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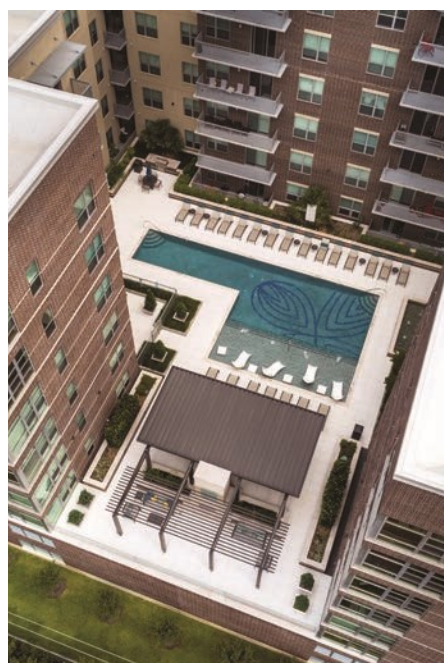
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Cummins Distribution Headquarters, Indianapolis, IN; Owner: Cummins Inc.; Architect of Record: Ratio Architects; Landscape Architect: DAVID RUBIN Land Collective; Size & Color: 11 3/4" x 35 3/8", 11 3/4" x 47 1/8", Charcoal, Glacier White, #M1187, #M2296, Natural, Super Black; Finish: Tudor®

The application of an elevated paver system provides the designer with new possibilities and advantages. Hanover® Pavers are offered in both a standard color range (see pages 44 and 45) and custom aggregate blends. Striping, banding and paving patterns are just a few of the design capabilities made possible by mixing various paver colors, sizes and finishes. A textured Tudor® finish provides slip resistant properties. Safer than gravel ballast, Hanover® Pavers make roofs and plazas safe for pedestrians and simplify repairs.



Above and Top Right Photos: Pearl 21 Eleven, Houston, TX; Architect: Meeks + Partners; Landscape Architect: Robinson & Co.; Size & Color: 29 3/4" x 29 3/4" x 2", Cream; Finish: Tudor®



By elevating the pavers, water is channeled away from the surface. Roof Pavers allow easy access to the roof and waterproofing system for repairs or standard maintenance procedures. Whether your project is a roof, deck, plaza or terrace, Hanover® Roof Pavers are serviceable, functional and attractive.

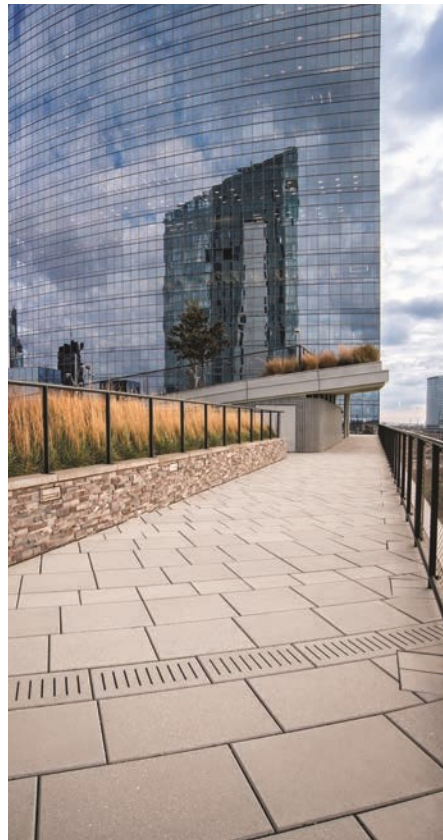
ROOF AND PLAZA PAVERS

SIZES:	Range from a nominal 12" x 12" to a nominal 24" x 48"
THICKNESS:	2" (Other thicknesses available.)
WEIGHT:	25 lbs/sf (Other thicknesses result in different weights.)
FINISH:	Tudor® for aesthetic and visual applications
COLORS:	8 standard colors - Quarry Red, Charcoal, Natural, Red 15, Tan, Brown, Cream, Limestone Gray Custom color and aggregate blending are available on special order when quantities permit.

Refer to pages 44 and 45 for paver colors.

