

FAST FACTS

ASPHALT IS THE TOP CHOICE FOR AIRPORT RUNWAY PAVEMENTS

Airport operators want super-smooth, durable runways that can be constructed and rehabilitated quickly, to minimize runway downtime. The strengths of asphalt pavement construction coincide exactly with what the aviation industry demands from its pavements:

- Smoothness
- Speed of construction
- Low maintenance
- Less complexity than concrete
- Low initial and life-cycle costs

More advantages of asphalt pavement construction:

- The maintenance process permits a runway to be shut down during off-peak hours for rehabilitation.
- Building super-smooth pavements of asphalt is much easier and more cost-effective than any other pavement type.
- The surface can be customized to increase skid resistance, lower the risk of hydroplaning, decrease splash and spray, or absorb noise.
- Perpetual Asphalt Pavements serve many well. In a Perpetual Pavement, the pavement structure remains intact for many years. The only maintenance required is to mill off the surface (usually about 2 inches) at infrequent intervals, recycle the material that has been removed, and resurface the pavement.

In fact, Baltimore-Washington International Airport in Maryland and Eareckson Air Force Base in Alaska were recognized with Perpetual Pavement Awards in 2002 for their long-lasting pavements.

Asphalt pavement runways support the high volumes of heavy planes landing at some of the nation's busiest airports, including Baltimore-Washington International, Lindbergh Field in San Diego, McCarran International (Las Vegas), Memphis International, Newark International, Oakland International, O'Hare International, Pearson International (Toronto), and San Francisco International.

Asphalt pavement is also used extensively on runways at many general aviation airports.

ASPHALT PAVEMENT FOR AIRPORTS – QUESTIONS AND ANSWERS

Q. Can asphalt be used to pave the runways at airports?

A. Yes. In fact, only asphalt can provide a super-smooth, durable surface that can be maintained during off-peak hours and returned to service quickly.

Q. At big commercial airports, is asphalt tough enough to take the punishment of heavy planes?

A. Yes. Just ask the people who operate some of the busiest airports in the country. Some of the commercial airports with asphalt runways include Baltimore-Washington International, Lindbergh Field in San Diego, McCarran International (Las Vegas), Memphis International, Newark International, Oakland International, O'Hare International (Chicago), and San Francisco International.

Q. Is the surface of an asphalt pavement good for landing planes?

A. Certainly. An asphalt pavement surface can be designed and constructed to increase skid resistance, lower the risk of hydroplaning, decrease splash and spray, and even absorb noise.

Q. Does the contractor have to do something special so that the pavement can withstand airplane traffic?

A. Yes, and with asphalt, it's simple. Research conducted over the past 15 to 20 years has given us the knowledge to make asphalt pavements strong enough to hold up under the pounding.

Q. Do airports need something different from what road users need?

A. Yes and no. Motorists want smooth, durable, safe, quiet roads – and asphalt can provide those. Airport operators also want super-smooth, durable runways that can be constructed and rehabilitated quickly, to minimize runway downtime. In that sense, the needs of both are the same. On the other hand, asphalt pavements can be customized to the exact requirements of the particular airport.

Q. What happens when an airport shuts down a runway for maintenance?

A. With asphalt, it may not be necessary. Just as asphalt roads can be rehabilitated during off-peak hours, so can airport runways.

Q. How much does smoothness matter at an airport?

A. A lot! A smoother surface provides takeoffs and landings that are safer and more comfortable.

Q. Can Perpetual Pavements be used for airport runways?

A. The Perpetual Pavement principle – a pavement whose structure lasts indefinitely, with a surface that can be renewed at infrequent intervals, is extremely useful for airports to minimize downtime of a runway, and is cost-effective.

Q. Can you give examples of how asphalt pavement has been used for airport runway reconstruction?

A. Sure! Here are a few:

- Runway 4R-22L at Newark International Airport was completely reconstructed in just 10 days. The contractor placed 105,000 tons of asphalt pavement, meeting extremely aggressive paving specifications. In addition to paving, the contractor removed and replaced all runway lights and saw-cut and sealed all joints on the 9,300-foot-long, 150-foot wide runway.
- In rebuilding the main runway at Eglin Air Force Base in Florida, the contractor met 100 percent of the smoothness specs.
- At the Front Range Airport in Colorado, the contractor used a paver with a computerized grade control to place a 4-inch overlay, and corrected an average of 25 inches per mile of deviation to 2 inches per mile.
- Two 7,500-foot-long runways at the Marine Air Corps Station, Cherry Point, North Carolina, needed paving. The Marine Air Corps asked the contractor to minimize transverse joints on the surface, so the contractor built the runways with no joints whatsoever.
- Boston Logan International Airport was the first airport in the nation to use warm mix asphalt, which allowed for a cost and energy savings.

