

PARKING LOT TRANSFORMS INTO A ONE-OF-A-KIND SUSTAINABLE PARK



A RESILIENCY PLAN FOR A FLOOD-PRONE HOBOKEN NEIGHBORHOOD:

Storm frequencies, intensities and durations are changing and, in many regions, severe storms and snowmelt events occur more often than expected. This environmental shift, combined with commonly used impervious surfaces in urban environments has increased the amount of stormwater runoff. This excess runoff overwhelms stormwater sewers and flood control systems, leading to flooding and the contamination of local waterways.

As part of an extensive resiliency plan to mitigate runoff in a flood-prone Hoboken neighborhood, the team at Starr Whitehouse was challenged with designing a space that would transform a one-acre parking lot into a one-of-a-kind park. Starr Whitehouse Principal, Stephen Whitehouse noted that “Hoboken’s citizens wanted their new Southwest Park to relieve local flooding and provide diverse experiences around a central community gathering space.” With the commitment to sustainability at the core of this project, Starr Whitehouse, along with a team of engineers, designers and support from Unilock, set out to craft a resilient, community-oriented urban park.

LOCATION:

Hoboken, New Jersey

DESIGNER:

Starr Whitehouse

CONTRACTOR:

Flanagan’s Contracting Group

PRODUCT:

Eco-Promenade®

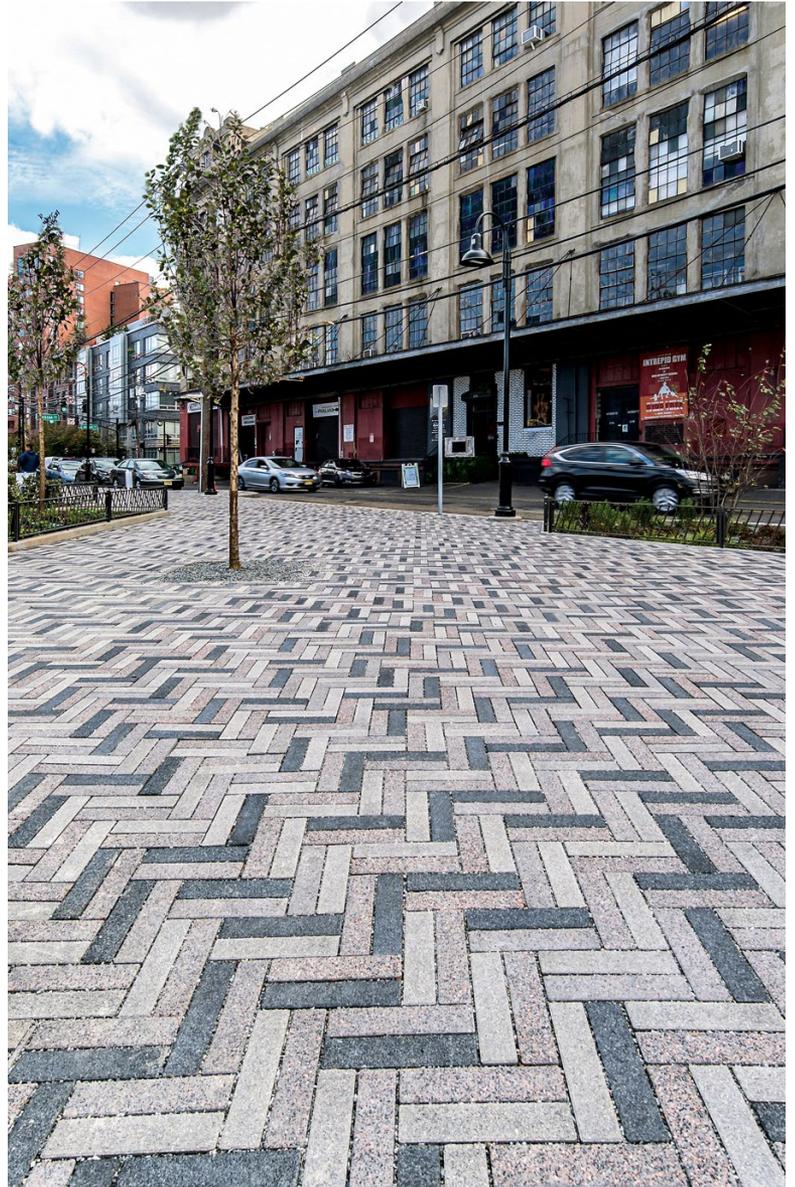


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The selection of design elements for this project were influenced by the end goal of creating a vibrant and livable space, while meeting the City of Hoboken's need to reduce flooding. The design required integration of green infrastructure, capable of managing large quantities of water from intense rain events. Permeable pavers became a key element. Functionality, performance and available design options were all factors that were considered when making product decisions. Availability of paver shapes, colors, and textures were a key driver in product selection, so as to achieve a design that could play off of the surrounding architecture.

