

## Planted-In-Place Tray System

(Patented: 7,603,808)

### Description:

The Planted-In-Place green roof system encompasses all the benefits of a standard vegetated roof while offering a system that is:

- Simple to install
- Offers integral drip irrigation
- Minimizes material and maintenance costs
- Shortens lead time
- Maximizes design possibilities
- Interlocking design for superior *ANSI/SPRI RP-14 Wind Design Standard* classification

Utilizing a tray system as its base, the Planted-In-Place system is easy and efficient to install. Empty trays are first laid out and pinned together, then they are filled with growing medium and planted. This installation process is designed to be cleaner, less wasteful, and may require less labor than other construction methods. Comprised of a heavy duty recycled polypropylene, the tray is designed to be placed directly on top of almost any roofing membrane system and eliminates the need for additional drainage, filtration or root barriers.

The Planted-In-Place Tray System is offered with integrated drip irrigation, eliminating the need for hand watering and ensuring the lasting health of the green roof. Additionally, the Planted-In-Place system offers variable growing medium depth (from 5.25" – 8") and more planting options than traditional pre-grown tray solutions. This allows for greater design flexibility and a unique look for each installation.

The channelized tray bottom is designed to maximize stormwater retention. It can reduce the amount and the rate of stormwater run-off and is capable of retaining up to 70% of annual precipitation. Detailed stormwater retention calculations and hydrographs are available upon request.

The drip irrigation system consists of a supply header and components inside the perimeter of the tray layout including; drip tape, tape ell's, drip tee's, compression barb fittings, threaded male point of connection for the header and a capped fitting for the opposing end of the header. Please see the Drip Irrigation technical information sheet for more detailed information.

### Planting Options:

- Planting design is fully customizable. Options include sedum cuttings, sedum plugs or fully vegetated sedum tiles or mats for full coverage. Small accent ornamentals up to 4"-pots can also be included. Please contact Columbia Green Technologies for more information.

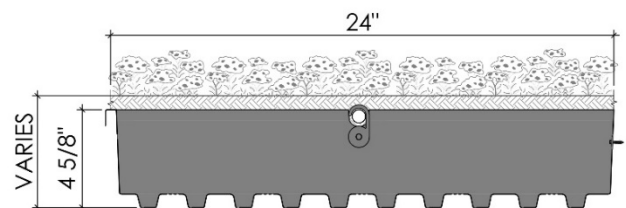
### LEED Information:

- Post-Consumer Recycled Content: 88%
- Manufacturing Location: Washougal, WA 98671

### Declare Label for Materials Transparency:



The Declare Label is a voluntary disclosure of building material ingredients which offers Living Building Challenge and other project teams concerned about building product ingredients a guide for product specification. Our tray system is 'Red List Free' which means it doesn't contain "worst in class" materials, chemicals, and elements known to pose serious risks to human health and the greater ecosystem. [www.declareproducts.com](http://www.declareproducts.com)



**Wind Uplift:**

- ANSI/SPRI RP-14 Wind Design Standard for Vegetative Roof Systems is the only wind uplift standard for the U.S.A.
- Due to the interlocking design, The Planted-In-Place Tray is considered a #2 Ballast system (Increased wind uplift resistance).
- Please request a copy of the ANSI/SPRI RP-14 User Guide.

**System Weights:**

*Includes 2 lbs/s.f. (plugs or cuttings) for plant material weight; add 2.5 lbs./ft<sup>2</sup> for sedum mats and tiles*

<b>System Depth</b>	<b>Dry Weight</b>	<b>Saturated Weight</b>
5.25" Media Depth	17 - 22 lbs./ft <sup>2</sup>	29 - 34 lbs./ft <sup>2</sup>
6" Media Depth	19 - 25 lbs./ft <sup>2</sup>	33 - 39 lbs./ft <sup>2</sup>
7" Media Depth	22 - 29 lbs./ft <sup>2</sup>	38 - 46 lbs./ft <sup>2</sup>
8" Media Depth	25 - 33 lbs./ft <sup>2</sup>	44 - 52 lbs./ft <sup>2</sup>

*\* System weights vary by region. Contact your local representative for information on weights for your specific project*

**Packaging/Component Size:**

<b>Empty Tray:</b>	
Thickness:	100 MIL.
Dimension:	24"W. x 24"L. X 4.625"
Coverage:	4 ft <sup>2</sup>
Weight:	3.65 lbs. per tray
Packaging:	Stacked – 400 trays/pallet

**Installation:**

1. Prior to installation, it is the Project Representative's responsibility to consult with a registered structural engineer to determine whether the structure is adequately reinforced to withstand the weight of a fully saturated vegetative tray.
2. Perform tray installation only after a representative from the roofing membrane manufacturer has inspected the membrane and found it to be in accordance with the membrane manufacturer's specifications.
3. Place the vegetative trays directly on the roofing membrane or protective layer as determined by the membrane manufacture.
4. Using the interlocking sides, overlap the vegetative trays.
5. Secure the trays to each other using the removable pin fastener. Place hooks with pins when irrigation is specified.
6. Place optional irrigation system. (See Drip Irrigation for Tray System Technical Information Sheet for more information)
7. Add growing media to a depth in accordance with the design plans and specifications.
8. Add vegetative cover. *\* Fully saturate growing media when installing sedum tiles or mats.\**
9. After all trays have been installed, irrigate plant material to ensure growth.

**Storage:**

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

**Precautions:**

- Confirm with a certified Structural Engineer that the structure can support the vegetative roof saturated weight.
- To facilitate drainage a minimum roof slope of 1/8" in 12" min. must be provided.
- System components should not be installed when the weather is below 45 °F (7.2 °C) or above 95 °F (35 °C).
- Use caution when lifting trays and do not drag modules into position.
- Check roof drains regularly to ensure there are no obstructions to impede water flow.
- Wash exposed skin prior to eating, drinking or smoking and at the end of each shift.