

# Case Study



## Erik Nielsen Whitehorse International Airport 2024



**Project:**  
Whitehorse International Airport 2024

**Location:**  
Whitehorse, Yukon

**Date:**  
Summer 2024

**Client/Owner:**  
Transport Canada

**Contractor:**  
Terus Construction

**Consultant/Engineer:**  
Associated Engineering

**Surface Tech Product:**  
ACE XP

## Project Overview

The Erik Nielsen Whitehorse International Airport is a critical transportation hub in the Yukon, serving as an essential lifeline for remote northern communities, facilitating crucial connectivity, supporting regional development, and acting as a gateway for tourism and economic activity. With increasing air traffic due to student research and a significant uptick in tourism, the airport required substantial improvements to its infrastructure.

*Surface Tech partnered with Terus Construction to provide a robust solution for the primary runway expansion and improvements. The project involved the use of 73,000 Metric Tonnes of PG 52-34 Fibre Reinforced Asphalt utilizing Surface Tech's ACE XP.*

## The Solution ACE XP & DFNDR

A key component of this project was the deployment of the Surface Tech DFNDR Automatic Dosing Machine, which was purchased by Terus Construction. This advanced equipment ensured precise and efficient dosing of the ACE XP fibers into the asphalt mix.

### Project Scope Highlights:

**Material Volume:** 73,000 MT of PG 52-34 Fibre Reinforced Asphalt

- Product: Surface Tech ACE XP
- Equipment: Surface-Tech DFNDR Automatic Dosing Machine (purchased by Terus Construction)
- Training: Specialized Fibre Reinforced Asphalt QC/QA - Plant and Team Trained and Qualified
- Timeline: Summer 2023: Estimated 2 months to complete the first 30,000MT of paving.
- Next Year: Completion of the remaining 43,000MT.

*Current Status (2024-2025): Work is well underway on the Primary Runway. Air traffic is currently utilizing the reinforced secondary runway.*

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## Challenges Overcome

Transport Canada, in collaboration with Tetra-Tech, Associated Engineering, and Cap Engineering, identified the need for significant upgrades to the airport's runways. The secondary runway had already been expanded and reinforced in 2022 to handle the daily traffic load of the primary runway. Now, the focus shifted to the primary runway, which required enhanced stability, performance, and innovation to meet the higher demands of growing air traffic.



## Economic & Environmental Advantages

### Economic Advantages:

- **Ease of Use & Storage:** Terus Construction ordered 750 boxes of ACE XP due to its ease of storage, eliminating the need for special storage or shipping.
- **Enhanced Life-cycle:** ACE XP creates a better solution to enhance the life-cycle of the pavement structure, significantly cutting maintenance costs despite the increase in air traffic.

### Environmental Advantages:

- **Reduced Material Use:** The enhanced performance and durability provided by ACE XP help reduce overall maintenance interventions over the pavement's life-cycle.
- **Sustainable Solution:** Easy to use and store, minimizing logistical environmental impact.

## Client Feedback & Results

The Erik Nielsen Whitehorse International Airport is not just a landing strip; it's an essential lifeline for remote northern communities, a strategic asset for connectivity, and a crucial gateway for tourism and economic activity in the Yukon. This ongoing project exemplifies how Surface Tech's ACE XP, provides the stability, performance required for critical infrastructure projects in challenging environments. By enhancing the pavement's life cycle and reducing maintenance costs, Surface Tech is helping the airport meet the higher demands of increasing air traffic, reinforcing its vital role as a resilient and high-performing northern transportation hub.

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