AFSCM 375-1 A
WM. M. TOMPKINS

AIR FORCE SYSTEMS COMMAND MANUAL

SYSTEMS MANAGEMENT

CONFIGURATION MANAGEMENT DURING DEFINITION AND ACQUISITION PHASES

1 JUNE 1964

UNITED STATES AIR FORCE

AIR FORCE SYSTEMS COMMAND

WM. M. TOMPKINS

FOREWORD

The professional leadership of the Air Force Systems Command in managing system program efforts is fully recognized throughout Government and industry. One of the keystones of our integrated management is configuration management.

In June 1962 we formalized our first standard approach to configuration management with the initial publication of AFSCM 375–1. Although this was a major step forward we have already moved into the second generation of this very important endeavor. This manual describes the management interface between the industrial and Government members of the acquisition team and I consider it to be one of the most important and effective management tools available to program managers.

It is my desire that the full requirements of this manual be implemented on all new system programs and all advanced development efforts that are in direct support of these system programs. The exhibits are to be contractually used in their present form unless a formal deviation is authorized by Headquarters AFSC. System program directors who are responsible for programs presently in the Acquisition Phase should take action to screen their present programs and implement the new exhibits wherever it is proper.

B. A. SCHRIEVER
General, USAF
Commander

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HEADQUARTERS, AIR FORCE SYSTEMS COMMAND
Andrews Air Force Base, Washington, D.C.
1 June 1964

Systems Management

CONFIGURATION MANAGEMENT DURING DEFINITION AND ACQUISITION PHASES

This manual establishes policy, provides guidance, and assigns responsibilities for configuration management of system/equipment programs. It prescribes typical formats, authorizes certain forms for preparation and maintenance of system/equipment program specifications. It provides for making concurrent decisions to approve or disapprove changes in specified requirements and to approve or disapprove the development, production, and retrofit requirements of engineering changes, and for implementing these decisions. It provides for configuration accounting of a given mission, design, series (M/D/S) of a system/equipment program.

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This manual supersedes AFSCM 375–1, 1 June 1962, Change A, 10 August 1962, Change B, 19 October 1962, and all interim changes.

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EXHIBITS

I Preparation of the System Performance/Design Requirements General Specification
II Preparation of Contract End Item Detail Specification (Prime Equipment)
III Preparation of Contract End Item Detail Specification (Facility)
IV Preparation of Contract End Item Detail Specification (Identification Item)
V Preparation of Inventory Equipment Requirement Detail Specifications (Requirement Items)
VI Preparation of Detail Specification (Critical Components and Company Standard Parts)
VII Specification Maintenance
VIII Preparation of System Requirements Changes
IX Preparation of Engineering Change Proposals for Contract End Items
X Standard Configuration Identification Numbers
XI Identification and Acceptance of Equipment, Aerospace Facilities, Technical Orders Engineering Data, and Contract Documents
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FOR THE COMMANDER:

UNITED STATES AIR FORCE
OFFICIAL
HQ AIR FORCE SYSTEMS COMMAND

JOHN F. RASH
Colonel, USAF
Director of Administrative Services

ABBREVIATIONS USED IN THIS MANUAL

A&E—Architect & Engineer.
AAE—Aerospace Ancillary Equipment.
ACO—Administrative Contracting Officer.
ADO—Advanced Development Objective.
AFPRO—Air Force Plant Representative Office.
AGE—Aerospace Ground Equipment.
AVE—Aerospace Vehicle Equipment.
BOD—Beneficial Occupancy Date.
BOI—Break of Inspection.
CAT I—Category I Testing.
CAT II—Category II Testing.
CCB—Configuration Control Board.
CCBD—Configuration Control Board Directive.
CCN—Contract Change Notification.
CDR—Critical Design Review.
CEI—Contract End Item.
CMD—Configuration Management Division.
DCN—Design Change Notice.
ECP—Engineering Change Proposal.
FACI—First Article Configuration Inspection.
GFAE—Government Furnished Aerospace Equipment.
GFE—Government Furnished Equipment.
GFP—Government Furnished Property.
MGE—Maintenance Ground Equipment.
OGE—Operating Ground Equipment.
OSR—Operational Support Requirement.
PCO—Procuring Contracting Officer.
PDR—Preliminary Design Review.
RFP—Request for Proposal.
RPIE—Real Property Installed Equipment.
SCN—Specification Change Notice.
SOR—Specific Operational Requirement.
SPO—System Program Office.
TCTO—Time Compliance Technical Order.

Chapter 1

CONFIGURATION MANAGEMENT BY THE AIR FORCE SYSTEMS COMMAND

SECTION A—INTRODUCTION

1. Baseline Management.

a. Some of the more important aspects of configuration management are formally required at the beginning of a system program; one being the concept of baseline management.

b. Baselines may be established at any point in a program where it is necessary to define a formal departure point for control of future changes in performance and design. System program management employs three baselines for the definition and acquisition of systems. These baselines are documented by approved specifications. Specifications are the basis for control of future changes in system performance and design. Figure 1 illustrates this basic management framework.

c. An elemental reason for defining the system in terms of specified requirements is to provide a tangible basis for determining contract costs and incentives. Once defined, changes in these requirements are formally approved and documented to provide an equitable way to adjust contract costs and incentives. Essentially, system program management is change management. The use of three baselines provides necessary latitudes for making changes so that, initially, most changes may be made within the scope of the basic contract and, ultimately, most changes will be formally approved by methods quite similar to those prescribed in the preceding issue of this manual.

