

Knoxville Utility Board, Knoxville, TN Manhole Soil Stabilization

Problem: A broken 8" pipe was weakening the soils around a 54 year old manhole situated in a busy riverfront avenue adjacent to Neyland Stadium. Tests revealed 33" voids around the manhole, which, combined with very weak soils, could have lead to a catastrophic collapse of the street.

Factors for Consideration: The Knoxville Utility Board (KUB) wanted traffic to remain uninterrupted during our work on the manhole. URETEK USA's Deep Injection method offered the KUB a fast, inexpensive solution by eliminating the need to excavate (in this case, 25' down). URETEK crews could complete the work in five nights, without any disruption during peak traffic hours.

Method/Process Applied: This unique process (The Uretek Deep Injection Process®) relies on a two-part polymer system, injected beneath the pavement 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 up to 20 to 1, and a lifting capacity of 8,000 pounds per square foot.

Result: URETEK USA applied its patented Deep Injection process to prevent the street from eventual collapse. Soil density tests were performed and a grid pattern was placed over the area where injections were to take place. Polymer was shot at several elevations, filling large voids and densifying the soils around the manhole. To ensure no further leakage into the manhole, URETEK USA sealed off the entry of the 8" pipe to the brick manhole.

Benefit: All work was completed at night and open to traffic the following morning. Massive voids were found and filled, and all inflow stopped. URETEK USA's Deep Injection saved the Knoxville Utility Board the cost and time-loss of a 25' excavation, preventing further road collapse in the process.

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



Project Start



During the Project



Job Complete

