Vegetated Roof

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 a vegetated (green) roof.

BENEFITS

Vegetated Roofs significantly reduce stormwater runoff and their insulating properties cut energy use. Additionally, the vegetation helps clean the air and can reduce the “heat island” effect in which cities and their pavement and black rooftops are hotter than undeveloped landscapes. Additional benefits include:

- Increased energy efficiency
- Reduced stormwater flows
- Improved air quality
- Lower heating and cooling costs
- Increased wildlife habitat
- Contribute LEED® points for your project

A Vegetated Roof (also known as a green roof or ecoroof) replaces conventional roofing with a living, breathing living roof system. A vegetated roof consists of a layer of vegetation over a growing medium on top of a synthetic, waterproof membrane. It can significantly decrease stormwater runoff, save energy, reduce pollution and erosion, and helps preserve fish habitat. Living rooftops also absorb carbon dioxide, cool urban heat islands, and filter air pollutants. A vegetated roof can increase habitat for birds and insects and provide much needed greenspace for urban dwellers.

Vegetated roof technologies not only provide the owners of buildings with a proven return on investment, but also represent opportunities for significant social, economic and environmental benefits, particularly in cities.

POLICY/CONDITIONS

A vegetated roof may be installed when the following conditions are met:

- Proof that the existing/new roof meets the ability to support the added weight of a vegetated roof (building code requirement).
Vegetated Roof (cont’d)

COMPLIANCE WITH THESE STANDARDS
• Bellingham Municipal Code 15.42
• Low Impact Development Technical Guidance Manual for Puget Sound
• Stormwater Management Manual for Western Washington

REFERENCES / SOURCES

FINANCIAL INCENTIVES
City of Bellingham
Use of a vegetated roof 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, a vegetated roof 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.

ADDITIONAL RESOURCES
Bellingham Green Roofs
The best in local green roof resources, case studies and current projects.
www.bellinghamgreenroofs.com

Portland’s Ecoroof Handbook
An excellent resource that contains information the city has gathered since 1996 through ecoroof research, construction, and monitoring. The information applies to Pacific Northwest conditions, mainly west of the Cascades.
www.portlandonline.com/bes/index.cfm?c=50818&a=259381

Green Roofs.com
A site dedicated to promote and inspire the earth friendly technology of organic greenroof architecture through the interchange of ideas, projects, news, video, travel, research, organization and government updates, marketing opportunities and exclusive features via the web.
www.greenroofs.com

Green Roofs for Healthy Cities
A rapidly growing not-for-profit industry association working to promote the industry throughout North America.
www.greenroofs.org

For more information please contact the City of Bellingham Building Development:(360) 778-8300 or planning@cob.org