

## GENERAL INFORMATION

## CHAPTER



*Army engineers plan, design, and construct airfields, heliports, and roads in the TO. To ensure these facilities meet proposed requirements, the responsible engineer officer must coordinate closely with all appropriate ground and air commanders. The engineer depends on the appropriate commanders for information on the weight and traffic frequency of using aircraft, facility life, geographic boundaries governing site selection, and the time available for construction as dictated by the operation plan. Detailed planning, reconnaissance, and site investigations are often limited by lack of time and by the tactical situation. However, even when time and security permit, the engineer should conduct normal ground reconnaissance and on-site investigations. If this is not possible, the engineer should obtain photographs of the area.*

### BASIC PLANNING CONSIDERATIONS IN THE THEATER OF OPERATIONS

Army engineers should use the following guides in the TO:

- Keep designs simple. Simple designs require minimum skilled labor and specialized materials.
- Use local materials whenever possible. This helps eliminate construction delays associated with a long communications and logistics line.
- Use existing facilities whenever possible. This helps avoid unnecessary construction.
- Remember that safety factors in design are drastically reduced in the TO because of time constraints and the inherent risks of war.
- Build one of two types of structures in the TO: initial or temporary. Initial design life is up to six months; temporary design life is up to two years.
- Ž Whenever possible, phase construction to permit the early use of the facility while further construction and improvements continue.
- Ž Generally avoid sites with dense brush, timberland, and rolling terrain that require heavy clearing or grading.
- Ž Take care to prevent destruction of natural drainage channels, culverts, and roads. Repairs require time and labor far exceeding that needed to prevent damage.

## AIRFIELD CONSTRUCTION

The planning and construction of Air Force bases in the TO is a joint responsibility of Army and Air Force personnel as outlined in Army Regulation (AR) 415-30/Air Force Regulation (AFR) 93-10. A summary of each service's responsibilities follows:

### AIR FORCE RESPONSIBILITIES

The Air Force provides the following support:

- Emergency repair of war-damaged air bases.
- Force bed down of Air Force units and weapon systems, excluding Army base-development responsibilities.
- Construction management of emergency repair of war damage and force bed-down.
- Operation and maintenance of Air Force facilities and installations.
- Crash rescue and fire suppression.
- Supply of material and equipment to perform Air Force engineering missions.

### ARMY RESPONSIBILITIES

The Army will provide the following troop construction support to the Air Force:

- Development of engineering designs, standard plans, and material to meet Air Force requirements.
- Reconnaissance, survey, design, construction, or improvement of airfields, roads, utilities, and structures.
- Rehabilitation of Air Force bases and facilities beyond the immediate emergency recovery requirements of the Air Force.
- Supply of materials and equipment to perform Army engineering missions.
- Construction of temporary standard air base facilities.
- Repair management of war damage and base development, including supervision of Army personnel. The Air Force base commander will set the work priorities.
- Road and airfield construction.

## ROAD CONSTRUCTION

Engineer construction units, under the appropriate Army command, have the following responsibilities:

- Reconnoiter roads and bridges.
- Recommend traffic-control procedures.
- Construct and install signs and other route-marking materials.
- Regulate traffic at locations where engineer work is being performed.
- Assist vehicles to keep traffic moving on main supply routes regardless of weather, enemy activity, or other difficulties.

## ENGINEERING STUDY

After the specific requirements for roads, air fields, and heliports have been determined engineers should prepare the facilities for use as soon as possible. In most cases, the need is critical because the accomplishment of a mission depends on

using certain airfields and roads. To obtain these facilities quickly, an adequate investigation of each site and a careful study of the design details are essential. This is explained in greater detail in Chapter 2 of this manual.