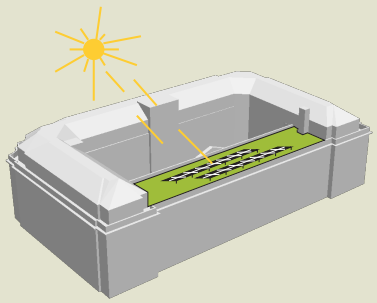
50 U.N. PLAZA - FEDERAL BUILDING

Photo: Patrick Race

CASE STUDY FACTS

Year: 2013
Type: Semi-intensive
Size: 9,000 sq. ft.
Access: Not for public
Greenroof System: Constructed layers
Designed by: Habitat Gardens and HKS Architecture



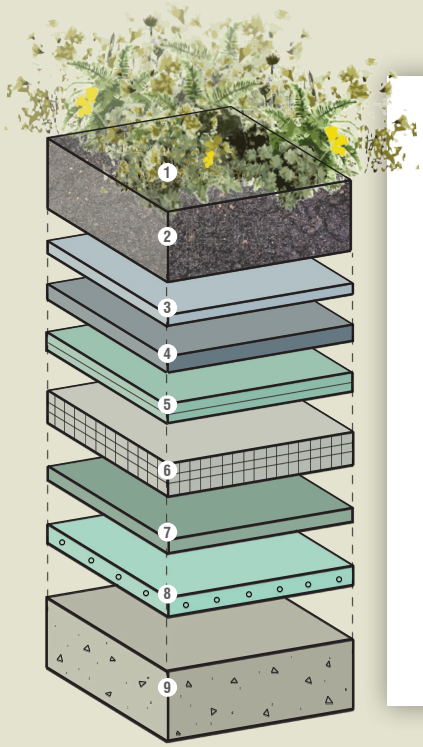
PROJECT BACKGROUND

The living roof on top of the U.S. Federal Building at 50 U.N. Plaza was initially conceived as one element of a larger, whole-building renovation. Collectively, this project was seeking a LEED Platinum rating, and the living roof helped earn a number of credits that contribute toward this goal, particularly in the management of stormwater. Additional credits were earned through the selection of drought-resistant native plants, which help contribute to the creation of habitat for pollinators, butterflies, and birds. The living roof also incorporates solar panels into the design, generating energy on site, and providing a wider range of habitats for plants with different shade tolerances.

The roof's design weaves together several different plant palettes - a succulent carpet, a meadow mix, wildflowers, and even vines growing along the walls that shield the rooftop mechanical equipment - which is made possible, in part, by a slightly thicker, 8-inch deep growing media. Structurally, the roof could support the additional weight of growing media because the original design for the building called for another story of office space where the living roof now exists.

Given certain safety and historic preservation standards, the living roof is not accessible to the public, however overall, the design still manages to maximize benefits and contribute to a building that functions at a high level.

ROOF SECTION



ROOF SECTION LAYERS

1. NATIVE PLANT SPECIES
2. SOIL
3. FILTER FABRIC
4. WATER RETENTION MAT
5. MOLDED SHEET DRAINAGE PANELS
6. POLYSTYRENE INSULATION
7. ROOT BARRIER
8. ROOF MEMBRANE
9. ROOF FOUNDATION