

# Pervious Pavement

## What is it?

Pervious pavement is a hard surface engineered to let water move through it into the ground beneath. The three big categories of pervious pavement are pavers, poured surfaces and rigid grids that can be filled with gravel or planted with grass. Pervious pavement can be made out of concrete, asphalt, recycled glass, ceramics and more, and comes in a wide variety of styles and colors.

## Why do it?

Stormwater running off pavement is a major contributor to the 14 billion gallons of combined sewer overflows the Cincinnati region experiences every year. Pervious pavements keep polluted runoff out of our rivers by sending rain into the ground, where it can be used by plants and eventually enters the groundwater. They can also help solve stormwater runoff problems on properties by sending rain into the ground instead of into basements or other places you don't want it.



## Key Factors to Consider

Pervious pavement is most effective on sites with fast-draining soil and flat or gently sloping surfaces. The paving sits on top of a gravel bed which acts as a temporary water storage area until the water is able to sink into the soil beneath. The depth of the gravel bed depends on the site's percolation rate (how fast water drains) and typical rainfall amounts. Slope is significant because on a sloped site, the water will run to the downhill section of the gravel bed, allowing very little surface area for all of that water to contact soil. That being said, permeable pavements do still function on the steep, clayey surfaces of Cincinnati, they just require more detailed planning.

Pervious pavements need to be kept clear of sediment so the water is able to move freely through the surface. This is most often a problem where pavements come in contact with soil or mulch, but also affects what you can put on the pavement as a de-icer (do not use sand or other materials that do not dissolve). Pavers may need to be weeded occasionally. Poured surfaces should not be plowed extremely closely to avoid breaking up the surface. Pervious pavements perform well in cold weather by forming ice at lower temperatures and allowing melting ice to sink down into the pavement rather than running off and refreezing as it travels.



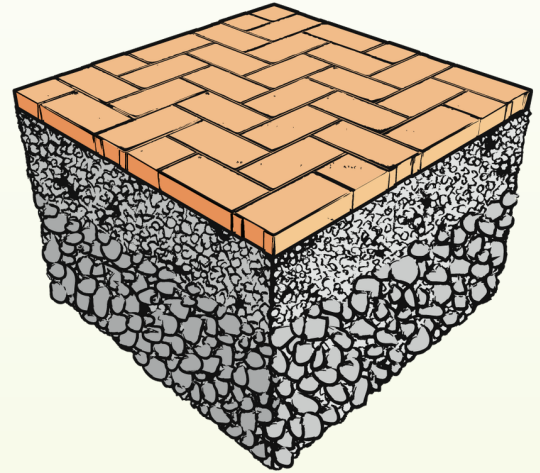
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## How to get started

Tell your landscape architect or pavement contractor you are interested in exploring pervious paving options. Make sure to specify if you are interested in a poured surface (pervious concrete, porous asphalt or recycled glass) or permeable pavers. Visit the parking lot of the Green Learning Station to view different types of surfaces in action.

## What will it cost?

Because pervious pavement installations vary from site to site in terms of how deep a gravel base is required and what types of equipment can be used to do the installation, it is difficult to estimate a cost range for pervious pavement. Reading Rock, who makes and sells permeable concrete pavers, estimates that a mechanical installation of permeable pavers and their gravel sub-base ranges from \$5.50-\$7.00 per square foot. A hand installation of the same system costs on average \$10.00 per square foot. Porous asphalt and pervious concrete systems tend to cost about one and a half times what impervious asphalt or concrete would cost on your site, mostly due to the added excavation and material required for the gravel bed.



## Local Resources

- Reading Rock, a local provider of permeable concrete pavers: [www.readingrock.com](http://www.readingrock.com)
- Belden Brick, a regional supplier of ceramic brick permeable pavers: [www.beldenbrick.com](http://www.beldenbrick.com)
- National Ready Mixed Concrete Association: [www.perviouspavement.org](http://www.perviouspavement.org)
- National Asphalt Pavement Association: [www.asphaltpavement.org](http://www.asphaltpavement.org)
- Check out our online green businesses database to find someone to help with your project: [www.greenlearningstation.org/green-businesses.aspx](http://www.greenlearningstation.org/green-businesses.aspx).

