# O'HARE INTERNATIONAL AIRPORT

# AIR TRAFFIC BASICS

The manner in which an airport and the surrounding airspace is designed can determine the delay and capacity of not only the airport, but also the National Airspace System (NAS).

## OPERATING CONFIGURATIONS

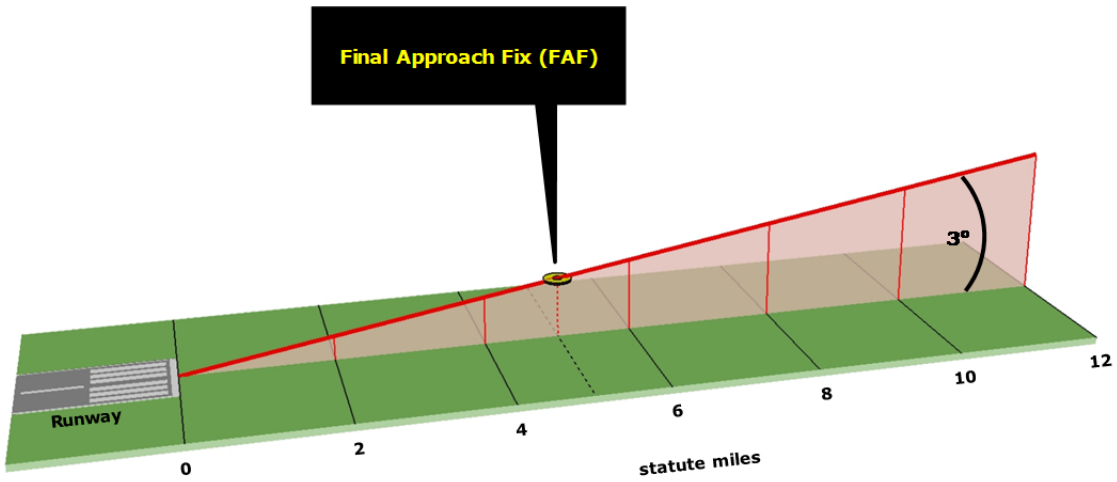
Numerous dependencies between arrival and departure operations exist either because (1) arrivals and departures share the use of a common runway; or (2) arrivals and departures to different runways cross one another, either in the air or on the ground. Arrivals and departures that take place on separate runways reduce these dependencies and increase capacity. A shift to multiple parallel, non-intersecting operational flows can provide multiple parallel approaches in both visual flight rules (VFR) (good weather) and instrument flight rules (IFR) (poor weather) conditions. This also allows for increased runway availability during snow events.

## SIMULTANEOUS OPERATIONS

Simultaneous operations with parallel runway orientation have been determined to be best suited to manage airport operations safely and efficiently in all weather conditions. This determination is a result of years of aviation industry study and detailed evaluation as part of quantitative efficiency and safety studies, environmental review processes, all while continuing to be in line with the best practices of the aviation industry worldwide. The implementation of simultaneous operations with parallel runway orientations has significantly reduced delays that would be dramatically worse without these procedures.

## GLIDESLOPE

The glideslope is the proper imaginary path for an airplane approaching a runway that shows the vertical path a landing airplane would follow if it made a textbook descent. While aircraft can intercept the glideslope at various locations due to traffic flow, the aircraft is typically on the glideslope before reaching the Final Approach Fix (FAF). The FAF is typically located between four and six nautical miles from the end of the runway. The 3.0 degree glideslope has been determined by the FAA to be the optimal approach glideslope angle for all aircraft from an operational safety perspective. For O'Hare the 3.0 degrees could only be increased to the maximum allowable (3.1 degrees) in order to clear obstacles. There are no obstacles in the runway approaches at O'Hare, therefore given this fact, and the types/sizes of aircraft serving O'Hare, all O'Hare approaches operate with a 3.0 degree glideslope angle, and are required to operate in that manner.[1]




[1] Letter from FAA Great Lakes Regional Administrator Barry Cooper to O'Hare Noise Compatibility Commission, July 7, 2011

## ARRIVAL ALTITUDES

The below table lists standard arrival altitudes for Runways 9R and 27L at 2, 3 and 4 nautical miles from the runway threshold for a typical day on a 3.0 degree glideslope.

| Chicago O'Hare International Airport<br>Runway 9R/27L Arrival Altitudes | | | | |
|---|---|---|---|---|
| **Runway** | **Distance (Nautical Miles)** | **Distance (Statute Miles)** | **Altitude (MSL)[1]** | **Altitude (AGL)[2]** |
| 9R | 2.0 | 2.3 | 1,393 | 703 |
| 9R | 3.0 | 3.5 | 1,738 | 1,028 |
| 9R | 4.0 | 4.6 | 2,059 | 1,362 |
| 27L | 2.0 | 2.3 | 1,276 | 641 |
| 27L | 3.0 | 3.5 | 1,599 | 957 |
| 27L | 4.0 | 4.6 | 1,918 | 1,272 |

Note 1: Mean Sea Level (MSL) is the altitude measured in feet above the average level of the the surface of one or more of Earth's oceans.
Note 2: Above Ground Level (AGL) is the altitude measured in feet with respect to the underlying ground surface.
Source: City of Chicago Department of Aviation's Airport Noise Management System