

SAFETY GROOVING FOR SAFER RUNWAYS



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Ottawa International Airport, Ottawa, Canada

>>> RUNWAY GROOVING

THE OTTAWA INTERNATIONAL Airport Authority (OIAA) was established in 1997, and since that time it has overseen more than \$500 million in infrastructure improvements. Serving a large metropolitan area, it is Canada's sixth busiest airport. With safety as a priority, recent infrastructure improvements were planned that would address aircraft landings. More than a third of aircraft accidents occur during approach and landing, and the Ottawa International Airport had, in fact, experienced runway skidding incidents. Wet pavement conditions were considered to be a major contributing factor. This made the airport an ideal candidate for implementing runway grooving.

Runway 07/25 had been resurfaced in 1994, before the establishment of the Airport Authority, and was constructed according to guidelines set forth by Transport Canada, operator of the airport at the time. Construction completed in the summer of 2013, however, brings it into conformance with standards set out by the International Civil Aviation Organization (ICAO) and the United States Federal Aviation Authority (FAA).

Since the early 1970s, the FAA has recommended grooved runways as the preferred surface to reduce hydroplaning related accidents. "The cost of a hydroplaning related incident, even without injuries or fatalities, represents a much larger expense than the cost of grooving due to damage to the aircraft and the severe disruption to the airport's flight schedule," says Philip Zuzelo, President, Cardinal/International Grooving and Grinding, LLC, the company that performed the grooving operation for Ottawa International. "There is extensive data in support of grooving. It can decrease aircraft stopping distance by more than 50 percent in wet weather, but even in dry weather it can decrease stopping distance by 10 to 15 percent."

Runway 07/25 is the smaller of the airport's two major runways, measuring 8000-by-200 feet (2400-by-60 meters). The existing surface of the runway consisted of pavement that was crowned for drainage. A standard runway grooving configuration of ¼ inch groove width by ¼ inch groove depth, spaced 1 ½

TEAM MEMBERS

- Cardinal/International Grooving and Grinding (General contractor)
- Harvey Airfield Services (Security/escort)

inches center to center, was added to the pavement for the entire length of the runway.

Ten days of runway shutdown were scheduled, with crews working 24 hours a day to complete the job. "We finished ahead of schedule," said Zuzelo, "with only six actual grooving days." Because the airport only has two major runways, this helped keep disruptions to a minimum. As a matter of necessity, work on runway intersections causes a complete airport shut down, so crews worked on these areas at night, when no commercial flights were scheduled.

Grooving on the larger runway is scheduled for next year.