MM	8000	427.	457.	449.	298.	190.	134.	107.	98.	57.	61.	41.	10.	13.	44.	11.	23599.
DT	8300	63.	77.	80.	39.	22.	24.	18.	7.	5.	6.	10.	4.	1.	1.	0.	3468.
SM	3600	4.	0.	2.	0.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	52717.
FM	5000	0.	4.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	21407.
CM	6000	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	775.
AM	7800	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	18658.
	LUS																
	TOTAL	9696.	10380.	9852.	7069.	3456.	2740.	2168.	1146.	640.	780.	511.	189.	264.	396.	158.	464943.

FIG. C-12: SAMPLE OUTPUT OF PLANNER, NO OPTIONS USED (Continued)

```
100     6  PROJECT
200
300       4    2    2    1    1    1
400     123  242972  117201
500       12    14    16    17    19    20
600     410  242412  110602
700         0     0     1     1     1     1
800    6705  241352  230620
900     199   199   199   199   210   234
1000   6709  242622  222408
1100    124   125   128   132   135   140
1200   114901  242822  1978  1980  2
1300   1   19
1400   4   10
1500   230620  241562  1978  1984  4
1600   1    5
1700   2   15
1800   4    5
1900   6   30
2000   1978  1985   2  4
2100   114403  244112
2200   114404  244112
2300   1 10.5
2400   2 10.5
2500   3 10.5
2600   4  9.0
2700   1978  1985   2  2
2800   211820  241542
2900   211820  241562
3000   3  5.0
3100   6 10.0
3200   1   2
3300   1979 20.00
3400   1980 25.00
3500    2 25.00 6 1
3600   244572  244582
3700     0.0  0.0  2.5  5.0  7.5  9.0
```

FIG. C-13: SAMPLE INPUT TO PLANNER, ALL OPTIONS USED

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PROJECTION RUN OF THE PLANNER MODEL

ENLISTED REQUIREMENTS WILL BE COMPUTED FOR  6 YEARS

REQUIREMENTS ARE NOT BEING TRANSFORMED FROM RATING/PAYGRADE TO RATING/LOS

THE FOLLOWING UPDATES ARE REPLACING THE NARM ONES IN THE INPUT FORCES
THESE UPDATES ARE IN EFFECT FOR THIS RUN ONLY
     ACT     PE      PU
    CODE    CODE    CODE      1978  1979  1980  1981  1982  1983
     125  242972  117201      12.   14.   16.   17.   19.   20.
     410  242412  110602       0.    0.    1.    1.    1.    1.
    6705  241352  230620     199.  199.  199.  199.  210.  234.
    6707  242522  222408     124.  125.  128.  132.  135.  140.

THE FOLLOWING FACTORS ARE REPLACING THE NARM ONES IN THIS RUN ONLY
      PU      PE      YEARS    FACTOR  NAME
    116911  242822  1978-1980     19.  BASE OPS SUPPORT
    116911  242822  1978-1980     10.  RECRUITE + EXAMINE
    230620  241562  1978-1984      5.  BASE OPS SUPPORT
    230620  241562  1978-1984     15.  TRAINING SUPPORT
    230620  241562  1978-1984      5.  RECRUITE + EXAMINE
    230620  241562  1978-1984     30.  ON BOARD

THE FOLLOWING FACTORS ARE BEING INCREASED/DECREASED BY THE SPECIFIED PERCENT FOR THIS RUN ONLY
                PERCENT
     YEARS      CHANGE   FACTOR                 PU/PE
  1978-1985      10.50   BASE OPS SUPPORT    114403/244112
                                             114404/244112
  1978-1985      10.50   TRAINING SUPPORT    114403/244112
                                             114404/244112
  1978-1985      10.50   MEDICAL SUPPORT     114403/244112
                                             114404/244112
  1978-1985       9.00   RECRUITE + EXAMINE  114403/244112
                                             114404/244112
                                             114404/244112
  1978-1985       5.00   MEDICAL SUPPORT     211820/241542
                                             211820/241562
  1978-1985      10.00   ON BOARD            211820/241542
                                             211820/241562

THE USER IS CHANGING THE PERCENT THE NARM VARIES THE FOLLOWING SUPPORT AREAS WITH THE FORCES:
                                 NARM     USER
    SUPPORT AREA          YEAR  PERCENT  PERCENT
    BASE OPS SUPPORT      1979    12.77    20.00
                          1980    12.85    25.00

THE USER IS CREATING A VARIABLE SUPPORT AREA COMPRISING THE FOLLOWING PROGRAM ELEMENTS:
     244572  244582
THIS SUPPORT AREA IS 25.00 PERCENT VARIABLE
THE SUPPORT AREA WILL VARY WITH THE FOLLOWING PROXIES:
     SHIP FORCES
     BASE OPS SUPPORT

