

# Manholes – Case Study 6

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## Problem

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Severe deterioration and infiltration



## Project

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Rehabilitation of severely deteriorated and structurally compromised old brick manhole with infiltration sheeting down the walls



## Client

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Fulton County Public Works Department, Atlanta, Georgia



## Location

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Atlanta, Georgia

## Description

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This 48" diameter x 27' deep structure was severely deteriorated with bricks falling out, near collapse, with infiltration sheeting down the wall. The structure was also leaning. Fulton County had offered the structure to several other companies, but no one wanted to attempt this structure.

## Solution

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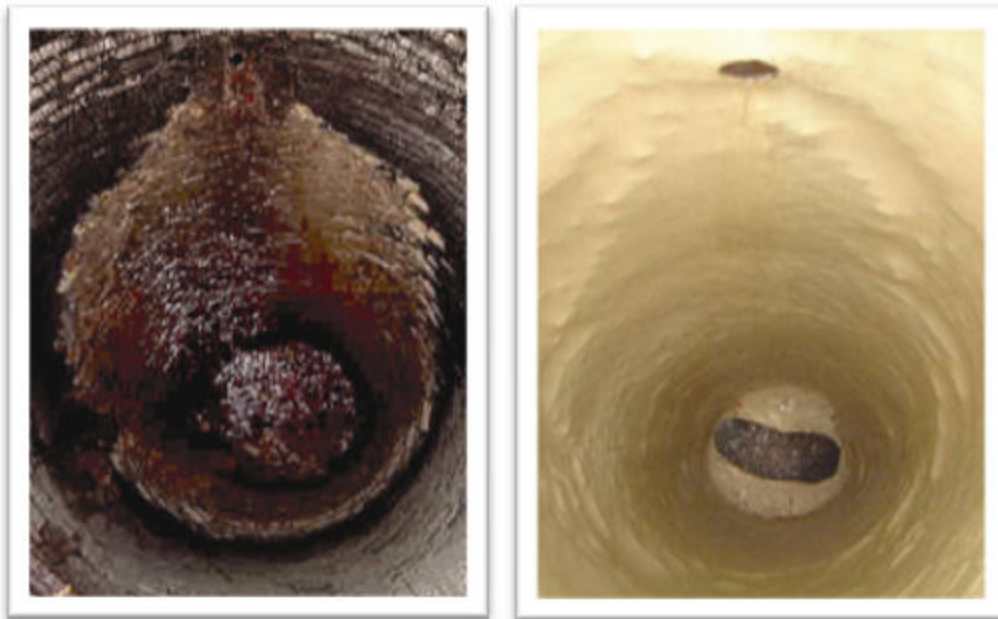
Poly-Triplex Certified Installer pressure cleaned the structure and removed some of the fallen bricks. The other bricks were used to rebuild the benches and invert channel. The liner was saturated and lowered into the structure. Then a pressurization system of air and steam was

inserted into the structure. With the non-porous inner membrane the installation process was able to hold back hydrostatic head pressure of groundwater infiltration until the liner was successfully cured-in-place and bonded to the host structure.

## Benefit

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In just a few hours the Poly-Triplex Liner permanently bonded to the interior surface providing a liquid and gas impermeable monolithic barrier between the sewer environment and the host structure. The structure was saved from collapse and Fulton County saved thousands of dollars on excavation costs. Hydrostatic head pressure of groundwater infiltration until the liner was successfully cured-in-place and bonded to the host structure. Poly-Triplex Technologies, Inc. provided Fulton County a 10-year non-prorated labor and materials warranty.



**Upper Left:** Severely deteriorated old brick manhole with active infiltration trickling down the walls.

**Upper Right:** Structure is completely rehabilitated in approximately 6 hours with the Poly-Triplex Liner System.

## Comments

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This manhole rehabilitation was inspected and studied for the following two years. Fulton County Public Works Department has chosen the Poly-Triplex Liner System as their product of choice for rehabilitation of their manholes with serious deterioration or infiltration. Poly-Triplex has currently lined more than 150 structures for Fulton County.