

Bass Residence Ecoroof

2835 SW Miles Street, Portland OR

Project Summary and Background

A 1710 square foot eco-roof was installed in May 2013. Located in Multnomah Village in SW Portland, the ecoroof was the final part of a major renovation began in the summer of 2011. The new renovation included a new framing and new low slope roof deck. The concept of an integrated ecoroof was a central part of the renovation from the beginning of the design process. Direct interior access to a roof top terrace and the ecoroof was developed to allow easy access to the area.

Ecoroof type – extensive, low slope, 5” typical depth.

Size – 1710 sq’

Cost - \$8,550.00 – all materials above the membrane

Ecoroof installation contractor – Dan Manning

Materials, Construction, and Details

During the design and engineering phase of the project both the owner/architect and the structural engineer began planning for ecoroof requirements. The roofs are designed for 5” soil loads. These loads required a heavier than typical roof framing, 2x12 roof joists were required over most of the spans. A combination of roof drains and scuppers direct the water off the roof. Small river rock areas around the drains allow water to flow freely off the roof in a large rain event.

Process

After the roof framing and sheathing was complete Dan Manning oversaw the installation of the TPO membrane, drainage details, and the ecoroof assembly. The final soil and planting installation was completed in late spring so the sedums would have time to establish before the dry summer months.

1. TPO membrane roof assembly
2. Heavy felt liner was laid across all roof surfaces.
3. 1 1/2” drain rock was laid around roof drains
4. Soil was spread across roof area.
5. Sedum clippings were spread
6. Jute netting laid over soil and clippings
7. Organic fertilizer and gluten pre-emergent was spread to prevent weeds
8. Roof deck pavers were placed and final architectural details added.



Membrane still visible, felt liner being installed.



Felt liner installation (cont)



1" river rock being distributed around perimeter for drainage



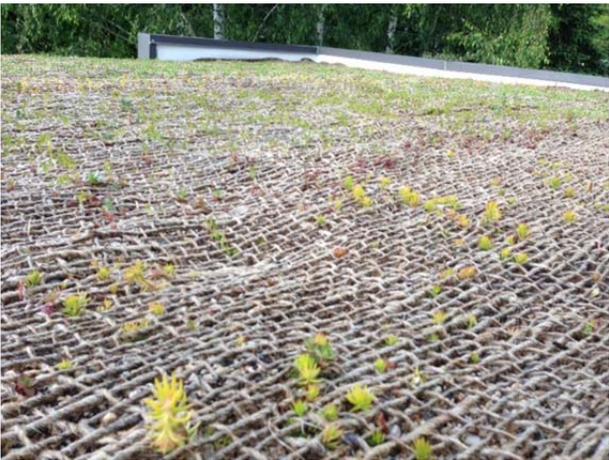
River rock, over felt liner, around perimeter of roof



Spreading the planting compound/soil average of 5" deep



Pavers yet to be installed, with jute mesh rolls



Jute mesh with (Angelina) sedum clippings taking hold

Operations and maintenance

In addition to the requirements set forth in the BES O&M plan, frequent visual inspections will be performed to monitor the health of the plantings during establishment. It is anticipated that some hand watering will be required the first summer. Fall will require the removal of leaves from the roof. The goal is to have a very drought tolerant mix of plantings that will require very little maintenance.