FIXED REQUIREMENTS ARE BEING CHANGED BY THE FOLLOW PERCENTAGES:
     YEAR  PERCENT
     1980     2.50
     1981     5.00
     1982     7.50
     1983     9.00
```

FIG. C-14: SAMPLE OUTPUT OF PLANNER, ALL OPTIONS USED

SHIP NAME	ACT CODE	PL CODE	PU CODE	1978	1979	1980	1981	1982	1983
AD	121	242972	117211	12.	14.	16.	17.	19.	20.
AD	123	242972	117203	10.	0.	0.	0.	0.	0.
CGN	582	242912	111601	1.	1.	1.	1.	1.	1.
CGN	582	242912	111605	2.	6.	6.	6.	6.	6.
CV	403	241122	110205	1.	1.	1.	1.	1.	1.
CVN	407	241122	110303	1.	1.	1.	1.	1.	1.
DD	441	242932	112210	17.	18.	19.	22.	22.	22.
DD	441	242932	112212	8.	14.	15.	12.	12.	12.
SS	695	242812	110918	2.	2.	7.	7.	8.	9.
SSN	697	242812	111004	3.	2.	2.	1.	1.	1.
CVV	410	242412	110602	0.	0.	1.	1.	1.	1.

AIR NAME	ACT CODE	PL CODE	PU CODE	1978	1979	1980	1981	1982	1983
SH-2	6655	242432	267275	47.	49.	59.	65.	80.	85.
UH-46	6655	242622	217619	15.	15.	12.	10.	10.	10.
A-6	6705	241342	220810	25.	30.	40.	50.	55.	60.
A-7	6705	241352	230620	199.	199.	199.	199.	210.	234.
F-14	6710	241442	220210	103.	113.	115.	117.	118.	119.
EA-6B	6765	241542	211820	76.	79.	71.	70.	70.	70.
EA-6B	6766	241562	211820	2.	5.	15.	20.	25.	30.
EA-6	6766	244532	221632	43.	34.	30.	30.	30.	30.
P-3C	6707	242622	222408	124.	125.	128.	132.	135.	140.

FIG. C-14: SAMPLE OUTPUT OF PLANNER, ALL OPTIONS USED (Continued)

Year 2

```
MATCH ON DIRECT FACTOR UPDATE  - PU/PE = 116901/242822
FACTOR 1 CHANGED FROM      17.50 TO      19.00
FACTOR 4 CHANGED FROM       7.00 TO      10.00

MATCH ON PERCENTAGE FACTOR UPDATE - PU/PE = 114403/244112
FACTOR 1 CHANGED FROM       6.00 TO       6.63
FACTOR 2 CHANGED FROM      42.00 TO      46.41
FACTOR 3 CHANGED FROM       6.00 TO       6.63
FACTOR 4 CHANGED FROM       2.00 TO       2.18

MATCH ON PERCENTAGE FACTOR UPDATE - PU/PE = 114404/244112
FACTOR 1 CHANGED FROM       6.00 TO       6.63
FACTOR 2 CHANGED FROM      42.50 TO      46.96
FACTOR 3 CHANGED FROM       6.00 TO       6.63
FACTOR 4 CHANGED FROM       2.00 TO       2.18

MATCH ON DIRECT FACTOR UPDATE  - PU/PE = 230620/241562
ONBOARD FACTOR CHANGED FROM      20.00 TO      30.00
FACTOR 1 CHANGED FROM       0.00 TO       5.00
FACTOR 2 CHANGED FROM       9.00 TO      15.00
FACTOR 4 CHANGED FROM       0.00 TO       5.00

MATCH ON PERCENTAGE FACTOR UPDATE - PU/PE = 211820/241542
ONBOARD FACTOR CHANGED FROM      48.00 TO      52.80
FACTOR 5 CHANGED FROM       1.00 TO       1.05

MATCH ON PERCENTAGE FACTOR UPDATE - PU/PE = 211820/241562
ONBOARD FACTOR CHANGED FROM      36.00 TO      39.60
FACTOR 3 CHANGED FROM       1.00 TO       1.05

