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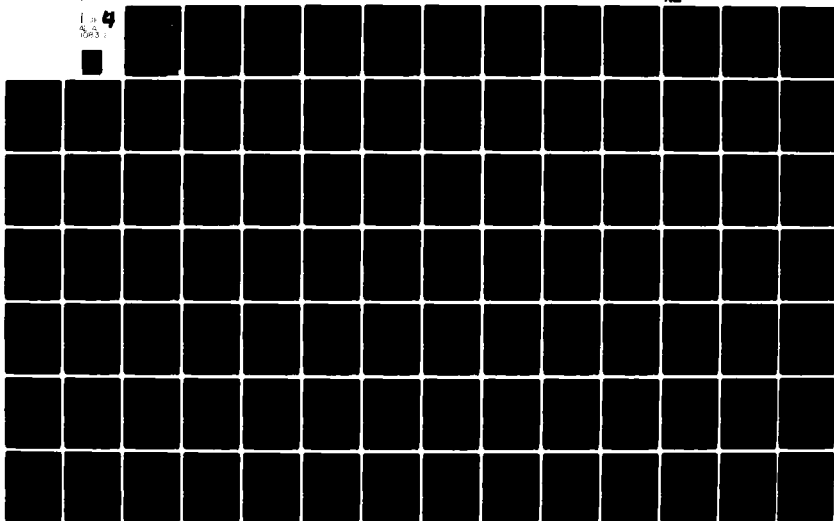
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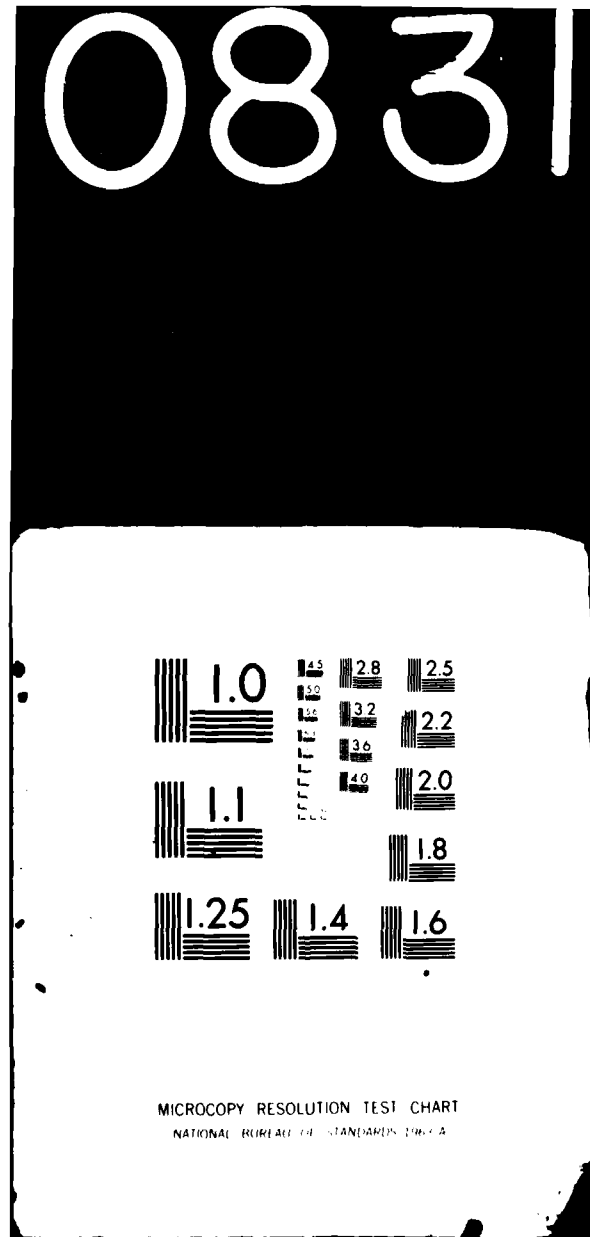
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Technical Report No. 492

STUDY OF ARMY MANPOWER REQUIREMENTS,
DETERMINATION PROCEDURES,
AND ORGANIZATION

Volume I

by

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7 July 1981

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ABSTRACT

→ This is the final report on a project to provide requisite information for a decision to adopt a functionally oriented approach to the development of manpower requirements for Army Table of Distribution and Allowance activities. The information covers the major areas for decision consideration, including: required organization, mission, functions, resources, training, procedures, planned objectives and related workload, and utilization of program outputs. The work was performed for Headquarters, Department of the Army, Deputy Chief of Staff for Personnel (DAPE-MBU) under Contract No. MDA 903-80-C-0726.

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SUMMARY

1. This report presents pertinent information for the planning and implementation of a functional manpower requirements determination for Army Table of Distribution and Allowance (TDA) activities, based on workload-related staffing standards. It is a compendium of products designed to meet or contribute to the following Army objectives:

- a. Develop and justify the optimum organization for accomplishing Army TDA manpower requirements determination
- b. Quantify resource requirements and provide definitive statements of missions and functions for all the organizational elements
- c. Develop a procedure for integrating program outputs in the PPBS
- d. Document required automatic data processing (ADP) support and system interface for short- and long-term program development
- e. Design a short- and long-term training program for managers, analysts, and technicians at all levels of responsibilities within the manpower requirements determination process
- f. Develop a time-phased 5-year plan for staffing standards coverage and application by function that interfaces with the Comptroller of the Army's summary level standards efforts.

2. The focus of this effort is clearly and deliberately on the determination of Army TDA manpower requirements, with specific emphasis on the development and use of functional manpower staffing standards. The consideration of related Army efforts, such as work methods and standards (WM&S) activities, and the manpower requirements aspects of the commercial and industrial type activities (CITA) reviews, was limited to the identification of potential mutual benefits, possible redundancies, and manpower resources that could logically be considered for use in

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a staffing standards program. Most significantly, this effort was not chartered, and in general, did not attempt to integrate related programs into the organizational and resource planning scenarios being developed for the staffing standards/manpower requirements determination process.

3. Pertinent study actions and results for each of the objective areas are summarized below.

ORGANIZATION

4. As a first step in the development of organizational alternatives, the functions essential to the development and use of staffing standards in functionally-oriented manpower requirements determination were defined. Criteria were then developed and applied to a variety of organizational alternatives to evaluate program control, effectiveness, and cost-benefit patterns, leading to the selection of one alternative as the recommended structure, functional placement, and guide for performing the essential program functions. Specifically, the selection of a recommended organization focused on which functions should be performed at various echelons (e.g., installation, MACOM headquarters, HQDA, etc.) and on the organizational entity with which responsibility would rest at each echelon.

5. Program functions are identified and briefly described as follows:

- a. Provide program management. Establishes policies necessary to assure a quality requirements program to present to OSD, OMB, and Congress. Establishes goals for standards coverage, issues standards development schedules, and monitors progress toward meeting these goals. Coordinates overall training and resource requirements of the program. Interacts with commercial/industrial type activities (CITA) program and Productivity Improvement Program. Approves completed standards studies.
- b. Prescribe standards development methodology. Develops and publishes detailed procedures for Army-wide use in the development of staffing standards. Prescribes the milestones in the development process where quality control will be exercised. Establishes ADP requirements for data collection and computations.

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- c. Enforce standards development methodology and policies. Reviews all standards development plans for substantive content and compliance with acceptable procedures. Reviews completed standards studies for adequacy of data collected, propriety of computations and manning tables, and utility of program estimating equations or factors. Checks development plans and final studies for compliance with all formatting and procedural directives.
- d. Develop standards. Prepares measurement plans that define what each standards study will cover, work measurement and work count, and locations where data are to be collected. Collects (or arranges with other technicians to collect) data called for by the measurement plan. Analyzes data collected and develops equations relating manpower to workload. Determines military/civilian mix and builds tables that depict various workload levels and the associated manpower identified by category, military occupational specialty series, nominal grade, and quantity. Develops adjustments to the standard needed at installations that have unique situations or needs. Develops program estimating equations as required for forecasting manpower needs in budget estimates.
- e. Publish standards. Formats and prepares standards for publication. Coordinates publication schedules with printing activity.
- f. Determine requirements. Analyzes and evaluates requests for additional manpower. Validates manpower requests by use of standards, if they are available. When standards are not available, validates requirements through other techniques. Provides valid requirements and supporting justification to resource managers for use in allocating manpower and/or to support manpower portions of the budget. Applies proposed standards and determines if a special allowance is needed to accommodate unique local conditions. Conducts functional reviews for proper utilization of manpower. Reapplies or oversees reapplication of all approved standards at least annually to ensure that the Army can present a credible statement of requirements to OSD, OMB, and Congress in each budget.

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6. The recommended organizational structure, with functional responsibilities identified at three organizational levels (HQDA, MACOM, and installation) is shown in Figure 1.

WORKLOAD ASSESSMENT AND PLAN

7. Workload in manpower requirements determination is estimated in terms of the manpower population figures and the number of functions involved. The latter is of particular concern in estimating standards development workload, because it directly affects the number of anticipated standards development studies.

8. The maximum TDA population subject to staffing standards coverage is estimated at 451,233. This reflects the exclusion from the total TDA population (535,169) of those areas believed not subject to standards coverage (83,936). The population subject to coverage is shown, by subfunction, as identified from the available data base in Section III of the report.

9. An analysis of the authorizations (including their deployment) in each function/subfunction was used to determine the number of studies required for full standards coverage. It is estimated that 62 Army-common standards studies (the same function/subfunction in two or more commands/agencies) and 164 command-unique standards studies (a function/subfunction only in one command) will be required. Roughly one-half of the total susceptible population estimate is for Army-common standards.

10. A 5-year standards study schedule for Army-common functions is presented in the report, covering the period FY-83 to FY-87. The schedule reflects a prioritizing scheme developed in this study that places emphasis on the rate of standards coverage return on the resources invested. Command-unique standards development workloads are estimated, but scheduling is left to the individual commands.

TRAINING ASSESSMENT

11. The assessment addressed both the identification of training requirements and the existing capabilities and sources to meet the requirement. In developing requirements, a delineation was made between personnel who develop standards and those who use them, because the types and depth of skill and knowledge requirements differ significantly between the two groups.

12. The principal requirement for those in the development category is a course that trains in the following basic areas:

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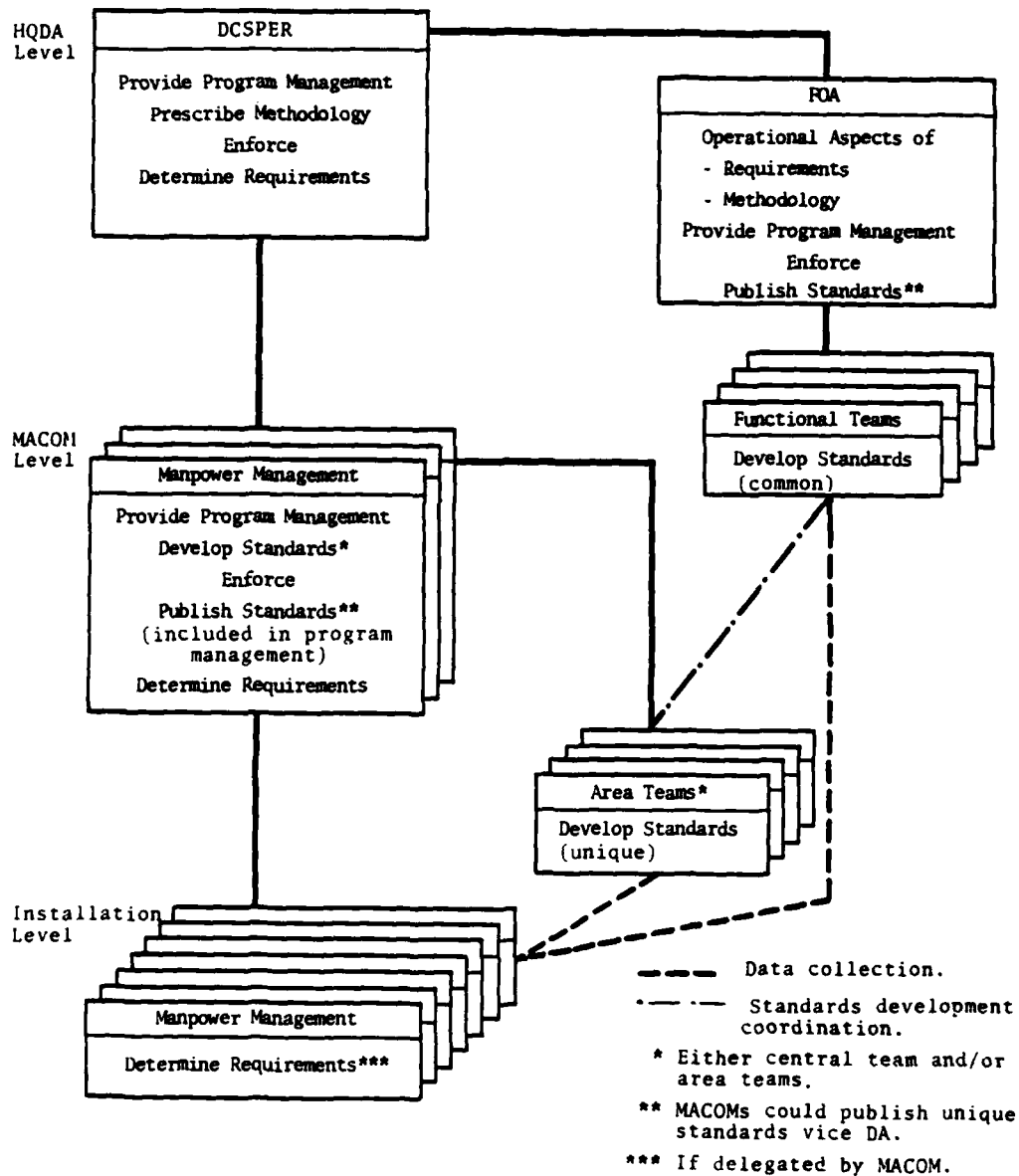


FIGURE 1
RECOMMENDED ORGANIZATIONAL ALTERNATIVE
AND FUNCTIONAL PLACEMENT

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- Work measurement techniques
- Basic statistics and sampling thereof
- Work and methods analysis techniques
- Analysis of organizational and functional structures
- The Army Management Structure
- Army and Civil Service personnel classification systems
- Types, basic elements, and use of standards
- Elements and procedures of standards computation
- Correlation and regression analysis
- The phased process for staffing standards development.

13. Training requirements for the user group can be accommodated with a short (< 5-day) standards appreciation course, or a short segment in the existing (Army) Manpower and Force Management course. The training should encompass the following areas of relevance:

- Concept organization, functions, and objectives of the MRDP
- Overview of the staffing standards development process, phase-by-phase
- Composition, qualifications, and uses of the various levels of standards produced, including an understanding of the statistical attributes of staffing standards
- Program estimating equations, how they relate to staffing standards, and procedures for using them in program and budget-input development.

14. Courses offered by the Air Force, the Navy, and the Army Management Engineering Training Agency (AMETA) were evaluated relative to the training requirements for developers. The recommended course of action is an expansion of the Work Methods and

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Standards course (at AMETA) to add needed training in statistics and applied staffing standards techniques.

RESOURCE ESTIMATES

15. Estimates of required program resources (manpower and dollars) are presented in this summary for the recommended organizational alternative. Costs for all three considered alternatives are presented in the report (Section V). All estimates are based on requirements to perform all program functions defined above, for FY-83 to FY-87. The dollar cost estimates include direct labor, benefits, and program travel costs. The requirements are zero-based, i.e., no offset has been entered to reflect current authorizations in like or similar functions.

16. Table 1 contains the estimates of total manpower requirements and associated costs. Travel cost estimates are presented in Table 2.

SYSTEMS INTERFACE FOR PPBS INTEGRATION

17. A number of existing and proposed Army systems have been identified and analyzed for potential impact of the integration of staffing standards-based manpower requirements into the PPBS process. The scope of analysis included systems directly contained in the PPBS and several other automated systems that support the PPBS process. Six data categories were developed and defined to permit identification of specific management and control information requirements and the system likely to provide the information. Potential interfaces exist among systems exchanging standards-based manpower requirements data and among other systems used to track and record manpower utilization and cost. The extent to which any interfaces are developed depends on the acceptability of requirements for data from each of the six categories. Table 3 shows the potential interfaces by system for each of the six data categories developed in the report. A detailed discussion of the information requirements for each of the six categories is contained in Section VI, along with descriptions of the potential interfacing systems. Section VI also contains a description of the automatic data processing support requirements for staffing standards development.

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TABLE 1
PROGRAM MANPOWER REQUIREMENTS AND ASSOCIATED COSTS

ESTIMATED REQUIREMENTS

Fiscal Year	Manpower			\$, Thousands of FY-81 Budget Dollars		
	Standards* Functions	Requirements** Functions	Total	Standards* Functions	Requirements** Functions	Total
83	407	539	946	10,338	11,519	21,852
84	419	514	933	10,914	11,245	22,159
85	432	503	935	11,536	11,280	22,816
86	434	493	927	11,942	11,315	23,257
87	434	484	918	12,012	11,074	23,086
Total	N/A	N/A	N/A	56,737	56,433	113,170

* All functions associated with standards development to include program management, standards development methodology, publication of standards as well as enforcement of standards development.

** All aspects of requirements determination to include application of standards, manpower surveys, etc.

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TABLE 2
TRAVEL COST ESTIMATES

Fiscal Year	Estimated Direct Analyst Hours			Estimated Travel \$ Per 1,000 Hrs	Estimated Travel Cost (\$000)		
	Army Common	Command Unique	Total		Army	Command	Total
83	69,310	273,180	342,490	3,400	235.7	928.8	1,164.5
84	132,530	273,180	405,710	3,700	490.4	1,010.8	1,501.2
85	132,530	273,180	405,710	4,100	543.4	1,120.0	1,663.4
86	132,530	273,180	405,710	4,500	596.4	1,229.3	1,825.7
87	132,530	273,180	405,710	5,000	662.7	1,365.9	2,028.6

TABLE 3
RELATIONSHIP OF DATA CATEGORIES
TO POTENTIAL INTERFACE SYSTEMS

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I. GENERAL

1.1 This is the final report on a project entitled "Study of Army Manpower Requirements, Determination Procedures, and Organization," performed by Presearch Incorporated for Headquarters, Department of Army, Office of the Deputy Chief of Staff for Personnel, under Contract No. MDA 903-80-C-0726. Unlike many technical reports, which typically document study research, findings, conclusions, and recommendations, this report is more a compendium of contract stipulated products. Because of the nature of these products and their structured development in this project, they represent a set of recommended major courses of action for consideration in the establishment of a functionally oriented approach to the development of Army Table of Distribution and Allowances (TDA) manpower requirements.

BACKGROUND

1.2 In recent years the Congress, the Office of Management and Budget, and the Office of the Secretary of Defense have placed increasing emphasis on the use of credible, measurement-based relationships in justifying resource requirements developed and submitted via the planning, programming, and budgeting system (PPBS). The expressed concern focused not only on the basis for allocation of resources or near-term planning, but also on the need for more accurate projections of requirements throughout the Five-Year Defense Program.

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1.3 In the specific area of manpower requirements, Congressional appropriations committees have repeatedly made it clear that requirements based on manning standards at the functional and subfunctional level were viewed with higher credibility than those not so based. Concurrently, the Army was criticized by the General Accounting Office (GAO) for, variously, not using workload information to determine manpower needs, not having an integrated manpower system, and generally, not adequately justifying support manpower requirements in budget requests.

1.4 In one report on this subject, ^{1/} the GAO summarized the Army's needs as follows:

- Define and implement accountability for all manpower actions
- Link its major manpower activities to a common data base
- Use workload information to determine manpower needs at the operational level
- Provide the information and incentive to top-level managers to make the best use of the total labor force
- Insure adequate development and availability of professional staff for manpower functions.

1.5 As can be seen from the number and scope of the related systems efforts identified in Section VI of this report, the

^{1/} GAO Report FPCO-80-9, "Lack of Control and Feedback Hinders Army Manpower Management Improvements," 31 October 1979.

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Army has a number of efforts underway to meet these needs. However, the Army's current manpower requirements determination process does not provide to managers the tools and data needed at all necessary levels to effectively make resource trade-off decisions in total resource planning, programming, budgeting, and allocation, in reviewing the results in terms of efficiency and effectiveness of mission accomplishment, and in evaluating decisions to utilize a particular combination of resources.

1.6 To meet this shortfall in requirements determination and justification capability, the Army must have a standardized requirements determination process that is compatible with the PPBS, functionally oriented to deal with the basic elements of mission workload and the need for reacting to mission or workload changes, and that uses a validated and accepted process to develop credible statements of manpower requirements. Achieving this set of recognized process requirements was the basic reason for this effort, and is the basis for the structuring and composition of the specific project's objectives and tasks.

PURPOSE AND SCOPE

1.7 The purpose of this effort is to provide requisite information for a decision to adopt and implement a concept of functional requirements determination based on workload related manpower staffing standards. The information is to provide alternatives and answers to the decision authority about required organization, mission, functions, resources, training, procedures, a workload assessment and work plan, and the utility of program outputs.

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Objectives

1.8 The specific objectives set by the Army and addressed by this project are as follows:

- a. Develop and justify the optimum organization for accomplishing Army TDA manpower requirements determination
- b. Quantify resource requirements and provide definitive statements of missions and functions for all the organizational elements
- c. Document required changes to Army policies, procedures, and directives
- d. Develop a procedure for integrating program outputs into the PPBS
- e. Document required automatic data processing (ADP) support and system interface for short- and long-term program development
- f. Design a short- and long-term training program for managers, analysts, and technicians at all levels of responsibilities within the manpower requirements determination process
- g. Develop a time-phased 5-year plan for staffing standards coverage and application by function that interfaces with the Comptroller of the Army's summary level standards efforts.

Tasks

1.9 The responsibilities of the project were stated in the form of six separate but interrelated tasks. The tasks and their respective stipulated products are described below.

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1.10 Task 1--Organizational Structure Development. This task called for the development of two or more alternative organizational structures for effectively planning, organizing, directing, supervising, conducting, and evaluating an Army-wide program of functional manpower staffing standards development and requirements determination for TDA activities.

1.11 Products of this task include these items:

- a. Organization structures and manning charts to include number, type, and general grade structure of required positions
- b. Mission and functions statements for organizational elements
- c. Justification for recommended organization on the basis of cost/benefit analyses of alternatives.

1.12 Results are presented in Section II of this report and in several appendices to the report.

1.13 Task 2--Program Workload and Plan. This task was to provide technical assistance in developing a definitive statement of workload to be accomplished. Workload was defined as staffing standards development by function and the initial and periodic application of those standards to determine and update manpower requirements. Workload that can be accomplished in 5 years, in yearly increments, by the alternative structures and resources was to be identified.

1.14 This task includes the following products:

- a. A list of TDA functions identified as Army-wide and command-unique, for which it is feasible and

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cost effective to develop and apply workload related staffing standards

- b. A 5-year plan to develop, review, and maintain staffing standards that reflect coverage by function, milestones for additional coverage, milestones for review and update of standards, and for initial and periodic application
- c. A statement of other workload associated with elements and tasks of current programs (e.g., manpower survey) that will be retained on an existing or modified basis during the initial 5-year period of operations.

1.15 Section III of this report documents the development of these task products.

1.16 Task 3--Training. The requirement of this task was the identification of training needs and sources.

1.17 Required products included the following:

- a. A statement of skills and experience required by various types and levels of personnel within the organizational structure
- b. Recommended individual training programs, to include source of training and estimated cost for one individual at each level of training.

1.18 Training requirements and recommended sources are presented in Section IV of this report.

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1.19 Task 4--Resources. The task called for estimated costs in manpower and dollars to support the recommended structure and workload accomplishment, with rationale therefore.

1.20 The following resource requirements were to be provided:

- a. Required manpower by category and grade and estimated costs for salaries and benefits for a 5-fiscal year period, with justification therefore
- b. Estimated travel and TDY costs to support the program for the same 5-year period.

1.21 Section V of this report presents the dollar cost estimates and rationale. The program manpower estimates are developed in Section II and are used in Section V to develop the estimated personnel costs.

1.22 Task 5--Documentation. This task called for the documentation of the policies, objectives, responsibilities, and procedures for conducting a functional staffing standards and requirements determination program. It further called for the documentation of required changes to published policies and regulations that relate to staffing standards and manpower requirements.

1.23 The stated product requirements were as follows:

- a. A definitive statement of required modifications to existing policies and regulations
- b. A draft manual prescribing policy, objectives, responsibilities, and procedures for conducting

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the functional staffing standards and requirements determination program.

1.24 As stipulated in the contract delivery instructions, these products are being delivered under separate cover.

1.25 Task 6--Systems Interface. This task focused on the identification of the required data processing support and systems interface for both program operations (mainly standards development and application) and the utilization of program outputs in the manpower management process.

1.26 Stipulated product requirements included the following items:

- a. A statement of required ADP support for program operations and potential sources of support
- b. A procedure for integrating requirements derived from staffing standards into the PPBS.

1.27 Section VI presents the ADP/systems interface assessments and recommendations.

Limitations

1.28 As indicated by the foregoing objectives and task statements, the focus of this effort is clearly, and solely, on the determination of Army TDA manpower requirements, with specific emphasis on the development and use of functional manpower staffing standards. Related Army efforts such as work methods and standards activities (WM&S) and the manpower requirements aspects of the commercial and industrial type activities (CITA) reviews

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were identified and were reviewed. In these cases, the analyses were limited to the identification of potential mutual benefits, possible redundancies, and manpower resources that could logically be considered for use in the staffing standards program, by virtue of incorporation of the activities being performed by those resources into the functions of the program. Most significantly, this effort was not chartered, and except as described below, did not attempt to integrate related programs into the organizational and resource planning scenarios being developed for the staffing standards/manpower requirements determination process.

1.29 Department of the Army Productivity Improvement Program (DAPP). Analyses in this area included these items:

- a. The subject of summary level standards, particularly those efforts that reflected the characteristics and objectives of staffing standards.
These specific areas were investigated:
 - 1. Documented procedures
 - 2. Schedules
 - 3. Standards completed, underway, or planned
 - 4. Dedicated manpower resources
 - 5. Organizational responsibilities in the process
 - 6. The disposition and use of the standards when completed.
- b. Depot-level detailed (performance) standards.
The review centered on these subjects:
 - 1. The substance of the standards, i.e., numbers developed and level of activity aggregation reflected

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2. Suitability for use in a "roll-up" role in developing work center staffing standards, including capabilities and efforts to aggregate requirements from detail standards
- c. A continuing search for interfaces with related programs, such as productivity measurement and improvement, where similarities in process, product, or objectives might hold potential for mutual benefit.

1.30 DAPP areas not directly germane to the defined effort, and therefore not evaluated in depth, included the following:

- a. General management studies.
- b. General WM&S services at the installation level (e.g., problem solving, methods/management improvement, random standards development).
- c. Procedures and structure for developing and updating performance standards in Army depot or industrial environments. The procedures for developing staffing standards will call for the use of these (and any other acceptable lower order standards) in the work aggregating process that is inherent in those standards. However, with or without a staffing standards program, the need to develop performance standards for use in scheduling and loading industrial activities will continue, so there is no justification for revising the basic process.

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- d. Productivity measurement and evaluation, except to address the potential ways that the staffing standards program can contribute to productivity, in general, and to productivity measurement in particular. The potential results because the lower order standards and data of the type used in productivity measurement and performance evaluation can be produced as natural corollaries to the staffing standards development process. The preliminary research and formulation of staffing standards development procedures have been conducted to exploit this potential for producing validated, structured productivity indices.
- e. Other facets of the DAPP, such as value engineering and the quick return on investment program.

1.31 CITA Review Activities. The following areas of investigation were included:

- a. A review of the general procedures used, with emphasis on manpower requirements determination in the reviews, and on elements or processes similar to those used in staffing standards development
- b. Analysis of the functional language and the various levels of functional aggregation used in scheduling reviews.

OBSERVATIONS

1.32 This subsection presents comments that are designed to provide insight on the general environment in which a staffing

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standards program will function and some of the potential difficulties of such a program in the Army. Also included are discussions on several issues that arose during the project, and that are not covered elsewhere in this report or the separate documentation of proposed program policies, responsibilities, and procedures.

1.33 In any undertaking of the magnitude and with the potential impact of the proposed program addressed in this report, it is logical to anticipate reservation and dubiosity in those quarters potentially affected. This project was certainly no exception. There are a number of facets of an Army-wide, functional staffing standards program that are counter to prevailing philosophies, and that promote both genuine and conjured concern among various echelons, Army staff elements, and related program proponents. Some of the more salient facets are as follows:

- a. The centralized management and standardized procedures that are inherent in an Army-wide standards concept conflict with the traditional decentralization of management that has characterized Army standards development involving summary-level standards in the past. There will undoubtedly be some who will view a move toward centralization as an unacceptable departure from basic Army policy. The possibility of such an argument must be recognized and dealt with in terms of today's needs for greater visibility and control of resources at the higher echelons that bear the burden of final budget justification and successful acquisition of resources.

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- b. A staffing standards development program inherently involves extensive work measurement and related functions that could be considered by M&S activity proponents to be their exclusive domain. The viewpoint would impose an excessive limitation on the deliberations on organizational alternatives, and was not considered to be a valid premise to the analyses.
- c. The transition from an organizational to a functional orientation in manpower requirements determination (MRDP) was not an easy one for the other Services, and could be even more difficult for the Army. A principal source of potential difficulty is the lack of structured Army functional classifications or definitions comparable to those in existence when the Air Force management engineering and Navy SHORSTAMPS programs were inaugurated. Of nearly equal concern is the frequently heard misconception that the key to success in the development and use of staffing standards is the standardization of organization. While this simplifies the process somewhat, it is not a panacea for the real nemesis of standards developers, i.e., the variances found within a defined function from one location to another that make it difficult to establish a universally applicable staffing standard for a function.
- d. Several key aspects of the staffing standards development process are very difficult to comprehend or accept by those who are not schooled in the process. First, the process relies on sample

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measurements (i.e., at only a portion of the locations where the function is performed), but seeks universal application of the standard. The second is the prevalent use of correlation and regression analysis to identify acceptable relationships and to develop equations. In addition to the mysticism with which this statistical process is often viewed (again, by those not schooled in the process), functional managers frequently find it difficult to accept that only one or a few of the numerous work units identified in the function can be used as an index or to measure the manpower requirements for the entire functional area (e.g., work center) in question.

CITA Review

1.34 CITA reviews are conducted to determine whether functions defined as commercial- or industrial-type should be performed in-house or by contract. If there are no overriding requirement such as a readiness-connected military requirement or a special relationship in executing governmental responsibilities, the decision on in-house or contract is essentially based on total cost economic comparisons.

1.35 An important element in the development of cost comparisons is the process of determining personnel requirements and costs. There are a number of things about this process that must be considered in establishing a staffing standards program. Some hold promise of mutual benefit; others of potential conflict. It is important here to clearly identify these essential considerations and discuss what might be done about them.

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1.36 The following are several areas of mutual benefit:

- a. The CITA review process emphasizes the importance of carefully defining the work that must be done and the required standard of performance whether in-house or by contract. The statements of work have function parameters, since the reviews are conducted on a functional basis. Both of these required attributes are consistent with the objectives and procedures applied in the preliminary phase of a staffing standards study. Work center definitions must have clear functional parameters, and standards of performance must be specified to make the ensuing measurement of the defined work a meaningful process. The similarities strongly suggest that the two processes should serve each other whenever possible, and that the efforts should be closely coordinated to maximize the mutual benefit of the separate efforts and avoid costly redundancies.
- b. As staffing standards enter the inventory, they can play an important role in the personnel requirements determination during the CITA review. While it is recognized that the functional parameters of the standards and the scope of the review are not always precisely the same, the bottoms-up, structured development of staffing standards provides lower-ordered backup data that would be easily adaptable to all or most of the requirements determinations in question.
- c. CITA review procedures do not currently include the details of how personnel requirements should

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be determined. Left essentially to their own devices, review teams individually resort to a variety of sources such as staffing guides, manpower survey data, or assistance from trained work measurement personnel. The result is a non-standard procedural approach and, in some cases, a "seat-of-the-pants" approach to requirements determination. This situation can be greatly improved, short of total organizational integration, if the procedures selected for staffing standards development are prescribed for use, as applicable, in CITA reviews.

1.37 Potential areas of conflict between CITA reviews and staffing standards development include the following:

- a. CITA reviews are scheduled 5 years in advance. They are conducted in functional areas that are almost totally covered by TDAs. Thus, any effort to schedule standards development studies initially faces either a conflict of schedules, an installation-level view that they are being studied, or both. There appears to be no simple solution to the problem short of total integration of the scheduling efforts. Even this is made difficult by the fact that the functional taxonomy used for CITA review schedules is dictated by Department of Defense Instruction No. 4100.33, and is different from the functional nomenclature existing and expected to evolve in the Army Management Structure.

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- b. In a related sense, the need to hold requirements at the level established by the CITA review for a prescribed period of time (believed to be 1 to 2 years) affects both the scheduling and the conduct of staffing standards studies. All installations where this CITA-driven requirements freeze is still in effect could be viewed as unacceptable measurement sites for standards development. Depending on the number and specific attributes of such cases, it might be impossible to satisfy all the requirements of a representative measurement sample in standards development.

1.38 It is obvious that close coordination of CITA-review and staffing standards development efforts is essential to the effective execution of both. Whether this coordination can be adequately effected without a single manager for both is a key question. The procedures and statements of functional responsibilities for the staffing standards program include appropriate references and instructions to essential CITA interfaces. However, the study did not delve deeply enough into CITA management to warrant a recommendation as drastic as organizational displacement or realignment. Once the procedural approach and program objectives for the staffing standards are firm, the question of integration or coexistence with the CITA program should be studied.

Methods Analysis in Staffing Standards Development

1.39 The question of methods analysis in the staffing standards development process surfaced during this project. This is an issue with far-reaching implications in terms of study cost, progress in obtaining standards coverage, and the perceived

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credibility of the staffing standards produced. Obviously, the amount of emphasis placed on front-end methods analysis will diversely affect these implications. Extreme emphasis will promise increased credibility but adds to study cost and, depending on the extent of analysis prescribed, could extend the performance period of a study from several months to an indefinite period. Conversely, an approach that is explicitly or implicitly devoid of methods analysis would produce standards with unacceptable or challengeable credibility. So, some middle-of-the-road position is needed, and the question becomes to what extent or level of detail should methods analysis be made an integral requirement of the staffing standards development process?

1.40 The approach used by the Air Force and the Navy for first-generation staffing standards relies on the methods analysis that is inherent in the process used to develop the measurement plan, specifically in formulating work center definitions and associated measurement instructions. Measurement plans also include a section for recommended management improvements. The work center definition process subjects the function to a detailed work breakdown, assessment of the elements thus identified for proper assignment, essential versus assumed workload, and ultimately, a comparative appraisal of tasks and general procedures among the various sites included in the preliminary phase. The result is a set of work center definitions that reflect only the authorized, essential, allowable work on which the staffing standard will be based.

1.41 Although it is performed at a higher level of aggregation, this process parallels the classical methods analysis approach used at lower work unit levels (i.e., break it down, analyze/improve/eliminate elements, and put it back together).

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It would appear that improvement on this approach would have to focus on separate methods analyses on each of the work units or tasks identified in the initial work description process. The problem with such an endeavor is the sheer magnitude of tasks or work processes that would have to be analyzed, and the very large increase in study time and cost that would result.

1.42 As an alternative to making a more detailed methods analysis an integral part of the standards development process, the Army should consider conducting systems and procedures studies as part of the normal work methods program separate and distinct from the actual staffing standards study, but scheduled to precede each study sufficiently to allow for improvements to be complete and stabilized. In this fashion, the full benefits of feasible methods improvements will be realized and reflected in the staffing standards without undue delay in that process.

Study Scheduling Criteria

1.43 The prioritization of functional areas for standards development in this project relied primarily on criteria that relate to the rate of standards coverage return on resources invested. This was not intended to imply that these are the only relevant criteria. Actually, the prioritizing scheme was designed to be flexible to other criteria, because it is based on a total score using rank-ordering procedures.

1.44 If additional or alternative criteria are preferred, the scheme can accommodate the change. The process is as follows:

- a. If the criterion is subject to quantification, give it a value and incorporate its assessment with that of the other quantifiable criteria.

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The functions are then rank-ordered, highest to lowest score.

- b. If the criterion is not readily quantifiable, develop priority list in the normal manner with the weighted criteria. The process then requires a subjective decision to leave the functions, as ordered, or to move those functions affected by nonweighted criteria to a higher position on the priority list, if it is felt that coverage is the overriding concern.

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II. ORGANIZATIONAL STRUCTURE DEVELOPMENT

CONTENTS

2.1 This section presents: (a) detailed steps used in the development of feasible organizational alternatives; (b) functional statements and mission directives where appropriate, for these alternatives; (c) staffing estimates for each alternative, to include interim manpower survey needs and manning tables; and (d) comparative analysis of the various alternatives and nomination of one as the recommended organizational structure for adoption by the Army.

DEVELOPMENT OF ORGANIZATIONAL ALTERNATIVES

General

2.2 Before any work on an organizational structure can be accomplished, the objectives of that structure must be clearly delineated. As a second step, it is essential to establish and clearly state those functions that will attain this objective. Using these functions as the basic "building blocks," alternative organizational structures can be developed that will do the following:

- Fix responsibilities
- Establish relationships
- Ensure control and coordination
- Economize on personnel by grouping closely related functions.

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Background

2.3 Currently, manpower requirements for TDA organizations are primarily determined using manpower survey teams. These teams conduct surveys of each TDA organization on a 2- to 4-year cycle, with more frequent surveys if required, because of changes in missions or workloads for a particular organization. Survey teams establish requirements using staffing guides, summary standards (if available), and other evaluation techniques to relate manpower to missions, functions, and workloads. The output from this system, generally, is manpower data that do not satisfy the Army's needs in accomplishing the major manpower activities of planning, programming, and budgeting; resource allocation; and manpower utilization.

2.4 Criticism of this approach to requirements determinations most often is directed at the Army's inability to relate manpower to workload so that managers can evaluate performance and so that accurate and realistic projections can be prepared for the budget to be submitted to OSD, OMB, and the Congress.

2.5 Based on the foregoing, the objective of any proposed organizational structure must be to produce a credible statement of Army manpower requirements for the Table of Distribution and Allowances (TDA) activities using functional staffing standards that relate manpower needs to workload.

Development Steps

2.6 The development of alternative organizational structures for a standards-based manpower requirements program involves the following steps:

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- Identify and define the major functions required to conduct the program
- Develop criteria to determine:
 - Where these functions can/should be performed within the Department of the Army (DA) structure (organizational level)
 - Who, at the level selected, can/should perform these functions (staff section/office/activity)
- Apply criteria to identify where these functions can/should be performed within the DA structure (organizational level)
- Structure organizational alternatives for where each function can/should be performed (organizational level)
- Apply criteria to identify who, at the levels selected, can/should perform these functions (staff section/office/activity)
- Based on where organizational alternatives, develop structures showing who, at levels selected, can/should perform the various functions (staff section/office/activity).

Considerations

2.7 To meet the objective of an effective program structure, it will be necessary to perform the following tasks:

- Blend old and new functions in a manner that will facilitate or accommodate the phase-out of current tasks, such as manpower surveys,

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with minimum disruption of the organizational structure

- Superimpose on the vertical organization of the Army a new atypical system that has a balance between necessary centralized program control, on the one hand, and desirable and appropriate decentralized program execution on the other.

MANPOWER REQUIREMENTS DETERMINATION PROGRAM FUNCTIONS

2.8 A manpower requirements determination program (MRDP), using workload-based staffing standards, includes a large number of functions. The following major functions of the program have been identified:

- Provide program management
- Prescribe standards development methodology
- Enforce standards development methodology and policies
- Develop standards
- Publish standards
- Determine requirements.

2.9 These functions will be used as the "building blocks" in the design of various organizational arrangements to be evaluated. Since this evaluation will include all levels of the DA structure, each functional description covers the full spectrum of subfunctions that could be involved at Headquarters, Department of the Army (HQDA), Major Army Command (MACOM), or installation level, even though not all subfunctions would necessarily be performed at each level.

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2.10 Detailed descriptions of these functions are presented in Appendix A. Summary descriptions of these functions are provided below:

- Provide program management. Establishes policies necessary to assure a quality requirements program to present to OSD, OMB, and Congress. Establishes goals for standards coverage, issues standards development schedules, and monitors progress toward meeting these goals. Coordinates overall training and resource requirements of the program. Recommends curricula for initial training and upgrading of personnel in the program. Interfaces with commercial/industrial activities (CITA) program. Approves completed standards studies.
- Prescribe standards development methodology. Develops and publishes detailed procedures for Army-wide use for the development of staffing standards. Prescribes the milestones in the development process where quality control will be exercised. Develops ADP requirements for data collection and computations.
- Enforce standards development methodology and policies. Reviews all standards development plans for substantive content and compliance with acceptable procedures. Reviews completed standards studies for adequacy of data collected, propriety of computations and manning tables, and utility of program estimating equations or factors. Checks development plans and final studies for compliance with all formatting and procedural directives. Makes on-site visits during the standards development

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process to assure standardized procedures and techniques are being used.

- Develop standards. Prepares measurement plans prescribing definitions of what each standards study will cover, work measurement and work count instructions, and the locations where data are to be collected. Collects (or arranges with other technicians to collect) data called for by the measurement plan. Analyzes data collected and develops staffing equations relating manpower to workload. Determines military/civilian mix and builds tables that depict various workload levels and the associated manpower identified by category, military occupational specialty series, nominal grade, and quantity. Develops adjustments to the standard needed at installations that have unique situations or needs. Develops program estimating equations as required for forecasting manpower needs in budget estimates.
- Publish standards. Formats and prepares standards for publication. Coordinates publication schedules with printing activity.
- Determine requirements. Quantitatively and qualitatively analyzes and evaluates requests for additional manpower. Validates manpower requests by use of standards, if they are available. When standards are not available, validates requirements through other techniques. Provides valid requirements and supporting justification to resource managers for use in allocating manpower and to support manpower portions of the budget. Applies proposed standards and determines if a special

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allowance is needed to accommodate unique local conditions. Conducts functional reviews for proper utilization of manpower. Reapplies or oversees reapplication of all approved standards, at least annually, to insure that the Army can present credible statement of requirements to OSD, OMB, and Congress in each budget.

ORGANIZATIONAL CRITERIA

Criteria Development

2.11 Organizational criteria were developed as guidelines for the placement of manpower requirements functions, to include staffing standards, within the DA structure. Each major function previously described was used as the basis for the criteria development.

2.12 Where. Criteria were first developed to identify the level within the DA structure (HQDA, MACOM, and installation) where the function can/should be performed. Although each function was considered individually, efficiencies obtained by collocating functions were acknowledged in the development of the criteria.

2.13 Who. In a similar manner, criteria were developed to identify the appropriate organizational entity (staff section/office/activity) that can/should perform the function.

2.14 To establish their relative merit and order of precedence for their application, the criteria were placed into mutually exclusive criteria categories. The categories, in order of consideration, are as follows:

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<u>Category</u>	<u>Title</u>
I	Mandatory Placement
II	Functional Compatibility
III	Inherent Capabilities
IV	Cost Benefits

Clarification of these categories is presented below. The purpose of this ordering is to preclude the evaluation of criteria that might be made irrelevant by an overriding criterion. Beyond this, it does not place relative values on any category or criterion.

2.15 The category descriptions are as follows:

- Category I, Mandatory Placement. Contains criteria that limit the assignment of functions. For example, a function that involves one or more of the following roles must be performed by a management headquarters activity (DoD Directive 5100.73 as implemented by AR 570-8):
 - Policy development and/or guidance
 - Long-range planning, programming, and budgeting
 - Management and distribution of resources
 - Program performance review and evaluation.
- Category II, Functional Compatibility. Contains criteria that reflect functional homogeneity. The DA staff, MACOMs, and activities are organized to execute functional responsibilities. Therefore, it is essential that any proposed assignment of functions be compatible with existing functions to ensure that performance of current missions is not impaired.

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- Category III, Inherent Capabilities. Contains criteria that measure existing organizational capabilities against desirable or required capabilities for functional performance. These criteria focus on adequacy and simplicity of control, feedback, and lines of communication.
- Category IV, Cost Benefit. Contains criteria that either measure quality of the product or costs to perform the function. These criteria are collectively weighed to determine the optimum balance between results and costs.

2.16 The evaluation criteria are displayed in rank order by MRDP function in Table 2.1. Definitions and/or explanations of criteria are presented in Appendix B.

APPLICATION OF WHERE CRITERIA

Army Organizational Levels

2.17 The Department of the Army is organized to respond to functional requirements that are derived from the objectives of the Army as set forth in Title 10 United States Code. The major organizational levels of the DA are as follows:

Headquarters, Department of the Army--The executive element that exercises supervision and control and includes the Army Secretariat; Army General, Special, and Personnel staffs; and designated staff support agencies. The HQDA level also includes Field Operating Agencies (FOA), which are those agencies under HQDA other than a MACOM and not a part of a MACOM with a primary mission of executing policy.

