

Managing For Sustainability.
Financially Beneficial.
Protection For Decades.



Roofing Solutions For Facility Managers



A vegetated roof from Tremco is one of the most environmentally responsible, attractive and cost-effective solutions available to the swelling demand for *sustainable* facility construction and management. Building owners, corporate sustainability officers and facility managers are recognizing the vital role a vegetated roof can play in:

- Helping manage water discharge
- Reducing facility operational costs
- Increasing energy efficiency
- Improving air quality
- Increasing the roof's life cycle
- Increasing the overall appearance and value of their buildings
- Reducing occupant stress
- Helping a facility attain LEED certification



Managing Storm Water Run-off, Reducing Costs And Increasing Comfort

Tremco's vegetated roofing systems – composed of a protective waterproofing assembly, integrated leak detection and a layer of plants embedded in a growing medium – address several sustainability and facility operations issues.

By absorbing large amounts of rainwater (as much as 70%), vegetated roofs slow down, filter and reduce the volume of water flowing into our overburdened sewer systems. This can lower your storm water fees while reducing stress on the systems. It can also eliminate the need to build costly storm water retention facilities on your property.

Vegetated roofs retain very little heat, unlike traditional roofs, so they do not raise building temperatures. This can help improve HVAC efficiency, lowering your energy spend by as much as 15% depending on where you're located. Through evapotranspiration, the plants and soil of vegetated roofs even help cool the air to lessen the effects of Urban Heat Islands (UHIs). UHIs occur in areas with little vegetation and an abundance of such dark surfaces as roofs, streets and parking lots.

Complementing this is the fact that the plants on a vegetated roof can further improve air quality by lowering greenhouse gases and airborne particulates.

Finally, studies have shown that vegetated roofs have a stress-lowering, therapeutic effect on people. They make facilities more comfortable by helping moderate the temperature and reduce building noise. Some designs may even attract such desirable wildlife as butterflies and songbirds. You won't find those benefits with traditional roofs.

Flexible, Customized Solutions And The Industry's Most Extensive Warranty

Every vegetated roofing system must meet the unique requirements of its owner. That's why Tremco creates a multi-disciplinary team of internal and external experts to develop a solution tailored for you. Our vegetated roofs are typically composed of:

- A protective, built-in-place waterproofing assembly
- Membrane options depending on the application
- Integrated leak detection
- Growing media that are custom-blended and laboratory-tested to ensure that they are correct for the plants and the environment
- Vegetation that is chosen to meet your requirements while being appropriate for the climate.

Highly successful landscape designers bring your ideas to life on the roof. An on-staff horticulturalist even ensures the correct selection of plants and maintenance protocols.

Only Tremco can mitigate your risk by managing the entire project, from the first meeting to the final inspection, including all contractors. We continue your protection with the industry's most comprehensive warranty, assuming complete responsibility for the vegetated roof for as long as 20 years, with scheduled maintenance, housekeeping, and problem response and resolution. Our warranty even provides extraordinary coverage for plant growth and performance.

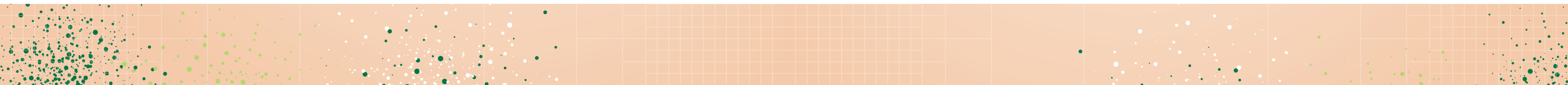
Tremco supports the sustainability of the entire building, not just the roof. Working with you to renovate, restore and maintain your buildings extends their useful life while minimizing waste and reducing the amount of material headed for landfills. Our patented Tremco ManagedAssets™ program assumes technical and financial responsibility for keeping buildings dry at a firm, fixed price; if there's a problem, it's on us.

Longer Roof Life Through Superior Weathering Protection

The redundant layers of a vegetated roof from Tremco provide extraordinary weatherproofing capabilities. This not only helps keep your building dry but actually extends the life of your roof. With proper maintenance, your Tremco vegetated roof should last for decades, saving you money on roof repair, restoration or even replacement.

No other company offers Tremco's commitment to sustainability, degree of customization, single-source responsibility and extensive warranty. That's why our vegetated roof system customers include key high-profile institutions across multiple industries in all climates.

