(b) Takeoff and Landing

Now that the aircraft loading has been determined, all aspects of the takeoff and landing must be considered.

All of the existing conditions at the departure and destination airport must be acquired, evaluated and maintained throughout the flight.

Apply the departure airport conditions and takeoff weight to the appropriate Takeoff Performance graph (Figures 5-7 and 5-9 or 5-11 and 5-13) to determine the length of runway necessary for the takeoff and/or the barrier distance.

The landing distance calculations are performed in the same manner using the existing conditions at the destination airport and, when established, the landing weight.

The conditions and calculations for the example flight are listed below. The takeoff and landing distances required for the example flight have fallen well below the available runway lengths.

	Departure Airport	Destination Airport
(1) Pressure Altitude	1500 ft.	2500 ft.
(2) Temperature	27°C	24°C
(3) Wind Component	15 KTS (Headwind)	0 KTS
(4) Runway Length Available	4800 ft.	7600 ft.
(5) Runway Required	2100 ft.*	1135 ft.**

NOTE

The remainder of the performance charts used in this flight planning example assume a no wind condition. The effect of winds aloft must be considered by the pilot when computing climb, cruise and descent performance.

*reference Figure 5-9
**reference Figure 5-35