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TABLE 2.1
EVALUATION CRITERIA FOR ORGANIZATIONAL ALTERNATIVES

Program Function	Criteria		
	Category	Where	Who
Provide program management	I: Mandatory Placement	Directed assignment of function Functions required to be performed by Army Management Headquarters Activities (AR 570-8)	Directed assignment of function
	II: Functional Compatibility	functional compatibility between existing functions of organizational entity under consideration and program function	Functional homogeneity between existing functions of organizational activity under consideration and program function
	III: Inherent Capabilities	Value of centralized control of an Army-wide program Value of performing function at more than one level with varying scope Avoids potential bias in performing function Span of control Ability to provide adequate overall control	Ability to integrate all functions of the requirements determination and utilization process Simplicity of procedures and control Effectiveness of feedback Efficiency of lines of communications
	IV: Cost Benefits	Credibility of final product Cost to organize and manage the program	Credibility of final product Cost to organize and manage the program
Prescribe standards, development methodology	I: Mandatory Placement	Directed assignment of function Functions required to be performed by Army Management Headquarters Activities (AR 570-8)	Directed assignment of function

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TABLE 2.1 (Cont)

Program Function	Criteria		
	Category	Where	Who
Prescribe standards development methodology (cont)	II: Functional Compatibility	Functional compatibility between existing functions of organizational entity under consideration and program function	Functional homogeneity between existing functions of organizational activity under consideration and program function
		Value of placing procedures (methodology) and policy determination (program management) functions within same organizational entity	Product homogeneity between existing product(s) of organizational activity under consideration and product(s) of program function
	III: Inherent Capabilities	Value of centralized control of an Army-wide program	Simplicity of procedures and control
		Value of performing function at more than one level with varying scope Avoids potential bias in performing function Ability to provide adequate overall control Ability to standardize performance and products	Effectiveness of feedback Efficiency of lines of communications
Enforce standards development methodology and policies	IV: Cost Benefits	Credibility of final product Cost to perform function	Credibility of final product Cost to perform function
	I: Mandatory Placement	Directed assignment of function Functions required to be performed by Army Management Headquarters Activities (AR 570-8)	Directed assignment of function

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TABLE 2.1 (Cont)

Program Function	Criteria		
	Category	Where	Who
Enforce standards development methodology and policies (cont)	II: Functional Compatibility	Functional compatibility between existing functions of organization and program function	Functional homogeneity between existing functions of organization and program function
		Value of assigning methodology and policies enforcement with the same organizational entity that develops the methodology and policies	Product homogeneity between existing product(s) of organizational activity under consideration and product(s) of program function
	III: Inherent Capabilities	Value of centralized control of an Army-wide program	Ability to monitor compliance
		Value of performing function at more than one level with varying scope	Simplicity of procedures and control
Develop standards	IV: Cost Benefits	Avoids potential bias in performing function	Effectiveness of feedback
		Ability to provide adequate overall control	Efficiency of lines of communications
	I: Mandatory Placement	Ability to standardize performance and products	Value of separate review authority an echelon above standards development
		Status with respect to maximum feasible decentralized threshold	Extent of review required to provide credible product
Develop standards	I: Mandatory Placement	Credibility of final product	Credibility of final product
		Cost to perform function	Cost to perform function
Develop standards	I: Mandatory Placement	Directed assignment of function	Directed assignment of function
		Functions required to be performed by Army Management Headquarters Activities (AR 570-8)	

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TABLE 2.1 (Cont)

Program Function	Criteria		
	Category	Where	Who
Develop standards (cont)	II: Functional Compatibility	Functional compatibility between existing functions of organizational entity under consideration and program function	Functional homogeneity between existing functions of organizational activity under consideration and program function
	III: Inherent Capabilities	Value of performing function at more than one level with varying scope Span of control Status with respect to maximum feasible decentralized threshold Standards population breakdown between Army-wide and command-unique Ability to effectively and efficiently utilize teams Ability to enhance product acceptance through participation	Product homogeneity between existing product(s) or organizational activity under consideration and product(s) of program function Simplicity of procedures and control Effectiveness of feedback Efficiency of lines of communications Value of proximity to data source
	IV: Cost Benefits	Credibility of final product Cost to organize and operate	Credibility of final product Cost to organize and operate

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TABLE 2.1 (Cont)

Program Function	Criteria		
	Category	Where	Who
Publish standards	I: Mandatory Placement	Directed assignment of function Functions required to be performed by Army Management Headquarters Activities (AR 570-8)	Directed assignment of function
	II: Functional Compatibility	Functional compatibility between existing functions of organizational entity under consideration and program function	Functional homogeneity between existing functions of organizational activity under consideration and program function Product homogeneity between existing product(s) of organizational activity under consideration and product(s) of program function
	III: Inherent Capabilities	Value of centralized publication of products of an Army-wide program Value of performing function at more than one level with varying scope Ability to standardize products	Simplicity of procedures and control Effectiveness of feedback Efficiency of lines of communications
	IV: Cost Benefits	Credibility of final product Cost to perform function	Credibility of final product Cost to perform function
Determine requirements (includes functions/activities not under standards)	I: Mandatory Placement	Directed assignment of function Functions required to be performed by Army Management Headquarters Activities (AR 570-8)	Directed assignment of function

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TABLE 2.1 (Cont)

Program Function	Criteria		Who
	Category	Where	
Determine requirements (cont)	II: Functional Compatibility	Functional compatibility between existing functions of organizational entity under consideration and program function	Functional homogeneity between existing functions of organizational activity under consideration and program function Product homogeneity between existing product(s) of organizational activity under consideration and product(s) of program function Value of placing standards application and development within the same organizational activities
	III: Inherent Capabilities	Value of performing function at more than one level Value of proximity to data source Quantity of requirements not subject to standards at each level within DA structure Ability to validate inputs Ability to evaluate requirements not covered by standards Ease of documenting results	Simplicity of procedures and control Effectiveness of feedback Efficiency of lines of communications Proximity to source of requirements Ability to monitor compliance
	IV: Cost Benefits	Credibility of final product Cost to perform function	Credibility of final product Cost to perform function

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Major Army Command--A command directly subordinate to, established by authority of, and specifically designated by HQDA. Army component commands of unified and specified commands are major Army commands. ^{1/} The MACOM level also includes support activities, which are those activities with a separate TDA under the direct supervision of the MACOM.

Army Installations--An installation is defined as the land and improvements permanently affixed thereto that are under the control of the DA and used by Army organizations. In addition to those installations used primarily by troops, the term 'installation' applies to such real properties as depots, arsenals, ammunition plants (both contractor and government operated), hospitals, terminals, and other special mission installations. ^{2/}

Procedures

2.18 The identification of where the program functions can/ should be performed within the DA structure (organizational level cited above) was accomplished for each major program function by individually applying the criteria in sequence until the viable options for the placement of the function were identified. At the same time, the need for functional grouping of homogeneous functions within the organizational framework was assessed along with any requirement to perform a program function at a lower level with reduced scope.

^{1/} Army Regulation 10-5, Organizations and Functions, Department of the Army, HQDA, 1 November 1978.

^{2/} Army Regulation 310-25, Dictionary of United States Army Terms, HQDA, 15 September 1975.

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2.19 The viable organizational options for where the function can/should be performed were identified prior to proceeding with the application of the criteria for who can/should perform them.

2.20 Results of the criteria application are presented for each MRDP function in criteria category sequence in the following paragraphs.

Provide Program Management

2.21 Criterion: Directed Assignment of Functions (Category I). There are no directives that prescribe placement of this function.

2.22 Criterion: Functions Required to be Performed by Management Headquarters Activities (AR 570-8) (Category I). This criterion would only apply to HQDA- and MACOM-level options.

- a. Applied To HQDA Level Option. The program management function includes the establishment of policies, setting of goals and priorities, as well as evaluating program results. This program function falls within the purview of the Army Management Headquarters Activities (AMHA) functional areas--policy development and/or guidance, program performance review and evaluation.
- b. Applied To MACOM Level Option. When this program management function is performed at MACOM level, it also falls within the purview of the AMHA functional areas--policy development and/or guidance, program performance review and evaluation.
- c. Summary Assessment. Performance of program management is properly a management headquarters

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role, which limits its assignment to HQDA and MACOM levels.

2.23 Criterion: Functional Compatibility Between Existing Functions of the Organizational Entity Under Consideration and the Program Function (Category II). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The program management function of the MRDP involves the establishment of Army-wide policies, goals, and schedules. Followup action to monitor programs is also required. Current DA staff functions involve the conduct of long-range planning, resource determination and allocation, the development of Army-wide objectives, the formulation of broad policy guidance, and the supervision and control of operations.
- b. Applied to MACOM Level Option. The MACOM normally performs specialized basic functions of the Army, e.g., organizing, training, and equipping. MACOMs are now responsible for their own requirements programs through the manpower survey program, the preparation of staffing guides, and the accomplishment of Methods and Standards (M&S) efforts for manpower and other productivity improvement programs.
- c. Summary Assessment. Program management of an Army-wide program would be compatible with functions normally performed at HQDA level. Program management at the MACOM level would be compatible for the unique efforts within each MACOM. However,

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overall program management would not be compatible with the MACOMs' current missions whereby they are generally functionally oriented. HQDA is the only level that can provide overall program management for an Army-wide program. MACOMs need program management (wherever two or more other MRDP functions are performed at the MACOM), with lesser scope than HQDA level to provide coordination, control, and supervision over their own MRDP.

2.24 Criterion: Value of Centralized Control of an Army-Wide Program (Category III). Application of criterion is as follows:

- a. Applied to HQDA Level Option. The basic management philosophy of the Army is centralized direction and decentralized execution. Because the MRDP is Army-wide, centralized control is required to produce uniform and credible products.
- b. Applied to MACOM Level Option. This function would only be performed at MACOM level under a fully decentralized program management concept. Under this concept, each command would establish its own individual programs and standardized products Army-wide would be difficult, if not impossible, to achieve. This nonstandardization would detract from credibility and negate one of the major benefits envisioned for the MRDP.
- c. Summary Assessment. To meet program objectives of a credible manpower requirements program, overall management of the program must be performed at HQDA level.

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2.25 Criterion: Value of Performing Function at More Than One Level With Varying Scope (Category III). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The program management function of the MRDP involves the establishment of Army-wide policies, goals, and schedules. Followup action to monitor progress is also required. To achieve standardized products Army-wide and a credible statement of manpower requirements, centralized program management is required. Centrally performed standards approval, a subfunction of program management, is also a basis for credibility and should not be delegated. However, this would still allow for the performance of other subfunctions at more than one level with varying scope.
- b. Applied to MACOM Level Options. MACOMs are responsible for unique missions and should be provided the capability to properly manage resources dedicated to the development of requirements for these unique missions.
- c. Summary Assessment. Overall management of an Army-wide program must be accomplished by HQDA. On the other hand, MACOMs should have the capability to manage their own programs as they do today. Accordingly, MACOM program management would be of a lesser scope than HQDA, but no less important to the Army's presentation of a credible requirements statement for inclusion in the budget.

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2.26 Recommendation. Overall program management should be performed at HQDA level for this Army-wide program. Program management, at reduced scope, should be performed at the MACOM level whenever two or more other MRDP functions are performed at the MACOM. However, the scope at MACOM level should not include final standards approval.

Prescribe Standards Development Methodology

2.27 Criterion: Directed Assignment of Functions (Category I). There are no directives that stipulate placement of this function.

2.28 Criterion: Functions Required to be Performed by Management Headquarters Activities (AR 570-8) (Category I). This criterion would only apply to HQDA and MACOM level options. Application is as follows:

- a. Applied to HQDA Level Option. The MRDP function, "prescribe standards development methodology," involves the development and publication of detailed procedures for Army-wide use in the development of staffing standards. This program function falls within the purview of the AMHA functional area--policy development and/or guidance--as it involves the promulgation of detailed instructions to be used in developing Army-wide functional staffing standards.
- b. Applied to MACOM Level Options. When the MRDP function, "prescribe standards development methodology," is performed at MACOM level, it also falls within the AMHA functional area--policy development and/or guidance.

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- c. Summary Assessment. Prescribing standards development methodology is an AMHA function that must be performed at HQDA and/or MACOM level.

2.29 Criterion: Functional Compatibility Between Existing Functions of Organizational Entity Under Consideration and Program Function (Category II). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. Current DA staff functions involve the conduct of long-range planning, resource determination and allocation, the development of Army-wide objectives, the formulation of broad policy guidance, and the supervision and control of operations. Standards development methodology will provide the detailed instructions to be used in developing functional Army-wide staffing standards. These procedures will, in effect, be implementing the policies of the requirements program when standards are involved.
- b. Applied to MACOM Level Option. The MACOMs normally perform specialized basic functions of the Army, e.g., organizing, training, and equipping. However, as a byproduct of their primary missions, the MACOMs currently prescribe standards development methodology for their commands. They also have developed procedures to implement command policies concerning their manpower requirements programs. Therefore, prescribing procedures for their own standards development programs would be consistent with current functions in many commands.

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- c. Summary Assessment. This function is compatible with other functions performed at the DA and MACOM levels.

2.30 Criterion: Value of Placing Procedures (Methodology) and Policy Determination (Program Management) Functions Within Same Organizational Entity (Category II). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. Procedures implement policies. The collocation of standards development methodology and program management simplifies the coordination of procedural changes resulting from policy changes. These two functions are very homogeneous and their performance at the same level would enhance program effectiveness. Because these two functions are mutually reinforcing, their assignment at the same level offers distinct benefits in terms of overall program management.
- b. Applied to MACOM Level Option. The same logic and rationale that applies to collocation at HQDA level also applies to MACOM level.
- c. Summary Assessment. Collocation of procedures (standards development methodology) and policy (program management) at the same level would result in the assignment of homogeneous functions.

2.31 Criterion: Value of Centralized Control for an Army-Wide Program (Category III). Application of this criterion is as follows:

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- a. Applied to HQDA Level Option. The manpower MRDP function, "prescribe standards development methodology," involves the development and publication of detailed procedures for Army-wide use in the development of staffing standards. Standardized products are the key in achieving a credible Army-wide manpower requirements program. Standardized products start with uniform procedures. For an effective standardization program, uniform procedures for Army-wide use are required. Thus, maximum benefit would be achieved if standards methodologies were prescribed centrally.
- b. Applied to MACOM Level Option. Under a decentralized procedures concept, MACOMs could prescribe their own methodology as they do today. However, current methodology is not consistent among the MACOMs and products are not standardized.
- c. Summary Assessment. Prescribing methodology for the development of Army-wide standards should be performed at HQDA level to enhance standardization and credibility.

2.32 Recommendation. HQDA level should prescribe standards development methodology.

Enforce Standards Development Methodology and Policies

2.33 Criterion: Directed Assignment of Functions (Category I).

There are no directives that prescribe specific placement of this function.

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2.34 Criterion: Functions Required to be Performed by Army Management Headquarters Activities (AR 570-8) (Category I). This criterion would only apply to HQDA and MACOM level options. Application is as follows:

- a. Applied to HQDA Level Option. This MRDP function, "enforce standards development methodology and policies," entails the review of standards development plans for substantive content and compliance with acceptable procedures. As such, it falls within the purview of the Army management headquarters functional area--program performance review and evaluation--as defined in AR 570-8.
- b. Applied to MACOM Level Option. When the MRDP function, "enforce standards development methodology and policies," is performed at MACOM level, it falls within the AMHA functional area--program performance review and evaluation.
- c. Summary Assessment. The enforcement function must be performed at the HQDA level and should be performed at MACOM level if the MACOM has a standards development role.

2.35 Criterion: Functional Compatibility Between Existing Functions of Organizational Entity Under Consideration and Program Function (Category II). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. Current DA staff functions involve the conduct of long-range planning, resource determination and allocation, the

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development of Army-wide objectives, the formulation of broad policy guidance, and the supervision and control of operations. The enforcement aspects of the MRDP are important to the proper supervision and control of the program as it provides for feedback about its effectiveness.

- b. Applied to MACOM Level Option. The MACOMs normally perform specialized basic functions of the Army, e.g., organizing, training, and equipping. However, as a byproduct of their primary missions, the MACOMs currently perform quality control of summary staffing standards and evaluate statements of requirements through normal staff review.
- c. Summary Assessment. HQDA level can enforce methodology and policies Army-wide while MACOM enforcement would be compatible with products prepared within their own commands.

2.36 Criterion: Value of Assigning Methodology and Policies Enforcement With the Same Organizational Entity That Prescribes the Methodology and Policies (Category II). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. In an assessment of MRDP functions interface and the efficiency obtained by collocating two or more program functions, it is essential to consider program objectives. Enforcement is the means to ensure standardization and a credible requirements program for presentation to OSD, OMB, and Congress. Enforcement also provides the feedback to indicate the need for policy and methodology changes or

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that corrective action is required. The placement of the enforcement and prescribing methodology functions at the same level would be mutually reinforcing and simplify achievement of program objectives.

- b. Applied to MACOM Level Option. Enforcement at the MACOM level would be limited to a review of the command generated products. If the program function, "prescribe standards development methodology," were to be performed at MACOM level, it would also be limited in scope to those procedural details required for the development of command-unique standards under centralized program direction.
- c. Summary Assessment. The collocating of functions--enforcement and the prescribing of standards methodology--will expedite processing and simplify feedback to monitor program effectiveness and to provide a basis for updating policies and procedures. Any feedback generated at MACOM level would be limited in scope and would not provide the perspective needed for an Army-wide program. HQDA is in the best position to achieve standardization of an Army-wide program.

2.37 Criterion: Value of Centralized Control for an Army-Wide Program (Category III). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The manpower requirements determination program function, "enforce standards development methodology and policies,"

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entails the review of all standards development plans for substantial content and compliance with prescribed policies and procedures. Uniform quality products are essential to a credible manpower requirements program. The best way to achieve this for an Army-wide program is through a central review of products.

- b. Applied to MACOM Level Option. Because of their proximity to the data source, MACOMs reviewing their own products would facilitate data validation and assure uniform products within the MACOM. Review by the MACOMs prior to submission to a central review authority would improve the quality of the products and prevent the system from being flooded with low quality products. Quality control is inherent to any product developed by the MACOM.
- c. Summary Assessment. In order to assure the uniformity required for a credible statement of manpower requirements, performance of the enforcement function at the DA level is essential. Enforcement at the MACOMs level would be inherent to any standards development role for their own products.

2.38 Recommendation. Maximum credibility of the Army's manpower requirements program can best be assured by centralized enforcement of standards development methodology and policies at the HQDA level. This will also have the additional benefit of placing enforcement with overall program management at HQDA, which will provide feedback for ease of updating policies and procedures. An enforcement role should also be assigned to any of the MACOMs with a standards development responsibility.

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Develop Standards

2.39 Criterion: Directed Assignment of Functions (Category I).

There are no directives that prescribe the placement of this function.

2.40 Criterion: Functions Required to be Performed by Management Headquarters Activities (AR 570-8) (Category I). The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equation(s) to relate authorizations to workload(s). Development of standards is not an AMHA function. However, if the function were assigned to an AMHA, the authorizations provided count against the AMHA ceiling.

2.41 Criterion: Functional Compatibility Between Existing Functions of Organizational Entity Under Consideration and Program Function (Category II). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection and analysis, and manning equation(s) to relate authorizations to workload(s). Current DA staff functions involve the conduct of long-range planning, resource determination and allocation, the development of Army-wide objectives, the formulation of broad policy guidance, and the supervision and control of operations. These functions do not normally involve operational functions (execution). However, selected operational functions are performed at the HQDA level within FOAs.

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- b. Applied to MACOM Level Option. The MACOMs normally perform specialized basic functions of the Army, e.g., organizing, training, and equipping. However, to support their primary missions, they do develop command-unique standards. One MACOM also develops garrison standards for use Army-wide. The DA staff does review and approve each garrison standard before its use in programming manpower.
- c. Applied to Installation Level Option. Under the Army's decentralized execution philosophy, development of standards is a MACOM responsibility. In most MACOMs, summary staffing standards development capability has been retained as a MACOM headquarters function. (In some instances, standards development personnel have been stationed at other than the headquarters location and assigned to cover specific geographical areas to reduce temporary duty costs and broaden the hiring base.) In some MACOMs, this responsibility has been delegated to the installation level (e.g., DARCOM and TRADOC). Based on the earlier definition of installation, this term connotes a contractor facility, depot, or arsenal, as well as a facility used primarily by troops. Thus, to refer to installations as a level for development of staffing standards would not be meaningful. For example, there is a wide variance in the number of installations assigned to the various MACOMs and in TDA strengths at installations. By way of illustrating the spectrum involved, two MACOMs have no major installations, ACC and WESTCOM have

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two each, and FORSCOM has 17 installations; installation populations range from 2,000 to over 14,000. In some cases, installations are located close together, and one staffing standards team could cover more than one installation. In other situations, the installations are not centrally located for coverage of widely dispersed MACOM populations.

- d. Summary Assessment. Development of standards is compatible with HQDA (FOA) and MACOM level functions. Development of standards at the installation level would require extensive coordination laterally and from the bottom up. The perspective at installation level would not provide a true indication of the need or compatibility for developing standards. Therefore, the MACOM should provide development services to their installations from either a central location or by a dispersed development staff designated to serve a geographical area. By way of maintaining some uniformity to the program, staffing standards development below MACOM level should not be permitted unless approved by HQDA.

2.42 Criterion: Value of Performing Functions at More Than One Level With Varying Scope (Category III). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and the manning equations for those authorizations susceptible to standards coverage. The development of staffing standards is an operational function

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that could be performed from one central location. Performance of this function at HQDA level would be appropriate within an FOA. However, in keeping with Army management philosophy, delegation of this function is appropriate. Basically there are two different types of standards involved, Army-common (applying to two or more MACOMs) and command-unique (applying only to one MACOM). Thus, one possible division of the standards effort would be to have Army-common standards developed at HQDA level and command-unique standards developed at MACOM level.

- b. Applied to MACOM Level Option. The MACOMs currently develop command-unique staffing standards, and one MACOM has been developing garrison standards for Army-wide use. To date the development of Army-wide standards at the MACOM level has required extensive coordination of scheduling and data collection efforts. To make this an effective procedure, the DA staff would need to become involved in directing the common standards studies effort.
- c. Summary Assessment. This function is appropriate for performance at the HQDA level. This arrangement would provide for the effective utilization of resources, and development of all standards at HQDA level would simplify coordination and enhance credibility of the final product. The MACOMs could develop their own unique staffing standards to support their own mission requirements. MACOM development of command-unique standards would take advantage of existing expertise and would

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minimize organizational turbulence with the staffing standards program. Development of Army-common standards by one or more MACOMs is possible; however, experience to date has shown that this arrangement presents severe coordination and scheduling problems. Only by extensive detailed involvement of the Army staff could such an effort be made reasonably effective.

2.43 Criterion: Span of Control (Category III). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equations to relate authorizations to workload. The central development of all staffing standards at HQDA level would involve the development of command-unique standards for 14 MACOMs, as well as Army-command standards. Management of this effort would be extensive because of the large number of MACOMs involved and the need for coordination of individual command requirements. To provide this management, a fairly large DA staff would be required.
- b. Applied to MACOM Level Option. The central development of all Army standards by a single MACOM would require protracted lateral coordination with the other MACOMs, and would require extensive detailed HQDA participation to make it effective.
- c. Summary Assessment. Some decentralized execution would provide for a better span of control.

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Decentralized development of command-unique standards would optimize span of control at the HQDA level. The current decentralized development of command-unique standards by each MACOM presents no problem with span of control at the MACOM level. Development of all Army-common standards at the MACOM level would cause severe span of control problems.

2.44 Criterion: Status of Maximum Feasible Decentralized Threshold (Category III). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equations that relate authorizations to workload. It is feasible to develop all standards centrally as the Navy does on a functional basis, i.e., while the Navy has two standards setting activities only one is responsible for a particular function. The advantages of this approach for the Army would be as follows:
 - Provide economy of scale
 - Avoid potential bias
 - Ensure broad perspective for assuring all MACOMs' needs are considered
 - Provide central functional expertise to assist Army staff in operational aspects of requirements evaluation
 - Provide for institutional memory and ongoing rapport with the functional staff for standards development and updating.

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Decentralization is a matter of degree. The degree of decentralization depends on the skills and competence possessed at the lower levels, and the ability of the lower level to perform the function ("develop standards"). In this case, division along product lines (common or unique standards) would cause less disruption within the existing DA structure, and would coincide with the skill and competence already possessed by most MACOMs. Garrison summary standards to be used throughout the Army are now developed by one MACOM. While this provides for full decentralization of the standards development process, it also places that MACOM in the position of conducting a massive coordination effort to obtain inputs to measurement plans and standards studies. Since each MACOM has its own unique mission areas to worry about, the support of another MACOM's collateral mission to develop some Army-common standards may not receive the backing it should. If the developing command proceeds with the standard to "get on with the job," then the standard may not reflect the needs of the other MACOMs and, when issued, would not be used. To avoid this situation under the new program, two feasible solutions exist for the development of Army common standards:

1. Accomplish the Army-common standards development effort at the HQDA level with some Army Staff involvement.
2. Designate one or more MACOMs as lead command(s) to develop common standards. This fully decentralized concept would require

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heavy Army staff involvement to provide needed coordination and direction with supporting commands. Based on present Army management philosophy, the delegation of a function (i.e., "develop common standards") to a MACOM for performance, with retention of detailed control over its performance, is a violation of the basic principle of delegation of responsibility.

- b. Applied to MACOM Level Option. Since development of standards is an operational function, decentralization is in order where logical and feasible. MACOM commanders should be able to develop the tools needed to accurately state their command's mission manpower requirements. To provide maximum flexibility in the use of these resources to meet MACOM priorities, the development effort should be performed centrally by the MACOM headquarters. As an operation expands in a MACOM, it may be economical to establish one or more dispersed teams to cover a geographical area to reduce temporary duty costs and broaden the hiring base for development personnel. Only in unusual instances should it be necessary for a MACOM to devote dedicated development personnel to a single installation. In any case, maximum flexibility in the management of the command's development effort would result if ownership of development personnel were retained by the MACOM headquarters. This ownership will assure adequate resources for the development effort are consistent with overall MACOM priorities. Where the number of personnel in the program in a MACOM is significant, it may be prudent to assign them to a headquarters support

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activity rather than to increase the size of the management headquarters activity unnecessarily. (DARCOM has utilized this procedure for personnel in their centralized effort.)

- c. Summary Assessment. For optimum decentralization of standards development, MACOMs should be responsible for their own unique command standards. While it is feasible to decentralize the development of all standards, the development of Army-common standards under this fully decentralized concept would place one or more designated MACOMs performing this function in a difficult position, as development under this concept would require extensive coordination among MACOMs. To make this concept viable, the DA staff would have to be heavily involved and a large staff would be required. This heavy DA staff involvement in a function that has been delegated to a MACOM violates the scalar principle of management in that authority and responsibility should flow in a clear unbroken line. Development of common standards at the DA level will eliminate the need for extensive DA staff involvement in a function that has been delegated to a MACOM. It will also insure that all MACOMs needs are considered and the potential for any bias avoided.

2.45 Criterion: Standards Population Breakdown Between Army-Wide and Command-Unique (Category III). Application of this criterion is as follows:

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- a. Applied to HQDA Level Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equations that relate authorizations to workload. Army-common standards constitute approximately 42% of the Army's standards universe.
- b. Applied to MACOM Level Option. Almost all MACOMs will have some command-unique standards in their functional areas of expertise, although the number of authorizations susceptible to command-unique standards will vary widely among MACOMs.
- c. Summary Assessment. The standards population breakdown between Army common and command-unique standards would not preclude development of standards at HQDA and/or MACOM level. However, the command-unique population could be so small in some MACOMs as to make the establishment of a unique standards program uneconomical.

2.46 Criterion: Ability to Effectively and Efficiently Utilize Teams (Category III). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equations that relate authorizations to workload. On the basis that one organization would develop Army standards, the development effort would provide some economy of scale by furnishing broad functional expertise primarily in the base operations areas. It would also present flexibility to cross utilize personnel on

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various standards studies and provide a training ground for new personnel entering the program. If accomplished at the DA level by an FOA, the personnel involved in the development of standards would be able to provide expertise to assist the Army manpower staff in their review and evaluation of requests for additional manpower. These same functional experts could monitor any common standards and recommend update/revision as needed, relieving the Army staff of this task. Functional specialists would also be able to review proposed directives for manpower implications prior to approval. A large central standards development effort would also provide additional career progression opportunities.

- b. Applied to MACOM Level Option. Standards development will fully utilize all teams. Team ownership at the MACOM level will provide flexibility in assigning work that will ensure level work loading of the teams. It is logical for MACOMs to start with development personnel at the headquarters location and only to expand to additional geographical locations as experience dictates.
- c. Summary Assessment. Functional teams at the HQDA level responsible for developing Army-common standards can perform certain operational aspects of manpower management that would otherwise have to be performed by the DA staff (necessitating an increase in AMHA). This additional utilization of functional team expertise will ensure efficient and effective use of these personnel. The MACOM, through proper scheduling of development efforts,

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can assure that development teams are also fully utilized.

2.47 Criterion: Ability to Enhance Product Acceptance Through Participation (Category III). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equations that relate authorizations to workload. The use of functionally oriented analysts to develop Army-common standards will improve Army functional staff support of standards by providing a developer who can "talk their language" and establish a day-to-day working relationship with functional staff members. These functionally oriented analysts can also provide the functional staff with day-to-day assistance in solving the management problems they encounter.
- b. Applied to MACOM Level Option. MACOM development of unique standards will provide knowledge as to how the standards were developed. MACOM input (e.g., review of measurement plans and final standards studies) in the development of Army-common standards will serve the same basic purpose.
- c. Summary Assessment. HQDA functional staff must support the standards development effort if credible products are to result. If the functional staff participates in the development of standards, support of the final product is more likely and possible wasted effort is avoided. If the MACOMs

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develop their own unique standards and provide comments/recommendations to the common standards measurement plans and standards studies, their acceptance of the final product is enhanced by their participation in the development process.

2.48 Criterion: Credibility of Final Product (Category IV).

Application of the criterion is as follows:

- a. Applied to HQDA Level Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equations that relate authorizations to workload. DA development of Army-common standards should eliminate potential bias and should provide a broader perspective in standards development. Although DA development of all standards by a central authority would provide some economy of scale, this would minimize MACOM participation and increase the potential for nonacceptance of the final product. Any savings from this economy of scale would be offset, to a large degree, by the extensive coordination efforts required of a central activity in attempting to meet the priorities of each individual MACOM.
- b. Applied to MACOM Level Option. For the credibility of the MACOM developed standards to be comparable to DA developed standards, each MACOM standard would be required to pass the same stringent enforcement tests that would be applied by the DA staff. If HQDA is the final approval authority

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on all standards, consistently high quality can be assured.

- c. Summary Assessment. Credibility of all standards should be equal on the basis that all pass the same rigid quality control test before approval for use in determining manpower requirements for the PPBS.

2.49 Recommendation. It is recommended that DA assign standards development roles in one of the following ways:

- Development of all staffing standards for the Army by a central activity at the DA level. Since standards development is an operational function, its performance at the DA level would be accomplished appropriately by an FOA (by adding to an existing one or organizing a new one).
- Designation of one or more MACOMs to develop Army-common standards in addition to their unique standards. Development of Army-common standards by one or more MACOMs would force these commands to coordinate their efforts Army-wide with other MACOMs to avoid conflicts of efforts and to ensure all MACOM needs are considered. Such extensive cross-coordination would require the DA staff to be deeply involved in an operational function to ensure full spectrum coverage and to adjudicate problem areas among the commands.
- Development of command standards at the DA level by a central activity (FOA) and MACOM development of their own unique standards.

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Publish Standards

2.50 Criterion: Directed Assignment of Functions (Category I).
There are no directives that stipulate placement of this function.

2.51 Criterion: Functions Required to be Performed by Management Headquarters (AR 570-8) (Category I). The MRDP function, "publish standards," involves formatting and publishing standards in directive form. Publishing standards is not an AMHA function; however, if this function were assigned to an AMHA, the authorizations provided count against the AMHA ceiling.

2.52 Criterion: Functional Compatibility Between Existing Functions of Organizational Entity Under Consideration and Program Function (Category II). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The MRDP function, "publish standards," involves formatting and publishing standards in directive form. Current DA staff functions involve the conduct of long-range planning, resource determination and allocation, the development of Army-wide objectives, the formulation of broad policy guidance, and the supervision and control of operations. Inherent in the performance of these functions is the publication of products needed to effectively and efficiently do the job. An example of such existing publications at DA level are the DA pamphlets containing staffing guides. Since publication of standards is an operational function, it could be performed at the HQDA level outside the HQDA staff.

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- b. Applied to MACOM Level Option. The MACOMs normally perform specialized basic functions of the Army, e.g., organizing, training, and equipping. However, as a byproduct of their primary missions, the MACOMs currently produce numerous publications. While MACOMs do not formally publish standards today, most of these standards, in slightly different format, do appear in DA pamphlets as yardsticks in staffing guides and are distributed to MACOMs and their subordinate organizations. The MACOMs currently prepare these staffing guides, and the DA staff reviews, approves, and publishes them. Since printing capability is integral to each MACOM headquarters, the publication of standards they develop would be feasible. However, loss of some credibility could occur if standards were issued under a MACOM authority line.
- c. Summary Assessment. Publication of all standards at HQDA is desirable and would enhance credibility. Publication of command standards by MACOMs would also be appropriate.

2.53 Criterion: Value of Placing Publication and Standards Approval (Program Management) at the Same Level (Category II).
Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The MRDP function, "publish standards," involves formatting and publishing standards in directive form. To provide maximum credibility for staffing standards, strict quality control must be exercised. Once these

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quality control parameters have been met, a decision on the adoption of a standard for use in manpower management must be made as part of the program management function. Thus, it naturally follows that simplified processing would result if the publication function were collocated with the approval subfunction of program management.

- b. Applied to MACOM Level Option. Collocation of the publication function with standards approval (program management) would provide the benefits as cited for HQDA level. Because the program management function at MACOM level is performed with reduced scope and does not include standards approval, collocation at MACOM level would not be beneficial.
- c. Summary Assessment. Collocation of standards publication and standards approval (program management) at the same organizational level would strengthen program control.

2.54 Criterion: Value of Centralized Publication of Products of an Army-Wide Program (Category III). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The MRDP function, "publish standards," involves formatting and publishing standards in directive form. The ultimate goal of the manpower requirements program is a credible statement of requirements for the Army to present to OSD, OMB, and Congress. Since all standards are subjected to the same quality assurance considerations at HQDA level, their publication

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by HQDA would clearly indicate the HQDA "stamp of approval" and would, in turn, maximize their credibility.

- b. Applied to MACOM Level Option. With quality assurance and standards approval recommended for performance at HQDA level, all MACOM standards studies would be submitted to that level for review and approval. While this procedure assures that all standards studies would be of the same quality, publication of unique standards at MACOM level would not provide the obvious DA staff approval that is inherent in a DA publication.
- c. Summary Assessment. Publication of all standards by HQDA would help to achieve the goal of presenting a credible statement of requirements to OSD, OMB, and Congress by clearly indicating that all standards have been approved by the HQDA staff.

2.55 Recommendation. All standards should be published by HQDA after their approval at that level. It is feasible for MACOMs to publish their own unique standards after their approval by HQDA.

Determine Requirements

2.56 Criterion: Directed Assignment of Function (Category I). There are no directives that stipulate placement of this function.

2.57 Criterion: Function Required to be Performed by Army Management Headquarters Activity (AR 570-8) (Category I). This criterion would only apply to HQDA and MACOM level options. Application of this criterion is as follows:

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- a. Applied to HQDA Level Option. The MRDP function, "determine requirements," involves the analysis, development, and review of manpower requirements. Requirements determination at the HQDA level involves the review of requirements proposed by subordinate organizations. Requirements at the DA level involve Army-wide considerations and future year needs for the PPBS that fall under the purview of AMHA functional area--long range planning, programming, and budgeting.
- b. Applied to MACOM Level Option. MACOMs are currently responsible for inputs to the PPBS. Since manpower requirements are an essential input to the PPBS, the determination of requirements falls within the AMHA functional area--long-range planning, programming, and budgeting.
- c. Applied to Installation Level Option. Performance of this function below MACOM/sub-MACOM level is not a management headquarters function.
- d. Summary Assessment. When dealing with the broad aspects of requirements determination, this function must be performed at the HQDA or MACOM level.

2.58 Criterion: Functional Compatibility Between Existing Functions of Organizational Entity Under Consideration and Program Function (Category II). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The MRDP function, "determine requirements," involves the analysis, development, and review of manpower requirements. Current DA staff functions involve the conduct of

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long-range planning, resource determination and allocation, the development of Army-wide objectives, the formulation of broad policy guidance, and the supervision and control of operations. The determination of requirements at the DA staff level includes the review/analysis of changes in requirements submitted by subordinates and the development or validation of manpower requirements for emerging Army needs. While requirements supported by staffing standards can be easily validated, requirements for functional areas not covered by standards will generate the need for more extensive reviews and analysis to assure credibility of the overall Army statement of requirements submitted to OSD, OMB, and Congress in each budget.

- b. Applied to MACOM Level Option. The MACOMs normally perform specialized basic functions of the Army, e.g., organizing, training, and equipping. To properly provide for personnel to perform their mission, manpower requirements must be accurately determined. Accordingly, MACOMs must have the capability either to determine their requirements or to evaluate requirements submitted by subordinates. Since requirements are established by MACOMs today, the continued assignment of a requirements determination function is appropriate.
- c. Applied to Installation Level Option. Determination of requirements within the MACOMs is handled in various ways. Basically, MACOMs either calculate all requirements at the MACOM headquarters, evaluate requirements submitted by their subordinate organizations, or some combination of these

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two methods. These subordinate organizations may or may not be major installations, depending on the command structure (e.g., some MACOMs do not own or operate any installations). However, all commanders of subordinate organizations are in a position to state their manpower needs for performing their assigned missions. Some of these commanders have dedicated personnel to perform formal manpower requirements, others do not. Performance of this function below MACOM level is only warranted if workload justifies it. However, the use of the term "installation" does not appear to be an adequately defined manpower grouping to routinely establish a requirements determination function at every installation.

- d. Summary Assessment. Requirements determination is appropriate at HQDA and MACOM levels. Statements of requirements (or changes) are appropriate from commanders below MACOM level; however, a requirements determination function with dedicated manpower below MACOM level (sub-MACOM/installation) is warranted only when workload justifies such an allocation of authorizations.

2.59 Criterion: Value of Performing Functions at More Than One Level (Category III). Application of this criterion is as follows:

- a. Applied to HQDA Level Option. The MRDP function, "determine requirements," involves the analysis, development, and review of manpower requirements. Since a credible requirements program must be presented to OSD, OMB, and Congress, members of

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the DA staff are required to present and defend this program. To become knowledgeable of program contents, the DA staff must review and evaluate the program for validity.

- b. Applied to MACOM Level Option. Since MACOMs are assigned the basic functions of the Army, the commanders are responsible for stating their manpower requirement needs. If these requirements are generated at MACOM level, they in effect represent the MACOM commander's position. If submitted by MACOM subordinates, then a MACOM headquarters review is in order to assure validity, prior to being forwarded to DA level as a MACOM position. This MACOM review would also ensure increased credibility of the stated needs by assuring that only valid requirements are submitted to the DA staff for evaluation.
- c. Summary Assessment. Development or review of requirements at intermediate levels between operational activities and HQDA level is appropriate to ensure credibility of stated manpower requirements and to avoid HQDA review of unwarranted and unjustified requirement requests.

2.60 Recommendation. The requirements determination function should be performed by full-time dedicated personnel at HQDA and MACOM levels. Organizations below MACOM level should be assigned this function only when it is not cost effective for performance solely at the MACOM headquarters.

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Summary of Where Recommendations

2.61 Provide Program Management. This function is required at the following levels:

- DA Staff level
- MACOM level at reduced scope if the command has a standards development role.

2.62 Prescribe Standards Development Methodology. This function can/should only be performed at DA staff level.

2.63 Enforce Standards Development Methodology and Policies. This function is required at the following levels:

- DA staff level for enhanced credibility of standards
- MACOM level with a standards development role.

2.64 Develop Standards. This function can/should be accomplished as follows:

- Development of all staffing standards for the Army by a central activity at the DA level. Since standards development is an operational function, its performance at the DA level would be accomplished appropriately by an FOA (by adding to an existing one or organizing a new one).
- Designation of one or more MACOMs to develop Army-common standards in addition to their unique standards. Development of Army-common standards by one or more MACOMs would force these commands to

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coordinate their efforts Army-wide with other MACOMs to avoid conflicts of efforts and to ensure all MACOM needs are considered. Such extensive cross-coordination would require the DA staff to be deeply involved in an operational function to ensure full spectrum coverage and to adjudicate problem areas among the commands.

- Development of common standards at the DA level by a central activity (FOA), and MACOM development of their own unique standards.

2.65 Publish Standards. This function should be performed at the DA level to enhance standards credibility. Publication of unique standards at MACOM level is feasible; however, this presents the potential for reduced credibility of the resultant requirements.

2.66 Determine Requirements. This function is required at HQDA and MACOM level and may be exercised below MACOM level with full time personnel when span of control warrants it.

2.67 Table 2.2 contains the where organizational options derived from the where criteria application. Three possible organizational arrangements were developed using the results of the where criteria application. These three organizational alternatives were developed based on various options for the assignment of standards development responsibilities. The salient features of each organizational alternative, presented in Figures 2.1, 2.2 and 2.3 are as follows:

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TABLE 2.2
ORGANIZATIONAL OPTIONS: WHERE

Program Function	Organizational Options: Where	Results of Criteria Application	Summary Basis
Provide program management ^{1/}	HQDA MACOM Both	Both ^{2/}	An effective Army-wide program must have central overall direction at the DA level MACOMS require capability to manage their own programs
Prescribe standards development methodology ^{1/}	HQDA MACOM Both	HQDA	Uniform procedures are crucial to an effective Army-wide program
Enforce standards development methodology and policies ^{1/}	HQDA MACOM Both	Both ^{2/}	Central enforcement assures consistent high quality of products prepared by multiple activities Enforcement (quality control) is inherent in the standards development function and those MACOMS with a development role should perform quality control
Develop standards ^{3/}	HQDA MACOM Installation Combination of Above	HQDA (Alternative) MACOM (Alternative) HQDA and MACOM (Alternative)	Development of standards by DA assures broad perspective, avoids potential bias, provides functional expertise to DA staff, avoids detailed management of MACOM task, and ensures availability of proper resources MACOM development of standards enhances acceptance and use; also allows optimum decentralized execution DA development of common and MACOM development of unique standards provides "best of both worlds"
Publish standards ^{1/}	HQDA MACOM Both	HQDA Both (Alternative)	Publication at DA level would simplify processing and enhance credibility
Requirements determination (includes functions/activities not under standards) ^{1/}	HQDA MACOM Installation Combination of Above	HQDA MACOM (Delegated to Subordinate levels when warranted)	Integral part of manpower management role Function could be delegated in larger commands

^{1/} Management headquarters functions at HQDA and MACOM Levels.

^{2/} Not required at MACOM under alternative where DA develops all standards.

^{3/} Management headquarters function when performed in MACOM headquarters.