To learn more about Tremco's customized vegetated roofing solutions, contact one of our representatives today.

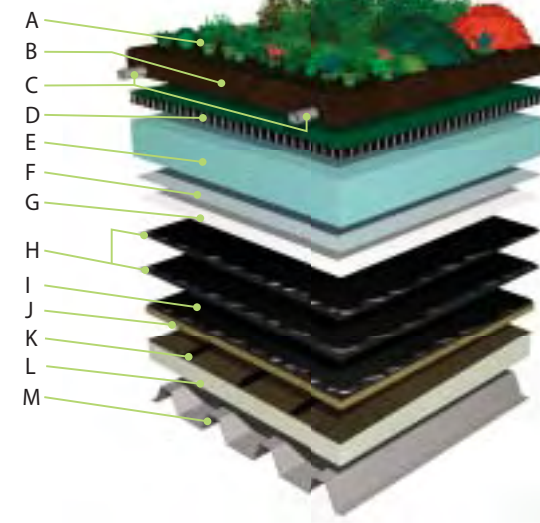


Vegetated Roofing Systems

Extensive



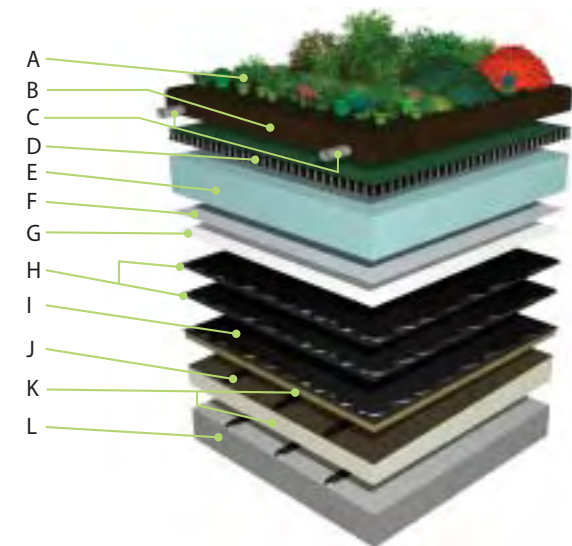
Extensive Metal*



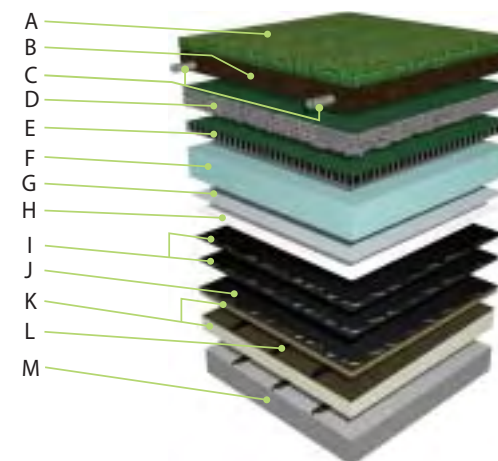
- A. Vegetation
- B. Engineered Growing Medium
- C. Optional Sub-Surface Irrigation
- D. Drainage Board (Water Drain VR)
- E. Extruded Polystyrene Insulation
- F. Membrane Protection Sheet (Polymat VR)
- G. Thermoplastic Cap Shield (Heat-Welded TPA Root Barrier)
- H. Two-Ply Base Membrane
- I. Hot or Cold Modified Asphalt
- J. High-Density Wood Fiber Coverboard
- K. Tremco Fas-n-Free® Adhesive
- L. Optional Tapered Insulation for Flat Decks
- M. Metal Deck

Extensive Concrete*

- A. Vegetation
- B. Engineered Growing Medium
- C. Optional Sub-Surface Irrigation
- D. Drainage Board (Water Drain VR)
- E. Extruded Polystyrene Insulation
- F. Membrane Protection Sheet (Polymat VR)
- G. Thermoplastic Cap Shield (Heat-Welded TPA Root Barrier)
- H. Two-Ply Base Membrane
- I. Hot or Cold Modified Asphalt
- J. Tremco Fas-n-Free® Adhesive
- K. Optional Tapered Insulation and HD Coverboard
- L. Concrete Deck



Extensive Turf*



- A. Grass
- B. Engineered Growing Medium
- C. Optional Sub-Surface Irrigation
- D. Aggregate
- E. Drainage Board (Water Drain VR)
- F. Extruded Polystyrene Insulation
- G. Membrane Protection Sheet (Polymat VR)
- H. Thermoplastic Cap Sheet (Heat-Welded TPA Root Barrier)
- I. Two-Ply Base Membrane
- J. Hot or Cold Modified Asphalt
- K. Optional Tapered Insulation and HD Coverboard
- L. Tremco Fas-n-Free® Adhesive
- M. Concrete Deck

*For illustration purposes only; each system is custom-designed to be project-specific.

