

Industry

Civil and General Construction / Government & Transportation

Products

Hydrostop/Hydropel

Project Completion 2018

Project Owner

Texas Department of Transportation

General Contractors

Roy Jorgensen Associates, Inc.

Background

The intersection of two major state highways, US 290 and SH 71 in Oak Hill, is a gateway to southwest Travis County and serves as a key route between Central Austin and fast-growing suburban and rural communities. However, US 290 is one of Texas' most congested highway corridors. As a result, the Texas Department of Transportation (TxDOT) is undertaking a major upgrade of the US 290 and SH 71 corridor, creating a state-of-the-art roadway to enhance traffic flow and connectivity.

The project will feature nonstop main lanes in each direction on US 290, supplemented by frontage road lanes. Key infrastructure improvements include an overpass, new flyovers, and a series of intersections where the highway will be lowered below ground level to maintain traffic flow. Additionally, the project will incorporate significant multimodal accommodations, including 14 miles of shared-use paths and 1.5 miles of sidewalks to support cyclists and pedestrians.

Challenges

The overpass was the primary focus for Hydropel's application, as it is one of the most vulnerable structures in terms of continuous traffic exposure and environmental stress.

Although weather conditions were not a major concern, the high-traffic nature of the highway posed risks of concrete corrosion, particularly due to exposure to de-icing salts and general road wear.



TxDOT sought a solution that would protect the concrete from water infiltration and other factors that could accelerate wear, ensuring long-term structural integrity and reducing future maintenance needs.

Solution

Hydropel Sealer was chosen as a powerful solution to protect the concrete from water damage. It is a clear, water-based liquid that can be easily sprayed or rolled onto surfaces without altering their appearance or breathability. Once applied, it forms an invisible, long-lasting barrier that repels water, preventing cracking, peeling, or fading.

For the Oak Hill project, approximately 500 gallons of Hydropel Sealer was applied, using a truck with 12 drums, each holding 55 gallons. The application rate is 1 gallon per 240 square feet. To achieve the best results, the team fine-tuned the application process:

- **Nozzle setup**: 3 nozzles at 140 degrees, positioned 2 feet above the ground at 20 psi, with a travel speed of 2.1 mph (3.1 ft/s).
- Signage: Markers placed at intervals from 100 to 4,500 feet guide the application.
- **Team coordination:** A driver, timer, and additional personnel ensure even coverage, and backpack sprayers ready to touch up any missed spots.

Results

By leveraging Kryton's advanced waterproofing solution, Pacific Park Condo's project stakeholders This careful planning and precise application will ensure that Hydropel Sealer provides maximum protection for Oak Hill for years to come.

