

Case Study



Beacon Roofing Parking Lot Aurora, CO - 2019



Project:
Beacon Roofing Parking Lot Rehabilitation

Location:
Aurora, Colorado, USA

Duration:
March 2019

Contractor:
Kiewit Infrastructure and Rose Paving

Client/Owner:
Beacon Roofing

Surface Tech Product:
ACE XP

Project Scope & Objectives

In 2019, Beacon Roofing acquired a new warehouse in Aurora, Colorado, but faced a significant challenge with the existing parking lot. **The lot was not designed to handle the heavy loads from 18-wheelers delivering roofing supplies, and Beacon Roofing needed a fast, cost-effective solution to ensure the pavement could withstand this stress without immediate and frequent maintenance.**

The project's main objective was to rehabilitate the parking lot using a durable pavement solution that could handle heavy traffic loads while saving on costs and minimizing downtime. Surface Tech's ACE XP Polymer Fiber™ was identified as the optimal solution, offering enhanced strength and durability compared to traditional asphalt mixes.

What We Did

Surface Tech, in collaboration with Kiewit Infrastructure and Rose Paving, executed the following steps to address the project's challenges:

Pavement Design & Material:

Selection: The project involved removing and replacing the existing 100,000 square foot parking lot. **Instead of using a standard 8-inch non-reinforced asphalt, the team opted for a 6-inch-thick pavement reinforced with ACE XP Polymer Fibers™.** This design provided the same load-bearing capacity as the thicker, non-reinforced pavement but with significant material and cost savings.

Installation:

The installation process was completed efficiently, ensuring that Beacon Roofing could commence operations with minimal delay. Surface Tech's ACE XP was seamlessly integrated into the asphalt mix, providing the necessary reinforcement to support the heavy traffic loads expected at the site.

Cost Efficiency:

The use of ACE XP Polymer Fibers™ resulted in a cost saving of \$34,615.44 for Beacon Roofing, demonstrating the financial benefits of using a reinforced mix over traditional, thicker asphalt layers.

Surface Tech Contact:

312 S. Cedros Ave., S200, Solana Beach, CA 92075

+1-619-880-0265

info@surface-tech.com

www.surface-tech.com



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Challenges Overcome

The primary challenge was the need for a fast, durable solution that could be implemented without compromising the operational timeline of Beacon Roofing. The team successfully delivered a solution that not only met the strength requirements but also reduced costs and project duration.



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Economic & Environmental Advantages

Thickness Reduction: By using a thinner, fiber-reinforced asphalt layer, the project achieved significant cost savings while maintaining the necessary durability for heavy traffic loads. The reduction in asphalt thickness also led to lower material costs and quicker installation times, further enhancing the economic benefits.

Material Use Reduction: The project's approach minimized the use of raw materials, reducing the environmental impact associated with the production and transport of asphalt. The extended lifespan of the reinforced pavement also means fewer repairs and replacements, contributing to long-term sustainability.

Client Feedback & Results

The success of the Beacon Roofing parking lot project was evident in the performance of the new pavement. The 6-inch ACE XP-reinforced asphalt performed as well as, if not better than, the originally planned 8-inch non-reinforced pavement. This success has led Beacon Roofing to plan a new 100,000 square foot lot using the same bottom lift standard mix design and top lift fiber-reinforced mix design.

The collaboration between Kiewit Infrastructure, Rose Paving, and Surface Tech demonstrated the effectiveness of ACE XP in delivering durable, cost-effective, and sustainable pavement solutions.

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