

Airport Terminology

Reference: Horonjeff and McKelvey, Planning and Design of Airports, 4 ed.

Accelerate-Stop Distance Available — The distance to completely stop an accelerating aircraft during takeoff once an engine has failed.

Approach Surface — A surface that is longitudinally centered on the extended runway centerline and extends outward and upward from each end of a runway at a designated slope based on the type of available or planned runway approach.

Blast Pad — Paved area adjacent to the ends of the runway designed to stop erosion due to jet blast and/or propeller wash.

Clearway — A rectangular area beyond the runway not less than 500 ft wide and not longer than 1,000 ft, centrally located about the extended centerline of the runway and under the control of the airport authorities.

Conical Surface — A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 horizontal to 1 vertical for a horizontal distance of 4,000 ft.

Declared-Distance Concept — The distances the airport owner declares available and suitable for the takeoff run, takeoff distance, accelerate-stop distance available, and the landing distance.

Field Length — Generally made up of three components: The full-strength pavement, the partial strength pavement (stopway), and the clearway.

Horizontal Surface — A horizontal plane 150 ft above the established airport elevation.

Landing Distance — Length of runway needed for an aircraft to make a full stop within 60 percent of this distance, assuming the pilot makes an approach at the proper speed and crosses the threshold at a height of 50 ft.

Large Aircraft — Aircraft with a maximum certified takeoff weight greater than 12,500 lbs.

Liftoff Distance — Distance needed for an aircraft to accelerate and lift off the ground when beginning from a dead stop.

Non-Precision Instrument Runway — A runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in approach procedure has been approved, or planned, and for which no precision approach

facilities are planned (FAR, Section 77.2). A non-precision instrument approach uses only an electronic azimuth (localizer).

Object-Free Area — A two-dimensional ground area surrounding the runway that must be clear of parked aircraft and objects other than those whose location is fixed by function.

Obstacle-Free Zone — A volume of airspace centered above the runway that supports the transition between ground and airborne operations. It is defined as the airspace above a surface whose elevation is the same as that of the nearest point on the runway centerline and extending 200 ft beyond each end of the runway.

Precision Instrument Runway — A runway having an existing instrument approach procedure utilizing an Instrument Landing system (ILS), or a Precision Approach Radar (PAR) (FAR, Section 77.2). A precision instrument approach uses an electronic azimuth (localizer) and descent (glide slope indicator) guidance.

Primary Surface — A surface longitudinally centered on a runway. For a paved runway the primary surface extends 200 ft beyond each end of the runway. When the runway is unpaved, the primary surface coincides with each end of the runway. The elevation of the primary surface is the same as the elevation of the nearest point on the runway centerline.

Runway — Refers to the full-strength pavement.

Runway Protection Zone — An area on the ground used to enhance the protection of people and objects near the runway approach.

Runway Safety Area — Area surrounding the runway that is suitable for reducing the risk of aircraft damage in case of an undershoot, overshoot, or excursion from the runway. The RSA includes the structural pavement, shoulders, blast pad, and stopway, if provided.

Shoulders — The pavement immediately adjacent to the edges of the structural pavement.

Small Aircraft — Aircraft with a maximum certified takeoff weight of 12,500 lbs or less.

Stop Distance — The distance an aircraft traverses from the time it crosses the threshold until it makes a complete stop.

Structural Pavement — The full-depth pavement that can structurally support the aircraft during normal operations.

Takeoff Distance — For an all-engine takeoff, 115 percent of the actual distance that an aircraft uses to reach a height of 35 ft.

Takeoff Run — Defined as 115 percent of the liftoff distance.

Transitional Surface — Surfaces extending outward and upward at right angles to the runway centerline plus the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface up to the horizontal surface and from the sides of the approach surfaces. The width of the transitional surface provided from each edge of the approach surface is 5,000 ft.

Transport Airport — An airport that is designed, constructed, and maintained to accommodate aircraft from the FAA Airport Reference Code categories C, D, and E.

Utility Airport — An airport that is designed, constructed, and maintained to accommodate aircraft from the FAA Airport Reference Code categories A and B.

Utility Runway — A runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 lbs maximum gross takeoff weight and less (FAR, Section 77.2).

Visual Runway — A runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure (FAR, Section 77.2).