  VARIABLE REQUIREMENTS FOR FORCE SUPPORT AREA BASE OPS SUPPORT   IS BEING CHANGED    56.62 PERCENT
```

FIG. C-14: SAMPLE OUTPUT OF PLANNER, ALL OPTIONS USED (Continued)

VARIABLE ENLISTED REQUIREMENTS FOR FY1979

ALL NAVY

RATING		PAYGRADE E-9	E-8	E-7	E-6	E-5	E-4	E-3	E-2	E-1	RATING TOTAL
BM	0130	47.	116.	547.	1031.	1471.	2159.	228.	0.	0.	5597.
MA	0153	19.	55.	193.	245.	0.	0.	0.	0.	0.	512.
QM	0200	19.	26.	360.	474.	601.	935.	252.	0.	0.	2696.
SH	0250	17.	23.	161.	355.	555.	828.	582.	0.	0.	2521.
OS	0300	28.	138.	327.	1025.	1446.	1996.	2183.	0.	0.	7136.
EN	0353	2.	23.	121.	166.	434.	397.	275.	0.	0.	1447.
ST	0400	14.	0.	0.	0.	0.	0.	0.	0.	0.	14.
STG	0401	0.	71.	173.	582.	819.	955.	720.	0.	0.	3321.
SFS	0496	0.	91.	142.	376.	528.	765.	156.	0.	0.	2056.
OT	0450	0.	1.	6.	23.	23.	22.	11.	0.	0.	87.
FN	0503	55.	36.	218.	501.	752.	808.	228.	0.	0.	2556.
GM	0630	17.	63.	0.	0.	0.	0.	0.	0.	0.	80.
GMM	0501	0.	0.	75.	216.	248.	292.	172.	0.	0.	1007.
GMT	0502	3.	16.	53.	310.	350.	435.	144.	0.	0.	1311.
GMG	0504	0.	0.	263.	524.	853.	849.	628.	0.	0.	3117.
FT	0800	102.	200.	0.	0.	0.	0.	0.	0.	0.	303.
FTG	0801	0.	0.	289.	555.	692.	492.	335.	0.	0.	2562.
FTB	0802	0.	0.	101.	571.	748.	1054.	339.	0.	0.	2812.
FTM	0803	0.	0.	68.	155.	225.	247.	0.	0.	0.	696.
MT	0813	0.	0.	87.	272.	440.	685.	0.	0.	0.	1484.
MN	0930	1.	2.	7.	6.	6.	10.	1.	0.	0.	33.
ET	1003	76.	164.	721.	1075.	0.	0.	0.	0.	0.	2866.
ETA	1301	0.	0.	0.	0.	1209.	1437.	261.	0.	0.	2907.
ETR	1302	0.	0.	0.	0.	1655.	1693.	231.	0.	0.	3576.
OS	1013	3.	30.	102.	352.	496.	526.	11.	0.	0.	1521.
PI	1083	4.	0.	0.	0.	0.	0.	0.	0.	0.	4.
IM	1133	0.	7.	29.	72.	110.	120.	28.	0.	0.	366.
GM	1203	0.	6.	24.	54.	73.	78.	14.	0.	0.	250.
AC	1403	20.	24.	130.	332.	0.	0.	0.	0.	0.	505.
AM	1503	50.	131.	592.	1110.	1632.	2462.	1746.	0.	0.	7734.
CFT	1611	1.	2.	16.	31.	22.	14.	7.	0.	0.	92.
CTA	1622	1.	1.	4.	5.	13.	5.	4.	0.	0.	32.
CTM	1633	1.	0.	7.	25.	24.	32.	0.	0.	0.	89.
CTO	1644	1.	0.	4.	13.	18.	22.	7.	0.	0.	66.
CTR	1655	1.	1.	4.	14.	18.	23.	12.	0.	0.	73.
CTI	1665	0.	0.	2.	14.	19.	7.	3.	0.	0.	46.
YN	1700	16.	80.	430.	731.	920.	1506.	1456.	0.	0.	5220.
CYN	1701	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LN	1750	1.	2.	10.	28.	35.	0.	0.	0.	0.	75.
PN	1800	32.	96.	379.	557.	723.	809.	785.	0.	0.	3339.
DP	1900	2.	8.	71.	155.	244.	350.	343.	0.	0.	1172.
SK	2000	50.	122.	493.	807.	1183.	1488.	740.	0.	0.	4882.
DK	2133	2.	31.	38.	377.	287.	159.	229.	0.	0.	1123.
MS	2200	53.	162.	578.	1772.	2404.	3077.	2802.	0.	0.	10788.
SD	8500	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CS	2300	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
IS	2300	0.	5.	17.	53.	114.	135.	107.	0.	0.	431.
SH	2490	17.	23.	87.	439.	650.	1366.	1029.	0.	0.	3660.
JO	2600	1.	3.	11.	30.	43.	172.	19.	0.	0.	279.
PC	2700	2.	4.	21.	66.	163.	303.	58.	0.	0.	617.
LI	3100	0.	5.	17.	46.	68.	84.	29.	0.	0.	249.
DA	3200	0.	0.	3.	21.	43.	33.	6.	0.	0.	108.
MU	3300	2.	2.	5.	8.	4.	5.	18.	0.	0.	44.
MM	3700	208.	513.	1182.	3618.	4720.	6272.	1266.	0.	0.	17840.

FIG. C-14: SAMPLE OUTPUT OF PLANNER, ALL OPTIONS USED (Continued)

CW	3400	69.	74.	386.	807.	999.	1283.	492.	0.	C.	4114.
MR	3400	5.	26.	112.	343.	578.	545.	157.	0.	0.	1765.
ST	4000	96.	145.	456.	1172.	1924.	2842.	1720.	0.	0.	8356.
BR	4020	0.	0.	0.	0.	0.	0.	0.	0.	C.	C.
EM	4100	109.	207.	649.	1546.	1928.	3085.	1005.	0.	0.	8529.
IC	4200	0.	36.	303.	830.	1234.	1584.	578.	0.	0.	4566.
MT	4300	50.	143.	597.	1416.	2017.	2724.	758.	0.	C.	7707.
PM	4500	0.	0.	11.	28.	25.	33.	3.	0.	C.	97.
PL	4700	0.	5.	18.	27.	31.	39.	10.	0.	0.	130.
