CHAPTER 14

Airport Facilities*

A. NATURE AND COMPOSITION OF FACILITIES

1. DESCRIPTION OF FACILITIES

(a) *Physical Characteristics*

There are approximately 9,500 civil aircraft landing facilities in the United States composed of airports, heliports, and seaplane bases. The national airport system which is considered a key to our national aviation system is composed of approximately one-third of these, plus some additional planned facilities for a total of 4,106. Over 90 percent of this total are airports, as distinguished from heliports and seaplane bases. Although the airports comprising the national system range across the entire spectrum in size, physical characteristics, and service provided, each one has the same common function, i.e., to provide an area for the safe takeoff and landing of aircraft. In size, they range from as small as 20 acres up to 10,000 acres.

The runway orientation and configuration are probably the most variable of the physical characteristics. The orientation of a runway is primarily related to the direction, intensity, and duration of the surface winds and, to a lesser extent, to the topography and soil conditions of the site. Thus, a runway can be orientated in practically any compass heading. The configuration of the runway system in addition to being related to surface winds also has an effect on airport capacity. The configuration of the runway system can be a single runway layout or a multirunway layout. The multirunway configuration can be two or more intersecting runways, two parallel runways, or any combination of these. Each runway has an area surrounding it which is designated to be cleared of obstructions to permit safe ingress and egress of aircraft.

A taxiway system is normally provided to permit ground maneuvering of aircraft between runway and apron. Needless to say, more complex runway configurations require correspondingly more complex taxiway systems. Although the paved runways and taxiways are considered adequate for all aircraft traffic, the area between the taxiways and runways is graded to standards which minimize damage to aircraft in the event of inadvertent or accidental maneuver of the aircraft off of the paved surfaces.

The taxiway system can serve one multipurpose apron or several separate single-purpose aprons, such as passenger, cargo, parking, servicing, hangar, or holding. Such facilities as passenger terminals, cargo terminals, and hangars are contiguous to these aprons.

*Prepared by Federal Aviation Agency, Airports Service, System Planning Division, with minor editing by committee staff.