Field Manual No. 5-104

# GENERAL ENGINEERING

**F** ield Manual 5-104 provides a doctrinal basis for the planning and execution of general engineering in the Theater of Operations. General engineering sustains military forces in the theater through the performance of facility construction and repair, and through acquisition, maintenance, and disposal of real property. The Theater of Operations is defined as "That portion of an area of conflict necessary for military operations, either offensive or defensive..., and for the administration incident to such military operations."

This manual will be primarily concerned with support to those noncommitted forces within the corps and communications zone areas. It will describe responsibilities, relationships, procedures, capabilities, constraints, and planning considerations in the conduct of general engineering tasks. The manual was designed to highlight doctrinal procedures and to give an overview of the general engineering functional area.

Field Manual 5-104 was developed for commanders and planning staffs at all levels who require engineer assistance, or are required to give engineer assistance in tasks falling under the general engineering purview.

The proponent agency of this publication is the US Army Engineer School. Users are invited to send comments and suggest improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to—Commandant, US Army Engineer School, ATTN: ATZA-TD-P, Ft. Belvoir, VA, 22060-5291.

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## **STANAG IMPLEMENTATION**

The provisions of this publication are the subject of International Standardization Agreement (STANAG) 2885, Procedure for the Provision of Potable Water in the Field.

Unless otherwise stated, whenever the masculine gender is used, both men and women are included.

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## Chapter 1 GENERAL ENGINEERING

**G** eneral engineering encompasses those engineer tasks which increase the mobility, survivability, and sustainability of tactical and logistical units to the rear of the forward line of troops (FLOT). Such tasks include construction and repair of lines of communication (LOC), main supply routes (MSR), airfields, and logistical facilities. While these tasks may be performed as far forward as the brigade rear area of the combat zone, most general engineer tasks are performed behind the division rear boundaries. Repair tasks dominate in well-developed theaters. Construction tasks prevail in less-developed theaters.

General engineer missions are usually performed by Engineer Combat Heavy Battalions, Port Construction Companies, Construction Support Companies, Combat Support Equipment Companies, Dump Truck Companies, and Pipeline Construction Support Companies. Divisional and corps combat battalions may also be required to perform limited general engineer tasks. General engineer tasks in a mid-to high-intensity conflict focus primarily on direct support of military forces. In such circumstances, little consideration can be given to nation-building missions. In a low-intensity conflict, nation-building tasks may dominate.

## **THE GENERAL ENGINEERING PLANNING PROCESS 2**

#### **PLANNING CONSIDERATIONS 2**

## **PRINCIPLES OF THEATER OF OPERATIONS CONSTRUCTION 3**

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