



# STORMCAPTURE® INFILTRATION SYSTEM

## Provides Relief to Overburdened Infrastructure in Grays Ferry Neighborhood

Philadelphia, PA

The Gray's Ferry area is an old neighborhood, rich in history. Loosely defined by Gray's Ferry Avenue on the north, Vare Avenue on the south, as far east as 25th Street, and running west to the Schuylkill River, the area is close to an important crossing of the Schuylkill River near downtown Philadelphia.

In the 18th century, Gray's Ferry was the southern most of three ferries that crossed the Schuylkill River to Philadelphia. While the ferry originally belonged to Benjamin Chambers, by 1747 George Gray had taken over ferry operations. The Gray's Ferry Bridge and several other rail lines now span the Schuylkill River.

The neighborhood was once the site of the Schuylkill Arsenal which was built in 1800 to function as a quartermaster, providing the U.S. military with much-needed supplies. The arsenal made clothing and flags for the military for the next 150 years as the third federal facility in the young nation. Its most famous task was outfitting the Lewis & Clark Expedition.

Now, because of aging infrastructure unequipped to handle excessive amounts of stormwater, during heavy rain events the drainage system becomes overloaded, flooding neighborhood streets. As part of

### DESIGN & CONSTRUCTION TEAM

**Owner**  
City of Philadelphia

**Contractor**  
C. Abbonizio Contractor's, Inc.

**Consulting Engineer**  
Hatch Mott McDonald

**Manufacturing Plant**  
Oldcastle Infrastructure  
Telford, PA

## StormCapture® Stormwater Infiltration System Provides Relief to Overburdened Infrastructure in Grays Ferry Neighborhood, Philadelphia, PA



The Floating Bridge across the Schuylkill River was eventually replaced by a permanent bridge in 1838.



StormCapture System

the Philadelphia Water Department's (PWD) ongoing efforts to alleviate pressure on the existing system, they enlisted the firm of Hatch Mott McDonald to find a solution to the recurring problem.

The final plan involved building an infiltration system that would collect stormwater runoff from nearby streets, then allow for controlled release into the ground to replenish local aquifers. The infiltration system was placed inside a city park, directly underneath a baseball field, so it had to meet the treatable flow rates as well as local regulatory requirements.

C. Abbonizio Contractor's Inc. was hired to complete the job. But prior to installation, Peter Abbonizio and Joe Winzinger, both with C. Abbonizio, and Michael Creeden with Oldcastle Infrastructure, had a pre-construction meeting with PWD to discuss using the StormCapture® system as an alternate solution over the one specified on the plans. PWD had never used the StormCapture system and was unfamiliar with it, but because of the cost savings and Oldcastle's Telford plant's working relationship with C. Abbonizio, the city ultimately selected the StormCapture system. The final approved system is capable of detaining 217,978 cu. ft. (1,630,589 gallons) of stormwater runoff.

Production of the StormCapture modules started in March 2016, and total installation took two weeks. The project consisted of 141 eight-foot tall StormCapture modules and 81 LinkSlabs, which reduced the number of modules needed as well as the overall cost for the project. There were two additional modules included on the project to allow the placement of access manholes outside of the baseball playing field, which were located directly above the infiltration system.

The modules were offloaded from the trucks and installed by crane. Due to the size of the project, the crane had to be moved frequently. Since the project was inside the city of Philadelphia, crews were limited to roughly 20 trucks per day. There was a very tight timeline to adhere to as the PWD would only allow the contractor to apply grass seed to the completed project within certain dates and they needed to make sure they met those dates, which they did.

Michael Creeden, Territory Manager for Oldcastle's Mid-Atlantic and Northeast regions remarked, "This project is a perfect example of the direction of stormwater management, especially in more urban areas. The City of Philadelphia saw an opportunity to eliminate a flooding problem while maintaining the city's green space. In the end, no one would ever know that we can store over a million gallons of water just inside of the park, right below the baseball field."

### About Oldcastle Infrastructure

Oldcastle Infrastructure, A CRH Company, is the leading provider of building materials, products and services for infrastructure projects to several market sectors nationwide, including: Building Structures, Communications, Energy, Transportation and Water.

### For More Information Contact:

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