

EcoCast™ transforms old stone and brick pipe into fully restored combined sewer line.

Problem:

An 800' section of a stacked stone combined sewer line, situated in an area with active springs, was leaking badly. The pipe also contained a 26° slope that led to a river outfall. Records indicate the old stone pipe was probably completed in phases, between 1870 and 1890. Adding to the problem was the pipe's shape and size. An inspection revealed both arched and round sections and two different diameters: 500' of 60" and 300' of 36".

Access was also an issue. The old combined sewer ran beneath three sets of road crossings; all at different elevations. It was also located near the University of Cincinnati campus, so minimizing surface disruption was a high priority.

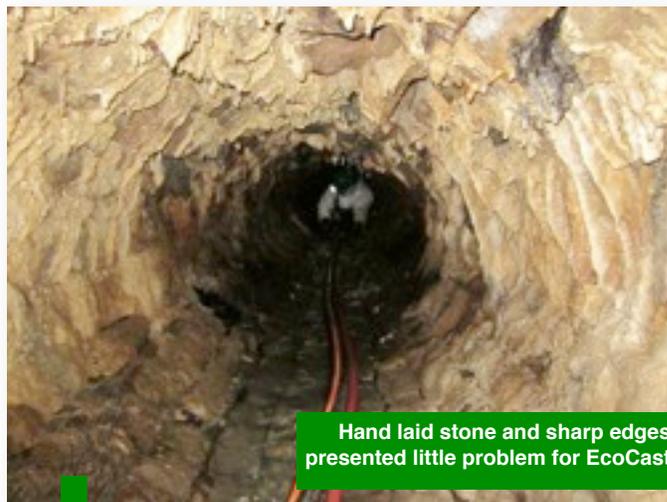
Solution:

Given the location of the pipe, replacing it was not an option. Cured-in-place-pipe (CIPP) was considered, however the combination of the pipe's different shapes, steep slope, and protruding stone did not make it a viable solution.

IPR recommended EcoCast, its proprietary centrifugally cast and spray-applied geopolymer lining system. It was ultimately chosen because of the product's ability to be applied in a variety of ways to secure the protruding stone and fill the voids. Once that was done, EcoCast's GeoSpray lining material was used to fully line the sewer to the engineer's required thickness.

Customer is pleased with the results:

Even though the project took six weeks to complete, traffic flow was never disrupted. Weather also posed a challenge, as temperatures ranged from freezing to the mid-70's. Regardless, the IPR EcoCast crew completed the project ahead of schedule and on budget.



Hand laid stone and sharp edges presented little problem for EcoCast



EcoCast GeoSpray was applied to "lock-in" the old protruding stone



EcoCast was applied in several layers to bring the pipe back to a round shape