HANOVER® ROCKCURB® FOR ROOF APPLICATIONS

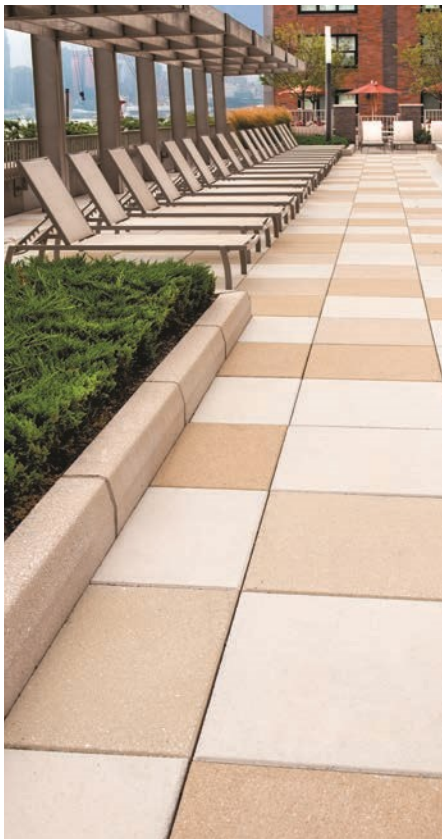
Hanover® RockCurb® is an integral part of green building projects, helping to earn Sustainable Sites Credits and achieve LEED points. Working with green roof assemblies to provide environmental benefits and aesthetically appealing rooftop gardens, RockCurb® can be used to separate green areas from hardscaped areas.



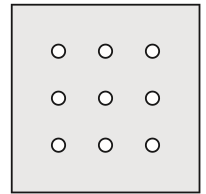
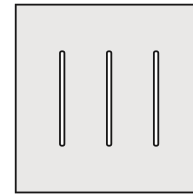
Above Photo: Cira Green at Cira Centre South, Philadelphia, PA; Architect: Erdy McHenry Architecture; Landscape Architect: RoofMeadow; Owner: Brandywine Realty Trust; Size & Color: Various sizes, Natural; Finish: #13, Tudor®

Right Photo: Logan Square Luxury Apartments, Chicago, IL; Architect: Brininstool + Lynch; Size & Color: 23 1/2" x 23 1/2", 23 1/2" x 35 3/8", Charcoal, Limestone Gray; Finish: Tudor®

Below Photo: Roberts Center for Pediatric Research, Philadelphia, PA; Owner: Childrens Hospital of Philadelphia; Architect: The Ballinger Company, Landscape Architect: Ground Reconsidered; Size & Color: Various Sizes, #M2027, #M3550, #M3552; Finish: Tudor®

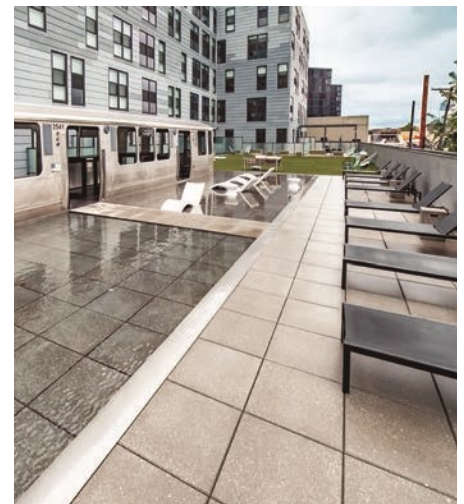


Estuary at Lincoln Harbor, Weehawken, NJ; Developer: Roseland Property; Landscape Architect: Marchetto Higgins Stieve; Size & Color: 23 7/8" x 23 7/8", 12" x 36" x 6" Battered RockCurb®, Cream, #M1929, #M1704; Finish: Tudor®, #13



DRAINAGE PAVERS

Hanover® Drainage Pavers, are available upon request. They can be manufactured with holes or slots depending on the project requirements.