GS	4400	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU	5080	7.	0.	0.	C.	0.	0.	0.	0.	C.	7.
EA	5100	0.	1.	4.	13.	7.	8.	3.	0.	0.	35.
CE	5300	0.	2.	14.	32.	41.	38.	9.	0.	0.	137.
LD	5390	3.	0.	0.	0.	0.	0.	0.	0.	C.	3.
ED	5410	0.	4.	25.	92.	51.	49.	22.	0.	C.	201.
CM	5500	0.	2.	13.	41.	37.	31.	10.	0.	C.	133.
BU	5600	0.	6.	30.	65.	64.	41.	16.	0.	0.	227.
SW	5700	0.	3.	11.	28.	23.	18.	5.	0.	0.	89.
UT	5800	2.	5.	11.	34.	38.	30.	7.	0.	0.	127.
AF	6100	241.	0.	0.	0.	0.	0.	0.	0.	C.	241.
AV	6100	189.	0.	0.	0.	0.	0.	0.	0.	C.	189.
AD	6200	0.	320.	645.	1806.	2004.	2201.	1895.	0.	0.	8871.
ADR	6205	0.	0.	0.	0.	0.	0.	0.	0.	C.	0.
ADJ	6206	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AT	6300	0.	191.	495.	1379.	2444.	2332.	1155.	0.	C.	7995.
AK	6310	0.	41.	112.	371.	447.	415.	144.	0.	0.	1531.
AM	6400	6.	83.	197.	384.	548.	611.	413.	0.	0.	2245.
AD	6500	10.	22.	294.	838.	1091.	1324.	1186.	0.	C.	4764.
AQ	6520	0.	111.	178.	512.	753.	771.	325.	0.	C.	2649.
AC	6600	4.	25.	78.	196.	308.	229.	140.	0.	C.	982.
AB	6700	36.	53.	0.	0.	0.	0.	0.	0.	0.	89.
ABE	6704	0.	0.	71.	137.	241.	362.	368.	0.	C.	1179.
ABF	6705	0.	0.	67.	112.	193.	373.	255.	0.	0.	1000.
ABH	6706	0.	0.	94.	254.	345.	624.	420.	0.	0.	1738.
AE	6800	0.	135.	430.	1165.	1717.	1751.	1236.	0.	C.	6633.
AH	6900	0.	276.	0.	0.	0.	0.	0.	0.	C.	276.
AHS	6901	0.	0.	404.	994.	1362.	1522.	1613.	0.	0.	5895.
AHH	6702	0.	0.	278.	856.	1098.	1385.	1150.	0.	0.	4769.
AHE	6903	0.	0.	126.	457.	559.	529.	519.	0.	0.	2190.
PR	7000	1.	5.	30.	191.	373.	369.	168.	0.	0.	1137.
AG	7100	1.	8.	27.	71.	72.	147.	62.	0.	0.	389.
TO	7200	5.	15.	51.	184.	241.	202.	47.	0.	C.	745.
AK	7300	16.	7.	98.	365.	543.	661.	486.	0.	C.	2175.
AS	7500	10.	14.	37.	139.	0.	0.	0.	0.	C.	201.
ASE	7501	0.	0.	0.	0.	84.	104.	45.	0.	0.	234.
ASH	7502	0.	0.	0.	0.	76.	81.	45.	0.	0.	203.
ASM	7505	0.	0.	0.	0.	157.	141.	107.	0.	0.	405.
AZ	7400	1.	16.	124.	409.	548.	695.	505.	0.	0.	2297.
PH	7600	1.	16.	34.	107.	189.	231.	78.	0.	0.	656.
PT	7700	0.	0.	0.	0.	0.	0.	0.	0.	C.	0.
HM	8000	35.	117.	587.	895.	1266.	1572.	2535.	0.	288.	7295.
DT	8300	5.	11.	68.	130.	207.	271.	481.	0.	35.	1208.
SM	3600	0.	0.	0.	0.	0.	0.	35288.	0.	3147.	38434.
FM	5000	0.	0.	0.	0.	0.	0.	14935.	0.	1378.	16313.
CM	6000	0.	0.	0.	0.	0.	0.	164.	0.	160.	324.
AM	7800	0.	0.	0.	0.	0.	0.	12249.	0.	1574.	13823.
PAYGRADE TOTAL		1790.	4345.	15440.	38470.	53204.	66626.	100281.	0.	6581.	284733.

FIG C-14: SAMPLE OUTPUT OF PLANNER, ALL OPTIONS USED (Continued)

VARIABLE ENLISTED REQUIREMENTS FOR FY1979

SUMMARY TABLE

RATING	TOTAL	PERCENT	RATING	TOTAL	PERCENT	RATING	TOTAL	PERCENT
BM	5597.	1.95	CYN	0.	0.00	AV	189.	0.07
MA	512.	0.18	LN	75.	0.03	AD	8871.	3.09
QM	2696.	0.94	PN	3330.	1.16	ADR	0.	0.00
SM	2521.	0.88	DP	1172.	0.41	ADJ	0.	0.00
[illegible]	[illegible]	[illegible]	SK	4882.	1.70	AT	7995.	2.79
EM	1447.	0.50	DK	1123.	0.39	AX	1531.	0.53
ST	14.	0.00	MS	10788.	3.76	AW	2245.	0.78
STG	3321.	1.16	SD	0.	0.00	AO	4764.	1.66
STS	2059.	0.72	CS	0.	0.00	AQ	2649.	0.92
OT	87.	0.03	IS	431.	0.15	AC	982.	0.34
TM	2596.	0.91	SH	3660.	1.28	AB	89.	0.03
GM	80.	0.03	JO	279.	0.10	ABE	1179.	0.41
GMM	1007.	0.35	PC	617.	0.22	ABF	1000.	0.35
GMT	1311.	0.46	LI	249.	0.09	ABH	1738.	0.61
GMG	3117.	1.09	DM	108.	0.04	AE	6633.	2.31
FT	303.	0.11	PU	44.	0.02	AM	276.	0.10
FTG	2562.	0.89	MM	17840.	6.22	AMS	5895.	2.06
FTB	2892.	1.01	EN	4114.	1.43	AMH	4768.	1.66
FTM	696.	0.24	MR	1765.	0.62	AME	2190.	0.76
MT	1484.	0.52	BT	8356.	2.91	PR	1137.	0.40
MN	33.	0.01	BR	0.	0.00	AG	389.	0.14
ET	2866.	1.00	EM	8529.	2.97	TD	745.	0.26
