URETEK USA

CASE STUDY

Andrews Air Force Base Airfield Repair

Problem: A significant dip had developed in one of the runways at Andrews Air Force Base. An engineering investigation concluded the dip was caused by a leaking pipe. The soils around the pipe were weakened to the point that full-depth reconstruction of the panels above it appeared to be the only option.

Factors for Consideration: Andrews Air Force Base is the home to Air Force One, one of the most recognizable planes in the world. This can be a challenge however, when "ramp freezes" occur, shutting down operations due to security reasons. Every airport repair job needs to be completed quickly, but Andrews required even faster repair, repair only URETEK USA could provide.

Method/Process Applied: This unique process (The Uretek Deep Injection Process®) relies on a two-part polymer system, injected beneath the concrete through pre-drilled holes of 5/8-inch diameter (penny-size). The polymerization between the soil and the slab yields a co-efficient of expansion of 20 to 1, and a lifting capacity of 8,000 pounds per square foot. The URETEK Deep Injection process was also used in this project to densify soils at depth by injecting the polymer below the soil-pavement interface.

Result: URETEK USA performed several tasks in a short time frame. First, they employed the URETEK Method to bring the panels in the dipped area to profile. The crew then re-constituted the soils around the pipe with the Deep Injection process. Using a grid pattern, the polymer was injected at depth, working inwards towards the pipe to squeeze the water out of the soil and into the pipe. Sealing the leaky joints of the pipe was the next step before routing and sealing the pavement joints on the surface.

Benefit: To excavate and replace the area of concern would have cost approximately $250,000, with a crew on-site working 35 days. URETEK's repair strategy cost half the replacement estimate, and took a total of 10 days to execute. Due to the interruption of the ramp freezes, crews worked mostly at night, keeping traffic rolling during peak hours.

Inexpensive, Fast, Quiet, Effective,
Pavement Lifting and Soil Stabilization. CONTROL.

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CASE STUDY PICTURES

Drilling Injection Holes In Runway

Measuring Lifting Progress and Accuracy

50% Lower Cost
70% Time Savings
Than Next Solution

"A Job Well Done."

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