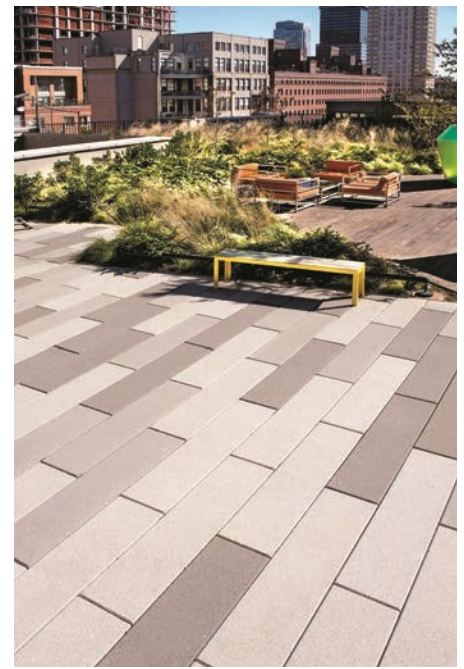




Large and Right Photos: 70 Columbus, Jersey City, NJ; Architect: Gwathmey Siegel Kaufman Architects llc; Size & Color: Various Sizes, #M1041, #M2310, #M3583; Finish: #12, #13

Green roofs provide shade and remove heat from the air, reducing temperatures of the roof surface and the surrounding air. On hot days, the surface temperature of a green roof can be cooler than the air temperature. The surface of a conventional rooftop can be up to 90°F warmer. Because green roofs absorb heat and act as insulators for buildings, energy consumption is decreased and the heat island effect is reduced.

Green roofs can be installed on a wide range of buildings. They can be as simple as groundcover



or as complex as a plaza area complete with trees. The popularity of green roofs is increasing as its value is appreciated.

Hanover® Prest® Pavers work hand in hand with Green Roof assemblies to provide environmental benefits and aesthetically appealing rooftops or plaza gardens. From planted areas which incorporate topsoil and mulch to grassy areas over a layer of soil or lightweight gravel fill, Hanover® Pavers are an integral part of these energy-efficient roofs. Pavers can be used to create walkways, terraces or seating areas while providing positive drainage.



Georgia Technical University, G Wayne Clough Undergraduate Learning Commons, Atlanta, GA; Design Architect: Bohlin Cywinski Jackson; Size & Color: 23 1/2" x 23 1/2", 11 3/4" x 23 1/2", Glacier White, M1636; Finish: Tudor®

HANOVER® PAVERS ARE AN INTEGRAL PART OF ENERGY-EFFICIENT GREEN ROOF DESIGN.



GLACIER WHITE TUDOR® FINISH

SOLAR REFLECTANCE AND HEAT EMITTANCE

Hanover® can provide pavers with reflectance and emittance values. Solar Reflectance is the ratio of the amount of solar radiation reflected from a surface to the total amount reaching that surface. Emittance refers to a material’s ability to release absorbed heat. The Solar Reflectance Index (SRI) is a value that incorporates solar reflectance and emittance in a single value to represent a material’s temperature in the sun. Hanover’s Glacier White with Tudor® finish, shown above, has high reflectance, emittance and SRI values. These values are a critical element in the roof’s ability to reduce heat consumption. Contact Hanover® for most current information and test results.



Cira Green at Cira Centre South, Philadelphia, PA; Architect: Erly McHenry Architecture; Landscape Architect: RoofMeadow; Owner: Brandywine Realty Trust; Size & Color: Various sizes, Natural; Finish: #13, Tudor®



HANOVER® & LEED POINTS

The U.S. Green Building Council (USGBC) provides standards for green building design and construction based on LEED Green Building Rating System. Building projects earn points for compliance with Sustainable Sites (SS) Credits. The total points earned result in an overall rating for the building from Certified to Platinum. Hanover® Prest® Pavers are an integral part of green building projects, helping to earn SS Credits and achieve LEED points.



Above and Right Photos: 101 Seaport, Boston, MA; Landscape Architect: Copley Wolf-Design Group; Size & Color: 23 1/2" x 23 1/2" x 2", Charcoal, Glacier White; Finish: Tudor®





All Photos: University View, College Park, MD; Owner: University View Partners LLC; Architect of Record: WDG Architecture; Landscape Architect: Macris, Hendricks & Glascock; Size & Color: 23 1/2" x 23 1/2" x 1 13/16", Natural; Finish: Diamond

(vs. stone ballast) with lower installation and maintenance expenses. By creating a limited pedestrian walkway, Roof Ballast Pavers make roof inspections safer and easier compared to stone ballast. When installed to completely cover the protected membrane, they shield the membrane from punctures, cuts and ultraviolet ray damage.