ETN	2907.	1.01	IC	4566.	1.59	AK	2175.	0.76
ETP	3576.	1.25	HT	7707.	2.69	AS	201.	0.07
DS	1521.	0.53	PM	97.	0.03	ASE	234.	0.08
PI	4.	0.00	ML	130.	0.05	ASH	203.	0.07
IM	366.	0.13	GS	0.	0.00	ASM	405.	0.14
CM	250.	0.09	CU	7.	0.00	AZ	2297.	0.80
NC	505.	0.18	EA	35.	0.01	PH	656.	0.23
RM	7734.	2.70	CE	137.	0.05	PT	0.	0.00
CTT	92.	0.03	EO	3.	0.00	HM	7295.	2.54
CTA	32.	0.01	EO	201.	0.07	DT	1208.	0.42
CTM	89.	0.03	CM	133.	0.05	SN	38434.	13.40
CTO	65[illegible]	0.02	BU	227.	0.08	FN	16313.	5.69
CTR	73.	0.03	SW	89.	0.03	CN	324.	0.11
CTI	45[illegible]	0.02	UT	127.	0.04	AN	13823.	4.82
YN	5220.	1.82	AF	261.	0.09			

FIG. C-14: SAMPLE OUTPUT OF PLANNER, ALL OPTIONS USED (Continued)

VARIABLE ENLISTED REQUIREMENTS FOR FY1979

SUMMARY TABLE

PAYGRADE	TOTAL	PERCENT
E-9	1790.	0.62
E-8	4343.	1.51
E-7	15440.	5.38
E-6	38470.	13.42
E-5	53204.	18.56
E-4	66624.	23.24
E-3	100281.	34.97
E-2	0.	0.00
E-1	6581.	2.30
P.O.	179871.	62.73
NON P.O.	106862.	37.27

YEAR 2

PE 244572 IS BEING MADE 25.00 PERCENT VARIABLE
ITS PROXY CHANGED 1.31 PERCENT
TOTAL ENDSTRENGTH IS 3706.00
BASE CASE VARIABLE ENDSTRENGTH IS 926.50
FIXED ENDSTRENGTH IS 2779.50
CURRENT CASE VARIABLE ENDSTRENGTH IS 938.64

PE 244582 IS BEING MADE 25.00 PERCENT VARIABLE
ITS PROXY CHANGED 1.31 PERCENT
TOTAL ENDSTRENGTH IS 444.20
BASE CASE VARIABLE ENDSTRENGTH IS 111.05
FIXED ENDSTRENGTH IS 333.15
CURRENT CASE VARIABLE ENDSTRENGTH IS 112.51

FIG. C-14: SAMPLE OUTPUT OF PLANNER, ALL OPTIONS USED (Continued)

TOTAL ENLISTED REQUIREMENTS FOR FY1979

ALL NAVY

RATING		PAYGRADE E-9	E-8	E-7	E-6	E-5	E-4	E-3	E-2	E-1	RATING TOTAL
BM	0100	160.	303.	1240.	2025.	2529.	2853.	296.	0.	0.	9405.
MA	0150	39.	89.	309.	528.	0.	0.	0.	0.	0.	956.
QM	0200	67.	119.	725.	852.	892.	1072.	283.	0.	0.	4211.
SM	0253	26.	56.	240.	614.	768.	919.	617.	0.	0.	3235.
OS	0300	87.	208.	583.	1524.	1788.	2191.	2312.	0.	0.	8693.
EM	0352	7.	47.	215.	348.	577.	415.	283.	0.	0.	1893.
ST	0400	56.	0.	0.	0.	0.	0.	0.	0.	0.	56.
STG	0401	0.	113.	307.	802.	980.	1072.	729.	0.	0.	4002.
STS	0404	0.	144.	253.	546.	708.	935.	172.	0.	0.	2757.
DT	0453	15.	39.	110.	296.	363.	376.	221.	0.	0.	1419.
TM	0500	80.	89.	375.	826.	1112.	1212.	340.	0.	0.	4034.
GM	0600	55.	139.	0.	0.	0.	0.	0.	0.	0.	194.
GMM	0601	0.	0.	129.	357.	356.	338.	175.	0.	0.	1356.
GMT	0602	12.	48.	152.	501.	532.	571.	187.	0.	0.	2003.
GMG	0604	0.	0.	446.	929.	1213.	1329.	674.	0.	0.	4592.
FT	0800	172.	349.	0.	0.	0.	0.	0.	0.	0.	522.
FTG	0801	0.	0.	479.	793.	859.	760.	352.	0.	0.	3264.
FTB	0802	0.	0.	298.	806.	869.	1251.	343.	0.	0.	3567.
FTM	0803	0.	0.	104.	230.	298.	325.	0.	0.	0.	955.
MT	0810	0.	0.	165.	423.	669.	949.	0.	0.	0.	2197.
MN	0900	13.	24.	45.	87.	125.	171.	49.	0.	0.	514.
ET	1000	164.	395.	1374.	3205.	0.	0.	0.	0.	0.	5138.
ETA	1001	0.	0.	0.	0.	2434.	2610.	504.	0.	0.	5547.
ETR	1002	0.	0.	0.	0.	2268.	2391.	289.	0.	0.	4979.
DS	1010	13.	47.	180.	556.	748.	715.	16.	0.	0.	2274.
PT	1080	7.	0.	0.	0.	0.	0.	0.	0.	0.	7.
IM	1100	0.	14.	46.	116.	152.	239.	31.	0.	0.	498.
QM	1200	0.	10.	38.	80.	96.	94.	17.	0.	0.	335.
NC	1400	39.	97.	311.	616.	0.	0.	0.	0.	0.	1193.
RM	1500	146.	412.	1293.	2635.	3958.	4815.	3055.	0.	0.	16353.
CTT	1611	15.	42.	156.	385.	399.	431.	215.	0.	0.	1614.
CTA	1622	15.	29.	101.	194.	267.	193.	100.	0.	0.	896.
CTM	1633	25.	47.	136.	376.	688.	556.	0.	0.	0.	1829.
CTG	1644	16.	34.	146.	269.	391.	474.	255.	0.	0.	1585.
CTR	1655	23.	58.	190.	323.	412.	556.	391.	0.	0.	1954.
CTI	1666	10.	17.	103.	224.	296.	185.	78.	0.	0.	910.
YN	1700	117.	315.	1256.	2508.	2907.	3008.	2011.	0.	0.	12123.