A STORMWATER MANAGEMENT SOLUTION WITH PERMEABLE PAVERS:

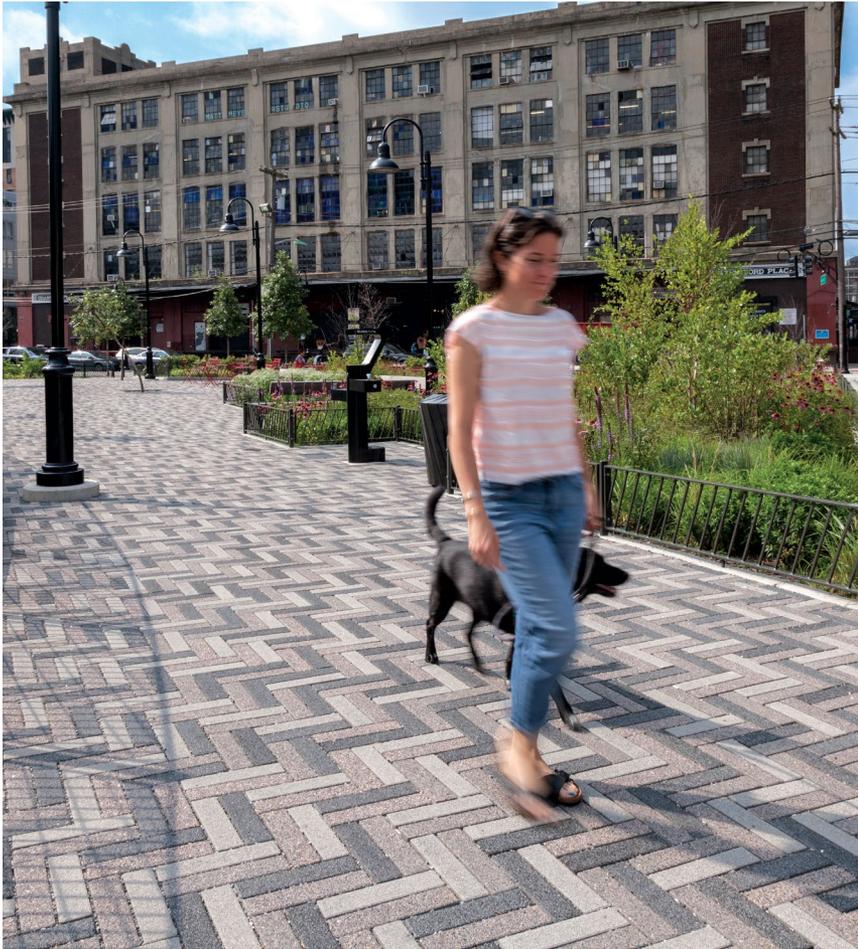
The resulting design of Hoboken Southwest Park employs three coordinated systems to reduce the negative effects of stormwater runoff - rain gardens, bioswales, and permeable pavers. Two large rain gardens, as well as a grassy lawn, soak up water and filter it through the sandy soils and plants, removing pollutants. Vegetated bioswales channel water from adjacent streets and sidewalks. Finally, permeable pavers supported by hollow tree cells allow water to infiltrate through the paved areas of the park. Water is filtered through the open-graded joint material and gravel subbase, removing pollutants before it permeates into the soil. While these systems help mitigate runoff on their own, excess water from heavy storms is channeled from the rain gardens, bioswales, and permeable paver system into three detention basins with a delayed release into the combined sewer to control the outflow of water. Combined, the park is capable of handling 200,000-gallons of water, a volume that surpasses the ten-year storm event it was designed for.



“The shapes, colors, and finishes of Unilock permeable pavers provided many design options for the park plaza and paths and assisted with stormwater management”

- Stephen Whitehouse, Principal
Starr Whitehouse

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Unilock worked with the team at Starr Whitehouse to choose a permeable paver to incorporate into this system. “The shapes, colors, and finishes of Unilock permeable pavers provided many design options for the park plaza and paths,” says Stephen Whitehouse. **Eco-Promenade®** was chosen because it is designed with special spacer bars that result in a joint gap, allowing for rapid penetration of rainwater back into the subbase and detention system through the open-graded joint material.

The herringbone paving pattern was achieved with the plank shape paver and uses **Series™** finish in three special-order colors. This finish offers a distinctive surface texture and long-term durability which are complements of a proprietary blend of some of nature’s highest performing minerals. Exposed granite and quartz aggregates throughout its surface create a striking visual effect with speckles of color and sparkle that are only enhanced as the product is exposed to outdoor elements. Beyond its eye-catching appearance, its micro-pebbled surface makes it a slip-resistant paver – the perfect choice for a high-traffic pedestrian realm like Hoboken Southwest Park. The chosen colors also add to the aesthetic of the project, playing off of the building hues in the neighborhood creating an interesting and vibrant space for all to enjoy. “Open now over two years,” says Stephen Whitehouse, “the park’s distinctive pavement still looks and performs as the design intended.”

