

GEOSPRAY®

Geopolymer Mortar



CASE STUDY:

Arlington National Cemetery Manhole Lining

PROJECT OVERVIEW

The US Army Corps of Engineers (USACE) is responsible for the maintenance and operation of utilities at Arlington National Cemetery directly on the banks of the Potomac River in Arlington, VA. USACE is currently engaged in a multiyear, multi-phase project to rehabilitate and upgrade the storm water system that handles water and drainage throughout the solemn national landmark.

The cemetery has been in operation since 1864, and while the plan for land usage at the site today is very detailed and organized, this has not always been the case. Determining the exact location of sewer assets, and evaluating their condition, is a complex process in planning for rehabilitation. Additionally, because there are on average 25 to 30 funerals and interments each day, during which no construction can be conducted, repair efforts are further complicated.

SOLUTION

The USACE had originally specified a spiral wound product for a 300 linear foot section of pipe that on the original drawings was round with few complications. Once the pipe was inspected, it was determined that there were several junction boxes and other concerns that made a spiral wound solution less desirable. After evaluating alternatives, it was determined that lining with a geopolymer was a good option. USACE changed the specification and allowed for the application of GeoSpray geopolymer mortar for the pipes, junction boxes, and 200 vertical feet of manholes and other structures. USACE had already installed the project with good success in other military applications including a project at Fort Bragg in 2015. Inland Pipe Rehab was awarded a subcontract for pipe bursting, geopolymer pipe lining and a portion of new construction work during phase two of the project.

RESULTS

The GeoSpray geopolymer lining was installed at night to avoid any disruption to the public or the operations of the cemetery while also adhering to detailed government regulations. Over a two week period, all of the pipe lining, manholes and junction boxes that were part of the project phase were completed. Further opportunities for use of GeoSpray with USACE are being evaluated for trenchless rehabilitation of military and other government assets.

PROJECT DETAILS

Location: Arlington National Cemetery, Washington, D.C.

Client: Army Corps of Engineers

Installation: May 2016

Installer: Inland Pipe Rehab, LLC



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Existing cement manhole.



Spin head applying GeoSpray manhole lining.



Completed manhole lining with GeoSpray.



Above ground work on 36" RCP rehabilitation.



Existing RCP pipe with initial patches to stop active infiltration.



Completed RCP rehab with GeoSpray geopolymer lining.



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