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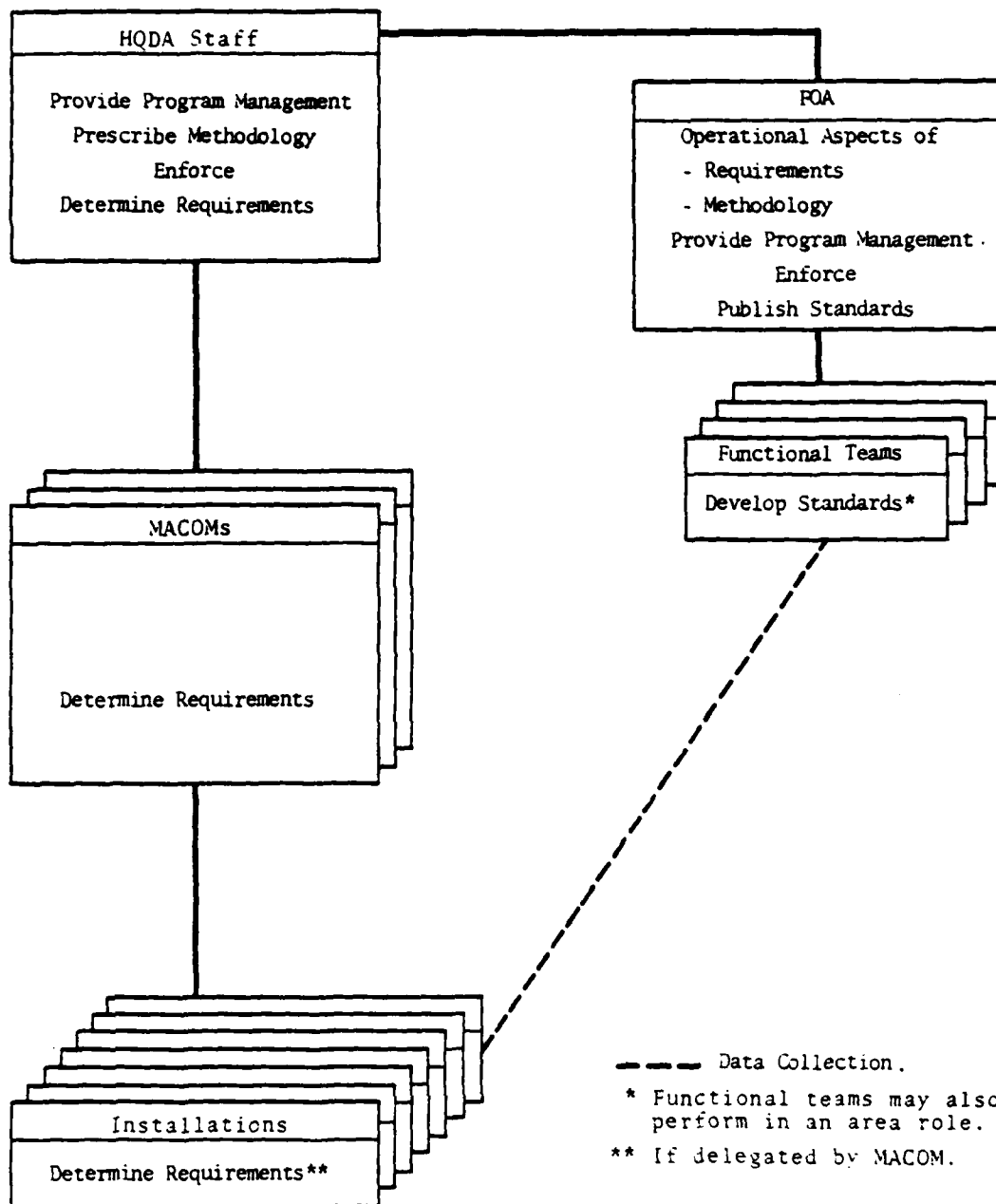


FIGURE 2.1
WHERE ORGANIZATIONAL STRUCTURE,
ALTERNATIVE 1

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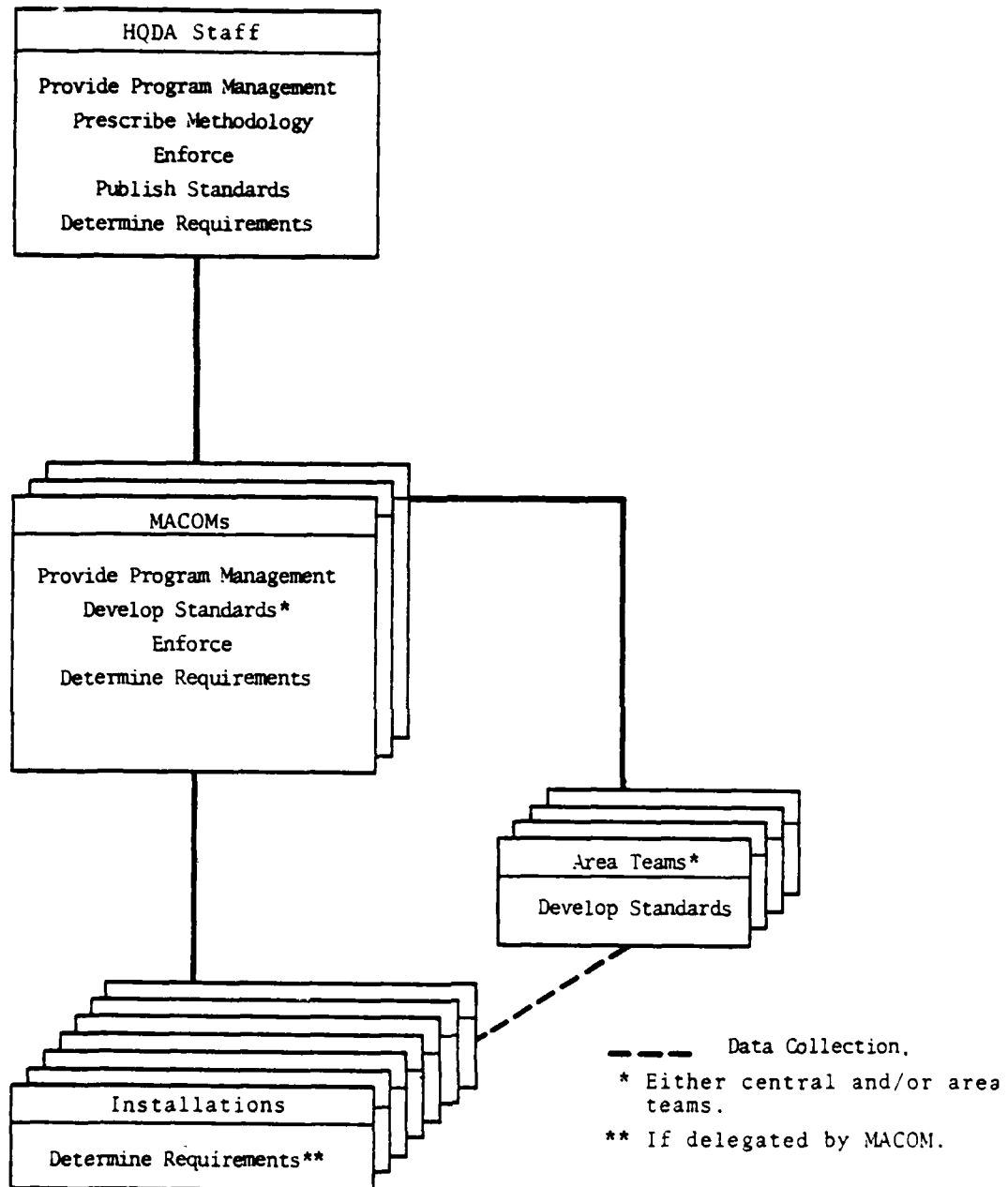


FIGURE 2.2
WHERE ORGANIZATIONAL STRUCTURE,
ALTERNATIVE 2

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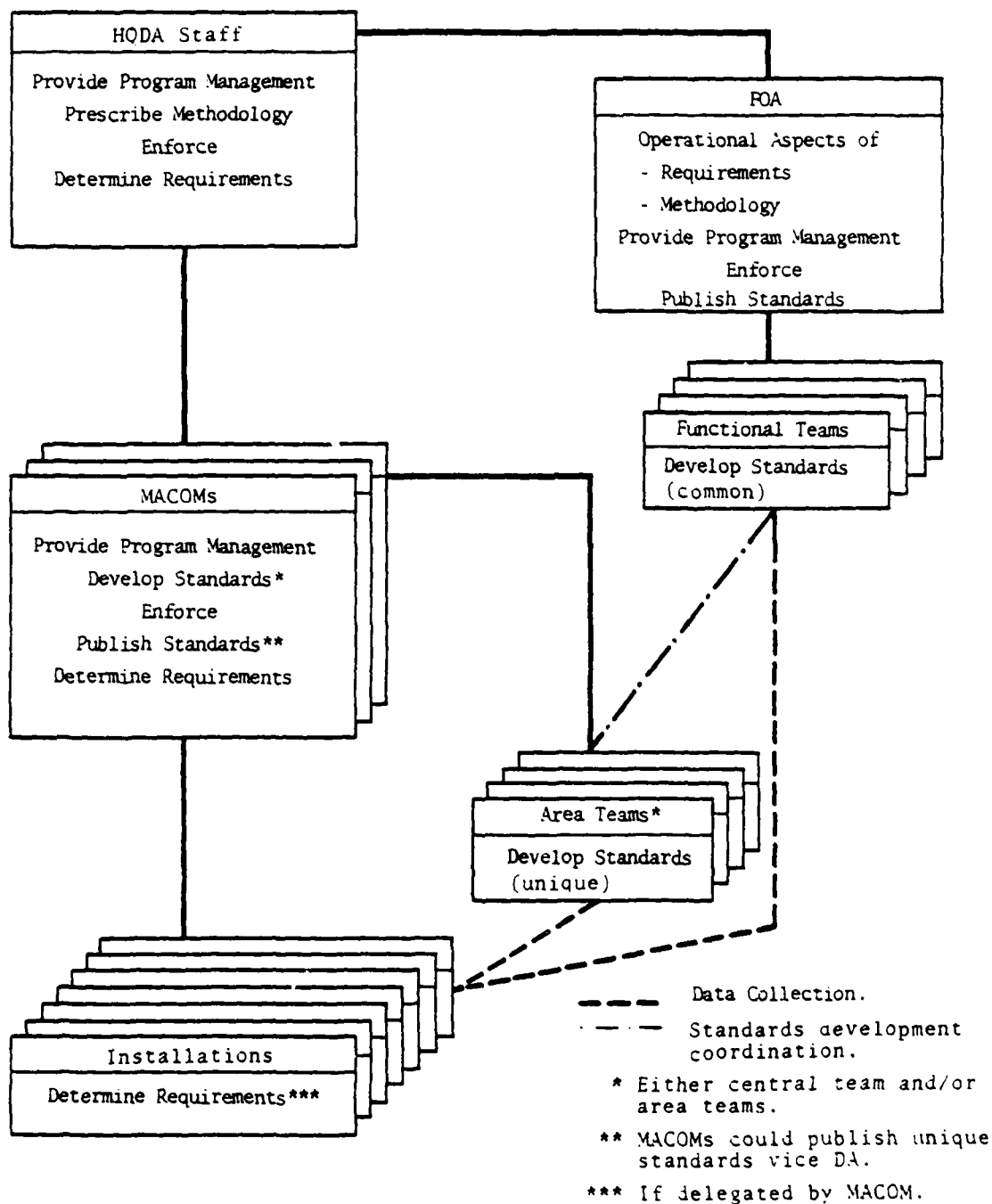


FIGURE 2.3
WHERE ORGANIZATIONAL STRUCTURE,
ALTERNATIVE 3

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STUDY OF ARMY MANPOWER REQUIREMENTS, DETERMINATION PROCEDURES, --ETC(U)

SEP 81 G H SMITH, R W HARTT, W C FRANK

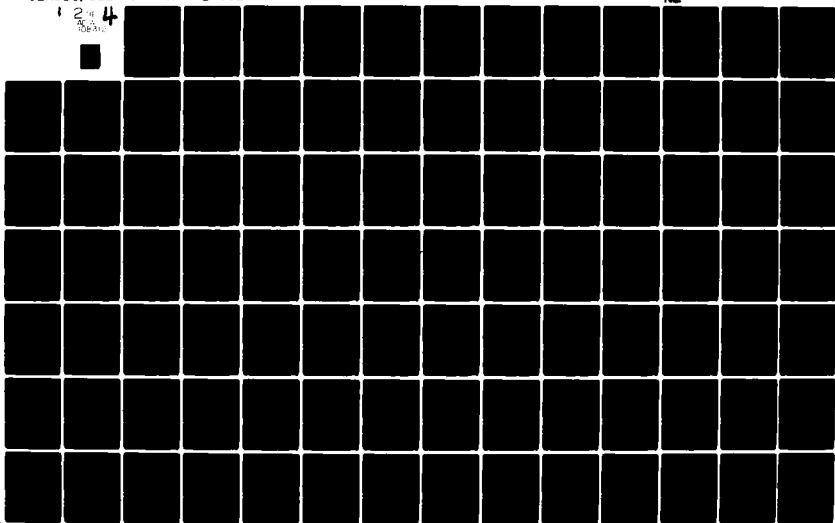
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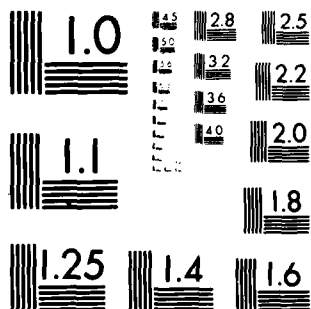
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- Alternative 1--Under this option all staffing standards (both Army-common and command-unique) development is accomplished by a single organization reporting to the DA staff. While MACOMs would coordinate on all development plans involving their authorizations, they could not have any staffing standards development role. Thus, MACOM responsibilities would be limited to the "determine requirements" function.
- Alternative 2--Under this option MACOMs would be responsible for development of their own unique standards. In addition, one or more MACOMs would be assigned the responsibility to develop Army common standards with specific direction and guidance by the DA staff. MACOMs with standards development roles would also have the concomitant functions of providing program management and enforcing standards development methodology and policies. All MACOMs would have the "determine requirements" function.
- Alternative 3--Under this option, MACOMs would develop their own unique standards, and a single organization (FOA) reporting to the DA staff would develop all Army-common standards. The MACOMs and the FOA would also have the concomitant functions of providing program management and enforcing standards development methodology and policies for their products. All MACOMs would have the "determine requirements" function.

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APPLICATION OF WHO CRITERIA

Staff Section/Office/Activity Spectrum

2.68 HQDA Level. At the HQDA level the Army general staff issues directives and programs to accomplish DA plans and policies, and supervises the execution and implementation of these directives and programs. Therefore, the Army general staff or an FOA under the purview of any general staff element would constitute the possible who options available for assignment of the program functions at the HQDA level. The Army general staff includes the following offices:

- Chief of Staff (CS)
- Deputy Chief of Staff for Operations and Plans (DCSOPS)
- Deputy Chief of Staff for Personnel (DCSPER)
- Deputy Chief of Staff for Logistics (DCSLOG)
- Deputy Chief of Staff for Research, Development, and Acquisition (DCSRDA)
- Comptroller of the Army (COA)
- Assistant Chief of Staff Intelligence (ASCI)
- Assistant Chief of Staff Automation and Communications (ACSAC).

Through an analysis of the functions assigned to the Army general staff in AR 10-5, "Organizations and Functions Department of the Army," it was established that the program functions would only be compatible with those functions currently assigned to COA or DCSPER. Primary functions for COA, as assigned by AR 10-5, include: accounting, budget formulation and execution, contract

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funding, cost and economic analysis, entitlement, fiscal/finance service, and management improvement. As part of the management improvement responsibility, COA manages the Productivity Improvement Program, which involves the following elements:

- Productivity Measurement and Evaluation
- Methods and Standards (M&S)
- Value Engineering
- Quick Return on Investment
- Management Practices.

The primary functions of DCSPER, as assigned by AR 10-5, include: military and civilian personnel management; personnel procurement, retention, and separation; individual training; preparing the manpower program for POM, budget, and apportionment; personnel mobilization; compensation and entitlement; organizational effectiveness; review and approval of personnel section of TOEs to ensure proper application of manpower and personnel policies and criteria; utilization of manpower; and acting as appropriation director for military pay and other selected programs. The following are basic functions of manpower management (AR 570-4):

- Determination of manpower requirements
- Manpower planning and programming
- Compilation of manpower data
- Allocation of manpower resources
- Determination of manpower authorizations
- Documentation of manpower requirements and authorizations

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- Evaluation of manpower utilization
- Development of performance standards and staffing guides.

2.69 Summary Assessment. Specific compatibility between the MRDP functions and COA's functions is found in the management improvement function, which is primarily carried out by the Productivity Improvement Program. In the DCSPER area the manpower management function is most compatible with the MRDP functions. A review of the requirements program functions in Appendix A indicates that a joint effort in the performance of these functions with the possible exception of the development of standards, would unnecessarily fragment the program and violate accepted management principles. Because the development of standards is an operational function, performance at the HQDA level would be accomplished in an FOA. Because FOAs are responsible to a single Army staff element, joint development involving two DA staff sections would not be appropriate. Thus, the options for who can/should perform the MRDP functions at the HQDA level are basically limited to COA or DCSPER.

2.70 MACOM Level. At the MACOM level the vertical extension of these two HQDA functions--management improvement and manpower management--exist with reduced scope, and the staff sections that perform these functions are the logical options for who can/should perform the program functions at the MACOM level. There are a number of different organizational configurations that encompass these functions at the MACOM level. These staff sections include the following:

- Deputy Chief of Staff for Resource Management or Director, Resource Management (DCSRM/DRM)

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- Comptroller
- Assistant Chief of Staff for Force Development (ACSFOR)
- Deputy Chief of Staff for Personnel.

After a review of the organizations and functions at the MACOM level, it was determined that MACOMs with a DCSRM/DRM were responsible for both the management improvement and manpower management functions. Thus, in MACOMs with DCSRM/DRM arrangements, all MRDP functions would be assigned to that staff section. In other MACOMs, an ACSFOR performs the manpower management function; therefore, when a MACOM has an ACSFOR, any new function added to manpower management would automatically be assigned to that staff section. The remaining MACOM staff sections that perform management improvement and manpower management functions have similar titles as those at the HQDA level of Comptroller and Deputy Chief of Staff for Personnel, and are addressed in the who criteria applications.

2.71 Summary Assessment. The options for who can/should be performing the MRDP functions at the MACOM level are the staff sections that are currently assigned either the management improvement or manpower management functions. Table 2.3 presents the candidate staff sections who can/should perform the function depending upon the particular MACOM organizational configuration.

Application Procedures

2.72 The identification of who can/should perform the MRDP functions, at the organizational level selected, was accomplished by following the same procedures used during application of the

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TABLE 2.3
CANDIDATE MACOM
STAFF SECTIONS WHO CAN/SHOULD PERFORM FUNCTION*

Staff Section	Management Improvement	Manpower Management
DCSRM/RM	X	X
Comptroller	X	X
ASCFOR	--	X
DCSPER	--	X

* A joint effort for the program function, develop standards, is also an option at the MACOM level.

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where criteria. The who criteria were applied in sequence until the viable options for the placement of the functions were identified or the process was completed.

Provide Program Management

2.73 Criterion: Directed Assignment of Functions (Category I). There are no directives that stipulate assignment of this function to a particular staff section.

2.74 Criterion: Functional Homogeneity Between Existing Functions of Organizational Entity Under Consideration and Program Function (Category II). This criterion has application at HQDA and MACOM levels.

2.75 HQDA Level. Application of this criterion to the HQDA level is as follows:

- a. Applied to COA Option. The MRDP function, "provide program management," includes the establishment of policies and objectives for the overall program, setting priorities for standards development efforts, and approving standards for implementation prior to their use in determining manpower requirements for submission to OSD, OMB, and Congress. Primary functions for COA, as assigned by AR 10-5, include: accounting, budget formulation and execution, contract funding, cost and economic analysis, entitlement, fiscal/finance service, and management improvement. As part of the management improvement responsibility, COA manages the Productivity Improvement Program, which involves the following elements:

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1. Productivity measurement and evaluation
2. Methods and standards (M&S)
3. Value engineering
4. Quick return on investment
5. Management practices.

The functions associated with the Productivity Improvement Program are similar to the management function of a MRDP. While there is some interrelation with other elements of this program, primary interface is with the M&S element. Policies for the productivity program and M&S are outlined in AR 5-4.

- b. Applied to DCSPER Option. The primary functions of DCSPER, as assigned by AR 10-5, are: military and civilian personnel management; personnel procurement, retention and separation; individual training; preparing the manpower program for the POM, budget, and apportionment; personnel mobilization; compensation and entitlement; organizational effectiveness; review and approval of personnel section of TOEs to ensure proper application of manpower and personnel policies and criteria; utilization of manpower; and acting as appropriation director for military pay and other selected programs. The foregoing DCSPER functions indicate similarity with the management function of MRDP in the following areas:

1. Preparing the manpower program for the POM
2. Budget requirements and apportionment

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3. Manpower policies

4. Utilization of manpower.

There are also some interfaces between the program management function and a number of the other DCSPER functions listed above.

- c. Summary Assessment. The function to provide program management is more homogeneous with the DCSPER functions than the COA functions when performance of all of the subfunctions of program management are considered.

2.76 MACOM Level. Application of this criterion to the MACOM level is as follows:

- a. Applied to the Management Improvement Option. The MRDP function, "provide program management," includes the establishment of policies and objectives for the overall program, setting priorities for standards development efforts, and monitoring progress in meeting these goals. Management improvement functions at the MACOM level are generally the same as those at DA but at a reduced scope appropriate for the MACOM level. The management functions of the manpower requirements program are also reduced in scope in a similar vein. The one key difference is that standards approval has not been recommended for delegation to the MACOMs.
- b. Applied to the Manpower Management Option. The primary manpower management functions at MACOM level are generally the same as those at HQDA

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level. The basic functions of manpower management (AR 570-4) are as follows:

1. Determination of manpower requirements
2. Manpower planning and programming
3. Compilation of manpower data
4. Allocation of manpower resources
5. Determination of manpower authorizations
6. Documentation of manpower requirements and authorizations
7. Evaluation of manpower utilization
8. Development of performance standards and staffing guides.

The MRDP function, "provide program management," is reduced in scope at the MACOM level. The key change is that standards approval for use in determining requirements is not proposed for delegation to the MACOMs.

- c. Summary Assessment. The function, "provide program management," is more homogeneous with the manpower management function than the management improvement function when all of the program management subfunctions are considered.

2.77 Criterion: Ability to Integrate All Functions of the Requirements Determination and Utilization Process (Category III). This criterion applies at HQDA and MACOM levels.

2.78 HQDA Level. Application of this criterion to this level is as follows:

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- a. Applied to COA Option. The MRDP function, "provide program management," includes the establishment of policies and objectives for the overall program, setting priorities for standards development efforts, and approving standards for implementation. Requirements determination and manpower utilization are integral functions of manpower management. A primary role of program management will be to coordinate the requirements determination effort with the other facets of manpower management. This integration will involve the following program management subfunctions:

1. Establishing policies
2. Establishing goals
3. Setting priorities
4. Monitoring progress in meeting established goals
5. Insuring adequate resources for the program
6. Approval of standards for use in determining manpower requirements.

Consolidation of the manpower management functions within the same organizational entity would facilitate integration. While some of the other subfunctions could be performed by COA, fragmentation of the program subfunctions would reduce program effectiveness by unnecessarily complicating coordination and lines of communication.

- b. Applied to DCSPER Option. DCSPER is now responsible for all facets of requirements determination.

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The present program calls for manpower surveys and the use of staffing guides to determine requirements. Thus, all manpower requirements determination functions are now being performed by the manpower manager (DCSPER).

- c. Summary Assessment. Assignment of program management to DCSPER would keep manpower functions consolidated and would enhance the integration of the manpower requirements determination with utilization.

2.79 MACOM Level. Application of this criterion to this level is as follows:

- a. Applied to the Management Improvement Option.
The integration of program functions with reduced scope involves the same principles that were outlined for the COA option. As stated previously, the integral role that manpower requirements determination plays in manpower management clearly indicates that certain program management subfunctions should be performed by the manpower manager. These subfunctions include:
 - 1. Establishing MACOM policies
 - 2. Setting coverage goals
 - 3. Monitoring progress in meeting these goals
 - 4. Insuring adequate resources for the requirements determination program.

With these listed subfunctions integral to the MACOM manpower manager, assignment of the residual

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program management subfunctions to management improvement would fragment the manpower management.

- b. Applied to the Manpower Management Option. It is essential that all facets of manpower management be consolidated at the MACOM level. Requirements determination is now accomplished at the MACOM level by conducting manpower surveys that use staffing guides (prepared by MACOMs and approved at DA level). Thus, the requirements program is now managed as an integrated program at the MACOM level by the manpower manager.
- c. Summary Assessment. The manpower manager at the MACOM level is now responsible for integrating the requirements determination program as part of manpower management. Since the principal subfunction of program management is integral to manpower management, this function should be assigned to the present manpower manager.

2.80 Recommendation. It is recommended that the function of program management be assigned to DCSPER in HQDA and manpower management at MACOM level.

Prescribe Standards Development Methodology

2.81 Criterion: Directed Assignment of Functions (Category I). There are no OSD directives that stipulate performance by a staff section.

2.82 Criterion: Functional Homogeneity Between Existing Functions of Organizational Entity Under Consideration and Program Function (Category II). This applies at the HQDA and MACOM levels.

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2.83 HQDA Level. Application of this criterion to this level is as follows:

- a. Applied to COA Option. The MRDP function, "prescribe standards development methodology," involves the preparation and publication of detailed procedures for use Army-wide in the development of staffing standards. It also involves establishing the points in the development cycle at which quality assurance will be exercised. Primary functions for COA, as assigned by AR 10-5, include: accounting, budget formulation and execution, contract financing, cost and economic analysis, entitlement, finance/fiscal service, and management improvement. As part of the management improvement responsibility, COA manages the Productivity Improvement Program, which involves the following elements:

1. Productivity measurement and evaluation
2. Methods and standards
3. Value engineering
4. Quick return on investment
5. Management practices.

The M&S element of the Productivity Improvement Program contains functions that are most similar to prescribing standards development methodology for a manpower requirements determination program. While policies for the overall productivity program and M&S are outlined in AR 5-4, several other COA-sponsored publications contain procedures for various types of M&S studies. These procedures

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are similar to those envisioned for a staffing standards effort.

- b. Applied to DCSPER Option. The primary functions of DCSPER, as assigned by AR 10-5, include: military and civilian personnel management; personnel procurement, retention and separation; individual training; preparing the manpower program for the POM, budget and apportionment; personnel mobilization; compensation and entitlement; review and approval of personnel section of TOEs to ensure proper application of manpower and personnel policies and criteria; utilization of manpower; and acting as appropriation director for military pay and other selected programs. DCSPER currently prescribes procedures for the survey teams and staffing guides, and publishes manpower guidance covering input to the PPBS. Manpower requirements for the PPBS are determined through the use of manpower surveys and staffing guides.
- c. Summary Assessment. Both COA and DCSPER are proponents of procedures that are compatible with prescribing standards development methodology.

2.84 Criterion: Simplicity of Procedures and Control (Category III). This criterion is applied only at the HQDA level.

2.85 HQDA Level. Application of the criterion at this level is as follows:

- a. Applied to COA Option. The MRDP function, "prescribe standards development methodology," involves the development and publication of detailed

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procedures for use Army-wide in the development of staffing standards. COA has the inherent capability to issue detailed procedures under which standards would be developed. However, these procedures must implement the overall policies of the program. Neither procedures nor control would be simplified under an arrangement where one staff office establishes the policies and another staff section prepares the implementing instructions. This would be the situation if COA prepared the instructions and DCSPER managed the program as recommended above.

- b. Applied to DCSPER Option. DCSPER has the inherent capability to issue detailed instructions under which Army-wide standards would be developed. A close interface between policymaking (program management) and implementing instructions would simplify coordination and control of the program. Detailed procedures that implement policies are paramount to effective control of a program, much of which operates under a decentralized concept. The collocation of procedures and policy (program management) in the same staff section would simplify coordination and control.
- c. Summary Assessment. Both COA and DCSPER are capable of prescribing standards development methodology. The mutual reinforcement of this program function with management of the program indicates that coordination of procedures would be simplified and control would be enhanced if the function were performed by the same staff section.

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2.86 Recommendation. The function of prescribing standards development methodology should be assigned to DCSPER at the HQDA level.

Enforce Standards Development Methodology and Policies

2.87 Criterion: Directed Assignment of Functions (Category I). There are no directives that prescribe placement of this function.

2.88 Criterion: Functional Homogeneity Between Existing Functions of Organizational Activity Under Consideration and Program Function (Category II). This criterion applies at HQDA and MACOM levels.

2.89 HQDA Level. Application of this criterion at this level is as follows:

- a. Applied to COA Option. The MRDP function, "enforce standards development methodology and policies," includes the review of standards development studies (to include measurement plans) for substantive content and compliance with manpower policy and procedures. It also includes the review of completed standards studies for adequacy of data collected, propriety of computations and manning equations, as well as the utility of program estimating equations and factors. Primary functions for COA, as assigned by AR 10-5, include: accounting, budget formulation and execution, contract financing, cost and economic analysis, entitlement, finance/fiscal service, and management improvement.

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As part of the management improvement responsibility, COA manages the Productivity Improvement Program, which involves the following elements:

1. Productivity measurement and evaluation
2. Methods and standards
3. Value engineering
4. Quick return on investment
5. Management practices.

COA currently participates in the review of Army-wide garrison standards for technical content and monitors methods and standards efforts as part of their management improvement function. Currently, summary standards with Army-wide (more than one MACOM) applicability are reviewed by both DCSPER and COA. While the COA review is for technical adequacy, the DCSPER review includes a check for compliance with all manpower policies including those related to the M&S efforts. Thus, assignment of the enforcement role to COA would limit it to the technical adequacy of standards. An additional DCSPER review for substantive content and compliance with broad manpower policies would still be required.

- b. Applied to DCSPER Option. The primary functions of DCSPER, as assigned by AR 10-5, include: military and civilian personnel management; personnel procurement, retention and separation; individual training; preparing the manpower program for the POM, budget and apportionment; personnel mobilization; compensation and entitlement; review and approval of personnel section of TOEs to ensure

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proper application of manpower and personnel policies and criteria; utilization of manpower; and acting as appropriation director for pay and other selected programs. DCSPER's current enforcement related functions are as follows:

1. The review of MACOM manpower surveys for compliance with procedures and manpower policies
2. The review of staffing guides with associated yardsticks for adequacy and compliance with manpower policies prior to publication.

DCSPER has the capability to perform a full review (both technical and substantive) for the enforcement of standards development.

- c. Summary Assessment. DCSPER could perform the function of enforcing standards development methodology and policies unilaterally, while COA would require assistance from DCSPER.

2.90 MACOM Level. Application of this criterion to this level is as follows:

- a. Applied to the Management Improvement Option.
The MRDP function, "enforce standards development methodology and policies," includes the review of all standards development plans for substantive content and compliance with acceptable procedures.
It also includes the review of completed standards studies for adequacy of data collected, propriety of computations, and manning equations. Management improvement at the MACOM level primarily involves the following:

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1. Productivity measurement and evaluation
2. Methods and standards
3. Value engineering
4. Quick return on investment
5. Management practices

A standards study review performed by the M&S staff would be limited to the technical adequacy of the standards development effort. The study would still require an additional review by manpower for substantive content and compliance with published manpower policies.

- b. Applied to the Manpower Management Option. The basic functions of manpower management include the following:

1. Determination of manpower requirements
Manpower planning and programming
3. Compilation of manpower data
4. Allocation of manpower resources
5. Determination of manpower authorizations
6. Documentation of manpower requirements and authorization
7. Evaluation of manpower utilization
8. Development of performance standards and staffing guides.

The MACOM manpower management staff currently performs reviews of manpower survey team reports for compliance with procedures and manpower policies. They also perform a similar review for

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individual yardsticks associated with staffing guides. Such reviews include summary standards to be used in staffing guides.

- c. Summary Assessment. The MACOM manpower management staff section could perform the review unilaterally, while the MACOM management improvement staff section would require assistance from the manpower management element.

2.91 Criterion: Product Homogeneity Between Existing Product(s) of Organizational Activities Under Consideration and Product(s) of Program Function (Category II). This criterion applies at HQDA and MACOM levels.

2.92 HQDA Level. Application of this criterion at this level is as follows:

- a. Applied to COA Option. The MRDP function, "enforce standards development methodology and policies," includes the review of all standards development plans for substantive content and compliance with acceptable procedures. It also includes the review of completed standards studies for adequacy of data collected, propriety of computations, and manning equations. As previously indicated, the COA review functions of this nature are conducted by the M&S element. M&S is an integrated people-oriented activity devoted to increased productivity. The products of the methods and standards effort include the following:
 - 1. Measurement plans
 - 2. Productivity enhancing method improvements

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3. Standards
 4. Management information systems.
- b. Applied to DCSPER Option. DCSPER currently performs an enforcement role in the manpower requirements program as follows:
1. Reviews manpower survey reports for compliance with Army procedures and policies.
 2. Performs quality control on MACOM-prepared staffing guides that contain yardsticks (manning tables) prepared using historical information from previous manpower surveys and/or summary standards as developed by the MACOM M&S section. This DCSPER review is an enforcement type of activity as it ensures compliance with all Army-wide policies and procedures as well as compliance with a directed format.
 3. Conducts reviews of staffing standards that will apply to more than one MACOM for compliance with manpower policies and procedures prior to their use by commands in programming manpower requirements.
- c. Summary Assessment. Limited homogeneity exists between the MRDP enforcement function and current COA functions. On the other hand, DCSPER currently performs enforcement type functions on manpower survey reports and the staffing guides used by manpower survey teams. These current DCSPER enforcement roles are extremely homogeneous with the enforcement function envisioned under the standards based MRDP.

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2.93 MACOM Level. Application of this criterion to this level is as follows:

- a. Applied to the Management Improvement Option.
The MRDP function, "enforce standards development methodology and policies," includes the review of all standards development plans for substantive content and compliance with acceptable procedures. It also includes the review of completed standards studies for adequacy of data collected, propriety of computations, and manning equations. The management improvement elements at the MACOM level are similar to those at HQDA level. Thus, M&S activities at the MACOM level are part of the management improvement responsibility. M&S is the prime office involved in the development of command-unique summary standards (FORSCOM also develops garrison standards for Army-wide use), which are currently a MACOM responsibility.
- b. Applied to the Manpower Management Option. Manpower management at the MACOM level is currently responsible for conducting manpower surveys and preparing the staffing guides used by the survey teams. The yardsticks in these staffing guides are similar to staffing standards, and many of the techniques used in their preparation are similar. Manpower management also participates in M&S development of summary staffing standards.
- c. Summary Assessment. Current enforcement efforts by both the management improvement and manpower management staff sections are homogeneous with the products to be used in the MRDP.

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2.94 Recommendation. DCSPER should be assigned responsibility for the enforcement of standards development methodology and policies at the HQDA level and the manpower management element at the MACOM level provided the MACOM has a standards development role.

Develop Standards

2.95 Criterion: Directed Assignment of Functions (Category I). There are no directives that prescribe placement of this function.

2.96 Criterion: Functional Homogeneity Between Existing Functions of Organizational Entity Under Consideration and Program Function (Category II). This criterion applies at the HQDA and MACOM levels.

2.97 HQDA Level. Application of this criterion at this level is as follows:

- a. Applied to COA Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equations that relate authorizations to workload. COA is currently responsible for overall M&S policies, except those related to manpower. While COA manages the M&S effort centrally, the execution is delegated to organizations below DA level. As indicated in the where criteria application, development of standards is an operational function and performance at the HQDA staff level is not appropriate. If development of standards is accomplished at the DA level, it would be in an FOA. Since each FOA is the responsibility of

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a particular DA staff office/section, it receives direct supervision from its sponsor. In an Army-wide staffing standards program, all activities developing standards would utilize the same procedures, formats, etc. Ergo, the DA staff would treat the FOA, for all technical aspects of standards development, like another MACOM. Thus, maximum functional homogeneity would be achieved if the staff office/section that managed the MRDP were also responsible for any FOA that developed standards.

- b. Applied to DCSPER Option. As outlined in the COA option for development of standards, maximum homogeneity for development of standards is achieved if the sponsor of any FOA is also the staff office/section that is responsible for the overall program management. Because of the requirement for the DA staff to interface the FOA's efforts with any MACOM standards development efforts, there would be definite benefits if any central development effort were sponsored by the same staff office/section that managed the Army program world-wide. Since DCSPER is now responsible for manpower related policies for the M&S efforts, the MACOMs receive their M&S policies from two separate sources. Assignment of the function to develop standards along with associated management and policies to DCSPER would eliminate this split in responsibility at the DA staff level.

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- c. **Summary Assessment.** Both COA and DCSPER have homogeneous functions for monitoring field operations. The performance of the standards development function by an FOA could be viewed as "just another MACOM," because the FOA would utilize the same procedures that would be used world-wide in the development of standards. Since both DCSPER and COA have FOAs, the addition of another FOA would have no significant effect. However, assignment of the FOA to the staff activity responsible for overall management of the requirements program within the Army would provide more homogeneity, because coordination of all elements of the MRDP would be simplified.

2.98 MACOM Level. Application of this criterion to this level is as follows:

- a. Applied to the Management Improvement Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equations that relate authorizations to workload. The management improvement functions at MACOM level are similar to those at HQDA level. One key difference is that standards are developed by the MACOM organizational element responsible for M&S.
- b. Applied to the Manpower Management Option. The basic functions of manpower management (AR 570-4) are as follows:
 - 1. Determination of manpower requirements
 - 2. Manpower planning and programming

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3. Compilation of manpower data
4. Allocation of manpower resources
5. Determination of manpower authorizations
6. Documentation of manpower requirements and authorizations
7. Evaluation of manpower utilization
8. Development of performance standards and staffing guides.

Staffing guides that contain yardsticks are developed by manpower management elements at the MACOM level and forwarded to HQDA for approval and publication.

In the development of these yardsticks, the manpower manager uses some of the same techniques that are used in the development of standards. In some instances, summary standards developed by the MACOM M&S office are used as yardsticks in staffing guides by merely reformatting.

- c. Applied to the Joint Effort Option. The joint development of manpower staffing standards at the MACOM level is currently practiced in the USACC. The manpower staffing standards development responsibilities in USACC are split between the manpower manager (ACSFOR) and the comptroller. Their basic responsibilities under this concept are shown in the following list:

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<u>Manpower</u>	<u>Comptroller</u>
Organization and manpower management	Methods and procedures analysis
Development of manpower standards	Development of labor standards
Development of staffing tables	Work measurement
Implementation of staffing standards	Productivity and performance reporting

The key to the success of the programs in USACC is reflected in the following extract:

It is important to note that while each office retains responsibility for its basic functions, it is only through a unified and cooperative effort throughout all phases of the study so that the program is able to achieve its goals and produce the desired results. ^{3/}

The U.S. Army Communications Command provides an example for the joint development of summary level standards used in manpower determinations. The priority established by the command for this effort is reflected in the relative number of USACC personnel assigned to the development of staffing standards. For example, based upon the TDA populations of USACC and TRADOC, USACC has 3.5 times the number of TRADOC personnel in the M&S function developing summary level standards.

^{3/} USACC, "Productivity and Manpower Staffing Standards Program," dated 1 October 1979, p. 4.

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- d. **Summary Assessment.** Both the management improvement and manpower management staff sections have homogeneous functions at the MACOM today. Based on the current M&S effort to expedite development of summary manpower standards, the management improvement program has an identical function in the standards development area. The development of yardsticks by the manpower managers is also homogeneous with the standards development function. The joint development of standards takes advantage of the capabilities of both staff sections.

2.99 Criterion: Product Homogeneity Between Existing Product(s) of Organizational Activity Under Consideration and Product(s) of the Program Function (Category II). This criterion applies at HQDA and MACOM levels.

2.100 HQDA Level. Application of this criterion at this level is as follows:

- a. **Applied to COA Option.** The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equations that relate authorizations to workload. The ultimate product of the MRDP is a statement of requirements for presentation to OSD, OMB, and Congress. The current M&S studies provide detailed and summary standards that are used to support these statements of requirements. Detailed and summary standards would continue to provide a substantial amount of supporting data in developing functional staffing standards that

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will be the primary basis for the Army's statement of requirements under the MRDP.

- b. Applied to DCSPER Option. Development of the manpower requirements for the PPBS is a DCSPER responsibility. In fulfilling this responsibility, the DCSPER (or his representative) must defend these requirements when they are submitted in the budget to OSD, OMB, and Congress. Under present functional assignments, DCSPER is in a position to control all facets (survey program and staffing guides) of the requirements program preparation. This includes the control over all policies and procedures used in determining these requirements, which he must defend before Congress. The present system ensures integration of all facets of the requirements program, as the DCSPER controls preparation and approval of staffing guides used in the development of manpower requirements.
- c. Summary Assessment. Standards developed by the MACOM M&S activities under the supervision of COA are very homogeneous with standards development under the MRDP. Because yardsticks in staffing guides are developed using some of the same techniques utilized in the development of standards, homogeneity also exists with DCSPER. With DCSPER responsible for supporting the Army's manpower needs to OSD, OMB, and Congress, assignment of this function to DCSPER would allow the same office that presents the Army's statement of requirements to OSD, OMB, and Congress to control all facets of requirements development. This integration would enhance the credibility of the final product.

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Any change from the present staff responsibilities would fragment the requirements process.

2.101 MACOM Level. Application of this criterion to this level is as follows:

- a. Applied to the Management Improvement Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equations that relate authorizations to workload. The management improvement responsibility at the MACOM level includes M&S activities. M&S is the prime office involved in the development of command-unique summary standards that are currently a MACOM responsibility. (Garrison standards for use Army-wide are also developed by FORSCOM).
- b. Applied to the Manpower Management Option. Manpower management at the MACOM level is currently responsible for conducting manpower surveys and preparing the staffing guides used by the survey teams. The yardsticks in these staffing guides are very similar to staffing standards and some of the same techniques used in their preparation. Manpower management also coordinates on all staffing standards development within the command.
- c. Applied to the Joint Effort Option. A joint staffing standards development effort between management improvement and manpower management would assimilate all of the products involved in standards development.

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- d. Summary Assessment. The products of both the management improvement and manpower management staff sections are homogeneous with the development of staffing standards. A joint effort by these two staff sections would encompass all the products currently associated with standards development and staffing guide preparation.

2.102 Criterion: Simplicity of Procedures and Control (Category III). This criterion applies at HQDA and MACOM levels.

2.103 HQDA Level. Application of this criterion at this level is as follows:

- a. Applied to COA Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equations that relate authorizations to workload. Procedures should be uniform Army-wide for staffing standards development. To ensure that uniform products are prepared by the multiple activities, the procedures must be quite detailed. Frequent clarifying instructions will be needed if many different activities use the same detailed procedures. To obtain responsive clarifications of instructions, a minimum number of staff offices should be involved. DCSPER is currently responsible for manpower related policies in M&S efforts. Other M&S policy comes from COA. This results in MACOMs receiving guidance from multiple sources and requires extensive coordination within the DA staff prior to issuance of M&S guidance. If COA

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performed standards development, a primary consideration in the control area would be the requirement for COA to respond to DCSPER priorities, i.e., the order in which standards should be developed. From a DCSPER point of view, it would mean that DCSPER would establish priorities and goals and monitor progress in meeting these goals; but DCSPER would have to look to COA to meet these goals or to take corrective action. For an effective program, a clear-cut basis for assignment of the responsibility must be established and observed in the management and operation of a program. To make COA responsible for only one function of total program management or operation would unnecessarily fragment the program exactly contrary to a GAO report ^{4/} on manpower management within the Army.

- b. Applied to DCSPER Option. As indicated above, procedures would be simplified if this function were made the responsibility of DCSPER. Control would also be simplified on the same basis, i.e., procedures and control are simplified when there are clear lines of responsibility established and a single staff office is responsible for all facets of the management and operation of a program.
- c. Summary Assessment. DCSPER is in a better position to integrate all functions of the MRDP, and assignment to DCSPER would avoid fragmentation of program management.

^{4/} GAO Report FPCD-80-9, "Lack of Control and Feedback Hinders Army Manpower Management Improvements," 31 October 1979.

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2.104 MACOM Level. Application of this criterion at this level is as follows:

- a. Applied to the Management Improvement Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equations that relate authorizations to workload. The M&S element develops detailed and summary standards under current assignment of tasks. Under today's system, manpower uses these M&S developed standards in preparing staff guides if they are available. However, under the proposed program, these standards will be required for requirements determination on a day-to-day basis. If the same office that uses standards controls their preparation, coordination and procedures are simplified.
- b. Applied to the Manpower Management Option. Management and control of a program by the same office provides for the most effective and efficient arrangement. Thus, control and procedures would be simplified by assignment of the standards development function to a single staff section. This approach also makes the staff section that performs the tasking responsible for obtaining resources for the tasks.
- c. Applied to the Joint Effort Option. The joint development effort at the MACOM level is currently practiced in the USACC. The manpower staffing standards development responsibility in USACC is split between the manpower manager (ACSFOR) and

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the comptroller. Their basic responsibilities under this concept are listed as follows:

<u>Manpower</u>	<u>Comptroller</u>
Organization and manpower management	Methods and procedures analysis
Development of manpower standards	Development of labor standards
Development of staffing tables	Work measurement
Implementation of staffing standards	Productivity and performance reporting

- d. Summary Assessment. Control and procedures would be simplified if a single staff activity at the MACOM level were responsible for both management and operation of the MRDP. Under today's system, the manpower management staff section at the MACOM is responsible for all facets of the MRDP. This includes the manpower survey program and the preparation of staffing guides and the yardsticks contained therein. (If M&S developed standards are available, they are supplemental to inherent manpower capability to develop yardsticks.) USACC has demonstrated that a joint effort can be successful, but only when sufficient priority for the development of summary standards for manpower determination is given and adequate dedicated resources are provided. The key element of a joint effort is the need for a totally unified and cooperative effort to achieve goals. The inherent disadvantages involved in coordinating a joint effort rule out this option on an all-MACOM basis. Assignment of the standards development function to the management improvement element at

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the MACOM would in effect fragment a program and unnecessarily complicate its operation.

2.105 Criterion: Effectiveness of Feedback (Category III).
This criterion applies at the HQDA and MACOM levels.

2.106 HQDA Level. Application of this criterion at this level is as follows:

- a. Applied to COA Option. The MRDP function, "develop standards," involves the preparation of measurement plans, data collection, data analysis, and manning equations that relate authorizations to workloads. Effectiveness of feedback is measured by the ability to receive user inputs and to detect changes needed to improve performance in the development of standards. The primary method for feedback in the development of standards is envisioned through the enforcement function. While a separate feedback system could be developed, the enforcement function appears to provide an adequate feedback system. Since enforcement involves both technical adequacy of a standard study as well as substantive content, DCSPER must be involved. Assignment of this function to COA would result in two staff agency reviews that would, for the most part, be duplicative.
- b. Applied to DCSPER Option. DCSPER has been recommended as the staff activity for performance of the enforcement of standards development methodology and policies. Thus, feedback is provided routinely through the evaluation of the products

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submitted for review. Provision of feedback through this method avoids the establishment of a separate feedback system.

- c. Summary Assessment. Feedback through the review of products submitted for quality control under the enforcement function provides an extremely effective system for detecting and determining changes needed to improve performance of the standards development effort. Since DCSPER has been recommended to perform the enforcement function at HQDA level, it is logical to have DCSPER review these products to detect changes needed rather than require reviews by both COA and DCSPERs.

2.107 MACOM Level. Application of this criterion at this level is as follows:

- a. Applied to the Management Improvement Option. MACOMs, with a standards development role, will have an enforcement function. This enforcement function will provide adequate feedback for management of their own program. Thus, a separate feedback system at the MACOM level is not warranted. With program management and enforcement proposed for manpower at the MACOM level, involvement of the management improvement program in these functions is not warranted.
- b. Applied to the Manpower Management Option. As outlined in the preceding paragraph, enforcement at the MACOM level can provide the limited feedback required to detect changes to accommodate MACOM needs. Since manpower has been recommended

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to perform this role at MACOM level, the most effective feedback will be achieved if it is provided through the manpower channel rather than involving another staff office at the MACOM level.

- c. Summary Assessment. Establishment of a separate feedback system is not warranted at MACOM as this role can be met as part of the enforcement function that is performed at that level. Since manpower has been recommended to perform this enforcement role at MACOM level, manpower is the appropriate staff activity to detect changes needed to improve performance. Performance of this function by manpower will also avoid duplicate staff reviews at that level.

2.108 Recommendation. DCSPER should be assigned responsibility for development of functional staffing standards Army-wide. If a MACOM has a standards development role, the staff section responsible for manpower management at that level should be responsible for developing standards.

Publish Standards

2.109 Criterion: Directed Assignment of Functions (Category II). No directives stipulate placement of this function in a particular staff section.

2.110 Criterion: Functional Homogeneity Between Existing Functions of Organizational Activity Under Consideration and Program Function (Category II). This criterion applies at the HQDA level only.

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2.111 HQDA Level. Application of this criterion is as follows:

- a. Applied to COA Option. The COA is the proponent for a number of publications in support of a variety of his own functions. The key consideration in this function is formatting for ease of use; thus, some familiarity with the use of the standard would enhance its presentation. Because M&S standards are not published at DA level, similarity of efforts does not exist in the management improvement program.
- b. Applied to DCSPER Option. DCSPER is the proponent for a number of publications, including the publication of staffing guides (which contain yardsticks) that are used daily in manpower requirements determinations.
- c. Summary Assessment. Based on use of standards, DCSPER functions are more homogeneous than COA with the publication of standards.

2.112 Criterion: Product Homogeneity Between Existing Product(s) of Organizational Activity Under Consideration and Product(s) of the Program Function (Category II). This criterion applies at HQDA level only.

2.113 HQDA Level. Application of this criterion to this level is as follows:

- a. Applied to COA Option. COA does not currently publish detailed or summary standards as such at the HQDA level.

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- b. Applied to the DCSPER Option. DCSPER is the proponent for the publication of staffing guides. These staffing guides contain yardsticks that are, in many cases, merely reformatted summary standards.
- c. Summary Assessment. DCSPER has almost identical publication responsibilities today as are envisioned under the staffing standards program. Thus, DCSPER has more homogeneous functions.

2.114 Recommendation. DCSPER should be the proponent for publication of all standards at the DA level. If command-unique standards are published at MACOM levels, the manpower management officers should perform that function.

Determine Requirements

2.115 Criterion: Directed Assignment of Functions (Category I). No OSD directives stipulate placement of this function in any particular staff section.

2.116 Criterion: Functional Homogeneity Between Existing Functions of Organizational Entity Under Consideration and Program Function (Category II). This criterion applies at HQDA and MACOM levels.

2.117 HQDA Level. Application of this criterion at this level is as follows:

- a. Applied to COA Option. The function of determining manpower requirements at the HQDA level includes the following:

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1. The evaluation of all requests for additional manpower from subordinate organizations
2. Development of requirements for emerging equipment and systems for TDA organizations
3. Review of correspondence and proposed directives for manpower implications
4. Coordination with CITA staff on in-Service manpower for contract reviews.

Primary functions for COA, as assigned by AR 10-5, include: accounting, budget formulation and execution, contract financing, cost and economic analysis, entitlement, fiscal/finance service, and management improvement. As part of the management improvement responsibility, COA manages the Productivity Improvement Program, which involves the following elements:

1. Productivity measurement and evaluation
2. Methods and standards
3. Value engineering
4. Quick return on investment
5. Management practices.

A comparison of COA functions with the "determine requirements" function for the MRDP indicates similarity exists primarily in the M&S element of the management improvement function. There is some interrelation with other elements of the management improvement function. In the M&S area the functional interface is principally in providing tools or assistance in determining requirements

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rather than the actual determining of requirements, which is an integral role of manpower management.

- b. Applied to DCSPER Option. The primary functions of DCSPER, as assigned by AR 10-5, include: military and civilian personnel management; personnel procurement, retention, and separation; individual training; preparing the manpower program, the POM, budget, and apportionment; personnel mobilization; compensation and entitlement; review and approval of the personnel section of TOEs to ensure proper application of manpower and personnel policies and criteria; utilization of manpower; and acting as appropriation director for military pay and other selected programs. A comparison of this MRDP function and the foregoing DCSPER functions indicates it is an integral part of "preparing the manpower program for the POM and budget."
- c. Summary Assessment. The function, "determine requirements," is an integral function of the manpower management role assigned to DCSPER.

2.118 MACOM Level. Application of this criterion at this level is as follows:

- a. Applied to the Manpower Management Option. The primary manpower management functions at MACOM level are generally the same as those at HQDA level. The basic functions of manpower management (AR 570-4) are as follows:
 - 1. Determination of manpower requirements
 - 2. Manpower planning and programming

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3. Compilation of manpower data
4. Allocation of manpower resources
5. Determination of manpower authorizations
6. Documentation of manpower requirements and authorizations
7. Evaluation of manpower utilization
8. Development of performance standards and staffing guides.

The MRDP function, "determine requirements," is reduced in scope at the MACOM level. However, the same basic situation exists at the MACOM level as at the HQDA level. The determination of requirements is an integral part of the manpower management role.

- b. Summary Assessment. Since determining requirements is an integral part of the manpower management role, maximum homogeneity is achieved by assigning this function to the MACOM staff section responsible for manpower role.

2.119 Recommendation. Assign the requirements determination function to DCSPER at HQDA level and manpower management at the MACOM level. (If delegated below MACOM level, it would be an extension of the MACOM manpower office.)