CYN	1701	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LN	1753	12.	23.	77.	137.	169.	0.	0.	0.	0.	437.
PN	1800	112.	196.	788.	1536.	1741.	1333.	999.	0.	0.	6705.
DP	1900	29.	56.	270.	601.	782.	869.	528.	0.	0.	3134.
SK	2000	157.	310.	1119.	1909.	2333.	2241.	965.	0.	0.	8905.
DK	2100	16.	55.	149.	705.	562.	398.	280.	0.	0.	2165.
MS	2200	135.	291.	1129.	3351.	4141.	4388.	3346.	0.	0.	16781.
SB	9500	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CS	2290	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
IS	2300	15.	32.	178.	343.	13076.	242.	113.	0.	0.	13999.
SH	2490	76.	125.	291.	1071.	1306.	1511.	1075.	0.	0.	5655.
JO	2600	7.	25.	82.	131.	189.	235.	40.	0.	0.	710.
PC	2700	15.	19.	42.	136.	269.	440.	142.	0.	0.	1064.
LI	3100	2.	7.	33.	82.	122.	154.	60.	0.	0.	480.
DM	3200	1.	3.	20.	85.	127.	80.	18.	0.	0.	334.
MU	3300	24.	41.	96.	188.	177.	287.	84.	0.	0.	896.
MM	3700	364.	787.	1840.	4984.	5738.	7159.	1393.	0.	0.	22258.

FIG. C-14: SAMPLE OUTPUT OF PLANNER, ALL OPTIONS USED (Continued)

LN 3400	112.	171.	774.	1640.	1990.	1967.	652.	0.	C.	7285.
MA 3500	13.	49.	199.	561.	803.	655.	174.	0.	C.	2454.
RT 4000	157.	233.	765.	1685.	2254.	2984.	1785.	0.	C.	5902.
BM 4020	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
EM 4100	173.	535.	1075.	2333.	2835.	3795.	1099.	0.	C.	11599.
IC 4200	0.	84.	467.	1166.	1596.	1845.	622.	0.	0.	5764.
MT 4300	87.	284.	1108.	2229.	2820.	3135.	835.	0.	0.	10406.
PM 4600	0.	0.	19.	45.	33.	37.	3.	0.	0.	137.
PL 4700	2.	7.	26.	41.	47.	47.	11.	0.	0.	181.
SS 4400	0.	0.	0.	0.	0.	0.	0.	0.	C.	0.
CU 5200	40.	0.	0.	0.	0.	0.	0.	0.	0.	49.
EA 5300	0.	0.	21.	73.	87.	75.	43.	0.	0.	307.
CE 5200	0.	23.	101.	245.	389.	319.	171.	0.	C.	1248.
EO 5300	36.	0.	0.	0.	0.	0.	0.	0.	C.	36.
ED 5410	0.	34.	126.	346.	431.	485.	338.	0.	0.	1760.
CM 5500	0.	26.	102.	273.	357.	359.	196.	0.	0.	1312.
BU 5600	0.	63.	219.	443.	637.	593.	428.	0.	C.	2385.
SM 5700	0.	24.	77.	165.	179.	224.	143.	0.	0.	813.
UT 5800	25.	28.	77.	231.	357.	297.	154.	0.	C.	1170.
AF 6000	358.	0.	0.	0.	0.	0.	0.	0.	C.	358.
AV 6100	290.	0.	0.	0.	0.	0.	0.	0.	C.	290.
AD 6200	0.	477.	1039.	2598.	2951.	2992.	2467.	0.	0.	12524.
ADF 6205	0.	0.	0.	0.	0.	0.	0.	0.	C.	0.
ADJ 6206	0.	0.	0.	0.	0.	0.	0.	0.	C.	0.
AT 6300	0.	294.	833.	2172.	3415.	3105.	1455.	0.	0.	11279.
AX 6310	0.	66.	196.	503.	629.	582.	175.	0.	C.	2150.
AM 6400	22.	127.	313.	609.	790.	709.	450.	0.	0.	3002.
AO 6500	41.	64.	449.	1155.	1401.	1550.	1386.	0.	0.	6045.
AQ 6520	0.	140.	252.	690.	902.	949.	390.	0.	0.	3311.
AC 6600	17.	68.	239.	615.	792.	706.	215.	0.	C.	2651.
AB 6700	55.	89.	0.	0.	0.	0.	0.	0.	0.	144.
ABE 6704	0.	0.	106.	209.	321.	444.	412.	0.	C.	1493.
ABF 6705	0.	0.	127.	197.	325.	454.	319.	0.	0.	1421.
ABM 6706	0.	0.	185.	417.	518.	821.	579.	0.	C.	2542.
AE 6800	0.	170.	602.	1715.	2671.	2228.	1526.	0.	C.	8925.
AM 6900	0.	372.	0.	0.	0.	0.	0.	0.	C.	372.
AMS 6901	0.	0.	581.	1382.	1824.	1880.	1943.	0.	C.	7610.
AMM 6902	0.	0.	412.	1174.	1466.	1695.	1405.	0.	C.	6152.
AME 6903	0.	0.	174.	568.	714.	668.	594.	0.	C.	2718.
PP 7000	8.	16.	85.	331.	538.	497.	239.	0.	0.	1715.
AG 7100	14.	44.	154.	359.	377.	502.	111.	0.	0.	1560.
TC 7200	13.	31.	111.	374.	479.	404.	91.	0.	C.	1502.
AK 7300	34.	47.	303.	722.	1010.	1101.	718.	0.	0.	3935.
AS 7500	18.	35.	111.	330.	0.	0.	0.	0.	C.	494.
ASL 7501	0.	0.	0.	0.	180.	193.	101.	0.	C.	474.
ASH 7502	0.	0.	0.	0.	155.	169.	100.	0.	C.	424.
ASM 7503	0.	0.	0.	0.	264.	249.	172.	0.	C.	685.
AZ 7400	12.	52.	233.	618.	805.	936.	649.	0.	0.	3305.
PM 7600	6.	45.	128.	335.	478.	462.	146.	0.	C.	1595.
