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PERVIOUS PAVERS

(unit pavers)

Pervious pavers are typically made of pre-cast concrete, brick, stone, or cobbles. Pavers usually form interlocking patterns, and are placed within a rigid frame on top of a sand bed or an under drain system. Sand or gravel fills the gaps between pavers, allowing water to pass to the underlying subgrade then infiltrate into the ground. Some pavers also have small voids in the pavement surface to increase permeability. Pervious pavers are available in many colors, shapes, sizes, and textures, and can support heavy traffic loads and weights. They can replace conventional asphalt or concrete paving in parking lots, roads, and sidewalks.

Benefits

By infiltrating precipitation, pervious pavers reduce stormwater runoff flow rate, volume, and temperature, and filter pollutants. They help recharge groundwater and maintain stream base flows. Pervious pavers may reduce or eliminate the need for an underground storm drain system or a curb and gutter system. They are durable and attractive, and allow great flexibility of design. Pervious paver areas can serve as an overflow for other stormwater management techniques.

Maintenance

It is important to control site erosion and sedimentation to prevent clogging. Annual vacuum sweeping helps maintain permeability. The gaps between pavers may require occasional weeding or scorching and sand or gravel replenishment. Because pervious pavers are easily lifted and reset, they are easy to repair or replace.

Cost

Pervious paver systems range in cost depending on the size of the installation and the installation technique. Data gathered from Bureau of Environmental Services Westmoreland Pilot Project (2004) indicate an estimated cost of \$5 per square foot installed, including base rock.

Safety and Siting Requirements

- Follow the manufacturer's installation specifications.
- Use over soils that drain well such as gravelly or loamy sand.
- Do not use pervious pavers in areas with high sediment loads that can clog pores in the pavement.
- Pervious pavers are not allowed in areas where hazardous material is stored or transported.
- Refer to Portland's Stormwater Management Manual for details on sizing, placement, and design.



Permits

- Pavers used in public areas and City rights-of-way require City review for drainage and Americans with Disabilities Act (ADA) compliance. Contact the Portland Office of Transportation (PDOT) or the City's Bureau of Development Services (BDS) with questions about use in these areas.
- Stormwater systems on non-residential sites need commercial building permits.

Examples

Oregon Natural Resources Council building parking lot, 5825 N. Greeley Ave.

Multnomah Arts Center,
SW 31st and Capital Hwy

SE Westmoreland,
SE 21st and Rex and SE Knapp

East Holladay Park
NE 128th and Holladay