Summary of Who Recommendations

2.120 Provide Program Management. This function of the MRDP is an integral part of manpower management role and should be exercised by DCSPER at HQDA level. The manpower manager at MACOM

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level should also perform this function if that MACOM has a standards development role.

2.121 Prescribe Standards Development Methodology. Since procedures implement policy, the staff section that determines policy should prescribe procedures. Therefore, DCSPER should be assigned this function at the HQDA level.

2.122 Enforce Standards Development Methodology and Policies. DCSPER has the capability to perform a full review (both technical and substantive), while COA would be limited to a technical role. The enforcement function also provides feedback to improve policies and procedures. DCSPER is the logical staff section to be assigned this function at the HQDA level. Manpower management at the MACOM level should perform the function for the same basic reason when a MACOM has a standards development role.

2.123 Develop Standards. To avoid fragmentation of the MRDP and to enhance coordination of its elements, DCSPER should be responsible for any FOA that develops standards. The manpower manager should be responsible for all staffing standards development at that level for the same reason.

2.124 Publish Standards. Publication should be performed by the staff section that approves the standards to enhance control and simplify procedures. Therefore, DCSPER should be assigned this function. If performed at MACOM level for unique standards, manpower management should be assigned this function.

2.125 Determine Requirements. Determining requirements is an integral manpower management role. Thus, this function should

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be assigned to DCSPER at the HQDA level and to the manpower manager at MACOM level.

2.126 Table 2.4 contains the organizational options resulting from the who criteria application. Figures 2.4, 2.5, and 2.6 reflect the results of the who criteria application to alternative organizational structures 1, 2, and 3, respectively.

PROGRAM APPLICABILITY

2.127 FIELD OPERATING AGENCIES (FOAs). AR 10-5 defines an FOA as the following:

An agency under the supervision of Headquarters, Department of the Army, but not a major Army command or part of a major Army command, which has the primary mission of executing policy.

While the missions of individual FOAs vary widely, some have operating functions (e.g., operation of commissaries, providing computer support, etc.) very similar to those of MACOMs. While MACOMs account for the predominant TDA manpower strength of the Army, FOAs account for a significant portion of the DA population. In fact, some FOAs have larger populations than some of the individual MACOMs. The population spectrum for FOAs varies from less than 10 authorizations to over 10,000. Thus, for the Army to present a fully credible statement of requirements to OSD, OMB, and Congress, some provision must be made to include the larger FOAs in the MRDP. While the previous section specifically addressed the MRDP in the MACOMs, most assessments and recommendations at that level would apply equally to the larger FOAs. Based on a review of the mission of each FOA along with assigned responsibilities and relative size, it was determined that FOAs

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TABLE 2.4
ORGANIZATIONAL OPTIONS: WHO

Program Function	Organizational Options:		Summary Basis
	Where	Who	
Provide Program Management	HQDA MACOM 1/	DCSPER Manpower manager	Integral to manpower management
Prescribe standards development methodology	HQDA	DCSPER	Procedures implement policies. If same office does both processing is simplified
Enforce standards development methodology and policies	HQDA MACOM 1/	DCSPER Manpower manager	Provides direct feedback on effectiveness of policies and procedures Assures quality product and in turn excellent credibility
Develop standards	HQDA (common) alternative MACOM (unique) HQDA (all) alternative 2/ MACOM (all) alternative 2/	DCSPER (FOA) Manpower manager DCSPER (FOA) Manpower manager	Continues control of all facets of manpower requirements determination under cognizance of a single functional staff agency (manpower) DCSPER FOA provides expertise to assist in requirements evaluation

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TABLE 2.4 (Cont)

Program Function	Organizational Options:		Summary Basis
	Where	Who	
Publish standards	HQDA ^{3/}	DCSPER ^{3/}	DCSPER now publishes staffing guides for use in determining requirements Simplifies processing as same staff section that approves them publishes them
Requirements determination (includes functions/activities not under standards)	HQDA MACOM	DCSPER Manpower manager	Integral function of manpower management role

^{1/} Function not required at MACOM under alternative where DA (FOA) develops all standards.

^{2/} FOA not required under this alternative.

^{3/} Variation would be for MACOMS (manpower manager) to publish their own unique standards.

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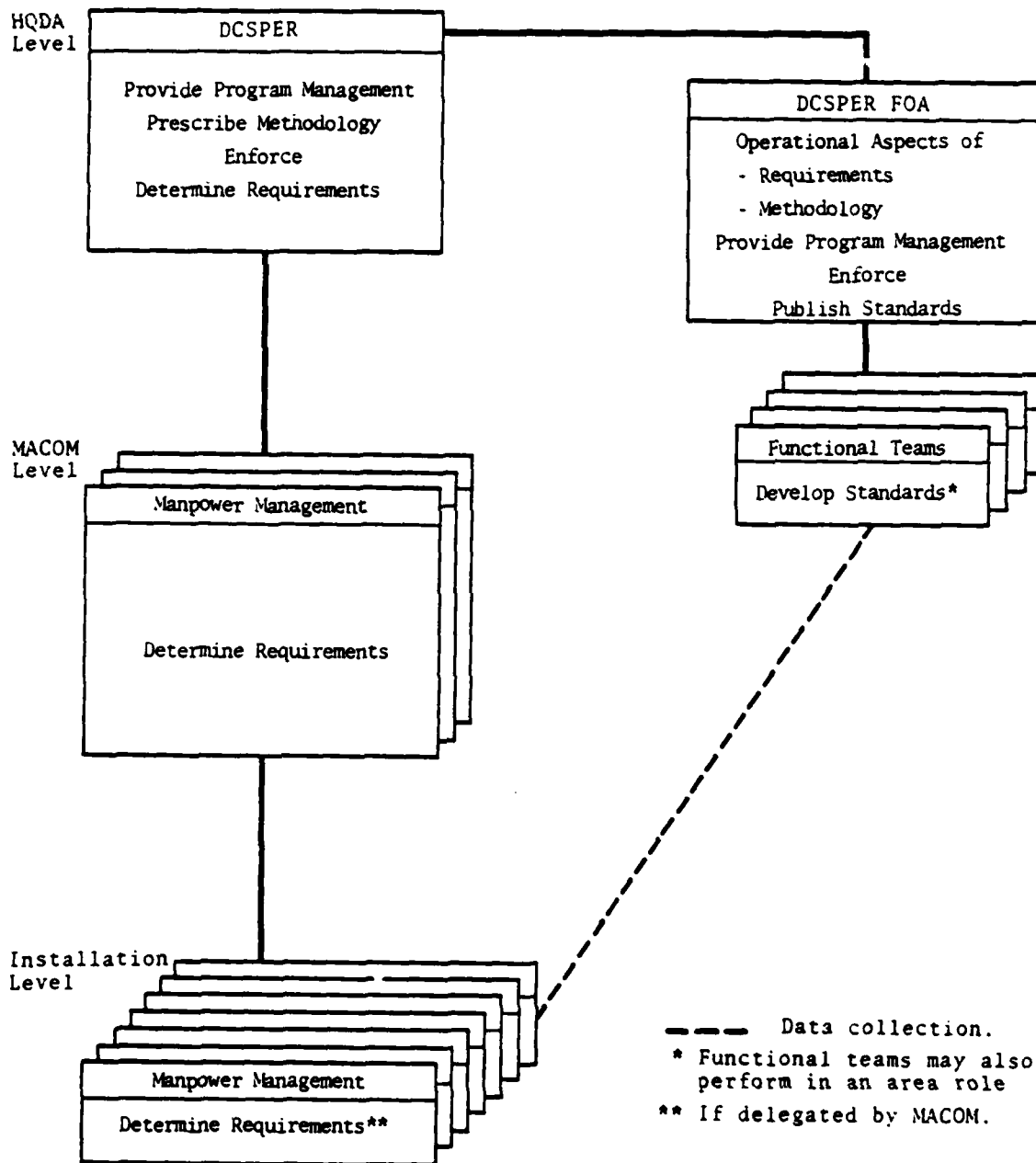


FIGURE 2.4
WHO ORGANIZATIONAL STRUCTURE,
ALTERNATIVE 1

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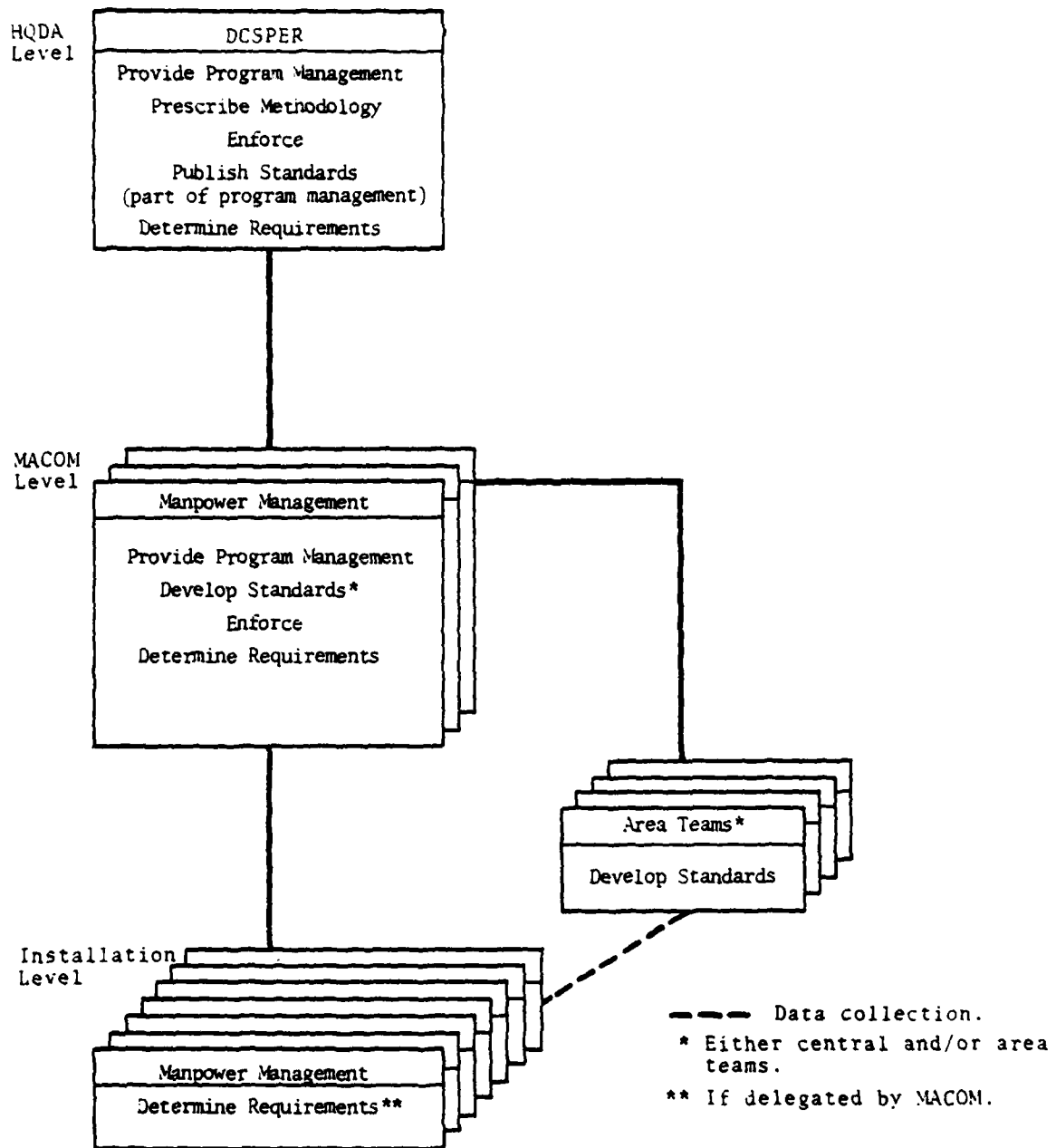


FIGURE 2.5
WHO ORGANIZATIONAL STRUCTURE,
ALTERNATIVE 2

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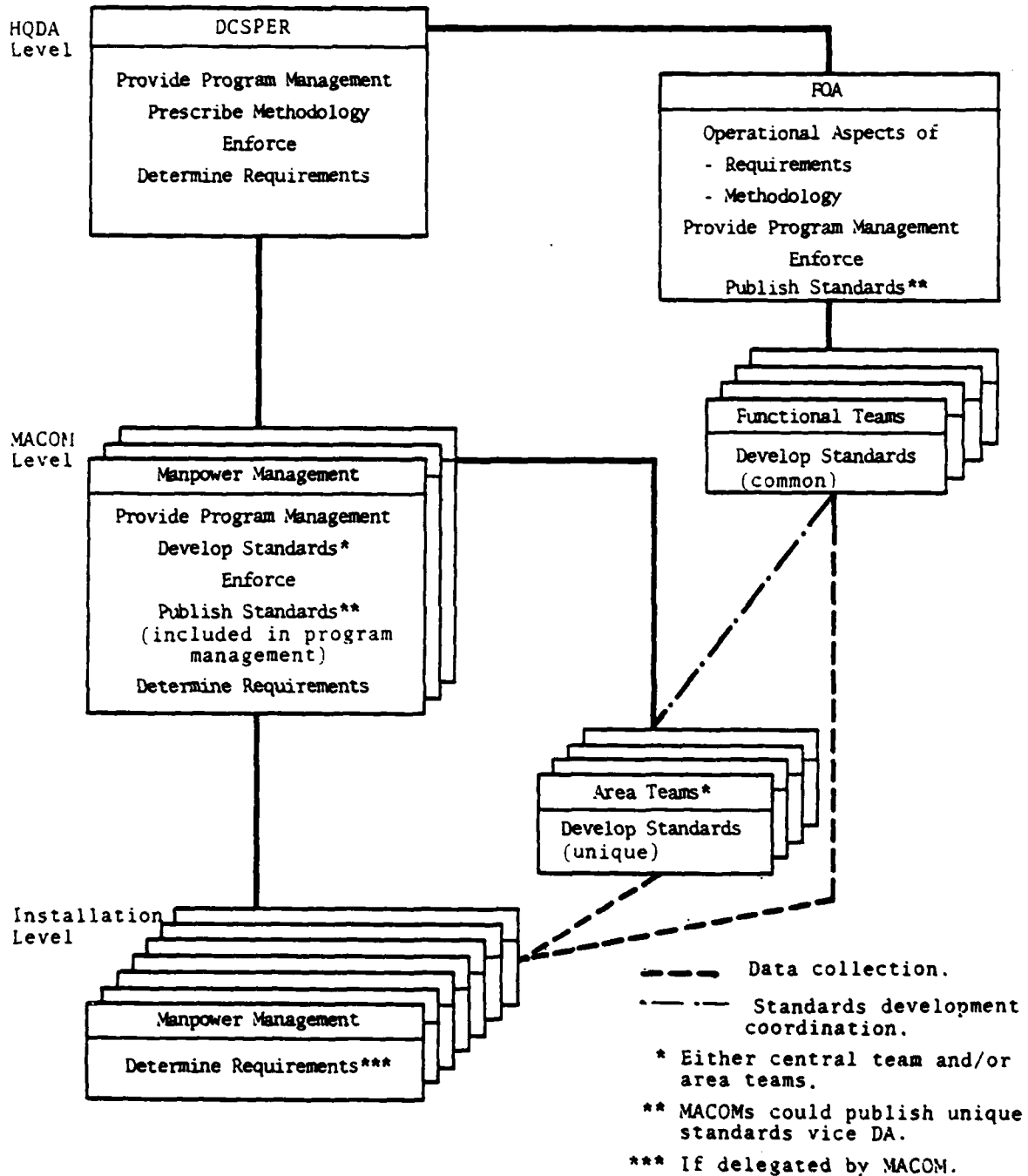


FIGURE 2.6
WHO ORGANIZATIONAL STRUCTURE,
ALTERNATIVE 3

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with a TDA population (authorizations) of 1,500 or more should be considered in this program. Using this criterion, the following 10 FOAs/organizations would participate in this program in addition to the 14 MACOMs.

- Army National Guard (ARNG)
- The Adjutant General Office (TAGO)
- US Army Computer Support Command (USACSC)
- US Army Recruiting Command (USAREC)
- US Military Academy (USMA)
- The Surgeon General (TSG)
- Military Personnel Center (MILPERCEN)
- Military Enlisted Processing Command (MEPCOM)
- US Army Troop Support Agency (USATSA)
- US Army Finance and Accounting Center (USAFAC).

A composite list of all 24 activities participating in the program is provided in Appendix C.

2.128 While agencies with an authorized population of less than 1,500 would not have a formal staffing standards program, these agencies would be entitled to review measurement plans and final standards studies if any of their TDA authorizations were involved. This review could be accomplished by the existing manpower management staff and would not involve additional authorizations in the manpower office.

MACOM Headquarters

2.129 Both the Navy and Air Force have excluded their major subordinate command headquarters from their standards development efforts. The primary reason is that the return on investment is marginal and management headquarters ceilings, in effect, preclude manpower increases supported by a standard. Since a

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similar situation exists in the Army, MACOM management headquarters have been excluded from the staffing standards program. Accordingly, each MACOM headquarters would still be subject to manpower surveys on a periodic basis by HQDA.

FUNCTIONAL STATEMENTS

HQDA

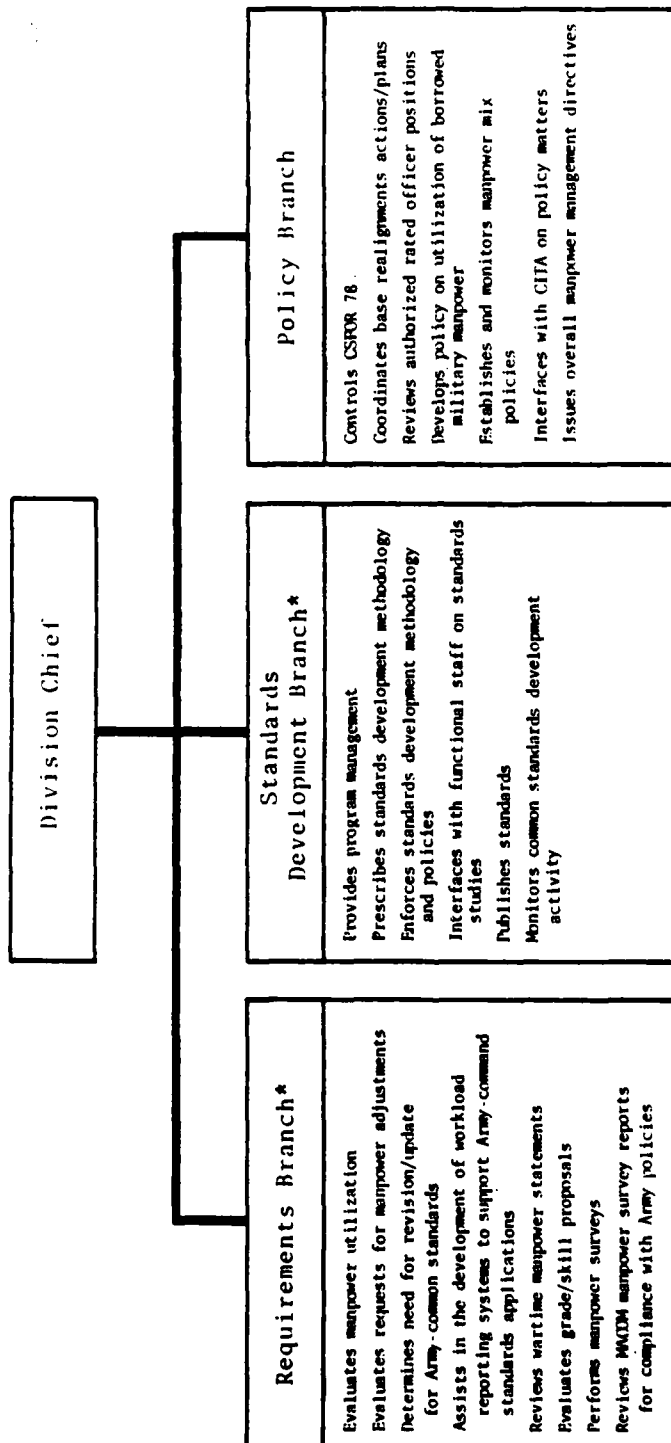
2.130 A review of the functions performed by HQDA DCSPER indicates maximum homogeneity of this program would be achieved if the MRDP were assigned to the Directorate of Manpower, Plans and Budget. Assignment to the Survey and Standards Division is considered appropriate, as the present DCSPER standards efforts, staffing guides, and survey program are responsibilities of this division. Figure 2.7 presents a suggested organizational function chart for this division. The detailed specific functions associated with the MRDP for HQDA are contained in Appendix D. Changes in functions necessitated by the various organizational alternatives are noted by each function in this appendix.

FOA

2.131 Figure 2.8 reflects a proposed organizational function chart for an FOA to develop staffing standards. Detailed functional statements and a draft mission statement are contained in Appendix E. Since an FOA would not be required under organizational alternative 2, this appendix does not apply under this option and has been so annotated.

2.132 MACOM/Agency Level. Figure 2.9 shows a proposed organizational function chart for the larger MACOMs/agencies with standards development responsibilities. Detailed functional

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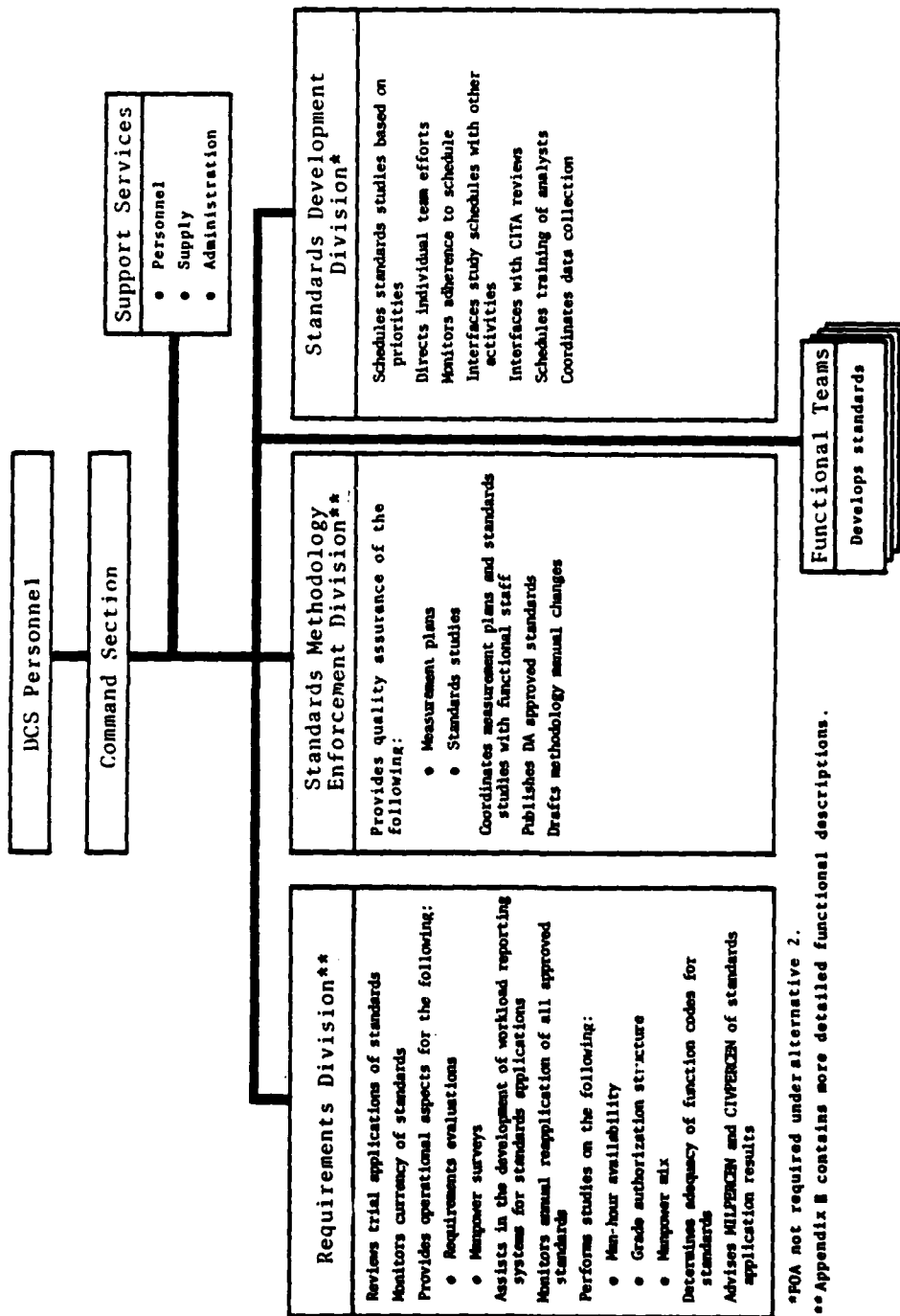


* Appendix D contains more detailed functional descriptions.

** RMA performs operational aspects of function under alternatives 1 and 3.

FIGURE 2.7
ORGANIZATION FUNCTION CHART, SURVEY AND
STANDARDS DIVISION DCS PERSONNEL, HQDA

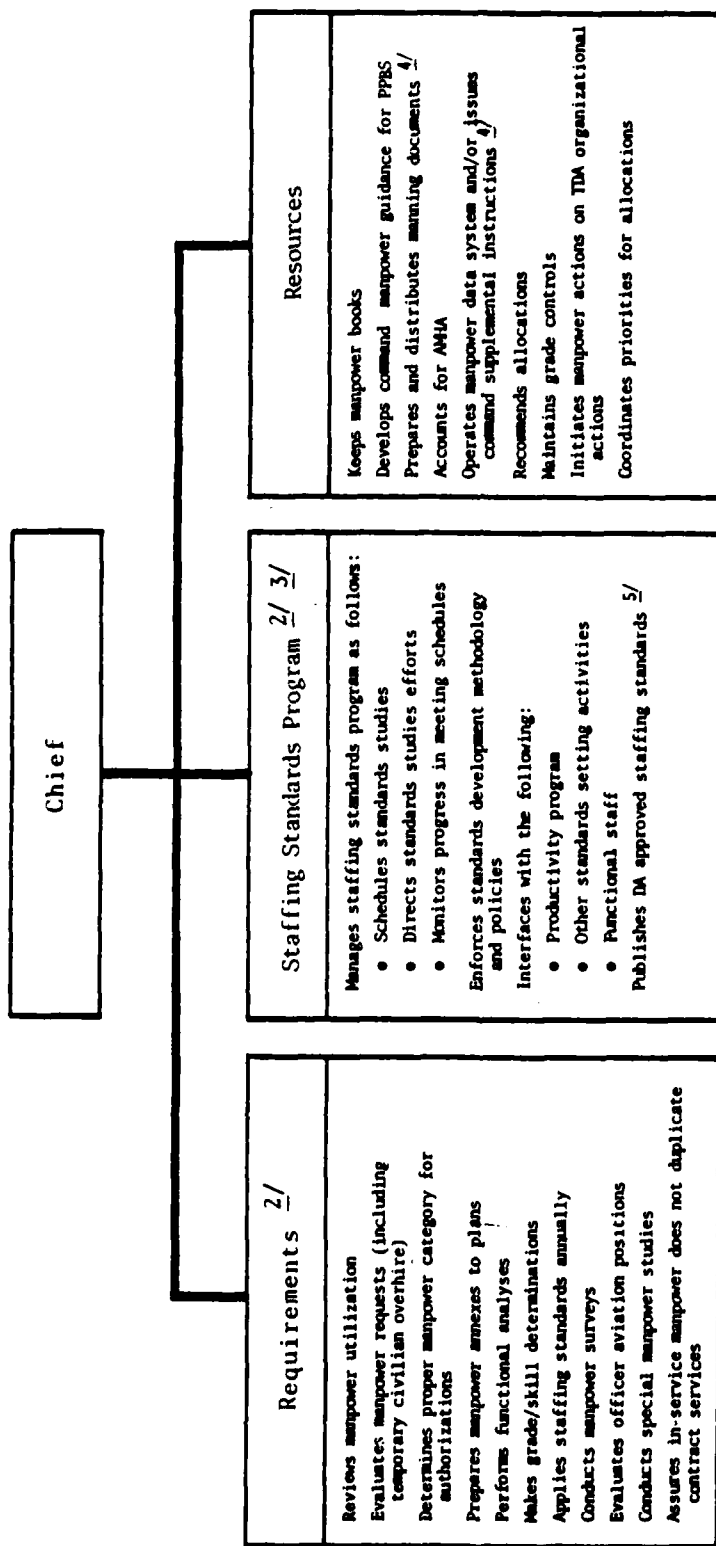
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*FOA not required under alternative 2.
 **Appendix B contains more detailed functional descriptions.

FIGURE 2.8
 FOA* ORGANIZATION FUNCTION CHART
 (Staffing Standards Development Agency)

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^{1/} Small manpower management offices would be unstructured.

^{2/} Appendix F contains more detailed functional statements.

^{3/} Not required under alternative 1.

^{4/} When responsibility is assigned to manpower at MACOM.

^{5/} Variation under alternative 3 only.

FIGURE 2.9
ORGANIZATION FUNCTION CHART MACOM/AGENCY
MANPOWER MANAGEMENT OFFICE ^{1/}

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descriptions are contained in Appendix F. Functions have been annotated to indicate nonperformance or the addition of certain subfunctions under various options and variations to these options. In those MACOMs or agencies with no standards development responsibilities, or very small efforts, the manpower management office would be an unstructured one. Appendix F also contains a functional description for requirements determination at the installation level, should one or more of the MACOMs delegate this function to that level. Under organizational alternative 1, MACOMs/agencies would only be responsible for requirements determination, and deletion of the other functions has been so noted.

FUNCTIONAL STAFFING ESTIMATES

Approach

2.133 The development of estimated staffing levels for a MRDP involves the following steps:

- Establish basic assumptions to be used in estimating manpower needs
- Develop estimated staffing levels by fiscal year and option for each function based on anticipated assignments of responsibilities and/or workloads
- Develop manning charts to indicate skills and nominal grades for each function at the various organizational levels for the three alternatives being considered.

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Assumptions

2.134 The following basic assumptions have been established for use in preparing staffing estimates:

- a. The end FY-80 level of summary staffing standards development will continue through FY 1982.
- b. Army Management Headquarters Activities (AMHA) ceilings will continue to exist, and Congressional, as well as OSD/OMB, pressures to maintain minimum AMHA levels can be expected. Where practicable, support organizations are appropriate for MACOM additions to minimize increases to AMHA.
- c. Development of Army-common standards will be the responsibility of a single organization assigned to HQDA or one MACOM under all options for the purpose of preparing staffing standards estimates.
- d. Each MACOM/agency will coordinate on all measurement plans and staffing standards studies that involve any of their authorizations.
- e. Scheduled manpower surveys will be continued for populations not covered by standards or under study and current responsibility for conducting surveys will not change.
- f. The Army goal will be to achieve initial standards coverage over a 7-year period with a program start date of FY-83.
- g. Military and civilian man-hour availability will be 145 man-hours per month per individual.

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- h. Manpower requirements for the overall manpower management role (e.g., chief of manpower management, force development, etc.) and the resource allocation function will not be affected by the adoption of the MRDP.

General Staffing Level Estimates

2.135 Estimated staffing levels have been developed using Army criteria and/or guides where applicable. These guides and criteria have been modified by Navy and Air Force experience (or their projections) where appropriate.

2.136 Manpower positions for staffing MRDP functions will be identified as in the analyst or support categories. These categories will cover the following types of positions:

- Analysts--Positions identified with standards development efforts and requirements determinations
- Support--Positions identified to support analysts with administrative assistance and to provide overhead to staff any organizations necessitated by this new program.

2.137 These staffing estimates have been developed based on the three organization alternatives in Figures 2.4, 2.5, 2.6, and the functional relationships previously described. While the function to determine requirements is constant for all alternatives at MACOM and DA levels, the other functions of the program directly relate to their standards development roles. Thus, assignment of a standards development role to an organization below

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the DA staff level will automatically require the assignment of the program management and enforcement functions. While the function to publish standards is closely associated with the standards development effort, its administrative nature does not require its inclusion with the standards development function as a package. The prescribing of standards development methodology is part of the standards development effort; however, this function is only proposed for performance at the DA level as it applies to procedures for an Army-wide program. The functions of providing program management and enforcing standards development methodology and policies are, in effect, tied directly to the role of standards development below the DA staff level.

DA Staff Level

2.138 Program management. The DA staff will be involved in policymaking in all options. Under alternatives 1 and 3, the FOA can perform many operational aspects of the program. However, under alternative 2 (when no FOA exists), the DA staff will be deeply involved in the operational aspects of the Army-common standards development effort. This will include extensive coordination of schedules among commands and monitoring/supervising common standards development to ensure that adequate consideration of each MACOM/agency's needs has been accorded. Analyst staffing at the DA level is primarily tied to the scope of an Army-wide program. Support is based on a ratio of one clerk for every four analysts. To provide initial impetus and guidance to the program, heavy front loaded staffing is being proposed. The proposed functional staffing by year for each option is shown as follows:

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<u>Category</u>	<u>FY-83</u>	<u>FY-84</u>	<u>FY-85</u>	<u>FY-86 to FY-87</u>
Alternative 1				
Analysts	3	4	5	5
Support	1	1	2	2
Total	<u>4</u>	<u>5</u>	<u>7</u>	<u>7</u>
Alternative 2				
Analysts	10	10	12	14
Support	3	3	4	4
Total	<u>13</u>	<u>13</u>	<u>16</u>	<u>18</u>
Alternative 3				
Analysts	5	6	7	8
Support	2	2	2	3
Total	<u>7</u>	<u>8</u>	<u>9</u>	<u>11</u>

2.139 Prescribe Standards Development Methodology. This function will be responsible for publication of a policies and procedures manual. Initial draft of the manual will be prepared under contract. Thus, near-term authorizations will only be needed for the initial publication and maintenance of the staffing standards methodology manual. It is estimated that three revisions per year will be required and complete reissuance every 5 years. Under alternative 1, the FOA would be the sole user of the manual and as such would be in a position to prepare any drafts of revisions to the manual. These drafts would only require DA review and approval. Thus, the DA staff could restrict their efforts to policy only and, in turn, could limit the size of the DA staff requirements for this alternative. Under alternative 3, the FOA could assist the DA staff in preparing these draft revisions to the manual; however, the use of this same manual by the MACOMs would require more DA staff involvement in its preparation and update than needed under alternative 1. Alternative 2 would require the largest addition at the DA staff level, since the staff would be involved in all details of the manual's preparation/update. Support is predicated on the ratio

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of one clerk for every three analysts. Proposed staffing for this function by alternative is as follows:

<u>Category</u>	<u>FY-83</u>	<u>FY-84</u>	<u>FY-85 to FY-87</u>
Alternative 1			
Analysts	1	1	1
Support	0	0	0
Total	<u>1</u>	<u>1</u>	<u>1</u>
Alternative 2			
Analysts	2	3	3
Support	0	1	1
Total	<u>2</u>	<u>4</u>	<u>4</u>
Alternative 3			
Analysts	1	2	2
Support	0	0	0
Total	<u>1</u>	<u>2</u>	<u>2</u>

2.140 Enforce Standards Development Methodology and Policies.

This function is crucial in establishing and maintaining the credibility of the Army's requirements program. On this basis, all common standards studies should receive a full second level review by the DA staff. Initially, all unique standards studies should also receive a full second level review by the DA staff. After the tone for the program has been established, the DA staff review of unique studies should gradually be reduced to the 20% level. Under alternative 1, in which the FOA develops all standards for the Army, the FOA enforcement function can accomplish much of the review needed, and DA staff level involvement would be minimal. Under alternative 3, the FOA could review their own studies and also perform certain operational aspects of enforcement on the MACOM/agency unique standards, e.g., statistical data reviews, propriety of formats, etc., which would, in turn, require a smaller DA staff. The absence of an FOA under alternative 2 will require DA staff performance of all aspects of

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enforcement of standards development methodology and policies for all standards. The ambitious standards development program to complete coverage in 7 years will necessitate fairly large numbers of enforcement personnel if reviews are to be completed promptly and unnecessary delays in standards implementation are to be avoided. The scope of the first 5 years of the program is indicated by the fact that up to 50 studies could be under way Army-wide at any one time during the latter stages of the program. Because there will be a lag between initiation of the program and submission of the first products for review, only minimum authorizations would be needed in the early part of the program. However, the need for full review of all of the initial products will advance the mature program authorizations into the FY-85 time period. Staffing estimates for the enforcement function are as follows:

<u>Category</u>	<u>FY-83</u>	<u>FY-84</u>	<u>FY-85 to FY-86</u>
Alternative 1			
Analysts	1	1	2
Support	0	0	0
Total	<u>1</u>	<u>1</u>	<u>2</u>
Alternative 2			
Analysts	3	4	6
Support	1	1	2
Total	<u>4</u>	<u>5</u>	<u>8</u>
Alternative 3			
Analysts	1	2	3
Support	0	0	1
Total	<u>1</u>	<u>2</u>	<u>4</u>

2.141 Develop Standards. This function is not performed by the DA staff under any alternative.

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2.142 Publish Standards. Except for policy considerations, this operational function can be performed in the FOA under alternatives 1 and 3. The DA staff must perform all of this function under alternative 2, because the FOA will not exist under this option. Accordingly, manpower in the DA staff will only be required under alternative 2. The policy considerations for this function are minor and can be performed by program management under all options. Performance of this function under alternative 2 is also proposed for combination with program management, as the size of the effort does not warrant a separate staff element. Workload for this function is anticipated to require at least quarterly revisions to the standards manual. Because of the administrative nature of this function, only one analyst should be required for technical consideration and management of the effort, with the remainder of the positions being administration ones. Staffing estimates for this function are as follows:

<u>Category</u>	<u>FY-83</u>	<u>FY-84</u>	<u>FY-85</u>	<u>FY-86 to FY-86</u>
Alternative 2				
Analysts	1	1	1	1
Support	0	1	2	3
Total	1	2	2	4

2.143 Determine Requirements. The DA staff currently evaluates out-of-cycle manpower requirements submitted by subordinate organizations. As more and more staffing standards are developed for use in determining requirements, the number of requests should be reduced or, if still received, their processing should be simplified. Accordingly, the staffing for this portion of the requirements function will remain fairly constant over the 5-year program period. The DA staff also performs manpower surveys for MACOM headquarters elements. Because the MACOM headquarters elements will not be part of the staffing standards

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universe, surveys of these elements by the DA staff would continue. The DA staff also reviews MACOM manpower survey reports for compliance with Army policies and directed manpower survey procedures. Since populations under standards or under study would not require surveying, the scope of the MACOM surveys will decrease as the staffing standards development program progresses. However, the total number of MACOM organizational surveys to be reviewed by the DA staff will remain fairly constant over the 5-year period addressed by this plan as full coverage is not envisioned for 7 years. The DA staff will also continue to review manpower requirements statements for the budget as they do under today's system. The requirements function will assume two new roles under the staffing standards program in the following areas:

- a. Assisting in the development of workload reporting systems required for standards applications.
- b. Monitoring annual reapplications of standards.
This effort will primarily be for Army-common standards.

Under alternatives 1 and 3, the FOA could perform certain routine analyses of manpower requests and provide recommendations to DCSPER for use in staffing manpower requests within the DA staff. The FOA could also provide team members for scheduled surveys or ad hoc manpower surveys required to evaluate requests submitted by subordinates or to review questionable utilization within the Army. Under alternative 2, the DA staff will require higher allocations as the FOA will not exist to provide for the operational aspects of requirements analysis and survey team assistance.

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2.144 Since manpower surveys are only one technique for evaluating manpower requests or reviewing utilization, they are an inherent capability of any requirements function. However, for a scheduled manpower survey program, an additive allowance would be required. Based on a MACOM headquarters population of approximately 11,400, a requirements augmentation for scheduled surveys would be required at the DA level either in the DA staff or a combination of the DA staff and the FOA. Because the FOA would not exist under alternative 2, the full additive for scheduled surveys would be required in the DA staff. The basis for calculating the additive for programmed surveys is one analyst for each 1,500 population to be surveyed annually. Administrative support is on the basis of one clerk for every five analysts required. Manpower estimates for the requirements function (including scheduled MACOM Headquarters surveys) by alternative are as follows:

<u>Category</u>	<u>FY-83 to FY-87</u>
Alternatives 1 and 3	
Analysts	8*
Support	2*
Total	<u>10</u>
Alternative 2	
Analysts	16
Support	4
Total	<u>20</u>

* Nine positions have been provided in the FOA under alternatives 1 and 3 for scheduled manpower surveys.

FOA Staffing Estimates

2.145 General. An FOA is proposed under alternatives 1 and 3. The following functions would be performed in the FOA under these alternatives, but would vary in scope between the two alternatives:

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- Provide program management
- Prescribe standards development methodology (operational aspects only)
- Enforce standards development methodology and policies
- Develop standards
- Publish standards
- Determine requirements (operational aspects only).

2.146 As described previously, the functions of program management and enforcement are directly tied to the standards development role. On this basis, the approach used in estimating staffing for the FOA was to first determine the number of development positions. Program management was then calculated based on the number of development positions. Enforcement positions were then established based on estimated completion dates of assigned standards studies. Study completion dates were also used to project staffing for the function of publishing approved standards. Manpower requirements for the operational aspects of prescribing standards development methodology were then estimated based on the scope of the role of the FOA in standards development. Manpower for the performance of requirements determination was then estimated. (This included staffing to assist the DA staff in performing scheduled manpower surveys of MACOM headquarters.) Based on the size and scope of these program functions, organizational overhead was then developed to provide executive supervision and needed support (personnel administration, supply, etc.).

Develop Standards

2.147 An explanation of the algorithm that was used to derive the number of "hands on" development man-months is contained in

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Appendix G. This appendix also reflects the man-months needed to review and update each standard every 2 years after initial approval. The steps used in converting these man-months into authorizations as well as in calculating the direct supervisory and administrative authorizations needed for the efficient operation of the development effort are contained in Appendix I. Appendix I also provides the development authorizations for command-unique standards (by command) and Army-common standards. Under alternative 1, the FOA is responsible for the development of all standards that would involve a total of 62 common standards studies and 164 unique standards studies. Under alternative 3, the FOA would only be responsible for the development of the 62 common standards studies. Based on the detailed computations of personnel in Appendix I, a summary of manpower requirements by alternative is as follows:

<u>Category</u>	<u>FY-83 to FY-87</u>
Alternative 1	
Analysts	269
Support	28
Total	397
Alternative 3	
Analysts	93
Support	10
Total	107

Provide Program Management

2.148 This function provides overall staff guidance and direction to the standards development effort within the FOA. Based on the experience of the other military departments, the ratio of analyst authorizations in the program management function to development analysts is 1 to 10. Administrative support for the program management analysts is one clerk for every four analysts

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authorized. Since development personnel have been "level loaded" over the 7-year initial development cycle, the program management requirements will be constant over this same period. Estimated staffing for this function is as follows:

<u>Category</u>	<u>FY-83 to FY-87</u>
Alternative 1	
Analysts	30
Support	8
Total	38
Alternative 3	
Analysts	9
Support	2
Total	11

Enforce Standards Development Methodology and Policies

2.149 This function provides complete review of all measurement plans and completed standards studies prepared within the FOA for technical adequacy, proper format, and substantive content. Under alternative 1, where all standards are developed by the FOA, the FOA would be processing 164 command-unique standards studies along with 62 Army-common standards studies over the 7-year period for an average of 35 per year. Under alternative 3, the FOA would only be reviewing the 62 common standards study efforts for an average of nine per year. To limit requirements at the DA staff, it would also be feasible under alternative 3 for the FOA enforcement function to perform technical adequacy reviews for MACOM/agency developed standards studies to relieve the DA staff of this operational workload. Because these technical reviews would be limited in scope, it is estimated that only about one-half the effort of a full review would be involved, or an equivalent of 21 reviews per year under alternative 3.

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Based on Navy and Air Force experience, an average of 2 man-months is required to review each standards study, or an equivalent of six studies per analyst per year. A support ratio of one clerk for every three analysts is suggested based on the fairly large administrative workload in receiving, controlling, and processing responses to each measurement plan and completed standards study. Because the full enforcement function will not be required during the initial buildup, the requirements have been phased consistent with anticipated study products and milestones. Based on these guidelines, staffing estimates for this function are as follows:

<u>Category</u>	<u>FY-83</u>	<u>FY-84</u>	<u>FY-85 to FY 87</u>
Alternative 1			
Analysts	2	4	7
Support	<u>1</u>	<u>1</u>	<u>2</u>
Total	3	5	9
Alternative 3			
Analysts	1	3	4
Support	<u>0</u>	<u>1</u>	<u>1</u>
Total	1	4	5

Publish Standards

2.150 This function involves the formatting and publication of all approved staffing standards in an Army directive. Publication of standards is an operational function and is appropriate for performance by the FOA. Since an FOA does not exist under alternative 2, the DA staff would be required to perform this function under that alternative. There is also a variation under alternative 3 whereby MACOMs/agencies would publish their own unique standards. However, this variation will not materially affect the workload in the FOA in terms of the number of annual

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revisions projected for the standards manual. Based on a projection of four revisions to the Army directive per year, manpower for this function in the FOA is estimated as follows:

<u>Category</u>	<u>FY-83</u>	<u>FY-84</u>	<u>FY-85 to FY-86</u>
Alternatives 1 and 3			
Analysts	1	1	1
Support	0	1	2
Total	<u>1</u>	<u>2</u>	<u>3</u>

Prescribe Standards Development Methodology

2.151 This function in the FOA would be to recommend to the DA staff changes to improve the procedures manual (methodology) based on experience gained during standards development efforts. Under alternative 1, where all standards are developed by the FOA, the procedures manual would only apply to the FOA and FOA input would be extensive, i.e., an FOA procedures manual published under DA auspices. Since the FOA does not exist under alternative 2, the DA staff would be required to perform the complete function at that level. Under alternative 3, the FOA could perform the operational aspects of this function (i.e., draft recommended changes to methodology manual) as the FOA would be one of the main users of the procedures manual. The staffing estimates are primarily based on the projected number of requests for clarifications by FOA development personnel and the amount of assistance that could be rendered to the DA staff in updating/revising/reissuing the procedures manual. Support spaces would be based on a ratio of one clerk for every five analysts. Manpower estimates for the function are as follows:

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<u>Category</u>	<u>FY-83</u>	<u>FY-84</u>	<u>FY-85 to FY-87</u>
Alternative 1			
Analysts	1	2	3
Support	0	0	1
Total	<u>1</u>	<u>2</u>	<u>3</u>
Alternative 3			
Analysts	1	2	2
Support	0	0	0
Total	<u>1</u>	<u>2</u>	<u>2</u>

Determine Requirements

2.152 This function at the FOA would involve the following tasks:

- Analysis of certain technical aspects of manpower requests as directed by the DA staff. Individual manpower requests will require more time to evaluate until standards become available. Workload associated with maintaining the annual application of standards will increase as more standards are completed and approved.
- Coordination of HQDA scheduled manpower surveys and provision of survey team members (including recorders) for DA surveys of MACOM headquarters. MACOM headquarters populations are expected to remain at current levels.
- Assistance in the development of workload report systems to support Army staffing standards applications. The need for workload reporting systems will increase as more staffing standards are completed.