PT 7700	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MM 8000	181.	408.	1667.	3041.	4397.	5299.	8063.	0.	564.	23618.
DT 8300	20.	51.	174.	400.	601.	851.	1305.	0.	68.	3470.
SM 3600	0.	0.	0.	0.	0.	0.	46597.	0.	6169.	52766.
FN 5900	0.	0.	0.	0.	0.	0.	18727.	0.	2657.	21425.
CN 6000	0.	0.	0.	0.	0.	0.	465.	0.	314.	779.
AN 7400	0.	0.	0.	0.	0.	0.	15638.	0.	2081.	18719.
PAYGRADE TOTAL	4075.	7200.	31146.	71107.	103226.	98146.	136115.	0.	12652.	465906.

FIG. C-14: SAMPLE OUTPUT OF PLANNER, ALL OPTIONS USED (Continued)

TOTAL ENLISTED REQUIREMENTS FOR FY1979

SUMMARY TABLE

RATING	TOTAL	PERCENT	RATING	TOTAL	PERCENT	RATING	TOTAL	PERCENT
BM	9405.	2.87	CYN	0.	0.00	AV	290.	0.09
MA	9564.	3.21	LN	417.	0.09	AD	12524.	2.69
GM	4011.	0.86	PN	6705.	1.44	ADR	0.	0.00
SM	3235.	0.69	DP	3134.	0.67	ADJ	0.	0.00
GS	8695.	1.87	SK	8965.	1.91	AT	11279.	2.42
EM	1893.	0.41	DK	2165.	0.46	AX	2150.	0.46
ST	56.	0.01	MS	16781.	3.60	AW	3002.	0.64
STG	4002.	0.86	SD	0.	0.00	AQ	6045.	1.30
STS	2737.	0.59	CS	0.	0.00	AG	3311.	0.71
CT	1419.	0.30	IS	13559.	3.00	AC	2651.	0.57
TM	4034.	0.87	SH	5435.	1.17	AB	144.	0.03
GM	194.	0.04	JO	710.	0.15	ABE	1493.	0.32
GMM	1356.	0.29	PC	1064.	0.23	ABF	1421.	0.31
GMT	2003.	0.43	LI	460.	0.10	ABH	2542.	0.55
GMG	4282.	0.92	DM	333.	0.07	AE	8925.	1.92
FT	522.	0.11	MU	856.	0.19	AM	372.	0.08
FTG	3266.	0.70	MM	22258.	4.78	AMS	7610.	1.63
FTB	3547.	0.76	EM	7209.	1.55	AMH	6152.	1.32
FTM	955.	0.21	MP	2454.	0.53	AME	2718.	0.58
MT	2197.	0.47	BT	9602.	2.15	PR	1715.	0.37
MN	514.	0.11	BR	0.	0.00	AG	1560.	0.33
ET	5138.	1.10	EM	11569.	2.49	TD	1502.	0.32
ETN	5547.	1.19	IC	5784.	1.24	AK	3935.	0.84
ETR	4977.	1.07	MT	10406.	2.23	AS	494.	0.11
OS	2274.	0.49	PM	137.	0.03	ASE	474.	0.10
PI	7.	0.00	PL	181.	0.04	ASH	424.	0.09
IM	496.	0.11	GS	0.	0.00	ASM	685.	0.15
GM	335.	0.07	CU	40.	0.01	AZ	3305.	0.71
MC	1093.	0.23	EA	367.	0.07	PH	1595.	0.34
PN	16353.	3.51	CE	1248.	0.27	PT	0.	0.00
CTT	1634.	0.35	EO	36.	0.01	HM	23618.	5.07
CTA	895.	0.19	EO	1760.	0.38	DT	3470.	0.74
CTM	1828.	0.39	CM	1312.	0.28	SN	52766.	11.33
CTO	1585.	0.34	BU	2383.	0.51	FN	21425.	4.60
CTR	1954.	0.42	SW	813.	0.17	CN	779.	0.17
CTI	910.	0.20	UT	1170.	0.25	AN	18719.	4.02
YN	12123.	2.60	AF	358.	0.08			

TOTAL ENLISTED REQUIREMENTS FOR FY1979

SUMMARY TABLE

PAYGRADE	TOTAL	PERCENT
E-9	4073.	0.87
E-8	9200.	1.97
E-7	31146.	6.69
E-6	71107.	15.26
E-5	103226.	22.16
E-4	98146.	21.07
E-3	136115.	29.22
E-2	0.	0.00
E-1	12893.	2.77
P.O.	316898.	68.02
NON P.O.	149008.	31.98

FIG. C-14: SAMPLE OUTPUT OF PLANNER, ALL OPTIONS USED (Continued)

APPENDIX D

NOTES ON PROCESSING ENREP DATA FILES

APPENDIX D

NOTES ON PROCESSING ENREP DATA FILES

RENLQUAL/SPECIAL Enlisted Billet File

1. The RENLQUAL/SPECIAL file is created and maintained by OP-102 on an IBM machine which should produce a 9-track, EBCDIC file. The file usually requires six to nine reels of tape.

2. Run ENREP routine EXTRACT. If there are any changes to the RENLQUAL/SPECIAL format, the DATA DIVISION of the input file will need to be changed. EXTRACT will create the RENLQUAL/EXTRACT file, which should use only two reels of tape.

3. Next, sort the RENLQUAL/EXTRACT file by ACT code and then by PE code, using the ENREP SORT program. Before executing the SORT program, be sure that lines 3000 and 4300 contain the correct labels for input and output, and that ACT precedes PE in lines 6350 and 6400. The SORT program will then create the RENQUAL/ACTPE file.

