



Bringing Green Infrastructure to Artesian Street in 2016

Project Overview and Update

What's happening on Artesian Street in 2016?

The Detroit Department of Public Works (DPW) plans to resurface Artesian Street, as well as other surrounding residential streets, in 2016. Construction will start in early May. The Detroit Water and Sewerage Department (DWSD) identified an opportunity to work with DPW to incorporate innovative green infrastructure projects to help manage storm water runoff more effectively.

What type of green infrastructure is DWSD constructing on Artesian Street?

DWSD will install pervious pavement on portions of Artesian Street. Pervious pavement looks very much like ordinary pavement except it has small openings that allow water to pass through and eventually soak into the ground. Permeable pavement significantly reduces the amount of storm water runoff compared to conventional pavement. It can be made of concrete, asphalt or pavers, and can be used for roads, sidewalks, trails, parking lots, and other surfaces. Pervious pavement can help to reduce ponding and flooding on streets, as well as improve public safety by reducing ice formation. DWSD will install pervious pavement along Artesian Street, between Joy and Cathedral Roads.

What is green infrastructure?

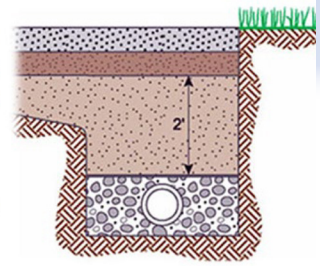
Green infrastructure is an approach to managing storm water that uses the natural processes of soils and plants to soak up storm water where it falls before it can enter and overwhelm the sewer system. DWSD is working with partners throughout Detroit to install a variety of green infrastructure practices, including bioswales, pervious pavement, rain gardens, and tree planting.





Location of pervious pavement along Artesian Street

Pervious Asphalt
Bedding
Aggregate Base
Underdrain



A side view of pervious asphalt

How does pervious asphalt work?

Pervious asphalt is like most standard roads except that the manufacturers leave out the very fine material from the asphalt mix creating open spaces that allow water to flow through it. Under the pervious asphalt pavement surface is a 12 to 30-inch layer of stones.

The storm water is stored within the void spaces between the stones while the water slowly infiltrates into the underlying soil. A drain pipe is buried within the stone to help drain the stone layer, if needed. The drain pipe flows to the existing sewer.

Project Update (as of May 2016)

What is the project schedule?

Construction may begin as early as May 9, 2016. DPW will resurface many streets at once, so construction crews may be in the green infrastructure project area along Artesian Street anytime in the next few months.

Where will residents park during road resurfacing and pervious asphalt construction?

A project goal is to keep homeowners happy while construction crews are at work. The construction crew will coordinate with residents when road work will affect a driveway. Driveways might be temporarily inaccessible during the day when work is happening, but the construction crew will install a temporary entry to driveways by the end of the construction day. Driveways should remain accessible during most of the construction activity and overnight driveway parking should still occur as normal.

During driveway entrance paving, there may be several days when driveways are inaccessible while the concrete sets. The contractor will keep residents informed about driveway access as construction progresses.

Residents should also be aware that traffic patterns may be changed to allow one-way travel down Artesian Street as well. Part of the construction process involves removing large portions of roadway. Construction crews will assist drivers through these areas with flaggers and signs. Drivers should watch out for signs and follow changes in traffic patterns.

What time will the construction crews work each day?

Construction crews will be working during daylight hours Monday through Friday. They may also work on Saturdays if needed.

Frequently Asked Project Questions

Are there other examples of pervious asphalt in Detroit and southeast Michigan?

Pervious asphalt is not a new approach to managing storm water. Property owners and municipalities are using this type of green infrastructure practice throughout southeast Michigan and around the country. Lawrence Tech has an interactive map that shows the location of pervious asphalt projects in southeast Michigan.

<http://www.ltu.edu/lid/>.

How well does pervious asphalt perform?

Research from existing pervious asphalt roads and parking lots has demonstrated that this green infrastructure practice can infiltrate a high percentage of storm water volume. In the case of large storms, pervious asphalt roads will still drain excess storm water to the sewer system. The lifespan of pervious asphalt is 10 to 20 years, which is comparable to a conventional asphalt road. More information on the performance of pervious asphalt is available on EPA's website at <http://water.epa.gov/polwaste/npdes/swbmp/Porous-Asphalt-Pavement.cfm>

Can pervious asphalt cause basement flooding?

Pervious asphalt can actually help reduce basement flooding caused by storms that overload the sewer system. The pervious asphalt sections of Artesian will be located more than 10 feet from homes and at least 2 feet above the groundwater table so as not to cause seeping into basements. Drain pipes beneath the pervious asphalt also help direct storm water to the sewer during heavy rains. Residents with concerns about basement flooding should remember to direct downspouts 6 feet away from the house and ensure that the ground slopes away from the house.

Who is responsible for maintaining the pervious asphalt?

DWSD is responsible for maintaining the pervious asphalt using street vacuums. This will be done twice a year to remove small particles from the pervious asphalt to prevent clogging and ensure it effectively soaks up storm water.

Project Contact Information

Who can residents call if there are questions or problems with the pervious asphalt once installed?

If residents on Artesian Street have questions or concerns about the pervious asphalt in front of their property or in the neighborhood, they can call DWSD at the 24 hour emergency hotline (313.267.7401) or email dwsd-publicaffairs@detroitmi.gov or use the Improve Detroit mobile app available at: www.detroitmi.gov/How-Do-I/Mobile-Apps/ImproveDetroit. It is important to DWSD to know if there are problems with the pervious asphalt or any questions on proper maintenance or functioning.

Where can I get more information?

DWSD will provide updates about the Artesian Street pervious asphalt project, as well as other Green Infrastructure projects, on their website (www.detroitmi.gov/dwsd). More technical information about pervious asphalt and how it works is available in Chapter 7 of SEMCOG's *Low Impact Development Manual for Michigan* (<http://www.semcog.org/lowimpactdevelopmentreference.aspx>).

Who can I contact to share my thoughts?

If you have questions or concerns about the pervious asphalt project, please contact Parvez Jafri at 313.267.1224 or jafrip@detroitmi.gov.

If you have questions or concerns about road resurfacing, please contact Jihad Slim 313.224.3947 or slimj@detroitmi.gov.