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Based on these considerations, the estimated manpower needs are as follows:

<u>Category</u>	<u>FY-83 to FY-87</u>
Alternatives 1 and 3	
Analysts	9
Support	2
Total	<u>11</u>

FOA Overhead

2.153 Includes command section personnel administration, organization, supply, and other general administrative support. Under alternative 1, the number of personnel to be supported by FY-87 is 392. Under alternative 3, the number to be supported by FY-87 is 139. On the basis that a large amount of administrative effort will be required to bring an FOA into existence, the full support capability has been provided at the beginning of the program in FY-83. In fact, there would be advantages to organizing the FOA in FY-82 to have an operating unit available on the first day of the 5-year program. By early organization and early assignment of the key staff members, much of the preliminary startup delays could be avoided. Estimated support staffing is as follows:

<u>Category</u>	<u>FY-83 to FY-87</u>
Alternative 1	
Analysts	1
Support	26
Total	<u>27</u>
Alternative 3	
Analysts	1
Support	14
Total	<u>15</u>

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MACOM/Agency

2.154 General. Appendix C lists the commands considered in the staffing standards program. A review of Appendix H indicates that the standards spectrum in three MACOMs (MDW, USARJ, and WESTCOM) only involves Army-common standards and these MACOMS would not have a standards development role. However, these three MACOMS would still review all measurement plans and final standards studies that involve any of their authorizations. This review would be a part of the function to determine requirements in these three commands because the same basic civilian series covers requirements determination and standards development.

2.155 A standards development role only exists at the MACOM/agency level under alternatives 2 and 3. Under alternative 2 each activity develops its own unique standards, and one or more MACOMS/agencies are tasked with the additional responsibility of the development of one or more Army-common standards. (For the purpose of preparing manpower estimates for this plan, FORSCOM has been assigned the responsibility for all Army-common standards studies.) Under alternative 3 the MACOM/agencies develop only their own unique standards.

2.156 Develop Standards. An explanation of the algorithm that was used to derive the number of "hands on" development man-months is contained in Appendix G. This appendix also reflects the man-months needed to review and update each standard every 2 years after initial approval. The steps used in converting these man-months into authorizations as well as in calculating the direct supervisory and administrative authorizations needed for the efficient operation of the development effort is contained in Appendix I. Appendix I also provides the development authorizations for command-unique standards (by command) and Army-common

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standards. Under alternative 1, the FOA would develop all standards and the MACOMS and agencies would not be involved. Under alternative 2, the commands would develop their own unique standards and one or more MACOM/agencies would also develop Army-common standards. (For staffing estimates FORSCOM has been assumed to be responsible for all Army-common standards development.) As noted in Appendix I, development manpower has been level loaded over the 7-year initial development cycle. Thus, the authorizations for standards development are constant over the period covered by this 5-year plan. A summary of manpower for each alternative is as follows:

<u>Category</u>	<u>FY-83 to FY-87</u>
Alternative 2	
Analysts	299
Support	28
Total	327

Note: See Table 2.5 for MACOM/
agency detail.

Alternative 3	
Analysts	202
Support	18
Total	220

Note: See Table 2.6 for MACOM/
agency detail.

2.157 Provide Program Management. This function provides executive supervision of the analysts actually developing the standards. A ratio of one manager for every ten hands-on development analysts is considered appropriate. However, a minimum of one position will be authorized for each MACOM/agency that has a standards development role. This minimum manning position will also provide enforcement capability.

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TABLE 2.5
MACOM/AGENCY MANPOWER REQUIREMENTS FOR
DEVELOPMENT* OF STANDARDS,
ALTERNATIVE 2

Command	FY-83 to FY-87		
	Analysts	Support	Total
FORSCOM**	107	11	118
USAREUR	2	0	2
DARCOM	94	9	103
TRADOC	21	2	23
HSC	7	1	8
EUSA	2	0	2
USACC	12	1	13
WESTCOM	--	--	--
INSCOM	6	1	7
USACE	5	1	6
MTMC	3	0	3
MDW	--	--	--
USARJ	--	--	--
USACIDC	1	0	1
ARNG	13	1	14
TAGO	3	0	3
USACSC	1	0	1
USAREC	2	0	2
USMA	3	0	3
TSG	10	1	11
MILPERCEN	2	0	2
MEPCOM	1	0	1
USATSA	2	0	2
USAFAC	2	0	2
Total	299	28	327

* Includes periodic review and update of standards.

** FORSCOM assigned Army common standards responsibility.

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TABLE 2.6
MACOM/AGENCY MANPOWER REQUIREMENTS FOR
DEVELOPMENT* OF STANDARDS,
ALTERNATIVE 3

Command	FY-83 to FY-87		
	Analysts	Support	Total
FORSCOM	10	1	11
USAREUR	2	0	2
DARCOM	94	9	103
TRADOC	21	2	23
HSC	7	1	8
EUSA	2	0	2
USACC	12	1	13
WESTCOM	--	--	--
INSCOM	6	1	7
USACE	5	1	6
MTMC	3	0	3
MDW	--	--	--
USARJ	--	--	--
USACIDC	1	0	1
ARNG	13	1	14
TAGO	3	0	3
USACSC	1	0	1
USAREC	2	0	2
USMA	3	0	3
TSG	10	1	11
MILPERCEN	2	0	2
MEPCOM	1	0	1
USATSA	2	0	2
USAFAC	2	0	2
Total	202	18	220

* Includes periodic review and update of approved standards.

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<u>Category</u>	<u>FY-83 to FY-87</u>
Alternative 2	
Analysts	40
Support	20
Total	60

Note: See Table 2.7 for MACOM/
agency detail.

Alternative 3	
Analysts	30
Support	3
Total	33

Note: See Table 2.8 for MACOM/
agency detail.

2.158 Enforce Standards Development Methodology and Policies.

This function applies only to those MACOMS/agencies that have a standards development role, and would exist in MACOM/agencies only under alternatives 2 and 3. Staffing of the function should be adequate to ensure that completed studies are reviewed promptly. Where the enforcement function would not warrant a full-time position, it would be accomplished as part of the program management function. Since development personnel will not produce products for some time after the start of the program, the positions for this function will phase in as standards studies are projected to be completed. Man-months of review effort for each study are the basis for projecting analysts for this function. Administrative assistance has been forecast on the basis of one clerk for every three enforcement analysts. A summary of estimates by alternative is as follows:

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TABLE 2.7
STAFFING TO PROVIDE PROGRAM MANAGEMENT BY
MACOM/AGENCY, ALTERNATIVE 2

Command	FY-83 to FY-87		
	Analysts	Support	Total
FORSCOM	11	17*	28
USAREUR	1	0	1
DARCOM	9	2	11
TRADOC	2	1	3
HSC	1	0	1
EUSA	1**	0	1
USACC	1	0	1
WESTCOM	--	--	--
INSCOM	1	0	1
USACE	1	0	1
MTMC	1**	0	1
MDW	--	--	--
USARJ	--	--	--
USACIDC	1**	0	1
ARNG	1	0	1
TAGO	1**	0	1
USACSC	1**	0	1
USAREC	1**	0	1
USMA	1**	0	1
TSG	1	0	1
MILPERCEN	1**	0	1
MEPCOM	1**	0	1
USATSA	1**	0	1
USAFAC	1**	0	1
Total	40	20	60

* Includes support for staffing common standards development organization.

** Indicates minimum manning. Position will also provide enforcement capability.

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TABLE 2.8
STAFFING TO PROVIDE PROGRAM MANAGEMENT BY
MACOM/AGENCY, ALTERNATIVE 3

Command	FY-83 to FY-87		
	Analysts	Support	Total
FORSCOM	1	0	1
USAREUR	1	0	1
DARCOM	9	2	11
TRADOC	2	1	3
HSC	1	0	1
EUSA	1*	0	1
USACC	1	0	1
WESTCOM	--	--	--
INSCOM	1	0	1
USACE	1	0	1
MTMC	1*	0	1
MDW	--	--	--
USARJ	--	--	--
USACIDC	1*	0	1
ARNG	1	0	1
TAGO	1*	0	1
USACSC	1*	0	1
USAREC	1*	0	1
USMA	1*	0	1
TSG	1	0	1
MILPERCEN	1*	0	1
MEPCOM	1*	0	1
USATSA	1*	0	1
USAFAC	1*	0	1
Total	30	3	33

* Indicates minimum manning. Position will also provide enforcement capability.

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<u>Category</u>	<u>FY-83</u>	<u>FY-84</u>	<u>FY-85 to FY-87</u>
Alternative 2			
Analysts	9	13	20
Support	2	3	7
Total	<u>11</u>	<u>16</u>	<u>27</u>

Note: See Table 2.9 for MACOM/agency detail.

Alternative 3			
Analysts	7	10	16
Support	<u>1</u>	<u>2</u>	<u>6</u>
Total	<u>8</u>	<u>12</u>	<u>22</u>

Note: See Table 2.10 for MACOM/agency detail.

2.159 Publish Standards. MACOMs/agencies would only be involved in the publication of standards under a variation to alternative 3. Under this variation each MACOM/agency would publish its own unique standards. Because the workload involved would be relatively small, additional manpower should not be required. Accordingly, this function should be combined with the program management function at the MACOM/agency level, because a separate staff element would not be warranted.

2.160 Determine Requirements. The goal of the requirements determination program is a credible statement of manpower needs for each budget submission. On this basis, requirements should be reviewed at least once during each year to include reapplication of all existing standards. Authorizations for the requirements determination function should provide for this annual review/standards reapplication capability. Authorizations have been calculated based on performance at the MACOM/agency headquarters. (However, the method of determining this allowance would

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TABLE 2.9
MACOM/AGENCY MANPOWER REQUIREMENTS FOR ENFORCEMENT
OF STANDARDS METHODOLOGY AND POLICIES,
ALTERNATIVE 2

Command	FY-83			FY-84			FY-85 to FY-87		
	A	S	T	A	S	T	A	S	T
FORSCOM*	3	1	4	4	1	5	6	2	8
USAREUR	**	**	**	**	**	**	**	**	**
DARCOM	2	1	3	3	1	4	4	1	5
TRADOC	1	0	1	2	1	3	3	1	4
HSC	1	0	1	1	0	1	2	1	3
EUSA	**	**	**	**	**	**	**	**	**
USACC	1	0	1	1	0	1	2	1	3
WESTCOM	-	-	-	-	-	-	-	-	-
INSCOM	**	**	**	**	**	**	**	**	**
USACE	**	**	**	**	**	**	**	**	**
MTMC	**	**	**	**	**	**	**	**	**
MDW	-	-	-	-	-	-	-	-	-
USARJ	-	-	-	-	-	-	-	-	-
USACIDC	**	**	**	**	**	**	**	**	**
ARNG	1	0	1	1	0	1	2	1	3
TAGO	**	**	**	**	**	**	**	**	**
USACSC	**	**	**	**	**	**	**	**	**
USAREC	**	**	**	**	**	**	**	**	**
USMA	**	**	**	**	**	**	**	**	**
TSG	**	**	**	1	0	1	1	0	1
MILPERCEN	**	**	**	**	**	**	**	**	**
MEPCOM	**	**	**	**	**	**	**	**	**
USATSA	**	**	**	**	**	**	**	**	**
USAFAC	**	**	**	**	**	**	**	**	**
Total	9	2	11	13	3	16	20	7	27

* For requirements computation, FORSCOM assigned Army-common standards development responsibility.

** Function combined with program management.

Legend: A = Analysts
S = Support
T = Total.

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TABLE 2.10
MACOM/AGENCY MANPOWER REQUIREMENTS FOR ENFORCEMENT
OF STANDARDS METHODOLOGY AND POLICIES,
ALTERNATIVE C

Command	FY-83			FY-84			FY-85 to FY-87		
	A	S	T	A	S	T	A	S	T
FORSCOM*	1	0	1	1	0	1	2	1	3
USAREUR	**	**	**	**	**	**	**	**	**
DARCOM	2	1	3	3	1	4	4	1	5
TRADOC	1	-	1	2	1	3	3	1	4
HSC	1	0	1	1	0	1	2	1	3
EUSA	**	**	**	**	**	**	**	**	**
USACC	1	0	1	1	0	1	2	1	3
WESTCOM	-	-	-	-	-	-	-	-	-
INSCOM	**	**	**	**	**	**	**	**	**
USACE	**	**	**	**	**	**	**	**	**
MTMC	**	**	**	**	**	**	**	**	**
MDW	-	-	-	-	-	-	-	-	-
USARJ	-	-	-	-	-	-	-	-	-
USACIDC	**	**	**	**	**	**	**	**	**
ARNG	1	0	1	1	0	1	2	1	3
TAGO	**	**	**	**	**	**	**	**	**
USACSC	**	**	**	**	**	**	**	**	**
USAREC	**	**	**	**	**	**	**	**	**
USMA	**	**	**	**	**	**	**	**	**
TSG	**	**	**	1	0	1	1	0	1
MILPERCEN	**	**	**	**	**	**	**	**	**
MEPCOM	**	**	**	**	**	**	**	**	**
USATSA	**	**	**	**	**	**	**	**	**
USAFAC	**	**	**	**	**	**	**	**	**
Total	7	1	8	10	2	12	16	6	22

* For requirements computation, FORSCOM assigned Army-common standards development responsibility.

** Function combined with program management.

Legend: A = Analysts
S = Support
T = Total.

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not preclude the MACOM from allocating some of this manpower to subordinate organizations/installations if desired.) The analyst requirements were found to be directly related to the TDA population of the command/agency. The following guide was derived using USAF experience in evaluating requirements (standards applications) on an annual basis in each command/agency. The requirements function should also have the capability to perform ad hoc manpower surveys in connection with the evaluation of requirements not covered by staffing standards. (Authorizations to conduct programmatic surveys on a recurring basis are considered an additive to the "determine requirements" allowances proposed in this section.) Included in the "determine requirements" function are utilization reviews for proper allocation of manpower resources against valid missions and workloads. The analyst allowance for the "determine requirements" function described above is contained in the following list:

MACOM/Agency

Command TDA Population	Requirement
Under 10,000	1 Analyst per 1,000 pop
10,000 to 20,000	1 Analyst per 1,500 pop
20,000 and up	1 Analyst per 2,000 pop

Support was identified to be one administrative position for every five analysts required. Using each command's TDA population shown in Table 2.11, total staffing needs for this function are listed below:

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TABLE 2.11
MANPOWER SURVEY POPULATIONS BY FISCAL YEAR

Command	TDA Pop	Less MACOM IQS	FY 82 MACOM Survey Pop	FY 82 Stds Studies Pop	FY 83 MACOM Survey Pop	FY 83 Stds Studies Pop	FY 84 MACOM Survey Pop	FY 84 Stds Studies Pop	FY 85 MACOM Survey Pop	FY 85 Stds Studies Pop	FY 86 MACOM Survey Pop	FY 86 Stds Studies Pop	FY 87 MACOM Survey Pop	FY 87 Stds Studies Pop
FRSCOM	56,304	1,794	54,510	21,988	32,522	15,365	17,157	3,551	13,606	849	12,757	5,378	7,379	
USARBR	66,422	1,173	65,249	33,827	31,422	3,499	27,923	9,391	18,532	3,646	14,886	1,523	13,363	
DAACOM	112,463	2,139	110,324	41,541	68,783	19,909	48,874	14,203	34,671	9,465	25,206	10,062	15,144	
TRAUDC	86,829	1,531	85,298	33,033	52,265	23,204	29,091	6,755	22,306	5,524	16,782	7,222	9,560	
USC	48,164	530	47,634	34,539	13,095	4,225	8,870	2,031	6,839	1,986	4,853	2,073	2,780	
EUUSA	16,786	725	16,061	6,209	9,852	1,912	7,940	1,710	6,230	18	6,212	1,080	5,132	
USACE	22,440	767	21,673	9,032	12,641	4,098	8,543	2,087	6,456	2,084	4,372	2,134	2,238	
WESTCOM	3,390	336	3,054	1,247	1,807	792	1,015	376	639	0	639	280	359	
INSCOM	10,061	674	9,387	3,452	5,935	1,887	4,048	905	3,143	871	2,272	900	1,372	
USACE	11,418	290	11,128	827	10,301	479	9,822	258	9,564	207	9,357	207	9,150	
MDMC	4,596	774	3,822	1,970	1,852	510	1,342	255	1,087	255	832	255	577	
MMW	2,970	186	2,784	164	2,620	222	2,398	5	2,393	0	2,393	0	2,393	
USARF	4,019	297	3,722	1,675	2,047	762	1,285	932	353	0	353	233	120	
USACILC	2,125	180	1,939	776	1,163	388	775	194	581	194	387	194	193	
Subtotal	447,987	11,402	436,585	180,280	246,305	77,252	169,053	42,653	126,400	25,099	101,301	31,541	69,360	
ARMY	25,306	232	25,074	9,634	15,440	4,817	10,623	2,408	8,215	2,408	5,807	2,408	3,399	
TAGO	3,196	--	3,196	718	2,478	350	2,110	170	1,940	170	1,761	170	1,587	
USACSC	1,507	--	1,507	12	1,495	4	1,491	2	1,489	2	1,487	2	1,485	
USARAC	9,970	--	9,970	3,998	5,972	1,999	3,973	999	2,974	999	1,975	999	976	
USMA	3,351	--	3,351	838	2,513	396	2,117	201	1,916	198	1,718	198	1,520	
TSG	3,910	--	3,910	2,270	1,640	612	1,028	306	722	306	416	311	115	
MILPERCEN	3,129	--	3,129	1,354	1,775	677	1,098	338	760	338	422	338	84	
MEPCOM	1,831	--	1,831	732	1,099	366	733	183	550	183	367	183	184	
USATSA	10,605	--	10,605	4,242	6,363	2,121	4,242	1,060	3,182	1,060	2,122	1,060	1,062	
USALAC	2,707	--	2,707	1,083	1,624	541	1,083	270	813	270	543	270	323	
Subtotal	65,512	232	65,280	24,881	40,399	11,892	28,507	5,946	22,561	5,943	16,618	5,948	10,670	
Aggregate	513,499	11,634	501,865	215,161	286,704	89,144	197,560	48,599	148,961	31,042	117,919	37,489	80,430	

Stds - Standards

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<u>Category</u>	<u>FY-83 to FY-87</u>
All Alternatives	
Analysts	373
Support	74
Total	446

Note: See Table 2.12 for MACOM/
agency detail.

2.161 Scheduled Manpower Surveys. The foregoing authorizations for requirements determination includes the capability for ad hoc surveys as part of their capability to evaluate requests for additional manpower (or in cases of possible misutilization of manpower resources). Retention of a cyclic manpower survey program will necessitate a manpower additive to provide this capability. This periodic survey capability would not appear necessary in those functional areas covered by standards, as these requirements would be revalidated annually with each standards reapplication. Populations undergoing standards studies (both command-unique and Army-common) should also be excluded from surveys, because changes in requirements based on a survey could create problems in the measurement portion of a standards study. (In fact, it would be desirable to freeze authorizations in a function at the time it is studied to avoid manipulation of resources that could reflect increased costs to implement a standard or to reduce the amount of savings generated by the standard). Thus, cyclic manpower surveys should not address authorizations under standards or under study. Since MACOM headquarters are surveyed by HQDA, these authorizations are also excluded from the MACOM survey programs. Table 2.13 reflects the additive population being studied for each fiscal year of this 5-year plan. Table 2.11 reflects the residual population that would be subject to manpower surveys for fiscal years 1983 thru 1987. On the basis that manpower surveys would be made on the average of every 3 years, only one-third of this residual population would

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TABLE 2.12
STAFFING TO DETERMINE REQUIREMENTS BY
MACOM/AGENCY, ALL ALTERNATIVES

Command	FY-83 to FY-87		
	Analysts	Support	Total
FORSCOM	55	7	42
USAREUR	39	8	47
DARCOM	82	16	98
TRADOC	50	10	60
HSC	30	6	36
EUSA	17	3	20
USACC	22	4	26
WESTCOM	3	1	4
INSCOM	10	2	12
USACE	11	2	13
MTMC	5	1	6
MDW	3	1	4
USARJ	4	1	5
USACIDC	2	0	2
ARNG	20	4	24
TAGO	3	1	4
USACSC	2	0	2
USAREC	10	2	12
USMA	2	0	2
TSG	4	1	5
MILPERCEN	3	1	4
MEPCOM	2	0	2
USATSA	10	2	12
USAFAC	3	1	4
Total	372	74	446

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TABLE 2.13
MACOM/AGENCY POPULATION PLACED UNDER STUDY BY FISCAL YEAR

Command	Standard Spectrum					FY-83					FY-84					FY-85					FY-86					FY-87				
	Common	Unique	Total	Common*	Unique**	Total	Common*	Unique**	Total	Common*	Unique**	Total	Common*	Unique**	Total	Common*	Unique**	Total	Common*	Unique**	Total	Common*	Unique**	Total	Common*	Unique**	Total			
USMC	39,730	8,225	47,955	18,698	3,290	21,988	13,720	1,645	15,365	2,729	822	3,551	27	822	3,551	27	822	3,551	27	822	3,551	27	822	3,551	27	822	3,551			
USARHC	50,662	1,359	52,021	33,283	544	33,827	3,227	272	3,499	9,255	136	9,391	3,510	136	9,391	3,510	136	9,391	3,510	136	9,391	3,510	136	9,391	3,510	136	9,391			
USARHC	20,537	92,932	103,469	8,367	33,174	41,541	3,322	16,587	19,909	5,009	8,294	14,203	1,171	8,294	9,465	1,171	8,294	9,465	1,171	8,294	9,465	1,171	8,294	9,465	1,171	8,294				
USARHC	28,134	52,806	80,940	11,030	21,875	33,033	12,625	10,579	23,204	1,466	5,289	6,755	235	5,289	5,524	235	5,289	5,524	235	5,289	5,524	235	5,289	5,524	235	5,289				
USARHC	26,977	19,865	46,842	26,593	7,946	34,539	252	3,973	4,225	45	1,986	2,831	0	1,986	1,986	0	1,986	1,986	0	1,986	1,986	0	1,986	1,986	0	1,986				
USARHC	10,767	181	10,948	6,137	72	6,209	1,876	36	1,912	1,692	18	1,710	0	1,710	1,710	0	1,710	1,710	0	1,710	1,710	0	1,710	1,710	0	1,710				
USARHC	2,584	18,724	21,308	1,542	7,490	9,032	353	3,745	4,098	215	1,872	2,087	212	1,872	2,087	212	1,872	2,087	212	1,872	2,087	212	1,872	2,087	212	1,872				
USARHC	2,695	...	2,695	1,247	...	1,247	792	...	792	376	...	376	...	376	...	376	...	376	...	376	...	376	...	376	...	376				
USARHC	659	8,176	8,835	182	3,270	3,452	232	1,635	1,867	88	817	905	54	817	871	83	817	871	83	817	871	83	817	871	83	817				
USARHC	116	2,067	2,183	0	827	827	65	414	479	51	207	258	0	207	258	0	207	258	0	207	258	0	207	258	0	207				
USARHC	950	2,551	3,501	950	1,020	1,970	0	510	510	0	255	255	0	255	255	0	255	255	0	255	255	0	255	255	0	255				
USARHC	391	...	391	164	...	164	222	...	222	5	...	5	...	5	...	5	...	5	...	5	...	5	...	5	...	5				
USARHC	3,602	...	3,602	1,675	...	1,675	762	...	762	932	...	932	...	932	...	932	...	932	...	932	...	932	...	932	...	932				
USARHC	0	1,941	1,941	0	776	776	0	388	388	0	194	194	0	194	194	0	194	194	0	194	194	0	194	194	0	194				
Subtotal	187,804	198,917	386,721	110,713	79,567	190,280	37,468	59,784	77,252	22,763	19,890	42,653	5,209	19,890	25,099	5,209	19,890	25,099	5,209	19,890	25,099	5,209	19,890	25,099	5,209	19,890				
USARHC	0	24,085	24,085	0	9,634	9,634	0	4,817	4,817	0	2,408	2,408	0	2,408	2,408	0	2,408	2,408	0	2,408	2,408	0	2,408	2,408	0	2,408				
USARHC	0	1,795	1,795	0	718	718	0	359	359	0	179	179	0	179	179	0	179	179	0	179	179	0	179	179	0	179				
USARHC	4	21	25	4	12	16	0	4	4	0	2	2	0	2	2	0	2	2	0	2	2	0	2	2	0	2				
USARHC	0	9,994	9,994	0	3,998	3,998	0	1,999	1,999	0	999	999	0	999	999	0	999	999	0	999	999	0	999	999	0	999				
USARHC	48	1,982	2,030	45	793	838	0	396	396	3	198	201	0	198	198	0	198	198	0	198	198	0	198	198	0	198				
USARHC	1,050	3,063	4,113	1,045	1,225	2,270	0	612	612	0	306	306	0	306	306	0	306	306	0	306	306	0	306	306	0	306				
USARHC	0	3,386	3,386	0	1,354	1,354	0	677	677	0	338	338	0	338	338	0	338	338	0	338	338	0	338	338	0	338				
USARHC	0	1,831	1,831	0	732	732	0	366	366	0	183	183	0	183	183	0	183	183	0	183	183	0	183	183	0	183				
USARHC	0	10,605	10,605	0	4,242	4,242	0	2,121	2,121	0	1,060	1,060	0	1,060	1,060	0	1,060	1,060	0	1,060	1,060	0	1,060	1,060	0	1,060				
USARHC	0	2,707	2,707	0	1,083	1,083	0	541	541	0	270	270	0	270	270	0	270	270	0	270	270	0	270	270	0	270				
Subtotal	1,102	59,469	60,571	1,094	23,787	24,881	0	11,892	11,892	3	5,943	5,946	0	5,943	5,943	3	5,943	5,943	0	5,943	5,943	3	5,943	5,943	0	5,943				
Total	188,906	258,386	447,292	111,807	103,354	215,161	37,468	51,676	89,144	22,766	25,833	48,599	5,209	25,833	31,042	5,209	25,833	31,042	5,209	25,833	31,042	5,209	25,833	31,042	5,209	25,833				

*Based on suggested study schedule using proposed priority ranking and phased buildup during FY-83.
 **Assumes command study schedules will follow same general pattern as common standards with 40% of unique standards population covered in FY-83, 20% more in FY-84, and 10% more in each of following three fiscal years.

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be surveyed each year. Staffing to support a cyclic survey program was then computed based on the survey populations reflected by year in Table 2.11 and the assumption that each analyst can survey an average of 1,500 positions per year. Administrative support to the survey program was based on one clerical position for every five analyst positions. The additive for the cyclic survey is the same under all alternatives as standards coverage and study programs proceed at the same pace under all options. A summary of the manpower requirements for this program is as follows:

<u>Category</u>	<u>FY-83</u>	<u>FY-84</u>	<u>FY-85</u>	<u>FY-86</u>	<u>FY-87</u>
All Alternatives					
Analysts	60	41	32	23	16
Support	12	6	4	3	1
Total	72	47	36	26	17

Note: See Table 2.14 for MACOM/agency detail.

Summary

2.162 A recapitulation of manpower requirements for each alternative and year is as follows:

<u>Category</u>	<u>FY-83</u>	<u>FY-84</u>	<u>FY-85</u>	<u>FY-86</u>	<u>FY-87</u>
Alternative 1					
Analysts	788	773	770	761	754
Support	154	149	151	150	148
Total	942	922	921	911	902
Alternative 2					
Analysts	813	800	802	795	788
Support	145	142	149	146	144
Total	958	942	951	941	932
Alternative 3					
Analysts	805	795	795	787	780
Support	141	138	140	140	138
Total	946	933	935	927	918

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TABLE 2.14
ADDITIVE STAFFING NEEDS FOR A PROGRAMMATIC MANPOWER
SURVEY PROGRAM BY MACOM/AGENCY--ALL ALTERNATIVES

Command	FY-83			FY-84			FY-85			FY-86			FY-87		
	A	S	T	A	S	T	A	S	T	A	S	T	A	S	T
FORSCOM	7	1	8	4	1	5	3	0	3	3	0	3	2	0	2
USAREUR	7	1	8	6	1	7	4	1	5	3	0	3	3	0	3
DARCOM	15	3	18	11	3	14	8	2	10	6	2	8	3	1	4
TRADOC	12	2	14	6	1	7	5	1	6	4	1	5	2	0	2
HSC	3	1	4	2	0	2	2	0	2	1	0	1	1	0	1
EUSA	2	1	3	2	0	2	1	0	1	1	0	1	1	0	1
USACC	3	1	4	2	0	2	1	0	1	1	0	1	0	0	1
WESTCOM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INSCOM	1	0	-	1	0	-	1	0	-	0	0	0	0	0	0
USACE	2	1	-	2	0	-	2	0	-	2	0	0	2	0	0
MTMC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MDW	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1
USARJ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USACIDC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARNG	3	1	4	2	0	2	2	0	2	1	0	1	1	0	1
TAGO	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-
USACSC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USAREC	1	0	1	1	0	1	1	0	1	-	-	-	-	-	-
USMA	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-
TSG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MILPERCEN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MEPCOM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USATSA	1	0	1	1	0	1	1	0	1	-	-	-	-	-	-
USAFAC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	60	12	72	41	6	47	32	4	36	23	3	26	16	1	17

Legend: A = Analysts
S = Support
T = Total.

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MANNING TABLES

General

2.163 The function statements in Appendices D, E, and F, along with estimated workload by function for each level, provide the basis for the number of positions required to adequately carry out the requirements determinations program under the three organizational alternatives presented. Since the scope of the individual functions at the various levels changes from option to option and manpower is phased in over a 5-year period, a range of staffing levels has been developed rather than one specific array for each function at an organizational level.

2.164 Because the requirements determination program will only involve TDA authorizations, the performance of its functions would nominally be accomplished by civilians. Use of military personnel in these functions would be dependent upon a military essentiality determination based on Army-wide manpower management needs and overall Army plans for use of military in the manpower functional area. Because the information for military essentiality is not available, the military positions have been limited to those that would be needed to provide for minimal career progression assignments for those individuals earmarked for manpower management roles at some future time. The command position and some supervisory positions in the FOA have been specifically earmarked for the military to provide military interface of the standards effort. This limited number of military positions will also assure that military considerations are taken into account in standards development studies and in the utility of completed products. These military will also bring their military experience to bear on the various manpower facets of the MRDP.

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2.165 A review of the civilian personnel classification manual and the functional descriptions outlined in Appendix A indicates the following technical civilian series have application in the MRDP. 5/

GS-343 MANAGEMENT ANALYSIS SERIES

This series includes positions involved in developing, analyzing, evaluating, advising on, or improving the effectiveness of work methods and procedures, organizations, manpower utilization, distribution of work assignments, delegations of authority, management controls, information and documentation systems, and similar functions of management. The work requires primarily a high order of analytical combined with a comprehensive knowledge of (a) the functions, processes and principles of management; and (b) methods used to gather, analyze and evaluate information concerning the management process.

GS-344 MANAGEMENT CLERICAL AND ASSISTANCE SERIES

This occupation includes positions that involve performance of clerical and technical work in support of such management analysis functions as time and motion studies; development of organizational and workflow charts; examination of work processes and data; improvement of records, paperwork, documentation, information management; and similar functions. The paramount qualification requirement is a practical knowledge of the purpose, operation, methodology, and techniques characteristic

5/ Administration positions for this program are the same as those for any functional area. Thus, these positions are shown as a one-line entry without specific grade or series identification.

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of specific management analysis functions rather than a thorough knowledge of the functions, processes, and principles of management.

GS-896 INDUSTRIAL ENGINEERING SERIES

This series includes positions that involve professional work in industrial engineering. Industrial engineering is that branch of engineering concerned with the planning, design, analysis, improvement, and installation of integrated systems of employees, materials, and equipment to produce a product or render a service. The work requires application of specialized professional knowledge and skill in the mathematical, physical, and social sciences together with the principles and methods of engineering analysis and design to specify, predict, and evaluate the results to be obtained from such systems.

GS-1531 STATISTICAL ASSISTANT SERIES

This series includes positions which require primarily the application of knowledge of statistical methods, procedures, and techniques, to the collection, processing, compilation, computation, analysis, editing, and presentation of statistical data. The work does not require the application of professional knowledge of statistics or other disciplines.

DA Staff

2.166 Provide Program Management. The function of program management is to establish policies to assure a quality requirements program, to develop standards coverage objectives/goals and/or development schedules and to monitor progress toward meeting these objectives. It is required at DA level under all options. The staffing of this function varies by option and

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fiscal year. Authorizations range from a minimum of 3 to a maximum of 18. Detailed manning proposed for this function is shown in Table 2.15.

2.167 Prescribe Standards Development Methodology. The function, "prescribe standards development methodology," is to establish and publish detailed procedures for use in the development of staffing standards. This function is required at DA staff level under all options; however, the proposed authorizations cover from one to four authorizations. Detailed manning proposed for this function is shown in Table 2.16.

2.168 Enforce Standards Development Methodology and Procedures. This function provides the quality assurance that ensures the credibility of the Army requirements program. This function is required at the DA staff level under all alternatives. Authorizations vary from one to eight based on the option and fiscal year. Detailed manning proposed for this function is shown in Table 2.17.

2.169 Publish Standards. This function involves the formatting of approved standards for publication in directive form. The function is operational in nature and is only required in the DA staff under alternative 2. Authorizations vary from a minimum of one to a maximum of four. Detailed manning proposed for this function is shown in Table 2.18.

2.170 Determine Requirements. This function deals with the evaluation of requests for additional manpower and with conducting manpower surveys of Major Command Headquarters. The function is required at the DA level under all options. The function varies in scope and size with the various options primarily because of the performance of certain operational aspects by the

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TABLE 2.15
MANNING CHART FOR PROVIDING PROGRAM
MANAGEMENT, HQDA STAFF

Positions									Manpower Range				
Line	Title	Code/ MOS	Nominal Grade	6	10	14	18	22					
1	Supervisory management analyst	GS-343	15	1	1	1	1	1					
2	Management analyst	GS-343	14	--	1	1	2	2					
3	Management analyst	GS-343	12-13	2	3	3	4	6					
4	Industrial engineer	GS-896	12-13	1	1	2	2	2					
5	Management analyst	GS-343	9-11	1	2	2	3	4					
6	Management technician	GS-344	9-11	--	--	2	2	2					
7	Administrative	GS-3X2	4-6	1	2	3	4	5					

* Where positions could be either military or civilian, identification for both is shown for that line number.

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TABLE 2.16
MANNING CHART FOR PRESCRIBING STANDARDS
DEVELOPMENT METHODOLOGY, HQDA STAFF

Positions									Manpower Range				
Line	Title	Code/ MOS	Nominal Grade	1	2	3	4	5					
1	Supervisory management analyst	GS-343	14	1	1	1	1	1					
2	Industrial engineer	GS-896	15	--	1	1	1	1					
3	Management analyst	GS-343	11-12	--	--	1	1	2					
4	Administrative	GS-3X2	4-5	--	--	--	1	1					

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TABLE 2.17
MANNING CHART FOR ENFORCING STANDARDS DEVELOPMENT
METHODOLOGY AND POLICIES, HQDA STAFF

Positions			Manpower Range					
Line	Title	Code/ MOS	Nominal Grade	1	3	5	7	9
1	Supervisory management analyst	GS-343	14	--	1	1	1	1
2	Management analyst	GS-343	13	1	1	1	2	2
3	Management analyst	GS-343	11-12	--	--	--	1	2
4	Industrial Engineer	GS-896	12-13	--	--	1	1	1
5	Management technician	GS-344	9-12	--	--	--	--	1
6	Administrative	GS-3X2	4-6	--	1	1	2	2

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STUDY OF ARMY MANPOWER REQUIREMENTS, DETERMINATION PROCEDURES, --ETC(U)

SEP 81 G H SMITH, R W HARTT, W C FRANK

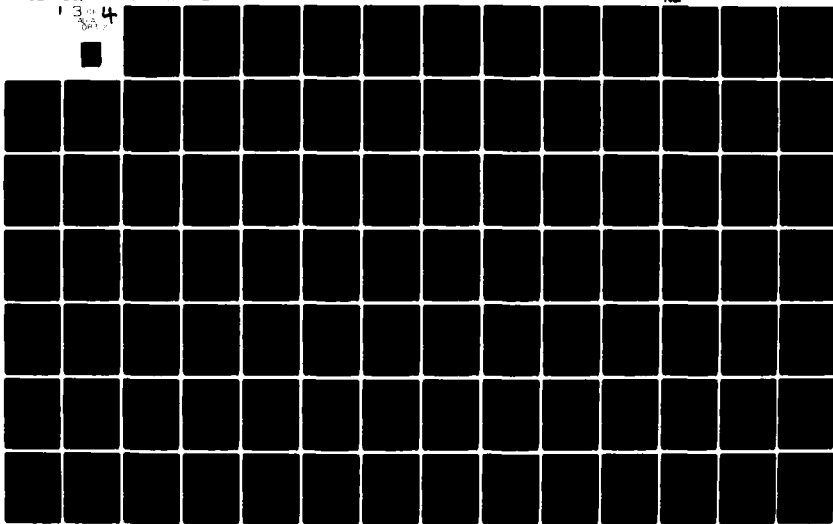
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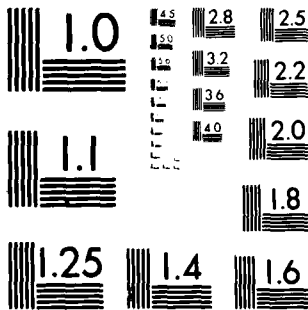
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

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TABLE 2.18
MANNING CHART FOR PUBLISHING STANDARDS, HQDA STAFF

Positions*									Manpower Range				
Line	Title	Code/ MOS	Nominal Grade	1	2	3	4	5					
1	Management analyst	GS-343	9	1	1	1	1	1					
2	Administrative officer	GS-341 71L	7 E-7	--	--	7	--	1					
3	Administrative specialist	GS-301 71L	5-6 E-5	--	--	1	2	2					
4	Administrative	GS-342 71L	4-5 E-4	--	1	1	1	1					

* Where positions could be either military or civilian, identification for both is shown for that line number.

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FOA under alternatives 1 and 3. Range of authorizations in this function varies from a minimum of 10 to a maximum of 20. Detailed manning proposed for this function is shown in Table 2.19.

FOA 6/

2.171 Develop Standards. This function involves the development of staffing standards. The usual practice is to establish a team tailored for each study by selecting the best qualified personnel for that functional area and in the quantity needed to complete the study expeditiously. The large number of development personnel in the FOA permits the formation of functional teams that provide full-time expertise in dealing with the functional staff. This minimizes familiarization time during review and update of standards. Since team size will vary from 2 to 15 personnel, detailed manning for this range of authorizations is presented in Table 2.20.

2.172 Provide Program Management. This function provides necessary executive management for the standards development effort. The scope and size of this function varies by option with authorizations ranging from a minimum of 11 to a maximum of 36. Detailed manning proposed for this function is shown in Table 2.21.

2.173 Enforce Standards Development Methodology and Policies. This function provides for the quality assurance needed to produce credible staffing standards. Scope and size of the function vary by alternatives and study milestones for scheduled

6/ FOA exists only under alternatives 1 and 3.

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TABLE 2.19
MANNING CHART FOR DETERMINING REQUIREMENTS, HQDA STAFF

Positions				Manpower Range				
Line	Title	Code/ MOS	Nominal Grade	4	8	12	16	20
1	Supervisory management analyst	GS-343	15	--	1	1	1	1
2	Management analyst	GS-343	14	1	2	2	2	2
3	Management analyst	GS-343	12-13	2	3	4	6	8
4	Management analyst	GS-343	9-11	--	--	2	3	4
5	Administrative	GS-3X2	4-6	1	2	3	4	5

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TABLE 2.20
MANNING CHART FOR STANDARDS DEVELOPMENT, FOA
(typical team composition)

Positions				Manpower Range				
Line	Title	Code/ MOS	Nominal Grade	2	4	6	8	10
1	Team chief	GS-343	12	1	1	1	1	1
2	Section leader	GS-343	11	--	--	1	2	2
3	Team member	GS-343	7-9	1	2	3	4	6
4	Administrative	GS-3X2	4-5	--	--	1	1	1

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TABLE 2.21
MANNING CHART FOR DETERMINING PROGRAM MANAGEMENT, FOA

Line	Positions			Manpower Range			
	Title	Code/ MOS	Nominal Grade	8	16	24	32 40
1	Supervisory management analyst	GS-343	14	1	1	1	1
2	Management analyst	GS-343	13	2	2	3	4 5
3	Management analyst	GS-343	11-12	2	7	10	12 15
4	Industrial engineer	GS-896	13	1	1	1	2 2
5	Management analyst	GS-343	7-9	--	1	3	5 7
6	Administrative	GS-3X2	4-5	2	4	6	8 10

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completion of studies. Detailed manning proposed for this function is shown in Table 2.22.

2.174 Prescribe Standards Development Methodology. This function provides recommended changes in detailed procedures for conducting standards studies. While the DA staff will be responsible for these detailed procedures, the FOA can perform certain operational aspects of this function, which in turn will minimize the requirements needed for this program in the DA staff. Under alternative 1 the FOA would be the sole user of a procedures manual. Under alternative 3 the FOA would be the primary user of the procedures manual, which would place the FOA in the position of being a major contributor to changes in the detailed procedures used in the standards development process. The number of authorizations in this function varies from a minimum of one to a maximum of four. Detailed manning proposed for this function is presented in Table 2.23.

2.175 Publish Standards. This function deals with formatting and publication of approved standards in an Army directive. The function exists in the FOA under alternative 1 and 3. Authorizations are the same by year for each alternative and vary from a minimum of one to a maximum of three. Detailed manning proposed for this function is shown in Table 2.24.

2.176 Determine Requirements. This function deals with the operational aspects of the evaluation of requests for additional manpower and with the conduct of manpower surveys for which the DA staff is responsible. The function exists in the FOA under alternatives 1 and 3, and staffing levels are the same for both options in all years of the program. Detailed manning proposed for this function is presented in Table 2.25.

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TABLE 2.22
MANNING CHART FOR PRESCRIBING STANDARDS
DEVELOPMENT METHODOLOGY, FOA

Positions				Manpower Range				
Line	Title	Code/ MOS	Nominal Grade	1	2	3	4	5
1	Supervisory management analyst	GS-343	13	1	1	1	1	1
2	Management analyst	GS-343	11-12	--	1	1	1	2
3	Industrial engineer	GS-896	11-12	--	--	--	1	1
4	Administrative	GS-3X2	4-5	--	--	1	1	1

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TABLE 2.23
MANNING CHART FOR ENFORCING STANDARDS
DEVELOPMENT METHODOLOGY, FOA

Positions			Manpower Range					
Line	Title	Code/ MOS	Nominal Grade	2	4	6	8	10
1	Supervisory management analyst	GS-343	14	--	--	1	1	1
2	Management analyst	GS-343	13	1	1	1	2	2
3	Management analyst	GS-343	11-12	1	1	2	2	2
4	Industrial engineer	GS-896	11-12	--	1	1	1	1
5	Management technician	GS-344	7-9	--	--	--	--	1
6	Administrative	GS-3X2	4-5	--	1	2	2	3

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TABLE 2.24
MANNING CHART FOR PUBLISHING STANDARDS, FOA

Positions*				Manpower Range				
Line	Title	Code/ MOS	Nominal Grade	1	2	3	4	5
1	Management analyst	GS-343	9	1	1	1	1	1
2	Administrative officer	GS-341 71L	7 E-7	--	--	--	--	1
3	Administrative specialist	GS-301 71L	5-6 E-5	--	--	1	2	2
4	Administrative	GS-3X2 71L	5 E-4	--	1	1	1	1

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TABLE 2.25
MANNING CHART FOR DETERMINING REQUIREMENTS, FOA

Positions			Manpower Range					
Line	Title	Code/ MOS	Nominal Grade	4	6	8	10	12
1	Supervisory management analyst	GS-343	14	--	--	1	1	1
2	Management analyst	GS-343	13	1	2	2	2	2
3	Management analyst	GS-343	11-12	2	2	2	3	3
4	Management technician	GS-344	11-12	--	--	--	1	1
5	Management analyst	GS-343	7-9	--	1	1	1	2
6	Administrative	GS-3X2	4-5	1	1	2	2	3

* Where positions could be either military or civilian, identification for both is shown for that line number.

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2.177 Overhead. This function provides the command element and support services (personnel, supply, administration) for the FOA. The size of the overhead varies with the number of personnel authorized in the FOA for the functions that constitute the MRDP. This function exists under alternatives 1 and 3 but varies in size for each alternative. Detailed manning proposed for the FOA overhead in each alternative is given in Table 2.26.

MACOM/Agency

2.178 Develop Standards. This function involves the development of standards. It is performed at this MACOM/agency level under alternatives 2 and 3. A standard is normally developed by a team tailored to perform a particular study. In some activities, the development effort will only consist of a few personnel, while in others it will consist of several teams, with up to 10 men on a team. Table 2.27 indicates the proposed detailed manning for various size teams.

2.179 Provide Program Management. This function provides the executive management for the development effort in each MACOM/agency. The function exists at this level under alternatives 2 and 3. Size of this function varies with the number of development analysts in each activity, with authorizations ranging from a minimum of 1 to a maximum of 11. Detailed manning proposed for this function is presented in Table 2.28.

2.180 Enforce Standards Development Methodology and Policies. This function assures the quality of the staffing standards by way of presenting a credible manpower requirements program. It exists in all MACOMs/agencies with a standards development role under alternatives 2 and 3. The function varies in size and scope consistent with the development effort in that activity.

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TABLE 2.26
MANNING CHART FOR OVERHEAD/SUPPORT, FOA

Positions*					Manpower Range				
Line	Title	Code/ MOS	Nominal Grade	15	20	25	30	35	
	Command section								
1	Commander	41	Col	1	1	1	1	1	
2	Technical advisor	GS-343	15	1	1	1	1	1	
3	Secretary	GS-318 71C	6 E-6	1	1	1	1	1	
	Support services								
4	Chief	GS-341 42	12 Ltc	1	1	1	1	1	
5	Personnel specialist	GS-212	11	1	1	1	1	1	
6	Personnel specialist	GS-212	9	1	2	2	3	3	
7	Personnel specialist	75B	E-6	1	1	1	1	1	

* Where positions could be either military or civilian, identification for both is shown for that line number.

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TABLE 2.26 (Cont)

Positions*								
Line	Title	Code/ MOS	Nominal Grade	Manpower Range				
				15	20	25	30	35
8	Supply specialist	GS-2005 76Y	7 E-6	1	1	1	1	1
9	Supply specialist	GS-2005 76Y	6 E-5	1	2	3	3	4
10	Administrative	GS-341 71L	11 E-9	1	1	1	1	1
11	Administrative specialist	GS-300 71L	9 E-7	--	--	1	1	1
12	Administrative specialist	GS-301 71L	7 E-6	1	1	2	2	2
13	Administrative specialist	GS-301 71L	5 E-5	2	4	5	7	10
14	Clerk typist	GS-322 71L	4 E-4	2	3	4	6	7

* Where positions could be either military or civilian, identification for both is shown for that line number.