4. Finally, sort the RENLQUAL/ACTPE file by PE code and then by ACT code. Again, be sure that lines 3000 and 4300 contain the correct labels, but now PE should precede ACT in lines 6350 and 6400. The SORT program will then create RENLQUAL/PEACT. Although either the RENLQUAL/EXTRACT or the RENLQUAL/ACTPE file could be input to the SORT program, it will execute faster if the latter is used.

ACT/PE/PU Dictionary

1. This dictionary exists for ships and aircraft and is used by many of the ENREP routines.

2. Each time a new RENLQUAL/SPECIAL file is received, run the LISTACT program. It will list every ACT/PE combination on the RENLQUAL/ACTPE file. Verify that all ship and aircraft combinations are in the dictionary, and that all ACT/PE combinations in the dictionary are in the file. Then the dictionary should be updated to reflect any changes.

3. Each time a new NARM/FORCES file, ship or aircraft, is received, verify that each PE/PU combination is in the dictionary. If not, it should be added.

4. The dictionaries must be sorted by ACT code, then by PE code, and finally by PU code. The ENREP DICT/SORT program will do this sort if it is needed. Be sure that lines 2700 and 3900 have the correct labels.

NARM Ship and Aircraft Forces Data

1. The NARM ship and aircraft forces files are obtained from OP-901M. They will most likely be 7-track, BCD tapes with unblocked records 191 characters long.

2. Verify that they are sorted by PU and then by PE. If not, modify one of the ENREP SORT programs to do it. Also, verify that the first record is a label. If not, add one.

3. If the format of these files has changed, the format at line 8800 for FORCES/AIR and at line 6700 for FORCES/SHIP must be modified. Otherwise, the files are ready to be used.

NARM Ship and Aircraft Factors Data

1. The NARM ship and aircraft factors file is obtained from OP-901M. It will most likely be a 7-track, BCD tape with unblocked records 178 characters long.

2. The file must be sorted by PU code, then by PE code, and finally by factor sequence number. The ENREP program FACTORS/FACSORT was written to do this sort. Be sure that lines 2700 and 3900 contain the correct labels. After the sort, break the file into a ship version and an aircraft version, and delete the first record, a label. Note that PU codes beginning with a "1" are ships, and those beginning with a "2" are aircraft.

3. If the format of this file has been changed, the DATA DIVISION of the FACTORS/FACSORT program and the format at line 52800 in FACTORS must be changed. Otherwise, the file is ready to be used.

NARM Enlisted Inventory Projections

1. The NARM enlisted inventory projections file is also obtained from OP-901M. It will most likely be a 7-track, BCD tape with unblocked records 192 characters long.

2. Verify that the tape is sorted by PE code in ascending order. If not, modify one of the ENREP SORT programs to do this. Also, verify that the first two records are dummy labels. If not, add two such records.

3. If the format of this file has changed, the format at line 48300 in TOTAL must be changed. Otherwise, the file is ready to be used.

PERS-2x Actual Enlisted Inventory

1. At the end of each fiscal year, PERS-2x counts the enlisted inventory by rating, paygrade, and length of service. This data file is created by an IBM machine and has a 9-track, EBCDIC format.

2. If there has been a change to the tape format, the format at line 175500 in routine PLANNER must be changed. Read the comment at lines 177700-178600 and modify the code which follows it if that has been changed. Otherwise, the file is ready to be used.