PAVERS FOR LIGHTWEIGHT BALLAST

When the roof design will not accommodate the load of a standard paver, Hanover® offers Pavers for Lightweight Ballast, weighing 15 lbs/sf. Sized at 11 3/4" x 23 1/2" x 1 1/4" and 23 1/2" x 23 1/2" x 1 1/4", Lightweight Ballast Pavers are manufactured in a Natural color and Diamond finish. These may be installed on a protected membrane system for ballasting and limited pedestrian use. However, Hanover® Pavers for Lightweight Ballast are not normally recommended for pedestal applications, particularly if pedestrian access is anticipated.

STANDARD PAVERS FOR WALKWAY AND BALLAST

When the project requires an economical roof ballast paver, Hanover® offers a standard paver, stocked in a Natural color and a non-slip Diamond finish. A wide range of sizes are available at a 1 13/16" thickness and a weight of 23 lbs/sf. Unlike river gravel which has been known to be hazardous, pavers used as ballast or walkways provide a durable, safe method of protecting the roof system.

Hanover® Roof Ballast Pavers reduce roof life cycle costs

STANDARD AND LIGHTWEIGHT BALLAST PAVES FINISH



FINISH: Diamond

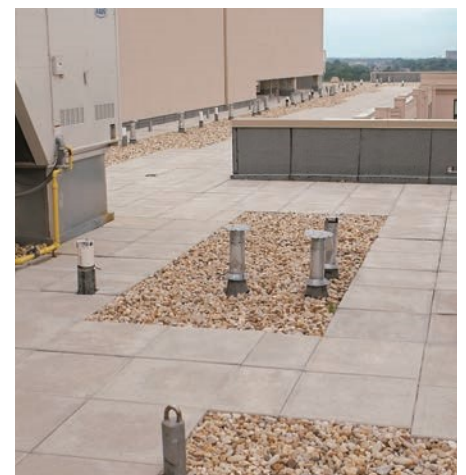
COLOR: Natural

Diamond is a ballast paver finish. It is not recommended for aesthetic projects.

Pavers can be ordered in color when quantities permit.

PLEASE NOTE: It is not recommended that diamond or stipple finish Prest® Pavers be used on applications in which aesthetics are of importance. (Surface blemishes are considered a normal characteristic with this product and should be expected.)

Natural color Prest® Pavers have a tendency to vary in color within any given shipment. It may vary in shade from gray/buff to light gray, and even to a darker gray. This variance should be expected and considered normal for the Natural color Prest® Pavers.

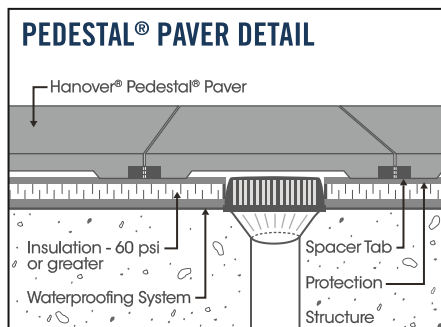




Stadium at Princeton University, Princeton, NJ; Architect: Rafael Vinoly Architects PC, New York, NY; Size & Color: 23 1/2" x 23 1/2" x 2 1/4" Pedestal® Paver, Natural; Finish: Diamond

For use as an alternative to the polyethylene pedestal systems, Hanover® Pedestal® Pavers are produced with an integrated concrete foot. The foot elevates the paver providing 1/2" elevation clearance for water drainage. The need for polyethylene pedestals is eliminated. The waterproofing assembly is protected from weather and UV light and pedestrian access is permitted.

