

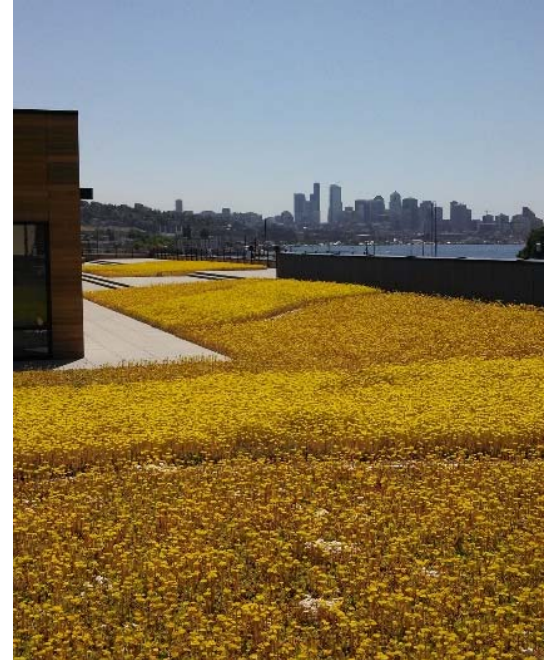
## Layered System for Extensive Green Roofs

### **Description:**

The Extensive Layered System is a lightweight, cost effective built-up vegetative roof system consisting of a drainage layer, filter layer, and water retention layer. Columbia Green Extensive growing media, engineered to maximize stormwater retention and plant health, is used in this system. Able to fit nearly any design, this system can be used on any roof layout since the layers can be easily cut on-site to fit curves and angles. These layers provide a viable foundation for the growing media and plant materials.

The extensive layered system is designed for stormwater management. It detains and retain rain and irrigation water, to reduce or eliminate roof runoff. The system supports healthy root systems by allowing airflow under and up through the multilayered system. This high level of air permittivity throughout the individual layers also aids in de-energizing air flow under the system thus reducing the chance of system uplift. The underlying waterproof membrane is protected with the use of a root barrier or protection layer if needed per the membrane requirements.

Growing media depths should be based on root space requirements for plant material selected, structural requirements, and stormwater retention goals. Extensive layered system are typically planted with low growing sedum or other regional groundcover adapted the rooftop environment. Growing media depths typically range from a minimum of 3-inches to 6-inches.



### **System Components:**

#### 1. 0.375" Drainage Layer

*Designed to mitigate excess moisture through ventilation and promote efficient drainage of the growing media*

- Description: .375" thick highly permeable three dimensional entangled polypropylene matrix
- Installation: Do not overlap material. Install parallel to slope.

#### 2. Filtration layer

*Adhered to the Drainage Layer, prevents erosion of the growing media*

- Description: Durable spun-bonded polyester with non-directional weave
- Installation: Overlap using provided 3" seams

#### 3. 0.1" Water Retention Layer:

*Provides supplemental moisture retention for green roof plants, and anchorage for plant roots*

- Description: High loft nonwoven polyester blanket with anchorage points for promoting solid root structures
- Installation: Do not overlap material. Install perpendicular to slope.

#### 4. Growing Media: Columbia Green Extensive Growing Media, Regionally Sourced

*See Columbia Green Growing Media Technical Information Sheet*

#### 5. Plants: Low profile, typically pregrown sedum or sedum plugs and cuttings. Selected by Designer

### **Storage:**

- Store components in a dry area.
- Store away from sources of ignition and extremely high temperatures.

### **Precautions:**

- Avoid prolonged exposure to sunlight, heat, sparks and open flames.
- Wash exposed skin prior to eating, drinking or smoking and at the end of each shift.

**LEED Information:**

Post-Consumer Recycled Content and Manufacturing Locations:

- Drainage Layer 40% ; Euclid, Ohio 44117
- Filtration Layer 0% ; Euclid, Ohio 44117
- Water Retention Layer Michigan City, IN 46360

**System Weight\*:**

*.375" Drainage Layer, 1" Water Retention Layer, includes 2 lbs/s.f. plant material weight (plugs or cuttings)*

System Depth	Dry Weight	Saturated Weight
3" Media Depth	11-14 lbs./ft <sup>2</sup>	20-24 lbs./ft <sup>2</sup>
4" Media Depth	14-18 lbs./ft <sup>2</sup>	26-30 lbs./ft <sup>2</sup>
6" Media Depth	20-26 lbs./ft <sup>2</sup>	37-43 lbs./ft <sup>2</sup>

*\* System weights vary by region due to variances in growing media weight contact your local representative for more information.*

**Packaging/Component Size:**

<b>1.0" Water Retention Layer, ML2001</b>	
Thickness:	1.0" +/- 0.1"
Dimension:	90"W x 54'L
Color:	White
Coverage:	400 ft <sup>2</sup>
Weight:	5.1 oz./yd <sup>2</sup>
Packaging:	30"± dia. roll

<b>Filter Layer: Pre-attached to Drainage Layer</b>	
Weight:	3 oz./yd <sup>2</sup> (0.33 oz./ft <sup>2</sup> )

<b>0.375" Drainage Layer, ML2007</b>	
Thickness:	0.40"
Dimension:	48"W. x 100'L.
Coverage:	400 ft <sup>2</sup>
Weight:	17 oz./yd <sup>2</sup> (1.88 oz./ft <sup>2</sup> )
Packaging:	24"± dia. roll

