

# First Green Alley in Lowell, MA utilizes Stormcrete® Modular Precast Porous Concrete

In 2014, the Lowell Regional Waste Water Utility (LRWWU) began a plan to separate a combined storm and sanitary sewer in the area surrounding Decatur Way, an alley in inner-city Lowell, MA.

Decatur Way had long been a source of concern for area residents and municipal officials due to the trash and illegal activity that occurred there. The alley was overgrown, garbage strewn and inviting as a haven for drug users.

As part of the LRWWU stormwater plan, Decatur Way was identified as a location for a green alley project. One of the hallmarks of a green alley is to provide a means of allowing stormwater to infiltrate back into the soils through permeable pavement.

During a rapid, three month design period, various options were considered for the pervious pavement, but were rejected due to concerns about either poor quality control during placement or maintenance concerns. The design engineer CDM Smith identified Stormcrete® Modular Precast Porous Concrete Paving Slabs as a viable alternative, and the product was eventually chosen for use.

The Stormcrete® slabs are manufactured and pre-cured in a controlled environment, providing a high degree of quality control while allowing for reproducible strength and consistent flow characteristics. With permanent lifting points set in the surface, the slabs are removable and replaceable and can be lifted easily and reset if needed—providing an extra factor of safety.

The Decatur Way project is an ideal showcase of the ability to provide both stormwater enhancements and beneficial community re-use of a forgotten resource through the installation of an engineered material like the Stormcrete® Modular Precast Porous Concrete System.



Green Alley Cross Section



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# Stormwater SUV debuts in Stormcrete® Modular Precast Porous Concrete Green Alley

Despite a recent surge in the popularity of porous pavements, there has been some reluctance to utilize this valuable Green Infrastructure (GI) technique. Typically, objections are raised regarding maintenance concerns.

The current standard for porous pavement maintenance is the use of regenerative air vacuum sweepers. Although these types of sweepers are effective for roadways and large parking lots, they tend to be expensive and cumbersome to operate. Likewise, their large size makes it difficult, if not impossible, to maneuver them in tight spaces like green alleys and sidewalks.

In the fall of 2015, the city of Lowell, MA installed Stormcrete® Modular Precast Porous Concrete paving slabs at a local green alley project.

Like most alleys, the Decatur Way green alley is a tight space, and conventional regenerative air vacuums are not practical. Instead, a new type of vacuum unit has been utilized in cleaning the alley, the Stormwater Utility Vacuum (i.e. Stormwater SUV).

The Stormwater SUV is a ride-on pure-vacuum unit specifically

tailored for the porous pavement industry. The unit is powerful, compact, maneuverable—and most importantly, affordable. The Stormwater SUV will work for routine maintenance of porous pavement alleys, sidewalks, medians, pedestrian plazas, street gutter, etc.

The Stormwater SUV has a self-contained vacuum unit for versatile debris collection. The power-lift pick-up head is designed specifically with porous pavement maintenance in mind. In addition, the SUV includes a hand-held auxiliary hose for focused porous pavement and bio-filter maintenance. The vacuum can also be quickly converted in the field, without tools, for leaf blowing/loading and litter pickup. The versatility of this machine allows maintenance crews to utilize it year round, even when it's not in use cleaning porous pavement.

In the Decatur Way green alley, the Stormwater SUV passed the test—easily picking up all sediment, trash and debris it encountered. By installing a Stormcrete® green alley, not only was Lowell able to successfully reduce stormwater flows to their combined system, but now, with the SUV, they have the means to preserve its infiltration capacity long into the future.



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PATENT PENDING

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