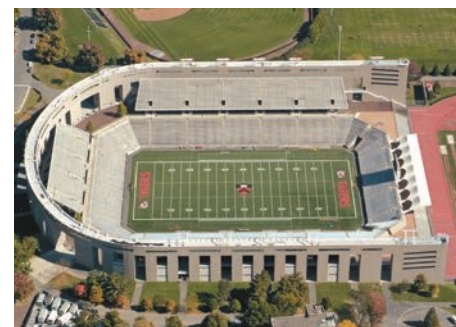
With a weight of 22 lbs/sf, Pedestal® Pavers are available in economical ballast finishes. When aesthetics are important, the Tudor® finish should be used.



HANOVER® SPACER TABS

In order to keep joints consistent when installing Hanover® Pedestal® Pavers, Spacer Tabs are available. Not visible from the surface after installation is complete, these flexible rubber-like spacers are placed between each paver to maintain an even 1/8" joint and provide water access to below surface drainage. Spacer Tabs are available in an "X" or "T" shape to accommodate various paving designs.

HANOVER® PEDESTAL® PAVERS	
SIZE:	23 1/2" x 23 1/2" x 2 1/4"
WEIGHT:	22 lbs/sf
ELEVATION CLEARANCE:	1/2"
FINISH:	Tudor® for aesthetic and visual applications; Diamond for walkway and ballast applications
COLORS:	8 standard colors - Quarry Red, Charcoal, Natural, Red 15, Tan, Brown, Cream, Limestone Gray Custom color and aggregate blending are available on special order when quantities permit.
Refer to pages 44 and 45 for paver colors.	

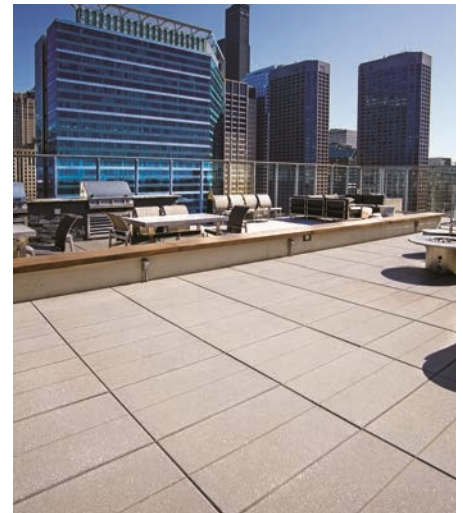


32 Hanover® Pedestal Systems

Effectively draining water from a roof or plaza is a critical issue for every building. By using an elevated paver system, water is channeled away from the roof surface, reclaiming lost space. Hanover® has developed several pedestal systems to achieve level plaza deck surfaces – even those with unusual slope-to-drain configurations. Hanover® Pedestal Systems are created to work together to accommodate a variety of roof slopes.

- High-Tab® Pedestal
- Flexible Leveling Shims
- EPDM Pedestals and Shims
- Elevator® Pedestal System
- Compensator® Leveling System

Please Note: 12" x 12" and PlankStone® Prest® Pavers are not recommended for pedestal set applications due to the size proportionate to the pedestal base. Stabilization of the system is difficult.



Hanover® Pedestal Systems | HIGH-TAB® PEDESTALS



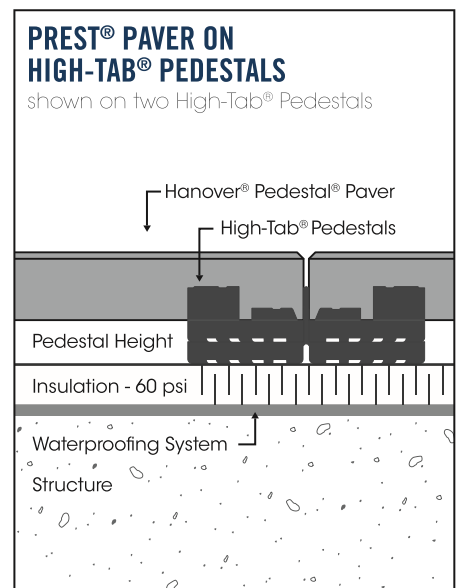
All Photos: Catalyst, Chicago, IL; Owner: Marquette Companies, Architect: Brininstool + Lynch; Landscape Architect: Latlin Design Group; Size & Color: 23 1/2" x 35 3/8" with score, Charcoal, Limestone Gray; Finish: Tudor®

When leveling shims are needed, Hanover's High-Tab® Pedestal provides a spacer tab with increased height, greatly improving installations. Other pedestals lose

- Creates a more solid feel
- Increased spacer tab height
- Prevents paver misalignment
- Can be used with other Hanover® Pedestal Systems

spacer tab height as pedestals are stacked, allowing pavers to shift. The added spacer tab height of Hanover's High-Tab® will secure each paver in its proper location.