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TABLE 2.27

MANNING CHART FOR STANDARDS
DEVELOPMENT, MACOM/AGENCY
(typical team composition)

Positions				Manpower Range				
Line	Title	Code/ MOS	Nominal Grade	2	4	6	8	10
1	Team chief	GS-343	12	1	1	1	1	1
2	Section leader	GS-343	11	--	--	1	2	2
3	Team member	GS-343	7-9	1	2	3	4	6
4	Administrative	GS-3X2	4-5	--	--	1	1	1

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TABLE 2.28
MANNING CHART FOR PROVIDING PROGRAM
MANAGEMENT, MACOM/AGENCY

Positions			Manpower Range					
Line	Title	Code/ MOS	Nominal Grade	2	4	6	8	10
1	Supervisory management analyst	GS-343	14	--	--	--	--	--
2	Supervisory management analyst	GS-343	13	--	--	1	1	1
3	Management analyst	GS-343	11-12	1	2	2	3	3
4	Management analyst	GS-343	7-9	--	1	1	1	2
5	Management technician	GS-344	9-11	--	--	--	1	2
6	Administrative	GS-3X2	4-5	--	1	2	2	2
Positions			Manpower Range					
Line	Title	Code/ MOS	Nominal Grade	15	20	25	30	35
1	Supervisory management analyst	GS-343	14	1	1	1	1	1
2	Supervisory management analyst	GS-343	13	2	2	2	3	3
3	Management analyst	GS-343	11-12	4	7	8	11	12
4	Management analyst	GS-343	7-9	3	4	6	7	9
5	Management technician	GS-344	9-11	2	2	3	3	3
6	Administrative	GS-3X2	4-5	3	4	5	5	7

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In some activities, this function is less than one full-time position, in which case program management assumes responsibility for this function. The authorizations in the enforcement function in the MACOM/agencies vary from a minimum of one to a maximum of five. Detailed manning proposed for this function at this level is shown in Table 2.29.

2.181 Determine Requirements. This function involves evaluation of requests for additional manpower, conducting surveys, and annual reapplication of approved staffing standards. The scope of this function is the same for all options for each fiscal year. Authorizations, including those for cyclic manpower surveys, range from a minimum of 2 to a maximum of 118. Detailed manning proposed for this function is presented in Table 2.30.

COMPARATIVE ANALYSIS OF ALTERNATIVES

General

2.182 The discussion of organizational alternatives thus far has been primarily in terms of the six basic functions of the MRDP. Based on the results of an overall comparative analysis of the three alternatives (Figures 2.4, 2.5 and 2.6) in terms of cost/benefits, one alternative will be nominated as the recommended organizational structure for adoption by the Army for implementing a MRDP using workload-based staffing standards.

2.183 As outlined previously in this section, the primary difference in the three alternatives is the assignment of standards development responsibilities. Thus, any comparative evaluation of the three alternatives will principally center around the differing standards development roles. Inherent in any standards development role is the requirement to provide executive

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TABLE 2.29
MANNING CHART FOR ENFORCING STANDARDS DEVELOPMENT
METHODOLOGY AND POLICIES, MACOM/AGENCY

Positions								
Line	Title	Code/ MOS	Nominal Grade	Manpower Range				
				2	4	6	8	10
1	Supervisory management analyst	GS-343	13	--	1	1	1	1
2	Management analyst	GS-343	11-12	2	2	3	3	4
3	Management analyst	GS-343	7-9	--	--	1	1	1
4	Industrial engineer	GS-896	11-12	--	--	--	1	1
5	Administrative	GS-3X2	4-5	--	1	1	2	3

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TABLE 2.30
MANNING CHART FOR DETERMINING REQUIREMENTS, MACOM/AGENCY

Line	Positions*			Manpower Range				
	Title	Code/ MOS	Nominal Grade	8	16	24	32	40
1	Supervisory management analyst	GS-343 41	15 Col	--	--	--	--	--
2	Supervisory management analyst	GS-343 41	14 Ltc	--	--	1	1	1
3	Management analyst	GS-343 41	13 Maj	1	1	1	2	2
4	Management analyst	GS-343 41	12 Cpt	2	2	3	4	5
5	Management analyst	GS-343	9-11	3	7	10	12	16
6	Management technician	GS-344	12	--	--	1	1	1
7	Management technician	GS-344	9-11	1	1	1	1	1
8	Management analyst	GS-343	5-7	--	1	1	2	3
9	Management technician	GS-344	5-7	--	--	1	2	3
10	Statistical assistant	GS-1531	7-9	--	--	--	1	1
11	Administration	GS-342	4-6	1	4	5	6	7

* Where positions could be either military or civilian, identification for both is shown for that line number.

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TABLE 2.30 (Cont)

Positions*					Manpower Range				
Line	Title	Code/ MOS	Nominal Grade	88	96	104	112	120	
1	Supervisory management analyst	GS-343 41	15 Col	1	1	1	1	1	
2	Supervisory management analyst	GS-343 41	14 Ltc	2	2	2	2	2	
3	Management analyst	GS-343 41	13 Maj	8	9	10	11	12	
4	Management analyst	GS-343 41	12 Cpt	11	12	13	14	15	
5	Management analyst	GS-343	9-11	22	22	25	25	27	
6	Management technician	GS-344	12	2	3	3	4	4	
7	Management technician	GS-344	9-11	4	5	5	6	6	
8	Management analyst	GS-343	5-7	10	11	12	13	14	
9	Management technician	GS-344	5-7	9	10	11	12	13	
10	Statistical assistant	GS-1531	7-9	4	5	5	6	6	
11	Administrative	GS-3X2	4-6	15	16	17	18	20	

* Where positions could be either military or civilian, identification for both is shown for that line number.

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TABLE 2.30 (Cont)

Positions*					Manpower Range				
Line	Title	Code/ MOS	Nominal Grade	48	56	64	72	80	
1	Supervisory management analyst	GS-343 41	15 Col	1	1	1	1	1	
2	Supervisory management analyst	GS-343 41	14 Ltc	1	1	1	1	1	
3	Management analyst	GS-343 41	13 Maj	3	4	5	6	7	
4	Management analyst	GS-343 41	12 Capt	6	7	8	9	10	
5	Management analyst	GS-343	9-11	16	18	18	20	21	
6	Management technician	GS-344	12	1	1	2	2	2	
7	Management technician	GS-344	9-11	2	2	3	3	4	
8	Management analyst	GS-343	5-7	4	6	7	8	9	
9	Management technician	GS-344	5-7	4	5	6	7	8	
10	Statistical assistant	GS-1531	7-9	2	2	3	3	4	
11	Administration	GS-3X2	4-6	8	9	10	12	13	

* Where positions could be either military or civilian, identification for both is shown for that line number.

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management of the development effort, and to enforce the standards development methodology to assure that products meet the quality control standards necessary to provide a credible statement of requirements. However, the management and enforcement functions may be required at a particular level without a development role provided that level has management responsibilities for subordinates with standards development roles or performs a second level of review for quality control (enforcement) purposes.

2.184 Development of standards involves three basic phases. The preliminary or planning phase, the data collection phase and the computation phase. While performance of the preliminary and computational phases is integral to the standards development role, data collection can be accomplished by personnel who are not members of the team designated to perform the study. Thus, data collection can be accomplished using three different approaches as follows:

- By study team technicians
- By nonstudy team technicians
- Combinations of study team and other technicians.

In all of the alternatives, it is proposed that the team that is developing a standard will accomplish all phases of the standard study including data collection from all measured locations. This approach to data collection is used by the Navy and is generally referred to as the "same eyes" approach. The Navy's "same eyes" approach has been selected for use versus the USAF system of using local personnel for the data collection, based on the following:

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- Avoids inherent delays while local data collection personnel and any intermediate headquarters personnel familiarize themselves with the project
- Avoids delays for mailing times, i.e., transmission of instructions to local level and return of collected data
- Minimizes personnel requirements by providing economy of scale and avoiding the need to authorize full time personnel at all locations
- Negates the need for the extensive coordination and/or adjustments to standards study schedules to avoid concurrent tasking of the same data collection personnel
- Avoids the situation where one command must commit certain resources for tasking by another command
- Avoids possible idle time for local personnel between data collection efforts.

2.185 The steps in making this comparative analysis and in selecting a recommended alternative are as follows:

- a. Identify the primary attributes an MRDP organizational structure should provide
- b. Apply these attributes to each of the three alternatives
- c. Develop a summary evaluation in terms of advantages and disadvantages for each alternative
- d. Select one of the alternatives as the recommended organizational structure.

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Attributes of an MRDP Organizational Structure

2.186 The following attributes have been identified as of primary importance in an MRDP organizational structure:

- a. Cost. Minimizes cost consistent with desired results.
- b. System discipline. Provides for establishment of objectives/goals and ability to monitor progress in meeting these goals. Also includes ability to take action to correct deficiencies.
- c. Accountability. Establishes clear lines of authority and accountability for meeting established goals with quality products.
- d. Coordination. Facilitates coordination of all facets of MRDP.
- e. Organizational change. Provides maximum benefit with minimum organizational change from current structure.
- f. Decentralized policy execution. Provides for optimum balance between centralized policy development and decentralized policy execution.

Evaluation of Alternative 1 Organizational Structure

2.187 Under this option, a central activity (FOA) reporting to the DA staff would develop all staffing standards, i.e., both Army-common and MACOM/agency-unique. While MACOMs/agencies would not have a development role, they would be users of the standards produced by the central activity. Accordingly, they would review

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measurement plans and standards studies involving their authorizations. This alternative would provide for an organizational arrangement for standards development very similar to that utilized by the Navy. While the Navy has two separate organizations (one on each coast) developing standards, only one of these two organizations is responsible for an individual function in the shore establishment Navy-wide. Thus, the Navy arrangement is the equivalent of a single activity with full standards development responsibility operating from two separate locations. Since both east and west coast Navy units have equal status, more involvement of the Navy staff is required than if the Navy had a single organization for development of all standards Navy-wide. The Army situation will differ in that the shore establishment for the Navy is primarily in CONUS, whereas the Army has large overseas areas/populations to cover. While this difference will have some effect on management and operational considerations, it does not negate the viability of this option.

2.188 A comparison of alternative 1 with the other alternatives for the areas listed above is as follows:

- a. Cost. This alternative requires the least expenditure of funds over the 5-year program. Since pay and allowances of personnel are the primary cost factors, these lower costs result from the economy of scale of a central operation. At the same time, TDY costs will be higher for this alternative in view of the extensive travel required to visit the various locations for collection of data during standards development. While portions of the central activity could be stationed at dispersed locations to reduce TDY

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costs, this would negate some of the economy-of-scale benefits envisioned for a central activity.

- b. System discipline. This alternative provides for the best system discipline for standards development, because only a single activity is involved in this effort. Thus, control of the standards development effort is simplified.
- c. Accountability. A single activity with full standards development responsibility provides for complete accountability in terms of setting goals and measuring progress toward meeting these goals. Resources for accomplishing scheduled workload can be maintained at a level consistent with overall Army priorities for standards development. Because the central activity is completely accountable for the development of standards, the MACOMs would not control any of the resources that are developing their own command-unique standards. Thus, whenever a MACOM commander believes his requirements have not been given a high enough priority or that the resources dedicated to his command are inadequate, that commander is placed in the untenable position of not controlling all of the tools with which he determines his requirements. This is a major change from the present manpower requirements determinations system (manpower surveys and staffing guides) whereby each commander has full control of all facets of his requirements determination program. Thus, alternative 1 fragments a commander's requirements

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program by placing some of his requirements tools (all standards) under the control of another commander.

- d. Coordination. Coordination of the standards development effort is facilitated at the DA staff level, because one organization would be responsible for the complete effort. However, coordination with MACOM/agencies on development priorities for command-unique standards and resultant products would present extensive coordination problems. Based on the number of MACOM/agencies involved and the projected number of studies for each, the coordination effort will be extremely involved and, although the central organization can accomplish much of this, the DA staff would be required to establish overall allocations of resources between Army-common and command-unique standards. Then a command-by-command allocation of effort would be required for command unique standards. The commands would either make up their own schedules based on command priorities or comment on the standards effort envisioned for that command by the central development agency. In either case, these coordination steps would be time consuming, even if all agreed on a course of action. Coordination of the use of detailed and summary standards as inputs for unique staffing standards would also be more involved.
- e. Decentralized policy execution. All alternatives provide for central policy direction by the DA staff. However, under alternative 1 this policy would primarily apply to the central standards

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development activity. Because FOAs are, by nature, operational organizations, execution is in effect at a level below the DA staff. However, delegation of some standards development to MACOMs and agencies is certainly feasible. Thus, this alternative does not represent maximum decentralization of the standards development program.

- f. Organizational change. This alternative presents the most radical departure from the current method of standards development because it would withdraw all staffing standards capability from all MACOMs/agencies. Withdrawal of all capability from commands could have an adverse effect on the overall program, because the MACOMs/agencies would no longer have a standards development role and development of standards by an outside agency could result in an adversary situation on individual standards and their use.

Evaluation of Alternative 2 Organizational Structure

2.189 Under this alternative, all MACOMs/agencies would develop their own unique standards and one or more MACOMs/agencies would be designated to develop Army-common standards in addition to their own unique standards. (To develop manpower requirements for this initial 5-year plan and for this evaluation, FORSCOM is assumed to have development responsibilities for all Army-common standards.) While an FOA would not be required under this option, an organization equivalent to an FOA has been projected for FORSCOM, because the size of the Army-common standards development effort would be sufficiently large to warrant a separate

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support unit to avoid a sizeable increase in AMHA for an operational function. Thus, the equivalent of the FOA overhead would be needed to establish such a unit under this alternative.

2.190 A comparison of alternative 2 with the other alternatives for the areas listed above is as follows:

- a. Cost. Alternative 2 calls for the highest dollar requirements based on personnel costs, which account for the major portion of the dollar resources needed for the program. With each command having its own unique standards capability, some geographical dispersion of the standards effort is realized, and will reduce TDY costs from those of alternative 1. However, TDY costs will be substantially the same as under alternative 3.
- b. System discipline. This alternative, when compared with the other two, provides for the least system discipline of the overall standards development effort. As viewed from the DA staff level, all development responsibilities would be assigned to MACOMs/agencies. Thus, DA control of the development effort would only be through the headquarters of the MACOMs/agencies. In the unique standards area, this should not present significant problems, as each MACOM/agency would be primarily concerned with its own unique standards development effort. However, in the case of a command that would be responsible for an Army-common standard, the situation would be more complex. The assignment of the garrison standards development

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responsibility to FORSCOM has clearly indicated the difficult coordination and cooperation problems a command experiences when given an Army-wide standards development task. To mitigate these types of problems, DA staff would be involved and coordinate the common standards effort if an effective program is to result. Such detailed DA staff involvement in a mission area assigned to a command(s) could certainly be considered as meddling by any commander with an Army-common standards development role. The basic discipline of the system would be achieved only through this DA staff involvement in the common standards area and the DA staff enforcement functions that would assure that all products meet the quality control standards set for the program.

- c. Accountability. This alternative provides the least accountability for standards development. Since unique standards would only apply to a specific command, the assignment of the responsibility for standards development, setting development goals, and monitoring progress toward meeting these goals would provide excellent accountability. In the common standards development area, the situation is quite different. While assignment of responsibility for common standards is made in the same manner as unique standards, meeting this responsibility presents the tasked command (or commands) with a very difficult situation. For many of the functions, up to 10 commands could be involved in reviewing measurement plans and completed standards studies for adequate coverage of

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its own command situations and authorizations. Because each reviewing command has its own priorities, the command tasked for a particular common study is not in a position to direct commitments by another command. In addition, the resources devoted to the common standards effort would belong to the tasked commander and, as such, the commander could reduce the level of resources for this common effort based on his other operational needs. For DA to "fence" the manpower given to a command for common standards development would deviate from the current policy of a commander's prerogative in the allocation of his resources. Thus, to make this alternative viable, the DA staff would be required to provide some detailed direction and coordination of the effort to ensure that schedules in this high pay-off area of common standards are met.

- d. Coordination. As discussed above, this alternative presents complex coordination problems for common standards that can only be met by extensive DA staff involvement if the program is to proceed efficiently. Since unique standards only affect one command, the coordination is straightforward and relatively easy in terms of the command's functional staff participation and interface with detailed and summary standards for a particular functional area.
- e. Decentralized policy execution. This alternative provides for the most decentralization of execution of policy of the three alternatives. As noted in previous paragraphs, the decentralization

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of Army-common standards development to the command level requires the DA staff to become involved in coordinating the overall effort. On this basis, the decentralization under this alternative appears to have gone beyond the level for an efficient operation and could be counterproductive.

- f. Organizational change. This alternative provides for minimum change from the existing standards development organizational structure whereby all standards are developed by commands. While the equivalents of some Army-common standards have been developed at DA level (i.e., DCSPER, USAFAC, etc.) the majority of these common standards have been developed by FORSCOM as part of their current garrison standards development responsibility. Because most of the common standards will be in the installation support areas, assignment of the common standards effort to FORSCOM would be a logical follow on (FORSCOM had some 44 personnel dedicated to the garrison standards effort as of December 1980). Assignment of the Army-common standards effort to FORSCOM would more than double the number of personnel involved in standards at FORSCOM. Such an increase would warrant establishment of a support organization as the holding activity for the standards development mission to avoid a significant increase in AMHA.

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Evaluation of Alternative 3 Organizational Structure

2.191 Under this alternative, a central activity (FOA) reporting to the DA staff would develop Army-common standards, and each MACOM/agency would develop its own unique staffing standards. The alternative 3 organizational arrangement for standards development is a combination of the best features of the Navy and Air Force systems. It proposes to use the USAF split of standards development responsibilities (common by a central activity and unique by individual commands) and the Navy's "same eyes" development approach.

2.192 A comparison of alternative 3 with the other alternatives for the areas indicated is as follows:

- a. Cost. This alternative requires a higher expenditure of funds than alternative 1 but lower than alternative 2. TDY costs would be approximately the same as alternative 2 but less than alternative 1 because of the dispersion among commands of the unique standards effort.
- b. System discipline. This system provides for direct DA staff control over the Army-common standards development effort. The discipline in the command-unique standards area will be achieved by DA staff establishing each command's standards coverage goals and by monitoring achievements. Through the DA staff enforcement functions the quality of the command products can be assured, because approval for the use of any standard, common or command-unique, would not be given by

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the DA staff until all quality control parameters had been met.

- c. Accountability. A central activity (FOA) with Army-common standards development responsibilities, reporting directly to the DA staff, provides for clearly delineated lines of authority. Setting of goals and measuring progress toward meeting these goals will give an excellent measure of performance. Resources for accomplishing scheduled workloads are assured to be consistent with overall Army priorities. For unique standards, a similar situation exists. MACOMs/agencies would be assigned the responsibility for development of their own standards. The DA staff would also establish command goals for standards coverage and would monitor progress in meeting these goals. Based on these goals, each MACOM/agency would schedule studies consistent with available resources and command priorities. Progress toward meeting these goals would be monitored and quality control of products would be assured by the enforcement function at command level. The DA staff would assure quality control by a second level review of command generated products. Thus, clear-cut lines of accountability would be maintained within the structure.
- d. Coordination. Coordination under this alternative is facilitated by the clearly delineated lines of responsibility (i.e., FOA for common standards and commands for their own unique standards). Because Army-common standards apply to two or more MACOMs/agencies, the DA functional staff

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will be directly involved with the FOA during standards studies. This close contact will build a rapport that will prove mutually beneficial in developing a standard and in coordinating when completed. To provide for maximum benefit from the FOA arrangement under this option, some permanent functional expertise in the FOA would be advantageous (similar to the Air Force's functional management engineering teams). For command-unique standards, the interface at the command level will be with the functional staff as it applies to the command (including the interface with detailed and summary standards).

- e. Decentralized policy execution. Alternative 3 provides the optimum balance on decentralized execution because it assigns responsibilities for standards development consistent with the ability and authority to execute the related tasks. Specifically, the MACOMs/agencies would only be responsible for their own unique standards and would not be involved in Army-wide efforts except for coordination as it affects their own authorizations.
- f. Organizational change. This alternative provides for a very limited change from the current structure. Basically, it centralizes the various common standards development efforts into a single cohesive activity reporting to the DA staff. Specifically, it would remove the Army-wide garrison standards effort from FORSCOM and the Army-wide finance and accounting standards development responsibilities from USAFAC. Because each of these

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commands would continue to have unique standards development responsibilities, this change would primarily be in terms of a workload adjustment and possible change in staff responsibilities rather than an organizational change at the command level. Thus, the organizational change would be limited to the creation of an FOA and the assignment of this new mission to that organization.

Summary Evaluation of Alternatives

2.193 General. All three alternatives will provide a staffing standards program that will improve the credibility of the statement of manpower requirements submitted to Congress annually in the budget. Thus, the primary benefit of this program will be the ability of the Army to document most of its TDA needs in such a way as to avoid future arbitrary congressional reductions. Staffing standards will also provide a basis for bringing workload and resources into agreement until additional resources can be provided. Standards will also provide each commander with an improved basis for supporting his requirements and in turn his chances of obtaining scarce manpower resources.

2.194 Based on the application of the functional criteria and the cost/benefit considerations, the specific advantages and disadvantages of alternative 1 are as follows:

- Advantages
 - Minimum imposition on commands, because they are not responsible for developing or managing any staffing standards (only detailed and summary standards for local use).

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- Resources are assured to maintain standards development pace consistent with overall Army priorities.
 - Maximum economy of scale for centralized development of all Army standards.
 - Provides broad in-depth functionally oriented expertise to assist DA staff in evaluating requirements and to work with functional staff on day-to-day basis.
 - Improves career progression opportunities for standards development personnel.
 - Avoids possible command bias and assures broad perspective in the development of standards.
 - Full-time functional experts are available to monitor standards for currency and the effect of functional policy changes on present standards.
 - Reduces size of AMHA, as FOA assumes functions formerly in the MACOM headquarters.
 - FOA performs operational aspects of enforcement, publication of standards, and drafting of procedures to minimize increases in HQDA staff.
 - Provides for quick concentration of resources to develop a standard with top priority; i.e., allows special effort for highest priority in the Army rather than within each command.
- Disadvantages
 - Additional TDY (can be minimized by strategically locating functional teams).

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- Command reluctance to accept and use products they did not help develop. (However, commands would review all measurement plans and standards studies involving their authorizations.)
- Reduced hiring base.
- Requires extensive DA staff involvement to referee conflicting command priority needs for standards.
- Most significant departure from present decentralized type of standards development operation.

2.195 Based on the application of the functional criteria and cost/benefit considerations, the specific advantages and disadvantages of alternative 2 are as follows:

- Advantages

- Some economy of scale for development of Army-common standards.
- No change in present standards development roles at command level.

- Disadvantages

- Creates severe coordination problems when one or more commands are required to develop Army-common standards in addition to their own unique standards.
- Increases DA staff to monitor currency of Army-common standards and to determine when revisions are needed.

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- Does not provide functional expertise to assist DA staff in evaluating requirements.
- Resource needs highest of three alternatives (slightly lower than alternative 1).
- Requires some increase in size of AMHA over alternative 1.
- Requires extensive DA staff involvement in coordinating and directing command support of the Army-common standards development effort.
- Commands charged with developing Army-common standards placed in position of determining relative priorities between Army-wide and command-unique standards efforts.
- Resources for Army-common standards development are not assured consistent with overall Army priorities.

2.196 Based on the application of the functional criteria and cost/benefit considerations, the specific advantages and disadvantages of alternative 3 are as follows;

- Advantages

- Some economy of scale for development of common standard.
- Minimum imposition on commands, as they are only responsible for their own unique standards.
- Does not place one command in the position of depending on another for development of Army-common standards.
- Resources needs lower than alternative 2.

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- Provides functional expertise in FOA to assist DA staff in evaluating requirements and to work with functional staff on day-to-day basis.
 - FOA development of Army-common standards avoids possible command bias and assures broad perspective in the development process.
 - Simplifies maintenance of Army-common standards as dedicated personnel provide full time functionally oriented experts to monitor currency of standards.
 - Minimizes increases to DA staff to manage and operate the program as FOA can perform operational aspects of enforcement, publication of all standards, and drafting of procedures.
 - Minimum change from present command roles in standards development; e.g., relieves FORSCOM of Army-wide garrison standards.
- Disadvantages
 - Requires some increase in AMHA over alternative 1.
 - Career progression opportunities for standards development personnel reduced over alternative 1.

Recommended Alternative

2.197 As indicated by the advantages and disadvantages for each option, each alternative has some positive attributes that would recommend it for adoption. However, when the disadvantages are weighed against the advantages, the balance is clearly in favor

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of alternative 3. Alternative 3 has the following positive benefits to recommend it over the other two alternatives:

- Optimum balance between centralized policy and control and decentralized policy execution
- Establishes clear lines of authority and accountability for performance of standards development
- Represents middle-of-the-road cost position
- Minimum change from current command roles in development of standards
- Requires only moderate increases to AMHA to fully implement
- FOA provides for DA staff assistance in operational aspects of MRDP, which avoids need for any significant additions to the HQDA staff level
- Provides for reasonable career progression opportunities for personnel in MRDP
- Assures adequate resources for Army-common standards development.

2.198 Based on the foregoing, it is recommended that the Army adopt alternative 3, as shown in Figure 2.6, as the organizational structure to implement an MRDP within the Army based on workload related staffing standards.

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III. STANDARDS DEVELOPMENT WORKLOAD AND 5-YEAR PLAN

3.1 This section contains the 5-year plan and schedule for staffing standards development. The plan is the culmination of a series of interrelated analyses focusing principally on defining and quantifying the workload for an Army standards program. The plan reflects only the workload associated with standards development, a most significant element of the overall standards program and, therefore, highly critical to an accurate assessment of the total resources required.

OBJECTIVES

3.2 The principal objectives of this plan can be defined as follows:

- a. Define the workload associated with the development of staffing standards for TDA activities.
- b. Formulate a plan identifying the workload associated with the development of Army-common standards over a 7-year period, and develop the initial 5-year schedule of standards studies.

APPROACH

3.3 To meet these objectives, a 5-step approach was followed:

- Finalize the functional set to be used

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- Quantify the probable standards universe for an Army-wide program
- Categorize the functions as to standards development feasibility
- Define the potential standards universe
- Develop an initial 5-year plan for standards development.

The specific procedures followed, data sources utilized, analyses conducted, and results are presented in ensuing paragraphs.

DEVELOPMENT OF THE FUNCTIONAL SET

3.4 Preliminary investigations and analysis indicated at the onset of this study effort that a set of functional terms and definitions designed for use in a functionally-oriented staffing standards program was not available. Inasmuch as a functional language was fundamental to the overall program, emphasis was placed on identifying from among the Army management systems one that would provide the most comprehensive language. Ideally, such a classification scheme and language should be one that could be applied uniformly and consistently within the Army's organizational structure. The language should be structured into a universal hierarchy for application in both automated and nonautomated modes. Additionally, the language should have remained reasonably stable over time, at least to the extent that reasonably consistent information would have been reported and, thus, would be available for analysis.

3.5 The most universally applied classification scheme that embodies the aforementioned attributes was found to be the Army Management Structure (AMS) and its hierarchical codes (AMSCO).

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The AMSCO generally provides rudimentary functional classifications of all TDA unit resources programmed and allocated by the planning, programming, and budgeting system. Key considerations in selecting the AMSCO as a functional classification language were the hierarchical code structure and its linkage to a DCSPER resource management system under development. AMSCO has the following characteristics:

- a. The hierarchy consists of the OSD program element code, major force program and subprogram, and defense planning and programming category. Not included in the hierarchy is the congressional funding appropriation.
- b. The AMSCOs are central to the Manpower Evaluation and Tracking System (METS) under development for DCSPER, which provides the capability to identify functional manpower authorizations and personnel strengths allocated among organizations, installations, and MACOMs.

The Functional Set

3.6 Analysis of the AMS and the activity definitions in AR 37-100-80 resulted in identifying an appropriate language to describe functional responsibilities in TDA units. The basic language consists of work centers, subfunctions, and functions. A work center represents a homogeneous grouping of tasks to perform one or more outputs. A subfunction is composed of one or more work centers performing related services or outputs. A function consists of one or more related subfunctions that, together, represent a major segment of the total services required to be performed at an installation or in a unit.

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3.7 Defined in this manner, the functional responsibilities in TDA units were classified into 18 functions and 309 subfunctions. Table 3.1 lists the 18 functions and identifies with each a representative sample of the subfunctions. The functional and subfunctional titles are largely those identified in the AMS. In some instances, titles were modified slightly in keeping with the need for a functional classification scheme. (To a very limited extent, individual work center names can also be identified, but the AMSCO precludes complete and accurate identification of all work centers.)

QUANTIFICATION OF THE PROBABLE STANDARDS UNIVERSE

3.8 The second step in the overall analysis was to obtain an initial estimate of the standards universe. Essentially, this involved identifying units that perform each subfunction within the Army command structure. Implicitly, this included determining unit designations, identification codes, and geographical locations; cognizant MACOMS; and the number of authorizations and/or personnel performing the workload.

3.9 Alternative sources for obtaining the requisite data were evaluated against the following criteria:

- a. The information source selected must contain all essential data elements (organization, AMSCO, location, and number of authorizations and/or personnel assigned by category).
- b. The data must be available within the limits imposed by the contract schedule.
- c. The data supplied must be convertible to an automated data processing system to facilitate analysis and classification.

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TABLE 3.1
LISTING OF FUNCTIONS AND REPRESENTATIVE SUBFUNCTIONS

ADMINISTRATION Administrative Support HQ Commandant AUTOMATIC DATA PROCESSING Automation Support (ADP) Automation Security (ADP) Worldwide Military Command and Control Systems (WWMCCS) ADP BASE SUPPORT SERVICES Audio Visual Services Bachelor Housing Furnishings Support Commissary Operations Community and Morale Support Activities Army Community Service Activities Army Food Service Program COMMUNICATIONS National Military Command System-Wide Support STARCOM (Army communications System-ACS) Minimum Essential Emergency Communications Network (MEECN) Satellite Communications Traffic Control Approach and Landing Systems DENTAL Dental Care Activities DEPOT MATERIAL MAINTENANCE Aircraft Depot Maintenance Communications-Electronics Equipment AIF Manufacture and Assembly AIF Overhaul, Repair, and Renovation FACILITIES SUPPORT Operation of Utilities Maintenance and Repair of Real Property Fire Prevention and Protection Refuse Handling Pest Control INTELLIGENCE Cryptologic Activities Human Intelligence (HUMINT) Imagery Intelligence Scientific and Technical Intelligence Intelligence Production Activities MAINTENANCE OF MATERIAL Support of Material Related Support Maintenance Tactical Support-Logistics Units	MEDICAL Examining Activities (Medical) Education and Training--Health Care Care in Regional Defense Facilities Station Hospitals and Medical Clinics PERSONNEL SUPPORT Chaplain Activities Command Information Activities Army Alcohol and Drug Abuse Control Program Installation Museums RECRUITING Recruiting Activities Examining Activities (Recruiting) Personnel Processing Activities (Recruiting) RESEARCH AND DEVELOPMENT In-House Laboratory Independent Research Defense Research Sciences Atmospheric Investigations Aircraft Avionics Technology Aeronautical Technology SECURITY Military Police Operations Military Police Investigations Correction of Military Offenders Criminal Investigations SUPPLY INSTALLATION Clothing Sales Stores Self-Service Supply Center Purchasing and Contracting Clothing Issue Points/Central Issue Facilities Operation of Storage Facilities SUPPLY CENTRAL Supply Management Operations Central Procurement Activities Industrial Preparedness Operations TRAINING Recruit Training Service Academy (USMA) USMA Preparatory School Officer Candidate School, Branch Immaterial Reserve Officer Training Corps TRANSPORTATION SERVICES Administrative Motor Services Local Transportation Office Operations Administrative Rail Services Administrative Watercraft Services

Source: AR-37-100, "The Army Management Structure."

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- d. The manpower and/or personnel data provided must accurately reflect operating force authorizations.

3.10 The METS was selected as the principal data source for quantifying the probable staffing universe. The METS provides manpower authorizations and assigned personnel strengths along with unit identification code (UIC), AMSCO, and unit location. Manpower data in the METS are provided by the Army's Force Accounting System. Personnel data are provided by the Civilian and Military Personnel Centers, using existing central data bases.

3.11 Relevant data from the METS, correlated to the proposed functional language, are reflected in Table 3.2. The basic information provided is at the lowest level of detail that could be reasonably obtained. The number of work centers in each subfunction was determined primarily on the activity definitions in AR 37-100-80. Where feasible, the work centers were correlated to the functional classification language utilized by the U.S. Navy and U.S. Air Force in their respective standards development programs. For some subfunctions where work center identification was not available, the number of work centers was estimated, e.g., for Army Industrial Fund activities and Army National Guard. The number of Army National Guard units by subfunction could not be determined.

STANDARDS DEVELOPMENT FEASIBILITY ASSESSMENT

3.12 Concurrent with the preceding quantification effort, an assessment was made of the susceptibility of each element of the

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TABLE 3.2
QUANTIFICATION OF PROBABLE STAFFING STANDARDS UNIVERSE

Function/Subfunction	AMSCO	Population	Number of MACOMs/ Agencies	Number of Units	Estimated Number of Work Centers
ADMINISTRATION					
Administration (General)	XXXX96N0000	11,567	-	70	10
Administrative Support (Europe)	20239900000	3,644	-	55	7
Administrative Support (FORSCOM)	20269900000	310	-	5	7
Administrative Support (Pacific)	20249900000	542	-	20	7
HQ Commandant	XXXX96N3000	2,097	-	58	2
Organizational Effectiveness	XXXX96N8000	63	4	24	1
Other Administration	XXXX96N9000	24,916	9	96	10
Army Reserve Commands (Reserves)	51999210000	29	1	21	2
Army Readiness Regions (Reserves)	51999230000	2,517	1	6	4
Director of RC Activities (Reserves)	51999250000	137	2	7	2
Reserve Readiness Support (Reserves)	51999200000	2,005	2	36	7
Finance and Accounting	95121200000	2,707	1	1	6
AUTOMATIC DATA PROCESSING					
Automation Activities (ADP)	XXXX96P0000	1,721	4	31	8
Automation Support (ADP)	XXXX96P1000	2,561	7	57	11
Automation Security (ADP)	XXXX96P2000	103	5	12	1
Worldwide Military Command and Control Systems (WWMCCS) ADP	31315100000	103	1	2	4
BASE SUPPORT SERVICES					
Audio Visual Services	XXXX96A4000	1,525	8	63	3
Bachelor Housing Furnishings Support	XXXX96H0000	787	9	105	6
Family Housing Management Operations	191000000	2,157	12	102	5
Commissary Operations	XXXX96Q0000	10,605	5	14	6
Community and Morale Support Activities	XXXX96S0000	528	2	27	1
Morale Support Activities	XXXX96S3000	2,329	7	45	14
Army Community Service Activities	XXXX96S4000	254	7	42	3
Army Food Service Program	XXXX96F0000	2,429	4	64	1
Garrison Bread Bakeries	XXXX96F2000	2	1	1	1
Dining Facilities	XXXX96F3000	3,448	8	93	1
Ration Distribution Points	XXXX96F6000	11	2	2	1
Other Personnel Activities	87871600000	1,096	7	20	7
Laundry and Dry Cleaning Services	XXXX96E4000	464	7	35	3
Public Affairs	95121400000	248	11	95	1
Tactical Support Forces (Reserves)	51292400000	1,720	1	33	3
COMMUNICATIONS					
Base Communications (CONUS)	39570100000	3,281	1	82	5
Base Communications (Europe)	39570200000	1,278	1	21	5
Base Communications (Pacific)	39570300000	476	1	5	5
Base Communications (Reserves)	53999500000	108	1	5	5
Communications Security	39340100000	731	3	17	4
Communications Support (Europe)	20239500000	245	1	2	1
Communications Support (Pacific)	20249500000	11	1	2	1
Alternate National Military Command Center	39201200000	277	1	2	3
National Military Command System-Wide Support	39205300000	46	1	2	2
STARCOM (Army Communications System-ACS)	39311100000	6,387	1	139	9
Long Haul Communications	39312600000	4,157	1	59	13

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TABLE 3.2 (Cont)

Function/Subfunction	AMSCO	Population	Number of MACOMs/ Agencies	Number of Units	Estimated Number of Work Centers
COMMUNICATIONS (cont)					
Minimum Essential Emergency Communications Network (MEECN)	39313100000	26	1	4	1
Satellite Communications	39314200000	503	2	18	3
Traffic Control Approach and Landing Systems	31511400000	1,674	1	44	3
DENTAL					
Dental Care Activities	84771500000	5,697	4	57	3
DEPOT MATERIAL MAINTENANCE					
Depot Maintenance Activities (General)	73220700000	258	1	3	5
Maintenance Support Activities	73801700000	4,293	1	27	25
Aircraft Depot Maintenance	738017A0000	179	1	2	8
Communications-Electronics Equipment	738017E0000	730	1	6	3/
AIF Manufacture and Assembly	300010000	3,205	1	8	1/
AIF Overhaul, Repair, and Renovation	300030000	18,040	1	20	1/
AIF Engineering Services	300078000	1,532	1	5	1/
AIF Other Products and Services	300080000	413	1	30	1/
AIF Redstone Arsenal	363100000	219	1	3	1/
FACILITIES SUPPORT					
Operation of Utilities	XXXX96J0000	1,613	5	51	2
Water Service	XXXX96J1000	495	7	34	1
Sewage Service	XXXX96J2000	278	7	36	1
Electric Service	XXXX96J3000	169	3	3	1
Boiler and Heating Plants	XXXX96J4000	1,369	7	44	2
Air Conditioning and Cold Storage Plants	XXXX96J5000	109	7	18	2
Other Utilities Operations	XXXX96J9000	75	4	5	1
Maintenance and Repair of Real Property	XXXX96K0000	6,422	5	55	1
Utilities Systems	XXXX96K1000	2,893	7	48	2
Buildings	XXXX96K2000	5,598	7	49	1
Grounds	XXXX96K3000	670	6	42	2
Railroad Maintenance	XXXX96K4000	41	4	17	1
Surfaced Areas Maintenance	XXXX96K5000	809	7	43	4
Miscellaneous Maintenance	XXXX96K6000	75	6	13	1
Maintenance and Repair-Inactive Installations/Facilities	XXXX96K8000	2	1	1	1
Facilities Engineering Shops					
Suspense Accounts	XXXX96K9000	893	2	4	1
Minor Construction	XXXX96L0000	160	4	7	1
Other Engineering Support	XXXX96M0000	5,209	6	60	21
Fire Prevention and Protection	XXXX96M1000	2,613	7	51	2
Refuse Handling	XXXX96M2000	286	7	36	2
Pest Control Services	XXXX96M3000	396	7	46	1
Custodial Services	XXXX96M4000	270	7	46	1
Snow and Sand Removal	XXXX96M5000	16	2	2	1

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TABLE 3.2 (Cont)

Function/Subfunction	AMSCO	Population	Number of MACOMs/ Agencies	Number of Units	Estimated Number of Work Centers
FACILITIES SUPPORT (cont)					
Management and Engineering-Active Installations	XXXX96M6000	3,287	7	64	5
Miscellaneous Engineering Activities	XXXX96M9000	1,926	7	53	9
Installation Restoration	XXXX96R0000	67	1	14	1
National Guard Logistical Support	37300000	15,652	1	2/	2/
INTELLIGENCE					
Foreign Counterintelligence Activities	31512700000	364	2	15	1
Security and Investigative Activities	31512800000	792	2	25	1
Cryptologic Activities	38101100000	5,801	2	27	4
Human Intelligence (HUMINT)	38101200000	630	1	13	1
Imagery Intelligence	38101900000	130	1	1	3
Intelligence Production Activities	38102100000	254	2	2	5
Scientific and Technical Intelligence	38102200000	505	2	4	5
Intelligence Data Handling System	38102500000	138	4	7	5
Defense Special Security System	38102800000	324	1	1	3
Cryptologic Communications	38105500000	511	1	11	3
Intelligence Support (CONUS)	20281600000	184	1	4	3
Intelligence Support (Europe)	20239100000	262	2	7	3
Intelligence Support (Pacific)	20249100000	21	3	5	1
Intelligence Support (Reserves)	51391100000	1	1	1	1
Tactical Intelligence Support (Korea)	20241600000	14	1	1	1
MAINTENANCE OF MATERIAL					
Support Maintenance	XXXX96C1000	7,002	10	82	14
Related Support Maintenance	XXXX96C2000	2,000	6	34	8
Tactical Support-Logistics Units	20281800000	372	1	4	2
Maintenance Activities (Reserves)	51799400000	2,714	1	24	3
MEDICAL					
Examining Activities (Medical)	84171300000	370	1	72	1
Education and Training--Health Care	84676100000	2,351	2	15	2
Care in Regional Defense Facilities	84771100000	17,508	1	10	29
Care in Non-Defense Facilities	84771300000	6	1	2	1
Other Health Activities	84771400000	5,548	5	62	9
Station Hospitals and Medical Clinics	84779200000	23,593	4	46	25
Medical Support Units (Reserves)	51899700000	318	1	18	2
PERSONNEL SUPPORT					
Personnel Support	XXXX96G0000	5,595	6	68	13
Chaplain Activities	XXXX96G1000	793	7	59	1
Command Information Activities	XXXX96G2000	777	8	43	5
Army Alcohol and Drug Abuse Control Program	XXXX96G3000	762	8	53	2
Installation Museums	XXXX96G4000	151	5	42	1
Other Personnel Support	XXXX96G5000	113	6	29	3
Enlistment Activities	XXXX96G9000	114	4	29	1
Personnel Administration	95122000000	5,146	3	13	7
Automated Personnel Support Systems (Reserves)	53999330000	4	1	1	1

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TABLE 3.2 (Cont)

Function/Subfunction	AMSCO	Population	Number of MACOMs/ Agencies	Number of Units	Estimated Number of Work Centers
PERSONNEL SUPPORT (cont) OPMS - USAR (Reserves)	53999310000	31	1	1	1
RECRUITING					
Recruiting Activities	87171100000	9,533	1	65	3
Examining Activities (Recruiting)	87171300000	1,461	1	72	1
Personnel Processing Activities (Recruiting)	87171400000	845	1	7	1
Recruiting and Retention Activities (Reserves)	53899100000	461	2	64	2
RESEARCH AND DEVELOPMENT					
In-House Laboratory Independent Research	61110100000	101	2	11	4
Defense Research Sciences	61110200000	2,345	3	22	25
Atmospheric Investigations	61211100000	58	1	1	1
Aircraft Avionics Technology	61220200000	196	1	1	3
Aeronautical Technology	61220900000	208	1	1	3
Airdrop Technology	61221000000	15	1	1	1
Tank and Automotive Technology	61260100000	188	1	1	3
Communications-Electronics	61270100000	174	1	3	2
Combat Surveillance, Target Acquisition, and Identification	61270300000	139	1	2	3
Military Environmental Criteria Development	61270400000	5	1	1	1
Electronic and Electron Devices	61270500000	738	1	5	1
Mapping and Geodesy	61270700000	1,013	1	5	2
Night Visions Investigations	61270900000	250	1	1	3
Human Factors Engineering in Systems Development	61271600000	144	1	1	3
Mobility and Weapons Effects Technology	61271900000	131	2	3	3
Environmental Quality Technology	61272000000	102	2	2	2
Clothing, Equipment, and Shelter Technology	61272300000	62	1	1	1
Joint Services Food System Technology	61272400000	302	1	1	4
Cold Regions Engineering Technology	61273000000	124	1	2	3
Military Facilities Engineering Technology	61273100000	50	1	3	1
Mobility Equipment Technology	61273300000	246	1	1	5
Helicopter, Combat Crew and Airborne Medicine	61277300000	122	1	1	3
Medical Defense Against Biological Agents	61277600000	457	1	1	6
Aircraft Power Plants and Propulsion	62320100000	89	1	1	2
Rotary Wing Controls, Rotors, and Structures	62321100000	54	1	1	1
Ballistic Missile Defense Advanced Technology Program	63330400000	166	1	3	4
Ballistic Missile Defense Systems Technology Program	63330800000	159	1	2	4
Chemical Defensive Material Concepts	64372300000	210	1	3	3
Combat Support Equipment	64372600000	79	1	1	2
Advanced Attack Helicopter	64420700000	170	1	3	3
Infantry Fighting Vehicle (IFV) XM2	64461600000	72	1	2	3
Tank Systems	64462000000	97	1	1	2

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TABLE 3.2 (Cont)

Function/Subfunction	AMSCO	Population	Number of MACOMs/ Agencies	Number of Units	Estimated Number of Work Centers
RESEARCH AND DEVELOPMENT (cont)					
General Combat Support	64471700000	396	2	3	6
Special Purpose Detectors	64472300000	141	1	3	3
Electronic Warfare Vulnerability/ Susceptibility	66371800000	246	1	1	4
Aviation Engineering Flight Activity	66520100000	166	1	1	3
Support of Development Testing	66570200000	859	1	7	7
Material Systems Analysis	66570600000	328	1	1	5
US Army Training and Doctrine Command (R&D)	66570700000	1,098	1	7	5
Programwide Activities (R&D)	66580100000	1,623	3	15	26
Major R&D Test and Evaluation Facilities	66580400000	10,082	1	12	25
AIF Research and Development - Harry Diamond Laboratories	6A36AA6000	1,145	1	1	1/
AIF HQ USA Research and Development Center, Army Industrial Fund	6A36520000	3,554	1	1	1/
AIF Research and Development - Watervliet Arsenal	6A36556000	834	1	1	1/
AIF Support of Service-Wide Supply - Edgewood Arsenal	6A36557500	79	1	1	1/
AIF Engineering Services-Edgewood Arsenal	6A36557800	102	1	1	1/
AIF Research and Development-Aberdeen Proving Ground	6A36716000	550	1	1	1/
AIF Depot Supply and Maintenance - Watertown Research Center	6A36A00060	460	1	1	1/
AIF Research and Development-Redstone Arsenal	7D36316000	1,282	2	8	1/
AIF Research and Development-Rocky Mountain Arsenal	7C36546000	13	1	1	1/
AIF Research and Development - Watervliet Arsenal	7C36566000	29	1	1	1/
AIF Other Products and Services - Aberdeen Proving Ground	6A36718119	39	1	1	1/
AIF Other Products and Services Materials (R&D)	6A36718700	9	1	1	1/
Tactical Electronic Warfare Technology	61210500000	1	1	1	1
Computer and Information Sciences	61271500000	1	1	1	1
Remotely Piloted Vehicles	61272500000	21	1	1	3
Support Technology	61273200000	15	1	1	1
Combat Medical Material	61277800000	33	1	1	1
Aircraft Weapons (Fire Control)	62320600000	16	1	1	1
Air Mobility Support	62320900000	25	1	3	2
Terminal Homing Systems	62330600000	9	1	1	1
Advanced Land Mobility System Concepts	62360200000	2	1	1	1
Army Small Arms Program	62360700000	1	1	1	1
Combat Vehicle Engines	62362100000	1	1	1	1
Electric Power Sources	62370200000	46	1	1	2
Remotely Piloted Vehicles/Drones	62372500000	25	1	2	1
Combat Medical Material	62373200000	4	1	1	1
Joint Survivability Investigations	64321500000	1	1	1	1

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TABLE 3.2 (Cont)