2. New Features. This manual includes several new features:

a. Configuration management also includes equipment programs as well as system programs.

b. It contains a complete and uniform specification program for establishing technical requirements for procurement or reprocurement of systems, equipments, and spare parts, including standard parts.

c. The manual contains a standard systematics for identifying configuration on engineering data and manufactured products, and on control documents by which configuration descriptions are interrelated and communicated.

d. The manual is organized to describe the responsibilities of the procuring agency as well as the responsibilities of contractors.

e. Contractor requirements are contained in 19 exhibits to be selectively and contractually applied. These exhibits are a mutually compatible set. Properly administered, they will segregate the tasks of the contractor and of the procuring agency so each may do his respective job without ambiguity, duplication or excessive administrative cost.

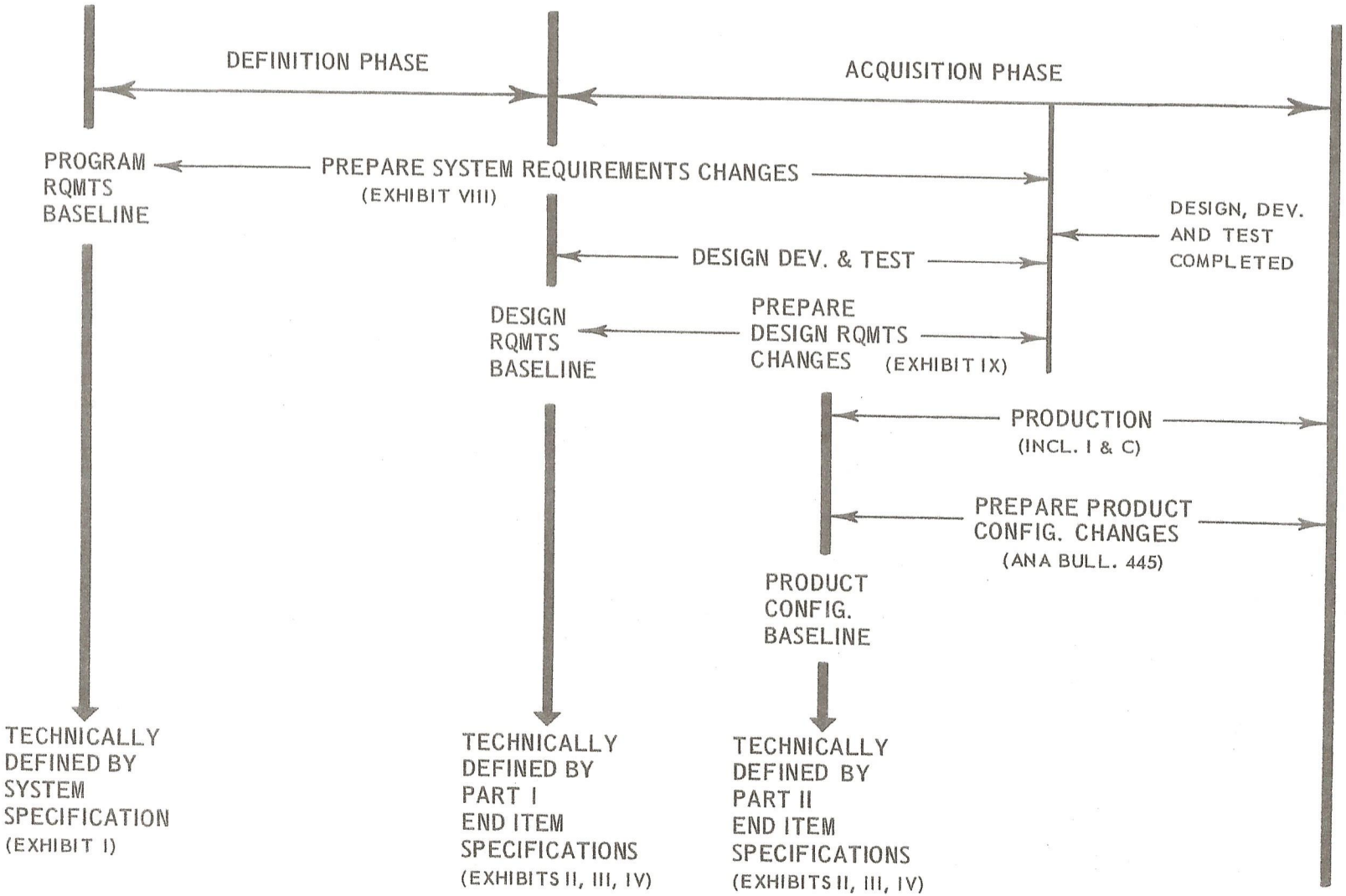
f. This manual incorporates or implements the principles included in three source documents: Defense Standardization Manual M-200A, Military Specification MIL–D–70327, and ANA Bulletin No. 445.

g. The exhibits in the manual implement 61 Government specifications, bulletins and standards containing configuration management requirements.

h. Exhibits are complete and self-contained. They are issued for incorporation in a contract as written. When contractually directed as written, they do not incorporate other documents, except all or part of those as noted in paragraph f, above.

i. Specifications are structured to keep the technical and contract relationships between the procuring agency and contractors at system and at contract end item levels of indenture.

j. The systematics required for configuration identification have been reduced to the disciplined use of just six control numbers. These



NOTE: EACH ENGINEERING CHANGE PROPOSAL (ECP) PREPARED USING EXHIBITS VIII & IX MUST INCLUDE A SPECIFICATION CHANGE NOTICE (EXHIBIT VII).

Figure 1. BASELINE MANAGEMENT