

A MEADOW IN THE SKY: Phillips Eco-Enterprise Center Extensive Green Roof

American Hydrotech Garden Roof® Components

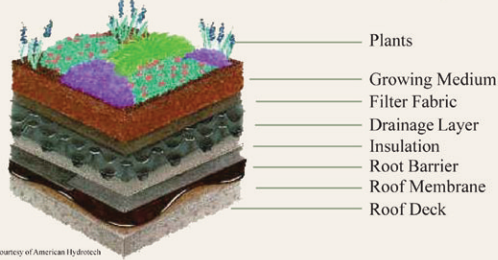
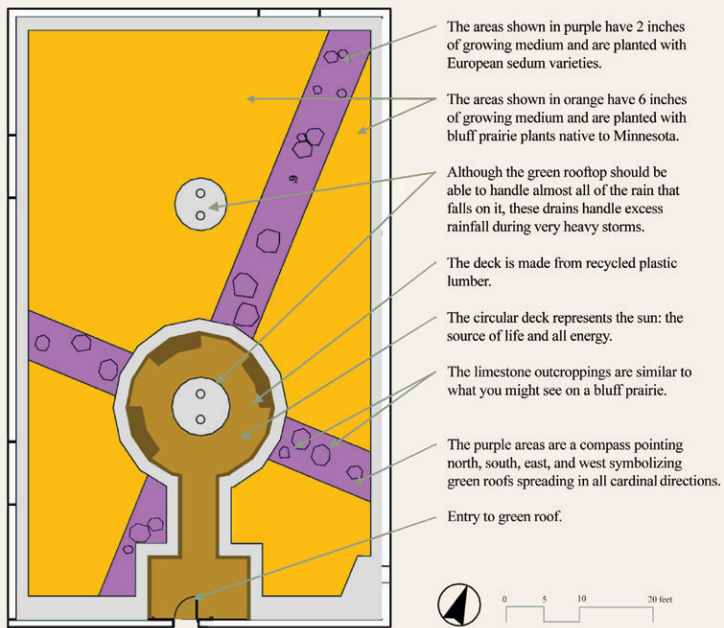


Image courtesy of American Hydrotech

Green Institute PEEC Green Roof Plan



- The areas shown in purple have 2 inches of growing medium and are planted with European sedum varieties.
- The areas shown in orange have 6 inches of growing medium and are planted with bluff prairie plants native to Minnesota.
- Although the green rooftop should be able to handle almost all of the rain that falls on it, these drains handle excess rainfall during very heavy storms.
- The deck is made from recycled plastic lumber.
- The circular deck represents the sun: the source of life and all energy.
- The limestone outcroppings are similar to what you might see on a bluff prairie.
- The purple areas are a compass pointing north, south, east, and west symbolizing green roofs spreading in all cardinal directions.
- Entry to green roof.

What Is an Extensive Green Roof?

- A roof vegetated with 1-6 inches of growing medium and plants.
- Designed for energy efficiency and water holding benefits.
- Lighter than an intensive green roof, which has more than 6 inches of growing medium and is often designed for use as a public space.

How Much Does the Green Roof Weigh?

An extensive green roof weighs 9 – 31 lbs/ sq. ft. This compares to:

- 18 – 31 lbs/sq. ft. for a gravel flat commercial deck ballast roof.
- 5-6 lbs/ sq. ft. for a residential asphalt shingled roof.
- 80+ lbs./ sq. ft. for an intensive green roof.

Design Concept

Blending 40 years of European green roof technology with 5,000 years of bluff prairie evolution to develop living, breathing buildings for Minnesota.

Why Build a Meadow in the Sky? Because...

- Soil and plants protect the roof from the sun and from extreme hot and cold temperatures. This can double or triple the lifespan of the roof.
- Green roofs help our lakes and rivers because most of the rain that falls on a green roof soaks into the “ground” where it falls. When rain runs off a typical hard roof and directly into our rivers and lakes, water quality suffers.
- Plants on the green roof clean the dirty rain that falls on the roof, and filter our dirty city air.
- Green roofs make a city cooler in the summer. Typical hard roofs make a hot city even hotter.
- The insulation provided by a green roof reduces energy costs for heating and cooling.
- Green rooftops make cities more livable by replacing a dead, ugly black rooftop with living, colorful plants.
- Birds, butterflies, spiders and beetles live on green rooftops. Green rooftops provide habitat for beneficial urban wildlife. Endangered species have even been found to live on green roofs!

Cross-Section: Minnesota Limestone Bluff Prairie



Similarities Between Native Bluff Prairie and PEEC Green Roof Habitat:

- HIGH PLACES OF PROSPECT
- SHALLOW SOILS
- SOIL OFTEN VERY DRY AND SOMETIMES VERY WET
- HIGH SUN AND WIND EXPOSURE

Cross-Section: PEEC Green Roof

