

FM 5-412

**Project
Management**

**HEADQUARTERS,
DEPARTMENT OF THE ARMY**

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PROJECT MANAGEMENT

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PREFACE

Field Manual (FM) 5-412 is intended for use as a training guide and reference text for engineer personnel responsible for planning, scheduling, and controlling construction projects in the theater of operations (TO). It provides planning and management techniques to be applied when planning and scheduling a construction project. This manual also provides techniques and procedures for estimating material, equipment, personnel, and time requirements for project completion.

The proponent of this publication is the United States Army Engineer School (USAES). Send comments and recommendations on Department of the Army (DA) Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commandant, US Army Engineer School, ATTN: ATSE-T-PD-P, Fort Leonard Wood, MO 65473-6650.

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

MISSION OF ARMY ENGINEER PROJECT MANAGEMENT

CHAPTER 1

MANAGEMENT THEORY

Management definitions are as varied as the authors who write books about the subject. A good definition states that management is "the process of getting things done through people." Project management may be defined more specifically as "the process of coordinating the skill and labor of personnel using machines and materials to form the materials into a desired structure. "Project construction operations include planning, designing facilities, procuring materials and equipment, and supervising construction. An important Army management principle states that "continual improvement in systems, methods, and use of resources is required for continuous effectiveness in operations." In most large nontactical Army organizations, management engineering staffs help commanders and line operators design new ways to work faster, cheaper, and better.

PRINCIPLES DERIVED FROM EXPERIENCE

Management principles have been developed from experience and serve as a basis for managing human and material resources. They do not furnish definite formulas or solutions to all management problems, nor are they infallible laws; they are only guidelines for action. Effective management should encompass--

- Clearly defined policies understood by those who are to carry them out.
- Subdivision of work, systematically planned and programmed.

- Specific assignment of tasks and an assurance that subordinates clearly understand the tasks.
- Adequate allocation of resources.
- Delegation of authority equal to the level of responsibility.
- Clear authority relationships.
- Unity of command and purpose throughout an organization.
- Effective and qualified leadership at each echelon.
- Continuous accountability for use of resources and production results.
- Effective coordination of all individual and group efforts.

DIFFERENCES FROM CIVILIAN PRACTICES

In a TO, construction, repair, rehabilitation, and maintenance of facilities differ considerably from civilian practices. Although the engineering principles involved are unchanged, in combat area operations the factors of time, personnel, materials, and enemy action impose a great range of problems. This requires modification of construction methods and concentration of effort. Engineers in a TO nor really do not build permanent facilities.

The variety of construction in the military, often done on an expedited or "crash" basis, creates challenging management problems.