Extensive Metal and Concrete

Extensive vegetated roofing systems use shallow beds that support only hardy, low-growing vegetation. They require minimal maintenance and irrigation.

Extensive Turf

Tremco's Extensive Turf System uses relatively shallow growing media depths of 5"–6" to create a healthy growing environment for almost any type of rooftop turf application. Customized for specific end-user applications, these systems also include an aggregate layer, the latest in sub-surface irrigation and fertigation technology and drainage components.

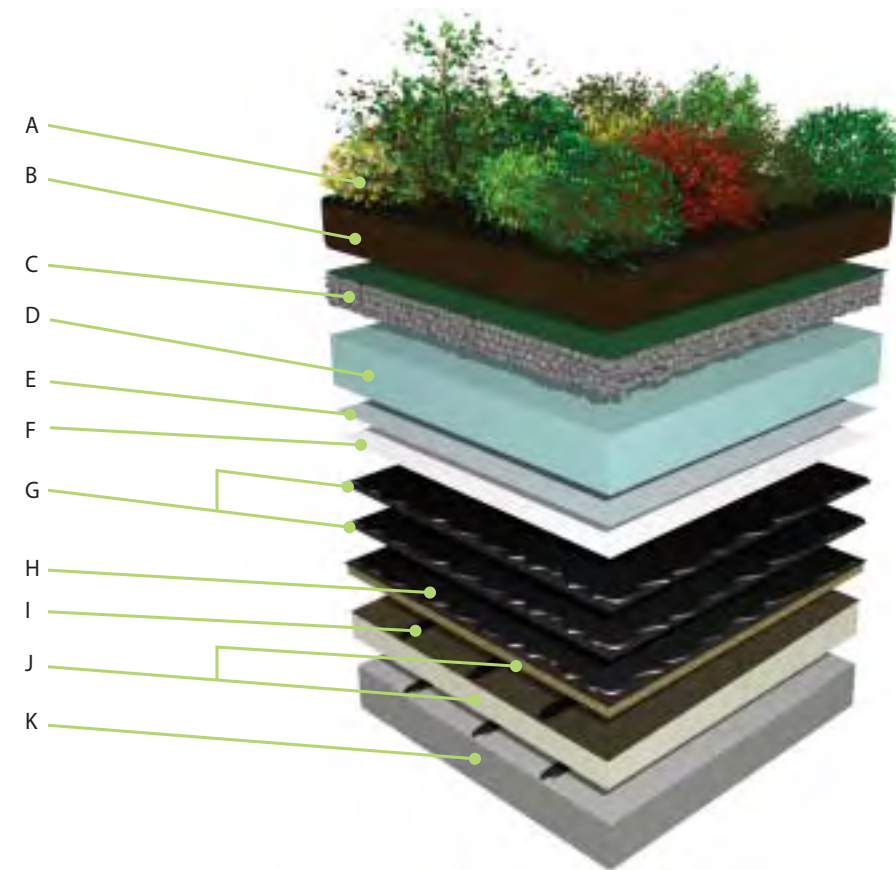
Vegetated Roofing Systems

Intensive



Intensive Concrete*

- A. Vegetation
- B. Engineered Growing Medium
- C. Coarse River Rock Aggregate Topped with Filter Fabric
- D. Extruded Polystyrene Insulation
- E. Membrane Protection Sheet (Polymat VR)
- F. Thermoplastic Cap Sheet (Heat-Welded TPA Root Barrier)
- G. Two-Ply Base Membrane
- H. Hot or Cold Modified Asphalt
- I. Tremco Fas-n-Free® Adhesive
- J. Optional Tapered Insulation and Dens-Deck Coverboard for Flat Decks
- K. Concrete Deck



Intensive Concrete

Deeper-bed intensive systems can grow a wider variety of plants and even small trees, making them more aesthetic and garden-like. This system requires regular maintenance and, to support its increased weight, additional structural support may be necessary.

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