

What is permeable pavement?

Permeable pavement is designed to let the rain that falls on paved areas soak through into the underlying soil. Permeable pavement designs include more open spaces or voids than traditional pavement to allow the water to pass through. Four main types of permeable pavement are discussed in this brochure:

- **Permeable pavers**
- **Open-celled grids**
- **Porous asphalt**
- **Pervious concrete**

What are the benefits that permeable pavement provides?

- Reduce flooding and erosion in small streams by slowing the speed of rainfall running off from sidewalks, patios, and driveways.
- Protect the water quality in streams and Lake Washington by filtering oil and grease and other pollutants from driveways.

Where can you use permeable pavement on Mercer Island?

Permeable pavement should not be installed in areas where soaking rain water into the ground could pose a hazard, such as in areas with steep slopes, erosion or landslide hazards, poorly infiltrating soils, contaminated soils, or shallow groundwater. The City has developed maps that show the areas of Mercer Island that are affected by these conditions (see link in Helpful Resources section of this brochure). Consult a civil or geotechnical engineer if in doubt.



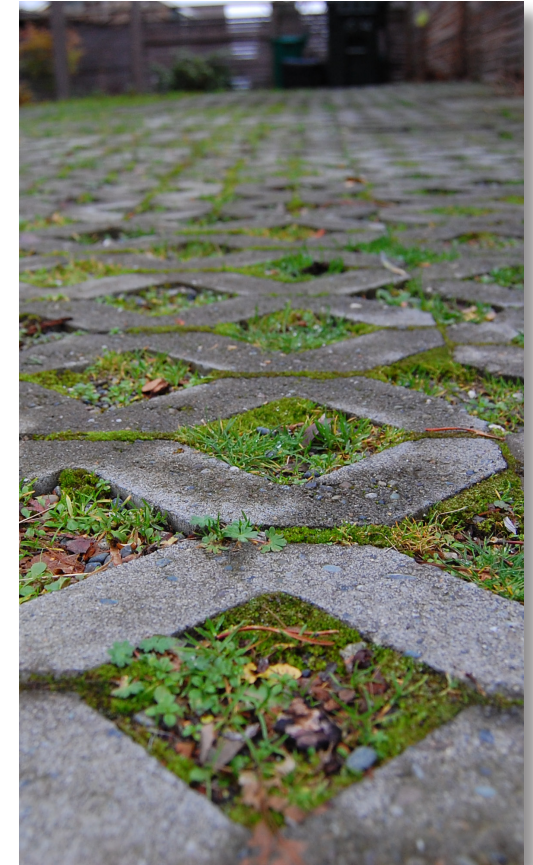
Helpful Resources

- Mercer Island Low Impact Development Information: <http://bit.ly/MI-LID>
- Mercer Island – Permeable Paver Design Guidelines: <http://bit.ly/MI-PermeablePavers>
- Mercer Island Erosion Hazard Map (PDF): <http://bit.ly/MI-ErosionHazardMap>
- Seattle Public Utilities Rain Wise – Reducing Pavement and Permeable Paving Options (PDF): <http://bit.ly/RainWise-PermeablePaving>
- Seattle Public Utilities Rain Wise – Materials and Suppliers (PDF): <http://bit.ly/RainWise-Suppliers>



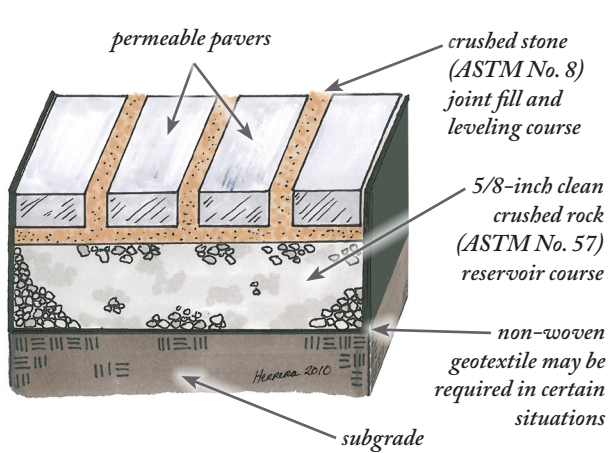
This brochure contains general principles only, which may not be appropriate or safe for every property or project. The City of Mercer Island is not responsible for your modifications to drainage flow or your property.

Permeable Pavement



Is permeable pavement right for you?

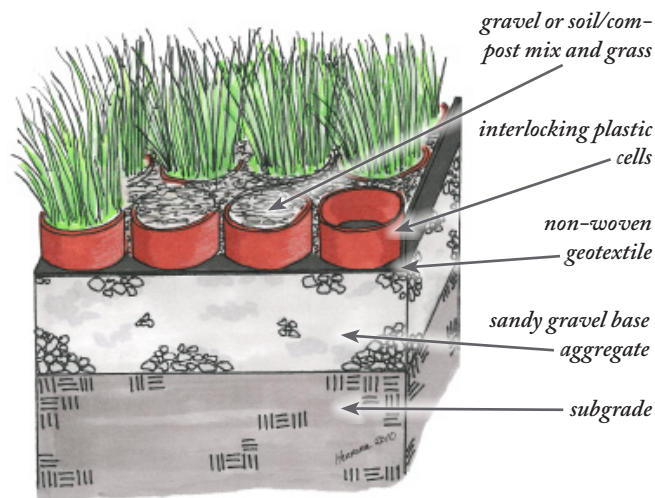
What types of permeable pavement are available?



Permeable pavers are interlocking blocks or bricks that come in a variety of materials, colors, and shapes and can be arranged in various patterns. Non-interlocking flagstones or other irregularly shaped pavers can also be installed with 1- to 3-inch gaps or joints between the pavers filled with gravel or a sand/compost mix. The City has prepared design guidelines for residential paver projects (see link in Helpful Resources section of this brochure).



Porous asphalt looks similar to conventional asphalt, but has fewer small particles, which provides open space for water to pass through. Porous asphalt has a rougher surface than conventional asphalt and can be used in low-traffic areas such as residential driveways and sidewalks.



Open-celled grids are concrete grids or rigid, plastic cells that interlock and are pinned in place. The grids or cells are filled with gravel or a mixture of permeable soil/compost and grass that allow water to pass through to the soil underneath. Open-celled grids can support the weight of vehicles and are typically installed in driveways, sidewalks, and patios.



Pervious concrete looks similar to conventional concrete, but has fewer small particles, which provides open space for water to pass through. Pervious concrete has a similar load-bearing capacity and a rougher surface than conventional concrete and can be installed in residential driveways, sidewalks, and patios.

Where should you install permeable pavement on your property?

Suitable locations have:

- A slope of less than 5% (1 foot drop in 20 feet)
- A low potential for pollutant spills (not recommended if vehicle maintenance is frequently conducted in your driveway)

Common applications include:

- Driveways
- Sidewalks
- Patios



How do you maintain permeable pavement?

- Minimize contact with sanding, leaf accumulation, and yard materials (such as compost).
- Sweep twice per year (fall and spring).
- Open-celled grids (installed with grass) may need occasional reseeding, mowing, and irrigation.
- Open-celled grids (installed with gravel) may need occasional refilling of crushed rock or gravel.
- Permeable pavers may need occasional refilling of sand in the joints.