



Permeable Pavers

This **Advanced Method and Material** was developed jointly by the City of Bellingham Public Works Department and Sustainable Connections to increase stormwater infiltration by providing means for the installation of pavers.



BENEFITS

Paver systems can provide a structural surface capable of supporting traffic loads that allows for water drainage through the section into the subgrade below. Additional benefits include:

- Decreased runoff to adjacent areas
- Faster surface dry time
- Faster melt-off of snow
- Multiple styles and finishes
- Can be installed by homeowner
- Simple transport and installation
- Contribute LEED® points for your project

Stormwater runoff is a key component of site design in the Pacific Northwest due to heavy annual rainfall. Stormwater runoff from impervious areas, specifically roadways, is the primary source of pollutants that are found in our regional streams, rivers, and Puget Sound. In both public and private facilities, alternatives to conventional collect/treat/release infrastructure are being designed and implemented to meet both state and federal regulations. The soft nature of some surface soils in the region also limit uses by vehicle and pedestrian use. Paver systems are one effective way to install a durable wearing surface while providing an infiltration of stormwater runoff for aquifer recharge. A key component is the installation of a minimum layer of drain rock underneath for storage and structural stability, determined by the installer or engineer.

POLICY/CONDITIONS

Pavers may be installed when the following conditions are met:

- The site subgrade has been reviewed by a suitably qualified professional and an infiltration rate determined if applicable.
- A stormwater site plan has been reviewed and approved for the site if applicable.
- Installations on grades greater than 5% need to be specifically engineered.
- Drain rock shall meet the current City or WSDOT standards.

COMPLIANCE WITH THESE STANDARDS

- Washington Department of Ecology – Stormwater Management Manual for Western Washington
- ICC/ANSI A117.1-2003 (when used in places of public accommodation, employment, education or any other places open to the general public)

SCOPE

Driveways, patios and pathways on both private property or in the City right-of-way.

DEFINITIONS

Paver: a stone/mortar unit that provides structural support over existing/imported subgrade. Generally placed together to achieve larger desired surface areas. Gaps between units provide for infiltration of stormwater runoff into subgrade.

Drainage Bed: a crushed rock layer underneath the paver system that provides structural support and stormwater storage.

PERMIT REQUIREMENTS

City of Bellingham Building Permit

City of Bellingham Stormwater Permit (if over 500 sf of land disturbing activities).

Contact COB Permit Center for more information: (360) 778-8300 or permits@cob.org.



Permeable Pavers

REFERENCES / SOURCES

Puget Sound Action Team – Low Impact Development – Technical Guidance Manual for Puget Sound
Washington Department of Ecology – Stormwater Management Manual for Western Washington

SUGGESTED MAINTENANCE

- Sweep large debris (leaves, sticks ect) off weekly
- Immediately place absorbent material on spills. Vacuum material off
- Remove any vegetation that forms anywhere on the surface

FINANCIAL INCENTIVES

City of Bellingham

Use of pavers will help to meet criteria that could qualify a project for a 50% reduction in the stormwater development charges. See Bellingham Municipal Code 15.16.030 or contact City staff for details and criteria about the reduced stormwater development charges.

Additionally, pavers can also be incorporated into a project to help avoid the triggering of the 0.1 cfs increase in flow for the 100-year storm threshold to require stormwater detention or to reduce the required size of stormwater mitigation facilities by using allowed stormwater modeling credits. Credits can be found in Stormwater Management Manual for Western Washington published in 2005 or the Low Impact Development Technical Guidance Manual for Puget Sound.

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ADDITIONAL RESOURCES



Paver Search

Provides a series of links to access a variety of useful information addressing the issues relevant to Permeable Pavers.

www.paversearch.com/permeable-pavers-menu.htm



Puget Sound Partnership

The Puget Sound Partnership is a community effort of citizens, governments, tribes, scientists and businesses working together to restore and protect Puget Sound.

www.psp.wa.gov



Nooksack Salmon Enhancement Association

Nooksack Salmon Enhancement Association (NSEA) is a community-based nonprofit organization dedicated to restoring sustainable wild salmon runs in Whatcom County.

www.n-sea.org