Function/Subfunction	AMSCO	Population	Number of MACOMs/ Agencies	Number of Units	Estimated Number of Work Centers
RESEARCH AND DEVELOPMENT (cont)					
SSM Rocket System	64330300000	5	1	1	2
Weapons and Ammunition	64360800000	7	1	1	1
Combat Support Munitions	64362700000	2	1	1	1
Field Artillery Cannon Systems	64362900000	9	1	1	2
Identification Friend or Foe (IFF) Developments	64370600000	5	1	1	1
Communications Development	64370700000	36	1	2	3
Aircraft Electronic Warfare (EW) Self Protection Equipment	64371100000	21	1	1	2
Tactical Surveillance Systems	64373000000	20	1	2	1
Tactical Electronic Warfare Equipment	64374500000	29	1	3	3
Single Channel Ground and Airborne Radio Subsystems	64374600000	27	1	1	1
Tactical Electronic Countermeasures Systems	64375500000	62	1	1	3
Aircraft Avionics	64420100000	8	1	1	1
Aircraft Weapons (Rockets, Guns)	64420200000	7	1	2	2
Aerial Scout (Helicopter)	64420300000	25	1	1	1
Air Mobility Support Equipment	64420400000	15	1	3	2
COBRA/TOW	64421200000	7	1	1	1
CH-47 Modernization	64421300000	32	1	2	1
Patriot	64430700000	18	1	1	1
Combat Support Systems	64460900000	7	1	1	1
Countermines and Barriers	64461200000	11	1	1	1
Field Artillery Weapons and Ammunition	64461400000	9	1	1	1
Vehicle Rapid Fire Weapon System	64461700000	24	1	1	1
Cannon Launched Guided Projectile	64462100000	20	1	1	1
Forward Observer Vehicle	644626F2000	1	1	1	1
Cavalry Fighting Vehicle	64462900000	4	1	1	1
Tank Gun Cooperative Development	64463000000	15	1	1	3
Communications Engineering Development	64470100000	11	1	3	2
Remotely Monitored Battlefield Sensor System	644704L0000	6	1	1	1
Radiological Defense Equipment	64470600000	14	1	1	1
Aircraft Electronic Warfare (EW) Self-Protection System	64471100000	35	1	1	2
Tactical Data System Interoperability	64471200000	12	1	2	2
Command and Control (R&D)	64472700000	23	1	2	4
Family of Military Engineer Construction Equipment	64472800000	15	1	2	1
Counter mortar Radar	644729L0000	7	1	1	1
Counterbattery Radar	644731L0000	8	1	1	1
Tactical Electronic Warfare Systems	64474500000	16	1	1	3
Stand-Off Target Acquisition System	64474800000	23	1	1	1
Division Tactical ECM Systems	644750L1000	25	1	1	2
NAVSTAR GPS User Equipment	64477800000	13	1	1	1
Non-Systems Training Devices	65471500000	43	1	1	5
Meteorological Equipment and Systems	66472600000	6	1	1	1
Theater Nuclear Force Survivability Analysis	66570800000	12	1	1	1
Technical Information Activities	66580300000	27	2	3	7
DOD Munitions Effectiveness and Explosive Safety	66580500000	8	1	1	2

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TABLE 3.2 (Cont)

Function/Subfunction	AMSCO	Population	Number of MACOMs/ Agencies	Number of Units	Estimated Number of Work Centers
RESEARCH AND DEVELOPMENT (cont)					
AIF Support of Service-Wide Supply - Harry Diamond Laboratories	6A36AA0075	6	1	1	1/
AIF US Army Materials and Mechanics Research Center - Overhaul, Repair, and Renovation	6A36A00033	30	1	1	1/
AIF US Army Materials and Mechanics Research Center - Support of Service-Wide Supply	6A36A00075	46	1	1	1/
AIF US Army Materials and Mechanics Research Center - Engineering Services	6A36A00078	85	1	1	1/
SECURITY					
Preservation of Order	XXXX96T0000	1,117	6	33	5
Military Police Operations	XXXX96T1000	1,161	7	35	4
Military Police Investigations	XXXX96T2000	180	2	2	1
Correction of Military Offenders	XXXX96T3000	67	3	4	4
Physical Facility Services	XXXX96T4000	905	7	24	5
Criminal Investigations	95152000000	1,941	1	11	4
SUPPLY INSTALLATION					
Supply Operations (Installation)	XXXX96B0000	2,249	5	26	4
Clothing Sales Stores	XXXX96B1000	1,566	8	50	3
Self-Service Supply Center	XXXX96B2000	334	4	35	1
Purchasing and Contracting	XXXX96B3000	971	4	15	3
Clothing Issue Points/Central Issue Facilities	XXXX96B4000	481	4	20	1
Operation of Storage Facilities	XXXX96B5000	2,589	5	37	3
Other Supply Operations	XXXX96B6000	528	5	13	1
Consolidated Installation Supply	XXXX96B8000	1,943	5	34	5
SUPPLY CENTRAL					
Supply Depot Operations	72111100000	3,097	3	19	16
Supply Management Operations	72111200000	6,509	2	27	6
Central Procurement Activities	72111300000	4,932	2	45	4
Logistics Administrative Support	72282900000	2,580	2	35	3
Industrial Preparedness Operations	72801100000	388	2	13	12
Logistic Support Activities	72801200000	2,856	7	82	11
Overseas Port Units	72801300000	2,331	5	21	3
Real Estate and Construction Administration	72801800000	177	2	2	3
Division Engineering Offices	72801810000	319	1	9	1
Facilities Investigation and Studies	72801820000	51	1	4	1
Technical Assistance - Active Installations	72801840000	20	1	7	1
Real Estate Administration	72801850000	359	1	7	3/
AIF Support of Service-Wide Supply	30007500	12,992	1	26	1/
TRAINING					
Force Related Training (FORSCOM)	20219300000	57	1	1	2

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TABLE 3.2 (Cont)

Function/Subfunction	AMSCO	Population	Number of MACOMs/ Agencies	Number of Units	Estimated Number of Work Centers
TRAINING (cont)					
Force Related Training (Europe)	20239300000	852	2	8	4
Force Related Training (Pacific)	20249300000	156	2	8	4
Force Related Training (Southcom)	20259300000	114	1	1	1
Other Combat Development Activities	20801800000	5,021	1	23	10
Recruit Training	81471100000	3,393	1	15	3
Recruit Training (Reserves)	51899200000	423	1	18	2
Professional and Skill Progression Training (Reserves)	51899300000	146	1	25	5
Service Academy (USMA)	81472100000	1,982	1	1	15
USMA Preparatory School	81472120000	69	1	1	1
Officer Candidate School, Branch Immaterial	81472200000	34	1	1	1
Reserve Officer Training Corps	81472300000	3,445	1	9	5
General Skill Training	81473100000	16,946	5	41	10
General Intelligence Skill Training	81473300000	570	2	3	1
Cryptologic/SIGINT Related Skill Training	81473400000	925	1	1	1
Undergraduate Pilot Training	81474100000	1,266	1	2	2
Other Flight Training	81474300000	248	1	2	1
Professional Military Education	81475100000	794	2	5	10
Combined Recruit and Skill Training	81476100000	9,635	1	15	3
Support of the Training Establishment	81477100000	3,076	2	25	12
Training Developments	81477200000	5,995	1	30	1
Training Support to Units	81973100000	1,204	3	17	9
Civilian Training, Education and Development	87875100000	2,648	1	2	11
Junior ROTC Activities	87972100000	17	1	2	1
Army Continuing Education System	87973200000	1,268	12	103	1
National Guard Training Operations	37100000	8,433	1	2/	2/
TRANSPORTATION SERVICES					
Transportation Services	XXXX96D0000	3,802	6	28	8
Administrative Motor Services	XXXX96D1000	4,207	8	64	6
Local Transportation Office Operations	XXXX96D2000	2,147	8	58	5
Administrative Rail Services	XXXX96D3000	63	4	17	1
Administrative Watercraft Services	XXXX96D4000	12	3	3	1
Movement of Privately-Owned Household Goods	XXXX96D5000	98	2	7	1
Administrative Aviation Services	XXXX96D6000	1,264	5	30	2
Port Terminal Operations (Reserves)	51493200000	47	1	11	2
AIF Military Traffic Management Command - Eastern Area - Transportation Services	33517210	281	1	3	1/
AIF Military Traffic Management Command - Eastern Area - Defense Freight Railway Interchange System	33517220	15	1	1	1/
AIF Military Traffic Management Command - Eastern Area - Port Operations	33517231	342	1	3	1/

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TABLE 3.2 (Cont)

Function/Subfunction	AMSCO	Population	Number of MACOMs/ Agencies	Number of Units	Estimated Number of Work Centers
TRANSPORTATION SERVICES (cont)					
AIF Military Traffic Management Command - Eastern Area - Commercial Port Operations	33517232	164	1	5	1/
AIF Military Traffic Management Command - Eastern Area - Base Operations Cost Code	33517242	585	1	3	1/
AIF Military Traffic Management Command - Eastern Area - General Support	33517241	350	1	3	1/
AIF Military Traffic Management Command - Western Area - Transportation Services	33527210	207	1	10	1/
AIF Military Traffic Management Command - Western Area - Military Port Operations	33527231	327	1	3	1/
AIF Military Traffic Management Command - Western Area - Commercial Port Operations	33527232	65	1	2	1/
AIF Military Traffic Management Command - Western Area - General Support	33527241	235	1	3	1/

Source: AR-37-100, "The Army Management Structure."

1/ Army Industrial Fund Activity. Insufficient information available to determine number of work centers.

2/ Army National Guard Activity. Insufficient information available to determine number of units or work centers.

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TDA population to standards coverage, and for standards-feasible functions, a further determination was made as to the feasibility of developing an Army-common staffing standard or a MACOM/agency-unique standard.

3.13 Elements of the TDA population not susceptible to standards coverage were those classified in one or more of the following categories:

- Authorizations for positions in policy formulation and decisionmaking (e.g., AMHA)
- Authorizations for positions in support of other nations, international organizations, foreign military sales, or in support of OSD and other Federal departments and agencies
- Authorizations for which the level of detail provided in the METS or AR 37-100-80 precluded functional classification, work center identification, or identification of the unit of assignment.

3.14 Table 3.3 identifies those specific elements of the TDA population that were excluded and indicates the total population estimated to be subject to standards coverage.

3.15 The feasibility assessment was performed utilizing the functional breakout provided in Table 3.2. Each subfunction was assessed to determine its feasibility for the development of MACOM/agency-unique standards or Army-common standards.

3.16 As a general selection criterion, a subfunction was determined to be feasible for Army-common standards if performed

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TABLE 3.3
IDENTIFICATION OF THE ESTIMATED STAFFING STANDARDS UNIVERSE

Population	Number
Total TDA population	535,169
Population not subject to standards coverage	
CSA, SA, MACOM, & agency AMHA	20,586
Army industrial fund AMHA	1,227
National Guard AMHA	1,221
Other reserve exclusions	3,395
MFP 10 (less JA & DF)	293
Joint activities/agencies	
- JA (less JA AMHA)	3,847
- DF	2,815
Army support to other DOD/US Govt departments/agencies	2,924
Civil works portion of USACE	8,010
Civilian holding accounts	1,344
Service-wide support	7,057
Aggregated E-1 "Z" codes (logistics support)	8,744
Unspecified "Z" codes	6,850
Unidentified R&D codes	910
Other exclusions	15,413
Total exclusions	83,936
Estimated total TDA population subject to standards coverage	451,233

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by two or more MACOMs. Otherwise, it was classified as feasible for the development of MACOM-unique or agency-unique standards.

3.17 The selection of subfunctions as candidates for the development of Army-common standards was accomplished in three steps. An initial screening was completed based upon the strict application of the selection criteria. Each subfunction identified was then further evaluated to eliminate those whose selection clearly resulted from data miscodings or misinterpretation of the activity definitions. The third assessment focused on standards feasibility in light of U.S. Navy or U.S. Air Force experience. Essentially, comparable subfunctions that were under standards or were under consideration for Navy- or Air Force-wide standards were deemed equally feasible for the development of Army-common standards.

POTENTIAL STANDARDS UNIVERSE

3.18 Table 3.4 identifies the subfunctions selected for development into Army-common standards and quantifies the relevant elements of the potential standards universe from which standard development study efforts have been identified for initial consideration in formulating the 5-year plan. Unless otherwise indicated by brackets, which denote aggregations of subfunctions into a single standard development study, each subfunction listed represents a separate study. In consideration of the resources required for each study, every effort was made to combine subfunctions to the extent permissible and still retain functional homogeneity.

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TABLE 3.4
PRIORITIZED LIST OF SUBFUNCTIONS FOR ARMY-COMMON
STANDARDS DEVELOPMENT

Function/Subfunction	AMSCO	Population	Number of MACOMs/ Agencies	Number of Units	Estimated Number of Work Centers	Standards Development Prioritization Score (90 Max)
ADMINISTRATION						
Administration (General)	XXXX96N0000	11,567	6	70	10	70
Administrative Support (Europe)	20239900000	3,644	1	55		
Administrative Support (FORSCOM)	20269900000	310	1	5	7	60
Administrative Support (Pacific)	20249900000	542	2	20		
HQ Commandant	XXXX96N3000	2,097	7	58	2	82
Organizational Effectiveness	XXXX96N8000	63	4	24	1	46
Other Administration	XXXX96N9000	24,916	9	96	10	52
Reserve Readiness Support (Reserves)	51999200000	2,005	2	36	7	28
AUTOMATIC DATA PROCESSING						
Automation Activities (ADP)	XXXX96P0000	1,721	4	31		
Automation Support (ADP)	XXXX96P1000	2,561	7	57	20	30
Automation Security (ADP)	XXXX96P2000	103	5	12		
BASE SUPPORT SERVICES						
Audio Visual Services	XXXX96A4000	1,525	8	63	3	66
Bachelor Housing Furnishings Support	XXXX96H0000	787	9	105	6	40
Family Housing Management Operations	191000000	2,157	12	102	5	56
Community and Morale Support Activities	XXXX96S0000	528	2	27		
Morale Support Activities	XXXX96S3000	2,329	7	45	18	30
Army Community Service Activities	XXXX96S4000	254	7	42		
Army Food Service Program	XXXX96F0000	2,429	4	64		
Garrison Bread Bakeries	XXXX96F2000	2	1	1	4	80
Dining Facilities	XXXX96F3000	3,448	8	93		
Ration Distribution Points	XXXX96F6000	11	2	2		
Other Personnel Activities	87871600000	1,096	7	20	7	40
Laundry and Dry Cleaning Services	XXXX96E4000	464	7	35	3	34
Public Affairs	95121400000	248	11	95	1	54
COMMUNICATIONS						
Communications Security	39340100000	731	3	17	4	40
DENTAL						
Dental Care Activities	84771500000	5,697	4	57	3	86
FACILITIES SUPPORT						
Operation of Utilities	XXXX96J0000	1,613	5	51		
Water Service	XXXX96J1000	495	7	34		
Sewage Service	XXXX96J2000	278	7	36		
Electric Service	XXXX96J3000	169	3	3	10	38
Boiler and Heating Plants	XXXX96J4000	1,569	7	44		
Air Conditioning and Cold Storage Plants	XXXX96J5000	109	7	18		
Other Utilities Operations	XXXX96J9000	75	4	5		
Maintenance and Repair of Real Property	XXXX96K0000	6,422	5	55		
Utilities Systems	XXXX96K1000	2,893	7	48		
Buildings	XXXX96K2000	5,598	7	49		
Grounds	XXXX96K3000	670	6	47	12	66
Railroad Maintenance	XXXX96K4000	41	4	17		
Surfaced Areas Maintenance	XXXX96K5000	809	7	43		
Miscellaneous Maintenance	XXXX96K6000	75	6	13		

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TABLE 3.4 (Cont)

Function/Subfunction	AMSCO	Population	Number of MACOMs/ Agencies	Number of Units	Estimated Number of Work Centers	Standards Development Prioritization Score (90 Max)
FACILITIES SUPPORT (Cont)						
Facilities Engineering Shops						
Suspense Accounts	XXXX96K9000	893	2	4	1	74
Minor Construction	XXXX96L0000	160	4	7	1	50
Other Engineering Support	XXXX96M0000	5,209	6	60	21	34
Fire Prevention and Protection	XXXX96M1000	2,613	7	51	2	90
Refuse Handling	XXXX96M2000	286	7	36	2	34
Pest Control Services	XXXX96M3000	396	7	46	1	58
Custodial Services	XXXX96M4000	270	7	46	1	38
Snow and Sand Removal	XXXX96M5000	16	2	2	1	25
Management and Engineering-Active Installations	XXXX96M6000	3,287	7	64	5	60
Miscellaneous Engineering Activities	XXXX96M9000	1,926	7	53	9	26
INTELLIGENCE						
Intelligence Data Handling System	38102500000	138	4	7	5	20
MAINTENANCE OF MATERIAL						
Support Maintenance	XXXX96C1000	7,002	10	82	14	50
Related Support Maintenance	XXXX96C2000	2,000	6	34	8	44
MEDICAL						
Other Health Activities	84771400000	5,548	5	62	9	54
Station Hospitals and Medical Clinics	84779200000	23,593	4	46	25	60
PERSONNEL SUPPORT						
Personnel Support	XXXX96G0000	5,595	6	68	13	38
Chaplain Activities	XXXX96G1000	793	7	59	1	78
Command Information Activities	XXXX96G2000	777	8	43	5	36
Army Alcohol and Drug Abuse Control Program	XXXX96G3000	762	8	53	2	58
Installation Museums	XXXX96G4000	151	5	42	1	46
Other Personnel Support	XXXX96G5000	113	6	29	3	42
Reenlistment Activities	XXXX96G9000	114	4	29	1	46
SECURITY						
Preservation of Order	XXXX96T0000	1,117	6	33		
Military Police Operations	XXXX96T1000	1,161	7	35		
Military Police Investigations	XXXX96T2000	180	2	2	19	34
Correction of Military Offenders	XXXX96T3000	67	3	4		
Physical Facility Services	XXXX96T4000	905	7	24		
SUPPLY INSTALLATION						
Supply Operations (Installation)	XXXX96B0000	2,249	5	26	4	52
Clothing Sales Stores	XXXX96B1000	1,566	8	50	3	66
Self-Service Supply Center	XXXX96B2000	334	4	35	1	58
Purchasing and Contracting	XXXX96B3000	971	4	15	3	58
Clothing Issue Points/Central Issue Facilities	XXXX96B4000	481	4	20	1	62
Operation of Storage Facilities	XXXX96B5000	2,589	5	37	3	78
Other Supply Operations	XXXX96B6000	528	5	13	1	66
Consolidated Installation Supply	XXXX96B8000	1,943	5	34	5	44

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TABLE 3.4 (Cont)

Function/Subfunction	AMSCO	Population	Number of MACOMs/ Agencies	Number of Units	Estimated Number of Work Centers	Standards Development Prioritization Score (90 Max)
SUPPLY CENTRAL						
Supply Depot Operations	72111100000	3,097	3	19	16	34
Logistic Support Activities	72801200000	2,856	7	82	11	34
Overseas Port Units	72801300000	2,331	5	21	3	78
Real Estate and Construction Administration	72801800000	177	2	2	3	42
TRAINING						
Army Continuing Education System	87973200000	1,268	12	103	1	82
TRANSPORTATION SERVICES						
Transportation Services	XXXX96D0000	3,802	6	28	8	56
Administrative Motor Services	XXXX96D1000	4,207	8	64	6	68
Local Transportation Office Operations	XXXX96D2000	2,147	8	58	5	56
Administrative Rail Services	XXXX96D3000	63	4	17	1	32
Administrative Watercraft Services	XXXX96D4000	12	3	3	1	32
Movement of Privately Owned Household Goods	XXXX96D5000	98	2	7	1	41
Administrative Aviation Services	XXXX96D6000	1,264	5	30	2	72

Source: AR-37-100, "The Army Management Structure."

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Prioritization of Standard Development Studies

3.19 In the absence of functional priority guidance upon which to base the selection of studies for inclusion in the 5-year plan, a weighted rating scheme was developed that establishes precedence among candidate studies essentially in terms of their relative return on investment. The four elements upon which the scheme is based are the following:

- Average population coverage per work center
- Analyst resources required for standards development
- Ease of standards development effort
- Level of staffing standards coverage.

Specific details of the scheme are illustrated in Figure 3.1.

3.20 A prioritization score was computed for each standard development study. Since all the studies were candidates for the development of Army-common standards, the level of staffing standards coverage (factor 4 in Figure 3.1) would not be an appropriate evaluating criterion during this initial scoring and thus, this factor was not applied.

3.21 Illustrative Example. To illustrate the derivation of the prioritization scores reflected in Table 3.4, the weighted rating scheme will be applied to the proposed standards development study covering the ADP function. There were three subfunctions identified in this function, and all three subfunctions are planned as a single, integrated standards development study. Key elements of these subfunctions and the applicable data include the following:

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Factor 1--Total Weight 40%

Criteria	Population Per W/C	Value	Weight Factor	Total Weighted Value
Average popula- tion coverage per work center	1,000 - higher 900 - 999 800 - 899 700 - 799 600 - 699 500 - 599 400 - 499 300 - 399 200 - 299 100 - 199 0 - 99	10 9 8 7 6 5 4 3 2 1 0	4 4 4 4 4 4 4 4 4 4 4	40 36 32 28 24 20 16 12 8 4 0

Factor 2--Total Weight 30%

Criteria	Category*	Value	Weight Factor	Total Weighted Value
Analyst resources required for standards development	1 2 3 4	9 6 3 0	3.33 3.33 3.33 0	30 20 10 0

*Category 1 - Generally clearcut subfunction--
3 work centers or less.
2 - Same as Category 1 but contains
4-7 work centers.
3 - larger, more fragmented subfunc-
tion--8 or more work centers.
4 - (hique, fragmented or aggregated
subfunction in which work centers
cannot be identified.

Factor 3--Total Weight 20%

Criteria	Category*	Value	Weight Factor	Total Weighted Value
Pase of standards development effort	1 2 3 4 5 6	10 8 6 4 2 0	2 2 2 2 2 2	20 16 12 8 4 0

*Category 1 - Satisfies definitions 1, 2 & 3.
2 - Satisfies definitions 1 & 2 or 1 & 3.
3 - Satisfies definition 1 only.
4 - Satisfies definitions 2 & 3.
5 - Satisfies definition 2 only.
6 - Satisfies definition 3 only.

Definitions 1. U.S. Navy and/or U.S. Air Force staffing
standards work in subfunction.
2. USA Standards or M&S work in subfunction.
3. Performance factor (PF) listed for
activity definition in Ar 37-100-80.

Factor 4--Total Weight 10%

Criteria	Category*	Value	Weight Factor	Total Weighted Value
Level of staffing standards coverage	Army-wide MACOM	1 1	10 5	10 5

*Army-wide - Could be applied to two or more
MACOMS.
MACOM - Could be applied to one or more
units/locations within a single
MACOM.

FIGURE 3.1
WEIGHTED RATING SCHEME FOR EVALUATION OF STAFFING STANDARDS CANDIDATES

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- Total population 4,385
- Number of MACOMs/agencies reporting under the applicable AMSCOs 7
- Estimated number of work centers 20

The weighted value for each of the factors is determined as follows:

- a. The applicable weighted score for factor 1 is obtained by dividing the total population by the estimated number of work centers. This number is then used to enter the table to obtain the associated total weighted value. For this example, the weighted value is 8.
- b. The weighted value for factor 2 is a function of the number of work centers. With 20 work centers, this study meets the criterion defined for category 3, which is equivalent to a weighted value of 10.
- c. Factor 3 assesses the relative ease of standards development. This study meets the criterion in definition 1 which, in turn, indicates that it meets the criterion for category 3. The associated weighted value is therefore 12.
- d. Factor 4 was not applied, as explained previously.
- e. The resultant prioritization score, 30, is the total obtained by aggregating the 3 weighted values.

3.22 Table 3.5 lists all 62 candidate Army-common standards development studies in descending order of priority for use in developing the 5-year plan. These studies represent 188,906

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TABLE 3.5
PRIORITIZED LIST OF STUDIES FOR ARMY-COMMON STANDARDS DEVELOPMENT

Study	Population
Fire Prevention and Protection	2,613
Dental Care Activities	5,697
HQ Commandant	2,097
Army Food Service Program	5,890
Army Continuing Education System	1,268
Overseas Port Units	2,331
Chaplain Activities	793
Operation of Storage Facilities	2,589
Facilities Engineering Shops-Suspense Accounts	893
Administrative Aviation Services	1,264
Administration (General)	11,567
Administrative Motor Services	4,207
Audio Visual Services	1,525
Other Supply Operations	528
Clothing Sales Stores	1,566
Maintenance and Repair of Real Property	16,508
Clothing Issue Points/Central Issue Facilities	481
Station Hospitals and Medical Clinics	23,593
Management and Engineering-Active Installations	3,287
Administrative Support	4,496
Pest Control Services	396
Army Alcohol and Drug Abuse Control Program	762
Self Service Supply Centers	334
Purchasing and Contracting	971
Transportation Services	3,802
Local Transportation Office Operations	2,147

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TABLE 3.5 (Cont)

Study	Population
Family Housing Management Operations	2,157
Public Affairs	248
Other Health Activities	5,548
Supply Operations (Installation)	2,249
Other Administration	24,916
Support Maintenance	7,002
Minor Construction	160
Organizational Effectiveness	63
Installation Museums	151
Re-enlistment Activities	114
Consolidated Installation Supply	1,943
Related Support Maintenance	2,000
Real Estate and Construction Administration	177
Other Personnel Support	113
Movement of Privately-Owned Household Goods	98
Communications Security	731
Other Personnel Activities	1,096
Bachelor Housing Furnishings Support	787
Operation of Utilities	4,108
Personnel Support	5,595
Custodial Services	270
Command Information Activities	777
Preservation of Order	3,430
Laundry and Dry Cleaning Service	464
Refuse Handling	286
Supply Depot Operations	3,097
Logistic Support Activities	2,856
Other Engineering Support	5,209

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TABLE 3.5 (Cont)

Study	Population
Administrative Rail Services	63
Administrative Watercraft Services	12
Automation Activities (ADP)	4,385
Community and Morale Support Activities	3,111
Reserve Readiness Support (Reserves)	2,005
Miscellaneous Engineering Activities	1,926
Snow and Sand Removal	16
Intelligence Data Handling System	138

Source: AR-37-100, "The Army Management Structure."

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authorizations. A similar prioritized list was not prepared for the candidate MACOM- or agency-unique studies; however, the studies are separately identified in tables in Appendix H. At the command's discretion, the order of precedence for scheduling studies could be determined utilizing the prioritization scheme in Figure 3.1 as a basis.

5-YEAR PLAN

3.23 A time-phased 5-year plan for the development of Army-common standards is provided in Table 3.6. The plan shows, in modified Gantt chart format, the planned effort by year, month, and major study phases.

Scheduling Considerations and Assumptions

3.24 Major elements of the schedule for which technical estimates were derived or definitive procedures formulated were as follows:

- Estimated direct labor required for standards development by major phase of development
- Estimated direct labor required for the review and update of existing standards
- Average man-loading requirements for the 5-year plan
- Scheduling conventions.

3.25 Direct Labor for Standards Development. The estimated direct, hands-on effort was determined utilizing the relationship $Y = 2.5 + 14X$, where Y is equal to the analyst man-months

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TABLE 3.6
FIVE-YEAR PLAN AND DEVELOPMENT SCHEDULE
FOR ARMY-COMMON STANDARDS

STUDY TITLE	FY-83	FY-84	FY-85	FY-86	FY-87
	ONDJFMAMJJAS	ONDJFMAMJJAS	ONDJFMAMJJAS	ONDJFMAMJJAS	ONDJFMAMJJAS
Fire Prevention and Protection	PPPPRRRTTHM 12222 1122	MMCCCC 2222221	--	UUUUU 12222	U 2
Dental Care Activities	PPPPRRRTTHM 22333 1144	MMCCCC 4443321	--	UUUUU 12222	U 2
INJ Commandant	PPPPRRRTTHM 22221 1222	MMCCCC 222112211	--	UUU 1222	UUU 222
Army Food Services Program	PPPPRRRTTHM 33333 224	MMCCCC 5553333	--	UUUU 12222	UU 22
Army Continuing Education System	PPPPRRRTTHM 11111 1222	MCCC 1111	--	UUUU 33331	
Overseas Post Units	PPPPRRRTTHM 33331 1134	MMCCCC 4442221	--	UUUU 12222	UU 22
Chaplain Activities	PPPPRRRTTHM 2111 11222	CCC 111	--	UUUU 33331	--
Operation of Storage Facilities	PPPPRRRTTHM 33332 1113	MMCCCC 3333212221	--	UU 12	UUUU 22222
Facilities Engineering Shops- Suspense Accounts	PPPPRRRTTHM 11111 1222	MCCC 2111	--	UUUUU 332221	--
Administrative Aviation Services	PPPPRRRTTHM 22221 1113	MMCCCC 3332211	--	UUUUU 12222	U 2
Administrative General	PPPPRRRTTHM 55551 223	MMCCCC 6666644443	--	UU 12	UUUU 22222
Administrative Motor Services	PPPPRRRTTHM 222444 12	MMCCCC 555554444	--	UUU 122	UUUU 2222
Audio Visual Services	PPPPRRRT 333 11	MMCCCC 444442221	--	UUU 122	UUUU 2222
Other Supply Operations	PPPPRRRT 11111 1	MMCCCC 2221111	--	UUUU 12222	UU 22
Clothing Sales Stores	PPPPRRRT 33332 1	MMCCCC 1444312211	--	U 1	UUUUU 22222
Maintenance and Repair of Real Property	PPPPPP 66665555	PPRRRTTHM 53 3411111 22222	MMCCCC 86555555	--	UUU 333
Clothing Issue Points	PPPPRRRT 1111 1	MMCCCC 222111	--	UUUUU 32222	--
Station Hospitals and Medical Clinics	PPPPPP 111888 000	PPPPRRRTTHM 88664 666 0	MMCCCC 11111111199 55555555	CCCCC 9999999	--
Management and Engineering- Active Installations	PPPPPP 4442222	RRRTTHM 22555554	CCC 444	--	UUUUU 32222
Administrative Support	PPPPPP 366663	RRRTTHM 23888555	CCC 332	--	UUUUU 32222

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TABLE 3.6 (Cont)

STUDY TITLE	FY- 83	FY- 84	FY- 85	FY- 86	FY- 87
	ONDJFHAMJJAS	ONDJFHAMJJAS	ONDJFHAMJJAS	ONDJFHAMJJAS	ONDJFHAMJJAS
Pest Control Services	PPPPR 11111	RRTH000CCC 11222111	...	UUU 122	UUUU 2222
Army Alcohol and Drug Abuse Control Program	PPPPR 22111	RRTH0000CCC 1133311222	C 1	...	UUUUU 32222
Self Service Supply Centers	PPRRR 111	TH00CC 111111	...	UUU 1122	UUUU 2221
Purchasing and Contracting	PPPPR 22111	RRTH0000CCC 122222222	CC 22	...	UUUUUU 222222
Transportation Services	PPPPR 57775	RRTH0000CCC 227788855	CCCC 5555	...	UUUUUU 222221
Local Transportation	PPPPP 33321	RRATTH000CCC 114444422	CCC 221	...	UUUUUU 222221
Family Housing Management Operations	PPPPP 44544	RRATTH0000C 225555554	CCC 444	...	UUUUUU 222221
Public Affairs	PPPP 1211	RRATTH000CCC 11222111	...	UU 11	UUUU 2223
Other Health Activities	PPPP 2555	PPPPRRRTTH 5544 13399	HH00CCCCC 999955557	...	UUU 222
Supply Operations (Installation)	...	PPPPPRRRTTH 233222 225	HH00CCCC 55553333	...	UUUU 22235
Other Administration	...	PPPPPRRRTT 7776644 33	TH000000CCC 14599995555	C 5	...
Support Maintenance	...	PPPPPP 477888	PPRRRTTH000 88 3331111 0000	HH00CCCCCCC 21114996664 0000	...
Minor Construction	...	PPP 111	RRATTH000CCC 12222111	...	UU 55
Organizational Effectiveness	...	PP 11	PPRRRTTH00CC 11 122221	C 1	U 2
Installation Museums	...	PP 11	PPRRRTTH00CC 11 122221	C 1	U 2
Re-enlistment Activities	...	PP 11	PPRRRTTH00CC 11 122221	C 1	U 2
Consolidated Installation Supply	...	...	PPPPPRRTTH 44444 2266	HH00CCCC 66523544	...
Related Support Maintenance	...	...	PPPPPRRTT 666655 2	TH000000CC 16666666444	CCCC 4444
Real Estate and Construction Administration	...	...	PPPPPRRTT 33332 22	HH00CCCC 45552222	...
Other Personnel Support	...	...	PPPPPRRTT 33332 12	HH00CCCC 45552222	...
Movement of Privately Owned Household Goods	...	...	PPPPPRRTTH 1111 122	HHCCCC 221111	...

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TABLE 3.6 (Cont)

STUDY TITLE	FY- 83	FY- 84	FY- 85	FY- 86	FY- 87
	ONDJFMAMJJAS	ONDJFMAMJJAS	ONDJFMAMJJAS	ONDJFMAMJJAS	ONDJFMAMJJAS
Communications Security	--	--	PPPPRRRTT 34433 22	TT0000CCCC 1655553373	--
Administration General (Civilian Personnel Office)	--	--	UUUUUU 222221		UUU 233
Other Personnel Activities	--	--	PPPPPPRR 455555	TT00000CCCC 23777774555	C 5
Bachelor Housing Furnishings Support	--	--	PPPPPPRR 444442	RTTT00000CC 2356666625	CCC 544
Operation of Utilities	--	--	PPPPPPRR 556889	RTTT00000CC 3228888886	CCCCC 66666
Personnel Support	--	--	PPPPP 59999	PARATTTH000H 9 33399999	HH000CCCCC 111177666 0001
Custodial Services	--	--	PPP 111	PARATTTH00CC 1 11222111	C 1
Command Information Activities	--	--	PPP 444	PPPPRRRTTH00H 333 226666	HHCCCC 434444
Preservation of Order	--	--	PP 11 02	PPPPPARATTT 11111 2222 22220	HH00000000CC 311111111116 2222244331
Laundry & Dry Cleaning	--	--	PP 33	PPPPRRRTTH00H 222 114444	HHCCCC 422221
Refuse Handling	--	--	PP 33	PARATTTH00CC 2 12333322	CC 22
Supply Depot Operations	--	--	--	--	PPPPPPPPPP 677777777
Logistic Support Activities	--	--	--	--	PPPPPPRR 7777777
Other Engineering Support	--	--	--	--	PPPPPPPP 8888888
Administrative Rail Services	--	--	--	--	PPPPRR 2111
Administrative Watercraft Services	--	--	--	--	PPPPRR 2111
Automation Activities (ADP)	--	--	--	--	PPPPPPPP 111111 0000000
Community and Morale Support Activities	--	--	--	--	PPPPPP 999999
Reserves Readiness Support (Reserves)	--	--	--	--	PPPP 5555

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TABLE 3.6 (Cont)

STUDY TITLE	FY-83	FY-84	FY-85	FY-86	FY-87
	ONDJFHAMJJAS	ONDJFHAMJJAS	ONDJFHAMJJAS	ONDJFHAMJJAS	ONDJFHAMJJAS
Miscellaneous Engineering Activities	--	--	--	--	PP 58
Snow and Sand Removal	--	--	--	--	P 2
Intelligence Data Handling Systems	--	--	--	--	P 5

Source: Ar-57-100, "The Army Management Structure."

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required and X is equal to the number of work centers in a standards development study. This resource estimating equation was developed from an appraisal of the resource planning and scheduling information of other Services, modified to reflect resource considerations for the projected additional requirements of an Army program. Details of the development of this resource estimating relationship are contained in Appendix G. Resource requirements by phase of standards development were estimated as a percent of the total man-months derived using the above equation. The estimates used in the schedule are the following:

- Preliminary Phase: 30%
- Measurement phase: 45%
(includes field test)
- Computation phase: 25%

3.26 Direct Labor for Standards Updates. The man-months required to complete the review and update of standards are largely a function of the work centers involved and the amount of change in functional responsibilities that have occurred since the standards were developed. Experience indicated a wide range in the actual amount of effort expended for individual standards. Drawing upon a diverse experience base, it was estimated that for scheduling purposes 13 man-months should be planned. This estimate includes the functional review and the development of additives or accomplishment of similar adjustments to the standards. Significant changes, e.g., remeasurement of one or more complete work centers, dictated by the results of the functional review would be scheduled as a new standards development study.

3.27 Average Man-Loading Requirements. The direct man-years for completing the development phases of the 62 proposed standards development studies were determined by application of the

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resource estimating equation to each study. Expressed in man-years, the total direct, hands-on analyst requirement is 435.25. To this amount were added an estimated 61.75 man-years of effort to accomplish the review and standards updates on a 2-year review cycle. The total man-years required equates to 497.00, or an average of 71.00 man-years during a 7-year period. (The latter is used for programming as per instruction resulting from coordination with the study COTR).

3.28 Scheduling Conventions. The following conventions were used in preparing the schedule:

- a. Studies are reflected in the order of priority indicated in Table 3.5.
- b. Studies were scheduled for completion within an 18- to 24-calendar month period. Extended periods beyond this targeted time frame were allowed to achieve a balanced schedule.
- c. In scheduling studies for which all or part of the functional responsibilities have been or are projected to be addressed prior to the first planning year, the aforementioned resource estimating equation was applied with modifications to cover only the population, estimated to equivalent work centers, that remained to be addressed.
- d. Updates of existing standards and of new standards developed during the 5-year period were scheduled 2 years following initial standard approval or completion of an earlier review and update.

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- e. Major elements of the standards development and maintenance phases were reflected on the schedule using the following letter codes:

<u>Code</u>	<u>Description</u>
P	Preliminary phase
R	Quality assurance and DA/MACOM functional review
T	Field test (DA/MACOM functional Review continuing)
M	Measurement phase
C	Computation phase
U	Standards update

Although not indicated in the schedule per se, the application phase and subsequent implementation of the standards would follow in sequence after the computation phase, and scheduled standards reviews and updates would follow 2 years after initial standard approval.

- f. The estimated number of analysts required by each calendar month is shown below the letter codes (when the number of analysts is 10 or more the quantity is shown vertically reading down).

3.29 Assumptions. In addition to the assumptions underlying the technical estimates and scheduling considerations outlined above, there are three major assumptions with significant resource implications that directly affect the attainment of the proposed schedule. These assumptions are as follows:

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- a. A capability consisting of 27 qualified work measurement analysts will be available at the onset of the first planning year.
- b. A gradual buildup will occur during the first year to achieve a total work measurement capability equivalent to 76 man-years of direct, hands-on labor per year during the 5-year schedule.
- c. Standards coverage for the following functions will have been achieved prior to the start of the 5-year plan:

<u>Function</u>	<u>Spaces</u>
Civilian Personnel Office	4,800
Administrative Motor Services and Local Transportation Office	1,900
Travel Pay and Commercial Accounts	1,400
Civilian Pay and Disbursing	800
Purchasing and Contracting	503
Clothing Issue Points/ Central Issue Facilities	62
Self-Service Supply Centers	157

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IV. TRAINING

GENERAL

4.1 This section presents an assessment of training requirements for the conduct and management of the proposed functional manpower requirements determination program (MRDP). The assessment focuses on the identification of training requirements that will be new or changed as the Army switches from an organizational manpower survey-oriented to a functional staffing standards-oriented process for TDA manpower requirement determination. The scope is therefore limited to the proposed MRDP, and is not intended to encompass other Army programs or efforts that require the same skills or disciplines reflected in MRDP training requirements.

PERTINENT CONSIDERATIONS

4.2 Training requirements derive basically from the tasks that must be performed in the function for which the training is being conducted. In many areas the translation from task requirements to training requirements to knowledge and skill requirements is a relatively straightforward, mechanical process. In others, the process is made more complex by such factors as the environment in which the tasks are to be performed, competing demands for the basic disciplines produced by the training, and the scope and substance of the training units or subjects required. In the case of the training being assessed here, there are a number of factors and considerations that must be observed.

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The Environment

4.3 The people assigned to develop and use staffing standards in manpower requirements determination will be parties to a minor revolution in this process. The reference here is to the change in orientation from organizational to functional requirements determination. Development analysts will have to cope with a difficult situation in dealing with people who are prone to think in organizational terms, and who do not comprehend the Army's need to address aggregate requirements on a functional, and not just organizational basis. The situation is made more serious by the fact that the best current set of functional definitions--those of the Army Management Structure--has not reached a state-of-detail and hierarchy that is anywhere near that available to the Air Force and the Navy when they initiated their staffing standards programs. The training of program personnel must prepare them to deal with the evolutionary change to functional orientation.

Nature of Staffing Standards

4.4 There are several characteristics of staffing standards that have an impact on the training for their development. The first is that they represent a blending of work measurement and statistical techniques. This means that the development analyst must be schooled in both areas. Secondly, a staffing standard is developed at a level of aggregated workload (i.e., encompassing multiple work units). It is vitally important that the standards analyst thoroughly understand the order of work units so that he can participate effectively in a structured approach to measurement planning, work measurement and data collection, and computation of work center standards.

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Program Objective

4.5 The perceived staffing standards development program is more ambitious than those of the sister Services. Specifically, the intention is to make better use of the work unit and work category measurements that are a natural part of the staffing standards development process. With proper attention to these levels of work activity, lower-order standards and performance factors can be developed for use in scheduling, loading, performance evaluation, and productivity measurement. These objectives require training emphasis in basic work measurement techniques, the order of work units, and detailed and summary level standards.

TRAINING NEEDS

4.6 There are two general categories of training used within the scope of the functions that constitute the proposed requirements determination program. The first category includes those people who require knowledge and skills in the development of staffing standards. The second group is characterized by their need to understand and appreciate what a staffing standard is, its utility, and how to use it. The people in these categories, their pertinent roles in the MRDP, and the relevant training needs are discussed below.

Development Category

4.7 Positions in this category include the following:

- a. Standards Development Analysts. These are the basic "hands-on" people who perform the details of work center definitions, measurement planning, work measurement and data collection, computations, and initial standards applications.

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- b. Standards Development Team Leaders. They direct the efforts of the analyst. Scope of responsibility can range from prescribed inputs and contributing efforts on a larger study to standards for an entire function. Team leaders must be able to accomplish all of the tasks performed by development analysts.
- c. Quality Control Personnel. These people are responsible for the enforcement of the prescribed standards development procedures, quality parameters, and policies. They must have a thorough knowledge of the policies and procedures, backed by prior hands-on experience in standards development.
- d. Standards Methods and Procedures Personnel. People in this specialized function develop and maintain procedures that reflect both the latest state-of-the-art and the practical aspects of the application of those procedures by standards analysts. They should be industrial engineers with at least 2 years of experience in staffing standards development and application. At least one member of the staff, at levels involved, should be current and proficient in mathematical modeling and advanced statistical analyses.
- e. Standards Development Managers and Planners. This group performs the tasks described in the program management function, including program resource planning, scheduling, and product coordination. The nature and importance of their duties require that they be knowledgeable and experienced in the standards development process.

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4.8 Knowledge of the standards development process is a common requirement for all positions in this category. From a training standpoint, the only near-term requirement of any real significance is the entry-level training for standards analysts. Beyond the knowledge and skills that can be developed in entry-level training, the demands of the other positions--with the exceptions noted below--are met more by the proficiency that results from hands-on experience than by additional training. Notable exceptions are the following:

- a. Standards development managers, at both MACOM HQ and HQDA levels, are a key link between standards developers and the standards users in the requirements determination function. Accordingly, they should be schooled in the broader context of Army manpower and force management (see required training for requirements determination, personnel, paragraph 4.15, below).
- b. Those who prescribe standards development methodology should stay current with the state-of-the-art in work measurement, statistics, and relevant operations research techniques. Accordingly, additional education or training in these areas should be anticipated for this group.

4.9 To illustrate the objective that must be met by entry-level training, typical tasks performed by entry-level analysts are presented in Table 4.1. To achieve this objective, i.e., to feed into the system people who can perform such an array of tasks, training is required in the following basic areas:

- a. Work measurement techniques
- b. Basic statistics and sampling theory

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TABLE 4.1
TYPICAL ENTRY-LEVEL ANALYST TASKS

Prepare preliminary draft of work center descriptions and task definitions.

Identify potential work units/workload factors for each direct category and identify sources of count.

Collect information relative to work accomplished, work center environment, authorized and assigned strength, work cycles, etc., for use in selecting work measurement method(s).

Identify and document programmed changes to work volume, equipment, mission, organization, or systems that could influence study effort.

Prepare study materials for use on-site, based on type of measurement techniques stipulated.

Compute minimum sample requirements for work sampling locations, based on category occurrence percentage estimates provided by supervisor, and develop work sampling observation schedules.

Establish work count procedures to record workload volume on a daily basis during work sampling.

Conduct work measurement, using work sampling, time study, operational audit, or other techniques prescribed by the measurement plan.

Document workload exceptions (additives/exclusions/deviations) found during measurement.

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TABLE 4.1 (Cont)

Perform and record PACE ratings, establish and record leveling factors, and apply allowance factors as prescribed in the measurement plan.

Complete all work measurement forms as prescribed by Procedural Directives.

Accomplish data spread of measurement data and construct graphic displays.

Construct scatter diagrams reflecting relationship between the dependent and independent variables.

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- c. Work and methods analysis techniques
- d. Analysis of organizational and functional structures, including hierarchical work breakdown structures (using the order-of-work-units approach), input-output analyses, and the definition of functional elements (functions/subfunctions/work centers/work categories/tasks, etc.)
- e. The Army Management Structure
- f. Army and Civil Service personnel classification systems
- g. Types and uses of standards, and the basic elements of standards
- h. The elements and procedures of standards computation
- i. Correlation and regression analysis
- j. The phased process for staffing standards development.

4.10 To describe a proposed training course, the aforementioned are translated into essential course units or subjects. These units are placed into three groups to facilitate comparison with and among existing candidate courses, to aid in the specification of prerequisites for entry, and to place the course units into perspective with the course objectives.

4.11 Group A: Basic Techniques and Procedures. Units in this group cover the basic tools required by the standards analysts. For the MRDP, the recommended units are as follows:

- a. Methods analysis
- b. Organizational analysis

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- c. Analysis and development of functional structures
- d. Time study
- e. Work sampling
- f. Operational audit
- g. Rating, leveling, and allowances
- h. Correlation and regression analysis
- i. Data control techniques
- j. Group training technique
- k. Queuing analysis.

4.12 Group B: Applied Techniques and Procedures. This group includes the course units that train in prescribed procedures, such as the approach and requirements of measurement planning in staffing standards development. For the purpose of this effort, they can be summarized in terms of the procedural phases of staffing standards development, since this is the application area of principal concern. The units there include the following:

- a. Preliminary phase procedures.
- b. Measurement phase procedures (i.e., those above and beyond the basic techniques used, such as special data forms, data submission, identification and processing of exceptions, etc.).
- c. Computation phase procedures.
- d. Standards application procedures. The specifics for these units will, of necessity, derive directly from the procedural manual on staffing standards development. Likewise, procedures germane to other applications, such as the development productivity measurement factors, will also derive from the governing procedural directive.

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4.13 Group C: General Knowledge, Prerequisite, Refresher-type Units. This group is less stringently defined than the preceding. It includes those units of instruction that are essential to a proper understanding or the attainment of acceptable proficiency in the basic and applied course units. Some examples are: an overview of the Army manpower management process, showing how standards fit in; a review of basic mathematics to insure ability to cope with statistical and other computations or instruction in the Army's functional and personnel classification systems; definitions; etc.

User Category

4.14 Within the functional scope of the MRDP, this category consists of those people, regardless of echelon, who perform the requirements determination function. In this role they use, among other things, staffing standards to determine manpower requirements for various functional and organizational aggregations. While they do not require a detailed knowledge of the standards development process, it is important that they understand staffing standards from the standpoint of the relationship they present, the general process of their development, their utility, and their limitations.

