750 Iron Tree Grates in Grand Rapids Replaced with Porous Pave Permeable Paving Material

City improves safety and attractiveness of downtown area by replacing rusted and broken tree grates with Porous Pave, a porous, pour-in-place surfacing material that is a proven solution for green stormwater infrastructure.

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Named "America's Greenest City" by Fast Company magazine, Grand Rapids. MI has received worldwide recognition for its sustainability efforts. The city's multi-year Sustainability Plan sets more than 200 specific targets in sustainability, energy efficiency, conservation and renewable energy. Progress achieved has reduced energy consumption and greenhouse gas emissions, resulting in significant cost savings and numerous social and environmental benefits.

In its continuing effort to make its downtown more welcoming, and to support its sustainability initiatives, Grand Rapids, MI is completing the replacement of 750 old iron tree grates with Porous Pave XL.

The first phase of the project was completed in September 2014 before the annual ArtPrize event. The city had Porous Pave tree surrounds installed to replace 250 cracked and broken grates that presented the most serious tripping hazard in the three square miles of downtown. An additional 500 grates will be replaced by July 2015.

"Porous Pave allows rainwater and air to get down to the tree roots," said Mark DeClercq, P.E., city engineer. "With its high rubber content and textured surface, Porous Pave is slip resistant and safer when wet than traditional metal tree grates."

"Porous Pave is ADA-compliant," said Dave Ouwinga, president and chief executive officer, Porous Pave, Inc. "In addition to making Porous Pave surfaces slip-resistant, the recycled rubber gives it flexibility, so it withstands freeze-thaw cycles without heaving, cracking or breaking."

An eco-friendly green building product, Porous Pave consists of recycled rubber, stone aggregate and a binder. Made in the U.S.A., Porous Pave XL is a hard, durable material made from 50% recycled rubber chips and 50% stone aggregate with a moisture-cured urethane binding agent. Porous Pave infiltrates stormwater on site, decreases the volume and slows the velocity of runoff flowing into storm drains and storm sewers, improves water quality by reducing erosion and filtering out pollutants, and recharges groundwater. Porous Pave is engineered with 29% void space. Independent testing confirms that Porous Pave allows up to 6,300 gallons of water per hour per square foot to drain directly through its surface, permeate down into a compacted aggregate base, and then slowly filter into the ground

Porous Pave is poured in place at thicknesses of one to two inches atop a compacted aggregate base of two, four or six inches, depending on the application and required compressive strength. Contractors use it in public, commercial and residential installations for loading docks, parking lots, driveways, building entryways and courtyards, walkways and sidewalks, and patios and terraces. The material's porosity, permeability and slip resistance make it ideal for tree surrounds.