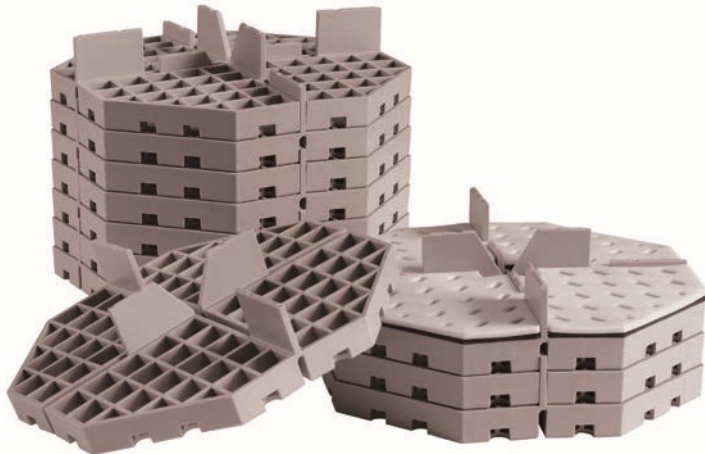
High-Tab® Pedestals can also be stacked without losing the performance of a higher spacer tab. High-Tabs can be turned and engaged – one into the other – in such a way that the integrity of the added tab height is still available from the top pedestal.



The illustration above shows a cross section of a roof deck installation. It is important to note the use of an insulation board with a minimum of 60 psi and also a protection layer placed between the insulation and the Pedestals.

Final leveling adjustments can be made with Hanover's flexible Leveling Shims. These shims are rubber-like, preventing paver movement and providing a more solid feel. They will not slide as they eliminate "rigid on rigid" placement. Thicknesses are available in 1/8" (white) or 1/16" (black). Leveling Shims may be separated into halves or quarters for individual paver adjustments. They can be used with Hanover's High-Tab® Pedestal and Hanover's Elevator® Pedestal System

HIGH-TAB® PEDESTAL WITH FLEXIBLE LEVELING SHIMS



FLEXIBLE LEVELING SHIMS

7" across flats
 1/8" thick : white
 1/16" thick : black



- Available in two thicknesses
- Color coded for easy identification
- Flexible, rubber-like material
- Eliminates paver movement
- Gives installation a more solid feel

SPACER TABS



Hanover® can provide rubber-like Spacer Tabs for joint consistency. Not visible from the surface after installation is complete, spacers are placed between pavers to maintain 1/8" joints. See page 31 for more information.

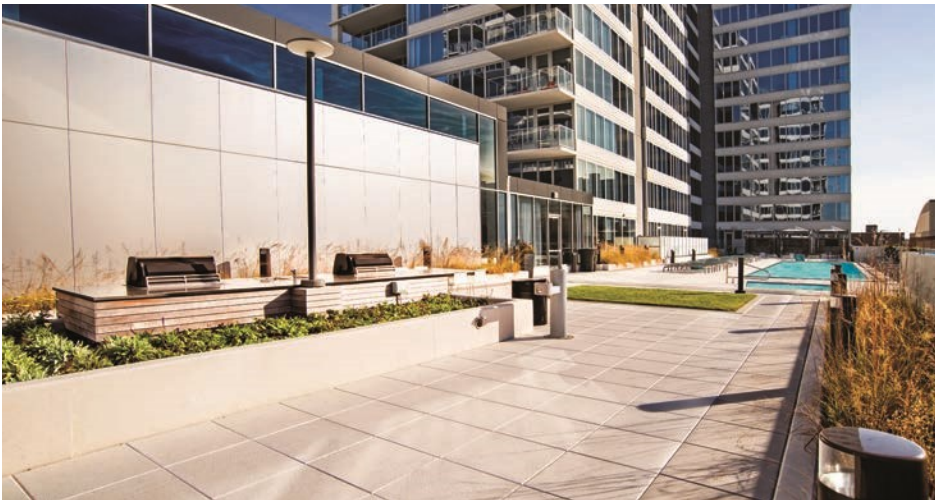
Hanover® Pedestal Systems | EPDM PEDESTALS & LEVELING SHIMS