4.15 The training objectives for this group can be addressed with an appreciation-oriented short course (or a segment of an appropriate existing course) that encompasses the following:

- a. Concept, organization, function, and objectives of the MRDP
- b. Overview of the staffing standards development process phase-by-phase

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- c. Composition, qualifications, and uses of the various levels of standards produced, including an understanding of the statistical attributes of staffing standards
- d. Program estimating equations, how they relate to staffing standards, and procedures for using them in program and budget-input development.

ESTIMATED COURSE REQUIREMENTS

4.16 The perceived training requirement impact of the proposed MRDP is relatively small in terms of courses required or affected. An entry level course is required with units as described above in the development category discussion. If properly tailored, the application units of this course would be sufficient for those people in the initial program cadre or who enter the program possessing proficiency in the basic skills and procedures (Group A, above), and could be presented separately to this group, thus minimizing training redundancy and cost.

4.17 The user group requires only the orientation--or appreciation--type training previously described. This can be handled as a separate course of very short duration (5 days), or, preferably, in conjunction with a broader course in manpower management.

CAPABILITY ASSESSMENT

4.18 The feasibility of meeting the training requirement with existing courses was evaluated by researching existing courses in the Army and in other Services. These included the management engineering training conducted by the Air Force, Navy training for SHORSTAMPS analyst, the Navy-sponsored "Manpower Engineering

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course" at Fort Belvoir, several potentially relevant courses at the Army Management Engineering Training Activity (AMETA), principally the Defense Work Methods and Standards course, and the Manpower and Force Management course at Fort Lee.

4.19 Of the courses researched, only three were considered to be viable candidates for either addressing or adjusting to the required training, and included the following:

- a. The Air Force Management Engineering course for technicians and the Defense Work Methods and Standards course for entry-level training in the development category
- b. The Manpower and Force Management course (more specifically, the revision of a module in that course) as the candidate vehicle for orientation training in the users category.

4.20 The remaining courses were eliminated from further consideration for the reasons listed below:

- a. Navy training for SHORSTAMPS analysts. The training curriculum is prescribed and presented by a Navy Manpower and Material Analysis Center, not by a formal training activity. A review of the course over time indicates considerable change from class to class. Finally, a relatively small amount of time is devoted to measurement planning (the preliminary phase of staffing standards development), the most important application area.
- b. Navy Manpower Engineering course. This 4-week course is roughly a Navy equivalent of the Army

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Manpower and Force Management course. It is too broad and too general for developers' entry-level training, and too heavily Navy-oriented to be a viable candidate for Army users training.

Development Category

4.21 The two existing capability options in this category (for entry-level training) are the Air Force training course and the AMETA Work Methods and Standards course. Table 4.2 shows how these courses compare in terms of time devoted to course units in the groups previously defined (Basic Techniques, Applied Techniques, General/Prerequisite).

TABLE 4.2
COMPARISON OF AIR FORCE AND AMETA COURSE EMPHASIS

Course Unit Group	AF Course		AMETA Course	
	Hours	%	Hours	%
Basic techniques	192	54	138	75
Applied techniques	56	16	19	10
General/prerequisites	109	30	28	15
Total	357*	100	185**	100

* Does not include: orientation, examinations, or graduation.

** Does not include: processing, examinations, or graduation.

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4.22 As they stand, neither course could be used without some reservations. The AMETA course is already heavy on the basic techniques--as it is intended to be. Understandably, it does not train in the specific applied techniques that will be a requirement when the standards-driven MRDP is implemented. These units, and additional emphasis on statistical methods, could easily be added to produce a comprehensive, professional course.

4.23 The Air Force technicians' course contains all of the essential units of training and is well balanced. However, a number of the units in the general knowledge and applied technique areas reflect an Air Force orientation that would generate confusion and difficulty for the entry-level Army student. Unlike some training arrangements, there is no provision in this course to substitute units with a given service orientation (e.g., in organization, functional/personnel classification systems, or procedural variances). Furthermore, the trend has been to a broadening of what was once a course specializing in management engineering and staffing standards development to a course that encompasses all of the manpower management functions. Latest informal information indicates that a revised course now under development will provide identical curricula for officer, enlisted, and civilian students, and will consist of approximately 60% management engineering and 40% manpower management functions.

4.24 Summary Conclusion. Reliance on the Air Force training is not an acceptable option at present, and the impending revision of the Air Force course will exacerbate the current disparities between Air Force training and Army needs for the MRDP. Alternatively, the Army can easily expand the Work Methods and Standards Course, which gives excellent preparation in basic techniques and procedures, to provide the additional training needed in activities and applied techniques.

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Users' Category

4.25 The Manpower and Force Management course is a logical candidate vehicle for presenting the necessary appreciation training as previously described, in the full context of Army manpower management. A module tailored to these units can be substituted for that portion currently devoted to staffing guides and manpower survey. Ideally, the time for this new module should be extended to 3 days to allow for full coverage of the units and practical exercises in standards application.

COST ESTIMATE

4.26 For all practical purposes, there is no new or significantly different cost per student for the recommended user training because the perceived requirement is essentially a revision of current units to reflect the new requirements determination procedures and tools.

4.27 The cost per student for the proposed developers' training is estimated on the basis of actual costs for Air Force students in their management engineering courses. Data were obtained for the latest reported year (FY 1979) for courses encompassing 42 and 44 training days, roughly the time envisioned for the proposed AMETA course. The average cost per student experienced by the Air Force was \$6,700, including student and instructor pay, travel and per diem, supplies, and indirect support. A factor of 1.17 was established as an appropriate inflator to reflect the cost in 1981 dollars. When applied, this gives an estimated training cost of \$7,840 per student. This should be further inflated to the planned training years when these are prescribed.

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V. RESOURCES

5.1 This section presents estimates of specific resource requirements for the Manpower requirements determination program (MRDP). The estimates include personnel costs (salaries and benefits) and program travel costs.

PERSONNEL COST ESTIMATES

Basis for Estimates

5.2 The estimated required manpower levels for the organizational alternatives presented in Section II were used in computing personnel cost estimates. Pertinent strength figures are summarized in Table 5.1.

5.3 The costing presented herein addresses the operating and support cost aspects of the three alternatives developed in this report. The costs represent the total operations and maintenance plus military pay appropriations funding that can be identified with each of these alternatives. Investment account funding to procure or to modify existing facilities or equipment is not included. Furthermore, data were not available on existing resources that might be made available to be applied as offsets to these stated resource requirements. All costs stated are in FY-81 constant dollars. Each of the three alternatives is presented for a 5-year period covering FY-83 through FY-87. This provides a basis for a 5-year projection of costs.

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TABLE 5.1

MANPOWER REQUIREMENTS SUMMARY

Level Function	FY 1983						FY 1984						FY 1985						FY 1986						FY 1987					
	Alt 1		Alt 2		Alt 3		Alt 1		Alt 2		Alt 3		Alt 1		Alt 2		Alt 3		Alt 1		Alt 2		Alt 3		Alt 1		Alt 2		Alt 3	
	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S
IA Staff																														
Management	3	1	10	3	5	2	4	1	10	3	6	2	5	2	12	4	7	2	5	2	14	4	8	3	5	2	14	4	8	3
Methodology	1	0	2	0	1	0	1	0	3	1	2	0	1	0	3	1	2	0	1	0	3	1	2	0	1	0	3	1	2	0
Enforcement	1	0	3	1	1	0	1	0	4	1	2	0	2	0	6	2	3	1	2	0	6	2	3	1	2	0	6	2	3	1
Publish stds			1	0					1	1					1	2					1	3					1	3		
Determine rqls	8	2	16	4	8	2	8	2	16	4	8	2	8	2	16	4	8	2	8	2	16	4	8	2	8	2	16	4	8	2
Subtotal	13	3	32	8	15	4	14	3	34	10	18	4	16	4	38	13	20	5	16	4	40	14	21	6	16	4	40	14	21	6
FOA																														
Management	30	8					2	30	8				2	30	8				2	30	8									
Methodology	1	0					2	0	3	1			2	0	3	1			2	0	3	1								
Enforcement	2	1					4	1					4	1	7	2			4	1	7	2								
Develop stds	299	28					97	10	299	28			97	10	299	28			97	10	299	28								
Publish stds	1	0					1	1					1	1					1	2										
Determine rqls	9	2					9	2	9	2			9	2	9	2			9	2	9	2								
Overhead	1	26					1	14	3	26			1	14	3	26			1	14	3	26								
Subtotal	343	65					119	28	346	66			122	30	50	69			123	31	550	69								
MACOM/agency																														
Management			41	20*	30	3			41	20*	30	3			41	20*	30	3			41	20*	30	3			41	20*	30	3
Enforcement			9	3	7	2			13	4	10	3			20	7	16	5			20	7	16	5			20	7	16	5
Develop stds			299	28	202	18			299	28	202	18			299	28	202	18			299	28	202	18			299	28	202	18
Publish stds																														
Determine rqls	3/2	74	572	74	572	74	372	74	572	74	372	74	572	74	372	74	372	74	572	74	372	74	372	74	572	74	372	74	372	74
Survey add	60	17	60	12	60	12	41	6	41	6	41	6	41	6	41	6	41	6	41	6	41	6	41	6	41	6	41	6	41	6
Subtotal	432	86	781	137	671	109	413	80	766	137	655	104	404	78	764	133	652	104	30	77	755	132	643	103	388	75	748	130	636	101
Total	788	154	813	145	805	111	773	149	800	143	795	138	770	151	802	140	795	140	761	150	795	146	787	140	754	148	788	144	780	138
Aggregate	432		0	0	0	0	422		042		033		071		051		035		011		041		027		007		037		018	

* Includes overhead authorizations for an Army common standards development organization.

** Commands/agencies publish their own unique standards under a variation. Function performed by program management and no full-time positions required at MACOM/agency level.

Add Additive
Alt Alternative
Stds Standards
Rqls Requirements
A Analyst
S Support
Not performed at that level under indicated option

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5.4 Manpower costs for civilian and military personnel were estimated using the Federal general schedule effective 1 October 1980. It was assumed that each civilian incumbent would initially be at Step 2 of the applicable grade during the first year of the program, increasing one step each year until leveling off at Step 5 in 1986. Because of the rotational nature of military billets, the same grade and years of service were applied each year for military personnel.

5.5 After costs for salaries were estimated, a 10.5% allowance for normal government benefits was added to the civilian salaries to arrive at total personnel costs. No allowance was made for overtime, night duty, hazardous duty, unusual operations, overseas duty, or other unusual conditions.

Estimated Personnel Costs

5.6 Table 5.2 presents estimated personnel costs by year for each alternative, as well as 5-year program totals. Five-year manpower costs for alternatives 1, 2, and 3 are \$110.1 million, \$114.2 million, and \$113.2 million, respectively. A breakout of annual, as well as 5-year costs, has also been shown for the two functional groups of standards development and requirements determination. The staffing standards group includes the functions of providing program management, prescribing standards development methodology, developing standards, publishing standards, as well as enforcing standards development methodology and policies. The requirements functional group covers the function of determining requirements to include manpower surveys.

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TABLE 5.2
PERSONNEL COSTS IN THOUSANDS OF FY-81 BUDGET DOLLARS

Fiscal Year	Functional Group	Alternative 1		Alternative 2		Alternative 3	
		Spaces	Cost	Spaces	Cost	Spaces	Cost
1983	Standards*	403	9,896	419	10,546	407	10,338
	Requirements**	539	11,519	539	11,519	539	11,519
	Total	942	21,415	958	22,065	946	21,852
1984	Standards*	408	10,351	428	10,992	419	10,914
	Requirements**	514	11,245	514	11,245	514	11,245
	Total	922	21,596	942	22,237	933	22,159
1985	Standards*	418	10,903	448	11,809	432	11,536
	Requirements**	503	11,280	503	11,280	503	11,280
	Total	921	22,183	951	23,089	935	22,816
1986	Standards*	418	11,253	448	12,193	434	11,942
	Requirements**	493	11,315	493	11,315	493	11,315
	Total	912	22,568	941	23,508	927	23,257
1987	Standards*	418	11,227	448	12,194	434	12,012
	Requirements**	484	11,074	484	11,074	484	11,074
	Total	902	22,301	932	23,268	918	23,086
Five-Year Total	Standards*	--	53,630	--	57,734	--	56,737
	Requirements**	--	56,433	--	56,433	--	56,433
	Total	--	110,063	--	114,167	--	113,170

* All functions associated with standards development to include program management, standards development methodology, publication of standards as well as enforcement of standards development.

** All aspects of requirements determination to include application of standards, manpower surveys, etc.

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TRAVEL COST ESTIMATES

Considerations

5.7 Most staffing standards development efforts involve research and data collection at multiple locations, which generates a potential for significant travel costs. The amount will vary with the centralization or dispersion of development analysts, and with the extent to which the lead team relies on analysts located at or near the study sites for assistance in data collection.

5.8 The program workload estimates and standards development plan developed in Section III reflect the maximum level of functional detail currently available in the data base. With few exceptions, data were not available at a level of detail that would accommodate a credible estimate of required travel on a study-by-study basis. Accordingly, a larger scale means of travel cost estimation was used.

Basis for Estimates

5.9 Combined travel and per diem cost estimates are based on the ratio of cost per 1,000 hours of standards analyst direct labor. Several possible cost-experience sources were considered, including the Air Force Management Engineering program, Navy SHORSTAMPS travel estimates, and our own experience in staffing standards development for the Navy SHORSTAMPS program. Of these, the only source that met all the criteria (i.e., complete data on both analyst hours, actual travel cost and travel intensity that is representative of the anticipated Army travel requirement), is the ongoing Presearch experience in SHORSTAMPS.

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STUDY OF ARMY MANPOWER REQUIREMENTS, DE
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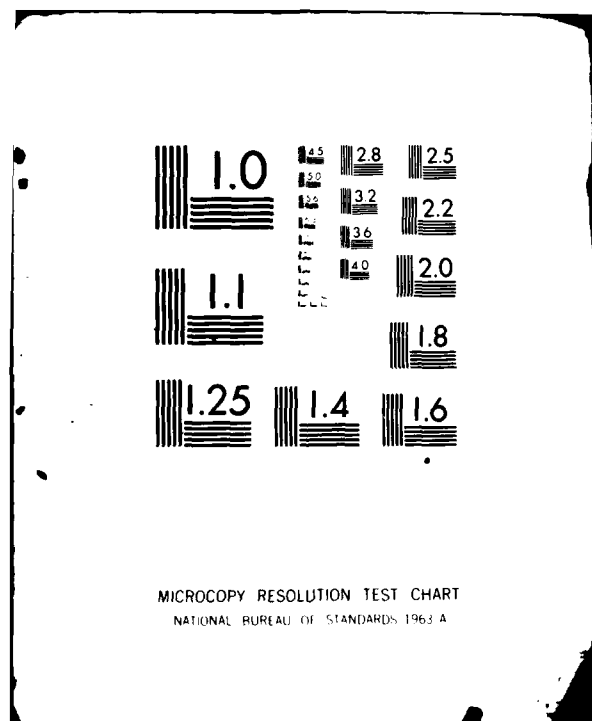
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5.10 For the 15-month period ending 31 May 1981, the ratio of total travel cost (transportation and per diem) to direct analyst hours was approximately \$2,800 per 1,000. To derive the cost estimating factors for FY-83 through FY-87, this base factor was increased each year to reflect an assumed inflation rate of 10% per year. The resulting cost estimators by fiscal year are shown in the following list:

- a. FY-83: \$3,400/1,000 analyst hours
- b. FY-84: \$3,700/1,000 analyst hours
- c. FY-85: \$4,100/1,000 analyst hours
- d. FY-86: \$4,500/1,000 analyst hours
- e. FY-87: \$5,000/1,000 analyst hours

5.11 Estimates of direct analyst hours were based on the man-month requirements previously estimated for standards development and maintenance (see Section III and Appendix I).

Estimated Travel Costs

5.12 The cost estimating factors and the resulting travel cost estimates are summarized in Table 5.3. Separate man-hour estimates and cost computations are provided for Army-common and command-unique efforts.

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TABLE 5.3
TRAVEL COST ESTIMATES

Fiscal Year	Estimated Direct Analyst Hours			Estimated Travel \$ Per 1,000 Hrs	Estimated Travel Cost (\$000)		
	Army Common	Command Unique	Total		Army	Command	Total
83	69,310	273,180	42,490	3,400	235.7	928.8	1,164.5
84	132,530	273,180	405,710	3,700	490.4	1,010.8	1,501.2
85	132,530	273,180	405,710	4,100	543.4	1,120.0	1,663.4
86	132,530	273,180	405,710	4,500	596.4	1,229.3	1,825.7
87	132,530	273,180	405,710	5,000	662.7	1,365.9	2,028.6

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VI. SYSTEMS INTERFACE

6.1 This section addresses the systems interfaces and automatic data processing (ADP) support requirements related to development, application, and implementation of staffing standards. Current and projected systems are discussed from the standpoint of impacts arising from adopting a standards-based manpower requirements determination process. Observations and recommendations are presented for use in formulating both short- and long-term plans for system modifications and for developing projected system design requirements. It should be noted that the extent and degree of potential system impacts will vary depending on the scope of program implementation. This section discusses all potential impacts without a predetermination of program scope. In this manner, all potential system interfaces (and related impacts) can be presented for review and discussions, permitting flexibility in the selection of and planning for the type and degree of interface necessary to complement the scope of program implementation.

6.2 The depth of presentation in this section is limited to identifying and describing the systems interfaces in fairly high-level terms. Detailed system design changes (e.g., specific timing requirements, input processing, data element descriptions or lists) were not developed in this analysis. The complexity of each system addressed dictates that detailed design changes be developed through a coordinated effort with the system proponent based on the processing requirements derived from staffing standards development, application, and implementation.

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STRUCTURE AND COMPOSITION OF THE INFORMATION REQUIREMENT

6.3 The objectives of the analysis and recommendations presented are to identify a procedure for integrating workload-related manpower requirements derived from the application of staffing standards into the Planning, Programming and Budgeting System (PPBS) and to develop a statement of required ADP support for staffing standards program operations. The first objective implies impacts on not only the PPBS, but any standard Army automated management information system (MIS) used to support the planning, programming, and budgeting decision processes. For this reason, a large family of Army MISs are considered and reviewed in this analysis. The ADP support required for staffing standards program operations (e.g., functional universe identification, computations, application) is presented separately, after the systems interface topics are presented.

Total Systems Approach for PPBS Integration

6.4 The PPBS is a management concept or practice supported at various command levels by a family of automated MISs. Several of the supporting systems are currently planned for upgrading or replacement to facilitate information flow and improve overall system responsiveness. Both current and projected systems were considered in this analysis. Many of the systems considered are not immediately associated with the recurring PPBS cycle, but are standard Army systems available to PPBS participants as information sources when formulating and executing PPBS guidance and decisions. As such, there is an implicit interface that must be considered and defined to ensure the consistency and integrity of data between systems potentially available for supporting PPBS-related analyses.

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6.5 Consideration is given to both the transfer of information from the standards program to PPBS systems, as well as from the support systems to the standards program. Many of the existing and projected MISs can provide data for use in standards development. For example, preliminary functional universe identification can be accomplished using existing data sources. This is one of the first steps taken in the development of a staffing standard.

6.6 It is assumed that no major changes will occur in the current PPBS structure used for developing the Army's manpower program. The adoption of standards-based manpower requirements determination for TDA units will replace or augment current manpower requirements determination methods for use within the existing PPBS framework. Program input will continue to be bottom-fed from the programming commands and agencies for review, prioritization, and selection by HQDA. However, PPBS participants, both at HQDA and in the field, will have an improved management tool in the form of staffing standards at their disposal for determining, justifying, and allocating manpower.

Categories of Information Users

6.7 The extent of potential system interfaces is determined by the needs of managers and analysts at various levels in the Army for standards-related information. These needs often fall outside of those necessary for direct PPBS participation, but, as previously described, consideration must be given to them to insure the consistency and integrity of information among all potentially useful sources. Users can be generally grouped by function performed, regardless of organizational structure or level. In many cases, a single user may perform several functions, depending on the organizational structure and nature of

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the management responsibilities associated with the organization. Potential information users are grouped into the following functional categories:

- Standards development
- Manpower requirements determination, budgeting, justification, and allocation
- Resource utilization, performance, and productivity measurement.

Information Requirements by Functional Category

6.8 Standards Development. Unique requirements for standards development ADP support are discussed at the end of this section. However, a common information requirement during standards development is the ability to perform a preliminary identification of the location and number of work centers potentially covered by a standards study. Additionally, an initial estimate of the number of manpower authorizations currently allocated to the potential work centers is an important element in preparing a study measurement plan. Timely access to this information should be available from the manpower management information systems. While the data obtained may not exactly define the study universe, it provides a logical starting point for measurement plan and work center description development that will refine the functional universe estimates. Additionally, during the initial application of a developed standard, current manpower authorizations must be known so that an assessment of the impacts (increase or decrease in authorizations) associated with implementing the standard can be made. This assessment is done in conjunction with the manpower program managers responsible for reallocating authorizations, as necessary, to implement the standard.

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6.9 Manpower Requirements Determination, Budgeting, Justification, and Allocation. Upon approval and implementation of a standard following the initial application, the standard becomes available for use in determining manpower requirements via subsequent applications during preparation of Program Analysis and Resource Reviews (PARR) and Program and Budget Estimates (PABE). These are the principal instruments used by programming commands and agencies in communicating manpower requirements to the Army staff. Similarly, program directors on the Army staff have the standard (or higher level estimating equations) available for use in recalculating manpower requirements when modifications are made to Program Development Increment Packages (PDIP) and Decision Units.

6.10 Essential in this process is the ability to project workload estimates. Estimates of workload must use the same work units upon which the standard is based. Accordingly, program guidance issued to the field by the Army staff for use in requirements determination must be readily translatable into workload units for application in staffing standard equations. Where feasible and acceptable, higher level estimating equations derived from staffing standards may be used with suitable workload surrogates contained in statements of program guidance (e.g., number of armored battalions supported, post or installation population).

6.11 Once manpower requirements are calculated, it is necessary to relate the work center manpower and workload to a specific TDA organization. While this information is not generally required for program development at HQDA, it is essential in the allocation process once manpower authorizations are approved and extended to the field. This is implied by the practice of managing and accounting for manpower (and other resources) functionally

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(by program) at HQDA level and organizationally (by unit) at MACOM and installation level. The capability to relate work centers to organizations also improves the information available for force structuring decisions when TDA units are projected in the program out-years.

6.12 Improved justification for manpower requirements is a natural corollary of the use of workload-based staffing standards. Similarly, improved budget justification for manpower authorizations can be achieved because of the workload basis used in requirements determination. In this process, it is beneficial to have the capability of relating manpower budget estimates with the functional areas or work centers covered by the estimates. This facilitates funds allocation below the MACOM level and retains an audit trail of budget items from the lowest level of development through the HQDA-level budget submission and review process. This ability would complement the practices of both end-strength management and fiscal management currently in use throughout the Department of Defense.

6.13 Resource Utilization, Performance, and Productivity Measurement. The ability to measure the efficiency and effectiveness of programmed resource utilization has received increased emphasis in recent years. Such measurement provides feedback to commanders and staff members for use in subsequent program formulation and in evaluating program execution. Productivity measurement involves calculating the total input resources--with special emphasis on manpower--employed to produce a unit of output from a work center or higher level element. The units of output are generally work units that are identified and measured during standards development. Since the key to measuring productivity is the ability to determine the results (i.e., output produced) of resource expenditures in tangible, mission-related terms, the

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use of work units measured and selected during standards development can significantly improve the quality and coverage of productivity measurement. Access to work units by work center and the ability to account for resources expended and output produced by work center or higher level organizational elements are required.

6.14 Performance measurement plays a key role in assessing the efficiency and effectiveness of resource utilization and evaluating organizational performance. Performance of an organization must be measured against some valid, commonly accepted norm. When measuring manpower performance, a staffing standard provides a norm for use in comparing actual performance with predicted or expected performance. Again, it is essential to account for organizational performance in terms of tangible units of measure such as work units produced so that the comparison with a staffing standard maintains a consistent degree of relevancy.

Order of Work Units Model

6.15 An important concept involving the structure of work centers and their lower- and higher-order disaggregations and aggregations is defined in the order-of-work units model. This model consists of a hierarchical structure within which various levels of work units are imbedded. The model implies that lower-order job elements are contained uniquely within subtasks and tasks, which in turn are discrete parts of work centers. It also implies that work centers are discrete parts of higher-level entities. In terms of information cataloging and retrieval, the order-of-work units provide the ability to relate lower-level manpower requirements, allocations, and utilization to higher-level structures concurrently with relating like components

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across many organizational boundaries. The concept is fundamental to the development of work centers and forms a framework for development of functional staffing standards. The use of the order-of-work units model is the key to successful integration of standards-based manpower requirements into the PPBS and any related system. Further discussion of the system interface implications associated with the use of an order-of-work units model is contained in later paragraphs dealing with the selection and use of a functional taxonomy.

POTENTIAL SYSTEMS INTERFACES

6.16 The following paragraphs list the current and projected Army systems with which interfaces have been analyzed. Some of the systems are not purely automated; these are the components of the PPBS which are used to communicate manpower requirements and allocations. However, these are automated systems used to support the PPBS process. The systems are grouped into functional categories to illustrate the pervasiveness of the potential impacts arising from programming, allocating, and measuring the utilization of manpower.

Programming, Budgeting, and Manpower/Force Structure Management

6.17 Program and Budget Guidance. The Program and Budget Guidance (PBG) provides information for preparing the following documents: Program Analysis and Resource Review (PARR), Program and Budget Estimates (PABE), and Command Operating Budget (COB). It is distributed to the approximately 25 major commands and field operating agencies that submit those documents. A two-volume publication (three volumes for U.S. Army Forces Command and U.S. Army Europe), the PBG contains information regarding the availability of dollar and manpower resources. Volume I goes to all

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major commands and operating agencies. It provides general guidance and expresses HQDA views on various programs, and it identifies programs requiring emphasis in command document submissions. Volume II is published separately for each command. Each of the separate publications provides summary data, resource trails, and manpower and fiscal constraints applicable to a particular command. (For FORSCOM and USAREUR, Volume II chapters on manpower and force structure are published as a Volume III). The PBG receives three distributions annually that correspond to the Army's Budget Estimate in October, the President's budget in January, and the Program Objective Memorandum in May.

6.18 Program Analysis and Resource Review. The Program Analysis and Resource Review provides a formal means for obtaining needed program participation by commands and operating agencies. Through the PARR they identify and explain their resource requirements to HQDA. In all, 25 commands and agencies submit the document, the largest of which are designated programming major commands. The yearly PARR helps obviate fragmented collection of data by functional interests. Its systematic submission facilitates balancing resource allocations made in behalf of the commands in the Program Objective Memorandum (POM). In turn, since balanced POM allocations invoke fewer interappropriation adjustments, they reduce turbulence in the budget formulation process.

6.19 Program and Budget Estimate. The Program and Budget Estimate is submitted to HQDA 2 months after the PARR by all commands and agencies preparing the document. The PABE furnishes in budget-level detail the dollar costs, by appropriation and end strengths, for military and civilian manpower needed to meet command operating requirements as approved during Staff evaluation of the PARR. The PABE, in addition, furnishes data as required by specific tasks assigned in the Preliminary Army Planning and

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Programming Guidance Memorandum. Beginning with the FY-81 to FY-85 cycle, the PABE links the program to the budget.

6.20 Command Operating Budget. Major commands and designated operating agencies formulate operating requirements based on the POM and the May issue of the PBG. They submit these requirements to HQDA in July as the COB. The document provides appropriation directors with budget and workload data needed in developing and evaluating their budget estimates. In addition to supporting the formulation and justification of the Army budget submitted in mid-September to the Office of the Secretary of Defense, the COB provides appropriation directors with information needed to construct apportionment requests for the upcoming fiscal year.

6.21 Force Development Integrated Management System: Program/-Budget Subsystem (FORDIMS:P/BS). This HQDA automated system consists of the automated portion of the Army Force Program (AFP) and the Civilian Budgeting System (CBS). The AFP is a force structure management system, i.e., a process that develops the detailed Army total force structure approved by the Secretary of Defense for the current, budget, and program fiscal years. The same term refers also to the automated management information system used within HQDA to produce resource guidance for military and civilian manpower and audit trails for Program Budget Guidance documents.

6.22 The CBS produces estimates of civilian work force costs and relative expenses for use in budget preparation. Cost estimates are developed by civilian category, function (for relationship to OSD program element), and funding appropriation.

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6.23 Force Accounting System (FAS). FAS is the current automated system used for recording, maintaining, and retrieving data for force structuring, force planning, and accounting for all units (to include current and projected manpower authorizations) of the Active Army and Reserve components. Field entries to FAS contain the organizational breakdown of allocated manpower authorizations. Additionally, authorizations are further disaggregated within each unit by function using the Army Management Structure Code.

6.24 The Army Authorization Document System (TAADS). TAADS is the automated system that contains current and projected unit manpower authorizations by unit and by position within each unit. TAADS inputs are submitted by the field as a means of establishing qualitative (e.g., grade, skill, special qualifications) manpower authorizations. Logically, the manpower authorizations extended in the program are initially suballocated to organizations and recorded in FAS. Subsequently, detailed qualifications for these authorizations are established and communicated in corresponding--by unit--TAADS documents.

Personnel Management and Utilization

6.25 The Officer Master File (OMF) and the Enlisted Master File (EMF). These automated files are fed by the Standard Division/Installation Personnel System (SIDPERS) and contain data on Active Army military personnel. Data contained include unit of assignment, grade, military occupational speciality, training history, and special qualifications. The files support the management of military personnel throughout the Army and are operated and maintained by the U.S. Army Military Personnel Center.

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6.26 The Civilian Personnel Information System - Model I (CIV-PERSINS-I). This automated data base, maintained and operated by the U.S. Army Civilian Personnel Center, is fed by various personnel transaction records prepared and forwarded by local installation civilian personnel offices. Included are data on unit of assignment, grade, skill, training, and special qualifications. The system currently covers direct hire U.S. citizens employed by the Army. The system also contains the Army Management Structure Code of assignment for each individual.

Financial Accounting, Fiscal Management, and Utilization

6.27 Several accounting systems are used throughout the Army. These accounting systems are in turn fed by civilian payroll systems that have the capability of reporting civilian costs and hours worked. The U.S. Army Finance and Accounting Center consolidates and reports these expenditures as required by current statutes and accounting practices. The standard Army systems included in the family of systems are the Standard Army Finance System (STANFINS) and the Standard Civilian Payroll System (STARCIPS).

6.28 Army Management Structure (AMS). While not an automated system in itself, the current Army Management Structure defines a set of functional cost accounting codes used throughout various Army systems. Operated under the auspices of the Comptroller of the Army, the AMS is used for programming, budgeting, and accounting classifications. Each Army Management Structure Code (AMSCO) can be related to an OSD program element code, useful for relating the Army program and budget to OSD program and budget classifications and categories.

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Proposed Systems

6.29 Several of the previously described automated systems are currently under revision or are scheduled for replacement. A brief description of the future systems follows. It can be assumed that those new systems have a potential interface with the staffing standard program and the overall Army manpower requirements determination process.

6.30 The Vertical Force Development Management Information System (VFDMIS). VFDMIS represents a significant upgrading of the current manpower management, budgeting, and force structuring automated support systems. Essentially, VFDMIS extends the automated processing capabilities available at HQDA through FDRDIMS-P/BS, FAS, and TAADS to the field. Improved data transfer capabilities, coupled with advanced data handling technology, will be used to reduce the manual effort associated with manpower management, budgeting, and force structuring processes. Increased system responsiveness, consistency of data among command levels, and improved war-time operating efficiency are included as VFDMIS objectives.

6.31 Army Civilian Personnel System (ACPERS). ACPERS will improve the capability of the Army to collect, process, and retrieve data on the civilian work force. While still in the preliminary requirements determination phase, ACPERS may provide the capability to collect civilian personnel data on foreign national employees similar to that collected by CIVPERSINS-I. ACPERS will replace or augment the current CIVPERSINS-I for use in civilian personnel management and utilization measurement.

6.32 Standard Army Finance System Redesign (STANFINS Redesign). A major effort is currently underway at USAFAC to upgrade and

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expand the existing Army accounting system capabilities. Expanded fiscal and resource management information capabilities are being designed into the system for potential application Army-wide. Of particular interest is the Performance Measurement Module of the Redesign, which offers great potential for collecting and analyzing workload and related performance data.

6.33 Program and Budget Accounting System (PBAS). Developed under the auspices of USAFAC, PBAS will be a standard financial system for reporting financial data from the installation/activity directly to a central data base at USAFAC. PBAS will improve the Army's control over program and fund distribution processes from HQDA to the MACOMs and to the installations, produce all departmental accounting reports, and upgrade information available to HQDA and MACOMs for financial management.

6.34 Army Management Structure Redesign (AMS(R)). The Army has begun an effort to restructure the current management language used in programming, budgeting, and accounting for resources. The effort is directed at producing a new AMS and related codes consisting of 10 resource classification components. The new structure will support the flow of information during the PPBS processes, as well as permit better tracking of resource allocation and expenditures. The new AMS is applicable to all resources: dollars, manpower, and personnel.

SPECIFIC ELEMENTS CONSTITUTING THE INTERFACE

6.35 The potential interfaces related to the use of staffing standards in the PPBS and standard automated systems are defined below in terms of the types or categories of data exchanged across the interface. As illustrated in the previous descriptions of systems, there is a logical interrelationship among

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systems, as well as between the standards program and the various systems. This implies that consistent sets of data must exist within all systems potentially interfacing with the standards program or within any system exchanging manpower programming, budgeting, allocation, or utilization data with a standards program-interfaced system. The following paragraphs describe the six categories of data constituting the potential or likely system interfaces necessary to support the use of staffing standards in manpower requirements determination budgeting, TDA unit force structuring, and resource utilization measurement. The categories presented reflect the potentially wide-ranging impacts and capabilities inherent with use of staffing standards for requirements determination. Many of the capabilities are not currently available or are available on a limited basis. While all of the interface elements are not required immediately for program operation, long-range planning and analysis are required to implement many of the interface capabilities presented. As such, the elements (and corresponding interface capabilities) present a future look at what potentially is available as management information to support a broad range of management functions and responsibilities.

Functional Taxonomy: Work Center Identification

6.36 A consistent, universally applied functional classification scheme is required to identify work centers, applicable staffing standard equations, estimated workload projections, and calculated manpower requirements. The functional classification scheme is absolutely essential for large-scale implementation of staffing standards. The classification scheme should have the following characteristics:

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- Provides hierarchical structure identifying and complementing the components of an order-of-work units model
- Relates directly to higher-level classification schemes used in program and budget preparation (e.g., OSD program element code, AMS, Program Decision Unit, funding appropriation)
- Codes like work centers identically, regardless of organizational placement or structure
- Permits expansion of codes as work centers are defined or further subdivided by standards studies
- Applies consistently throughout all interfacing systems (automated and nonautomated) at the appropriate level of detail.

6.37 These characteristics can be achieved through the combination of several data elements (e.g., a function code, a program element code, a funding appropriation code). In this manner, data exchanged across various interfaces can be structured to meet the needs of the particular system while maintaining the integrity of the data content. Information or data that must be accompanied by some form of work center identity or functional classification code includes the following:

- Each developed staffing standard equation
- Workload projections or guidance
- Calculated manpower requirements
- Resource expenditures (personnel assigned, hours worked, outputs produced).

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6.38 The current AMSCOs are only partially suitable for use as a functional classification scheme. Modifications will be required in some portions of the existing code structure to meet the minimum requirements for staffing standards implementation and use in programming. This is a viable short-term alternative to developing a new coding scheme because the AMSCOs have wide use throughout current Army systems and they already exhibit some of the required characteristics (e.g., relationship to OSD program elements, funding appropriate identity, and PDIPs, partially hierarchical in nature).

6.39 The long-term solution to the problem rests with the AMS restructuring effort currently underway at USAFAC. This effort offers great potential in developing a suitable functional taxonomy for use throughout all systems and processes supporting manpower requirements determination, budgeting, allocation and utilization measurement. Because of the diverse nature of these management responsibilities, a coordinated effort is required to produce an AMSCO suitable for use in all systems from the AMS restructuring.

Projections of Workload Estimates

6.40 In the process of applying a staffing standard or higher-level estimating equation, workload projections must be estimated for the functional area addressed. The units of workload projected must be consistent with the workload factors found in the standard equations. Under the current PPBS procedures, installations and commands or agencies preparing manpower requirements for inclusion in the program will have to perform this task and provide the workload data in programming documents by work center or higher level of aggregation.

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6.41 This implies that manpower programmers can interpret program guidance in terms of suitable units of workload. Workload factor surrogates are useful in the process and can be derived from high-level estimating relationships established from standards development work measurement data. Experience with relating program guidance to workload factors will improve the process over time; however, additional emphasis will have to be placed on the provision of program guidance in terms of workload surrogates and validated program factors to facilitate development of workload projections.

Staffing Standard and Estimating Equations

6.42 Once projections are determined, they can be entered as arguments into the applicable equation to calculate manpower requirements. MACOM and installation manpower programmers and allocators must have short-notice access to developed standards and estimating equations to accomplish the computation of requirements. While most standards will be applied at MACOM or installation level, Army staff members will require access to standards in the event short-notice modifications to manpower requirements are made.

6.43 Initially, it may be adequate to publish and distribute equations via a manual or regulation for use in computing requirements. However, as the number of standards developed expands to cover all TDA functions and the number of required applications grows, it may be necessary to automate the use of the equations. Similarly, automating the computational process may require automating the workload projection data needed for large-scale standards application.

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Calculated Manpower Requirements by Function

6.44 MACOMs and agencies will continue to communicate manpower and other resource requirements to HQDA using the existing PPBS vehicles (e.g., PARR, PABE, COB). Manpower requirements determined from standards must be identified along with the workload assumptions used in the computations. This provides improved justification for the manpower requirement. Once allocated, manpower authorizations must be audit-trailed back to the work centers performing the applicable function. Assessments of workload deferral will be necessary in the event requirements are not fully supported with authorizations. This deferral assessment can be included in subsequent PARRs as further justification for manpower requirements when mission accomplishment is adversely affected by the deferral.

6.45 The next step in the requirements determination/authorization process requires structuring the allocations to work centers within units. Initial structuring is accomplished through FAS entries and subsequently through submission of updated TAAUS documents.

Organizational Identity of Manpower Authorizations and Workload

6.46 Once manpower authorizations are allocated to the field, they must be suballocated to the units containing the designated work center. Although it is neither necessary nor practical to program and allocate manpower by work center between HQDA and the MACOMs/agencies, commanders and staffs at MACOM-level and below need to make suballocations down to specific work centers contained in their assigned TDA units. For this reason, it is essential to be able to audit-trail specific allocations back to the work center and unit originally specified to perform the

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function. It is adequate to accomplish suballocations in increments above or below existing levels for existing work centers. This would reduce the manual processing associated with FAS and TAADS input preparation. Submission of FAS and TAADS updates can then be compared with the bulk allocations made to ensure the force size is balanced with the programmed authorizations. Additionally, provisions should be made to indicate in a unit TAADS document those authorizations that are currently covered by approved standards.

6.47 It should be pointed out that the hierarchical nature of a functional classification scheme should support various levels of detail in program preparation, allocation, and subsequent suballocation. This would permit management at the relatively high levels of aggregation characteristic of communications between HQDA and MACOMs, while permitting more detailed management where required between the MACOMs and installations.

Resource Utilization: Personnel Assigned, Hours Expended, and Output Produced

6.48 Tracking program execution provides the feedback necessary for evaluation of the decisions made in the programming, budgeting, and allocation steps. Modifications to subsequent programs can be initiated if significant deviations in the current year are detected and analyzed in a timely fashion. Moreover, productivity and performance measures can be established, thus providing useful management information on the efficiency and effectiveness of the management practices currently employed. To accomplish program tracking and utilization measurement, the following minimum data are required:

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- Number of personnel assigned
- Number of work hours (man-months or man-years) expended
- Quantity of output produced.

These data are the minimum required to assess and measure manpower utilization. Other data would have to be collected with a consistent functional identification to support "total factor" productivity measurement (e.g., salaries paid, equipment purchased, energy costs).

6.49 To be useful, these data must be readily identifiable with the functions performed, manpower authorizations allocated, and dollars budgeted. Again, this can be accomplished using the same functional classification scheme used in the programming, budgeting, and allocation processes. There are several problems associated with attempting to accomplish this using current systems. These include the following:

- Lack of accurate, comprehensive utilization reporting system
- Absence of work center level of detail functional classification data within the military personnel reporting systems
- Limited coverage of the existing civilian personnel system (direct hire U.S. citizens only)
- Lack of a system for reporting output production in a consistent, timely manner.

6.50 Within the STANFINS Redesign effort, there is a module under development that could provide much of the capability

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required to measure resource utilization. The Performance Measurement Module is being designed to support utilization measurement by work center. Because of this potential capability, the Performance Measurement Module should be viewed as the long-term alternative support system for utilization measurement. As with the AMS restructuring effort, a coordinated effort is required to ensure the design specifications for the module are adequate for current and future manpower management and resource utilization measurement requirements.

Relationship of Data Categories to Existing and Proposed Systems

6.51 The six data categories presented can be tracked to the potential interfacing systems to show the relationship with user requirements. Table 6.1 consists of a matrix with the data categories along the vertical (left-hand) axis and potential interfacing systems along the horizontal (top) axis. This table pertains to programming, budgeting and allocating manpower for TDA units only. Intersections of the two axes contain an "X" where the data category would be exchanged either between the standards program or another system. It is important to note that every interfacing system must use the same functional classification scheme. Obviously, the specific level of detail will vary from system to system, but the hierarchical nature of the classification scheme is always preserved, maintaining the integrity of the relationship of information between systems.

6.52 As shown in Table 6.1, there is no current system available for automated storage or retrieval of standards equations. However, the STANFINS Redesign Performance Measurement Module will have the capability of developing, storing, and retrieving standards equations.

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TABLE 6.1
RELATIONSHIP OF DATA CATEGORIES
TO POTENTIAL INTERFACE SYSTEMS

System	PPBS				Existing							Proposed				
	PBG	PARR	PABE	COB	AFF	CBS	FAS	TAADS	OMF/EMF	CIVPERCENS-I	STAFINS, STARCIPS & all others	STAFINS Redesign	AMS (R)	PBAS	ACPERS	VFDNIS
Data Category																
Work center ID/PE code/ funding appropriate/PDP/DU		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Workload projections	X	X		X							X					
Staffing standards/estimating equations											X					
Manpower requirement/allocations	X	X	X	X	X	X	X	X								X
Organizational identity							X	X	X	X			X	X		
Resource utilization		X				X					X	X	X	X		

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STANDARDS DEVELOPMENT SUPPORT

6.53 The development of staffing standards culminates in the establishment of a causal relationship between work measured and the number of people performing the work. The relationship is established statistically using a mathematical tool called regression analysis. Simply stated, regression analysis provides quantitative measures on the strength of the relationship between the workload and the number of personnel performing the work. In addition, coefficients are computed for use in constructing a mathematical equation for the calculation of manpower requirements, given the amount of work to be performed.

6.54 Several types of equations are available for use in performing regression analysis, each having a unique quality to model or predict specific, intuitively appealing relationships between workload and manpower. Computation of regression coefficients and the statistics necessary to evaluate the strength of the relationship is greatly simplified through the use of electronic calculators or small, mathematically-oriented computers. The use of such electronic devices reduces the time required to perform calculations, permits use of more sophisticated regression models, and, in the case of a computer, reduces the manual burden of work measurement data manipulation.

6.55 The geographical dispersion of the organizational elements participating in standards development influences the options available for data processing support. Two basic options are available for providing required ADP support:

- A central computer facility accessed from several remote sites via remote job entry (RJE) devices or portable terminals.

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- Several geographically disbursed facilities, smaller in size than a central facility, accessed locally. Many other variations of these options are possible, but they do not differ significantly in concept or capability from the basic options.

6.56 Regardless of alternatives selected, a statistical software package must be available for use in coefficient and statistic computations. The selected software package should have the minimum capabilities to do the following:

- Perform multivariate linear and univariate non-linear regression analysis to include performing confidence tests on all relevant statistics and computing required equation coefficients
- Accept several sets of dependent and independent variable values resulting from repeated work measurement of a particular function
- If required, store the work measurement data for defined periods of time for use in verification analyses or development of other estimating equations.

6.57 Comparative advantages and disadvantages of each basic support option are listed in Table 6.2. Economic analysis of each alternative should be conducted prior to final selection. This is required by current Army ADP procurement regulations and would be beneficial if existing facilities can be identified to provide needed support. It should be kept in mind that this support is required only until STANFINS Redesign is introduced Army-wide. The Performance Measurement Module should be adequate to support standards computation at each installation serviced

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TABLE 6.2
STANDARDS DEVELOPMENT ADP SUPPORT OPTIONS

Option	Advantage	Disadvantages
Several geographical dispersed systems, locally accessed	Reduced complexity in overhead or systems software (a simpler system) No telecommunications costs	Requires procurement and programming of several systems and peripheral equipment Requires procurement of several statistical software packages ADP resource sharing is not practical Could result in proliferation of nonstandard systems
Central facility with remote access	Improves ADP resource utilization by concentrating demand on one system Promotes a standard system for Army-wide use and future modification or expansion Requires only one statistical software package	Additional cost for telecommunications links Additional cost associated with remote terminal procurement Requires large system to support telecommunications links with multiple users Requires more complex overhead or systems software to manage remote, multiple access capability

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by the system. Alternatives for implementing the options include the procurement or development of a standard statistical software package for use on existing installation computers, procurement of telecommunications equipment to augment an existing Army computer installation, and leasing services from a commercial time-sharing vendor (telecommunications and central computer facility).

RECOMMENDATIONS

6.58 The following recommendations are provided, based on the analysis of requirements for integrating standards-based manpower requirements with the current PPBS and other existing or automated information systems:

Use the current AMS and related codes as an interim or prototype functional classification scheme. Evolutionary modifications to the structure and codes, accomplished in conjunction with Comptroller of the Army and USAFAC, can provide the functional classification capabilities required between now and FY-87 (the planned implementation date for AMS(R)). During work center description development, existing AMSCOs should be expanded or modified to permit function and work center identification within those systems using the AMSCO. Those changes should be documented in AR 37-100-XX to ensure adequate dissemination throughout the Army.

Coordination should formally be maintained with the AMS restructuring project to ensure the adequacy of the new structure for identifying functions and work centers.

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- Coordination should be formally maintained with the STANFINS Redesign project to ensure required support is available for entry, storage, and retrieval of workload projection data; development of staffing standards (computation capabilities); measurement of resource utilization; and to ensure that functional and work center classification schemes are consistent and adequate in all elements of the support provided.
- A continuing assessment should be made of the potential interfacing systems concerning use of the current AMSCO (e.g., level of detail required, sources, edit, and validity checks) as a functional classification scheme consistent with staffing standards program interface requirements.
- As part of this assessment, guidelines should be established as to the functional level of detail at which information is contained in each interfacing system (e.g., by work center, program element code).
- Additionally, the plans for each system to assimilate the restructured AMS should be reviewed to ensure adequate levels of detail are maintained and consistency is established as required to support necessary interfaces.
- Guidelines should be developed and defined governing the level of functional classification detail used throughout all systems. Similarly, AMS (current and restructured) codes should be segmented, defined, and used to correspond consistently to similar levels of detail within the hierarchy of functional classifications and definitions.