Hanover's EPDM Rubber Pedestal is a flexible paver support pedestal, allowing the pavers to follow the contour of the roof. The EPDM Pedestal is suitable for both Architectural and Ballast applications where water drainage is required. When used in ballast applications, roof membranes are protected from the pavers. This 3/8" fixed height pedestal incorporates 1/8" spacer tabs and leveling shims to make installation easy. The EPDM rubber provides sound deadening qualities, is resistant to the ozone and severe weather conditions and creates a soft feel for walking. This pedestal is not stackable and must be considered only for low elevation support requirements.

Final adjustments can be made with Hanover's EPDM Leveling Shims. These shims prevent paver movement and provide a more solid feel. Thicknesses are available in 1/8" or 1/16".

HANOVER® EPDM PEDESTAL & LEVELING SHIMS





E2 Apartments, Evanston, IL; Architect: Fitzgerald Associates Architects; Structural Engineer: Wight & Company; Size & Color: Various Sizes, Charcoal, Glacier White, Limestone Gray, Finish: Tudor®

The Elevator® Pedestal System is an adjustable height pedestal system designed for elevated paver applications. Consisting of a Base, Top Plate, Coupler, StayBar®, and EdgeFinder™, the Elevator® System can accommodate paver heights above 2" up to 24". Components can be interchanged to achieve the desired height with precise adjustments being made with a simple turn.

TOP PLATE

Unlike any other pedestal, the Top Plate is equipped with pads that will quiet and secure the paver to the pedestal. Rigid-to-rigid (pedestal-to-paver) hard surfaces can create noise and paver movement when pedestrians walk across. The pads will help eliminate both conditions. The Top Plate incorporates spacer tabs.



ELEVATOR® PEDESTAL SYSTEM



Patent Pending

low tab or high tab, which set a uniform 1/8" space between pavers and aid with alignment. Four tab, three and no tab designs are available to accommodate various installation designs. The Top Plate provides over 42 square inches of bearing area.

COUPLER

As part of the Elevator® Pedestal System, Hanover® provides a Coupler to increase paver height by 2 1/2" - 4". Hanover's Coupler includes a circular flange with multiple holes, or eyelets, for ease of tie bracing. The ring of eyelets around the entire coupler, as well as the holes in the base, enables the installer to securely fasten wires quickly and easily when bracing is required.

STAYBAR®

Bracing is required for elevations above 16" and up to 24". For use with nominal 24" x 24" paver installations, Hanover® offers the StayBar® which fits firmly between Elevator® bases to prevent

HANOVER® PEDESTAL HEIGHTS

Please Note: Heights shown are pedestal heights only. For final paver installation height, add the thickness of the paver to the pedestal height.

Leveling Shims can be added to EPDM or High-Tab® Pedestals for final leveling adjustments.

Hanover® EPDM Pedestals are not stackable.



EPDM
PEDESTAL
3/8"



HIGH-TAB®
PEDESTAL
5/8"



2 HIGH-TAB®
PEDESTALS
1 1/4"



3 HIGH-TAB®
PEDESTALS
1 7/8"

movement of the assembly. Adequate stabilization is provided when used in conjunction with wire cross ties. Bracing should be achieved using a stainless steel 18 gauge wire, available through the MSC Catalog, part #31980188. Request installation guidelines for horizontal and cross bracing.

Please Note: StayBars are required for applications 16" and above. The ratio of StayBars to elevators is approximately 2 StayBars to every Elevator®. Quantities of StayBars may be more or less depending on the project. Make sure you have enough StayBars to secure all connections.

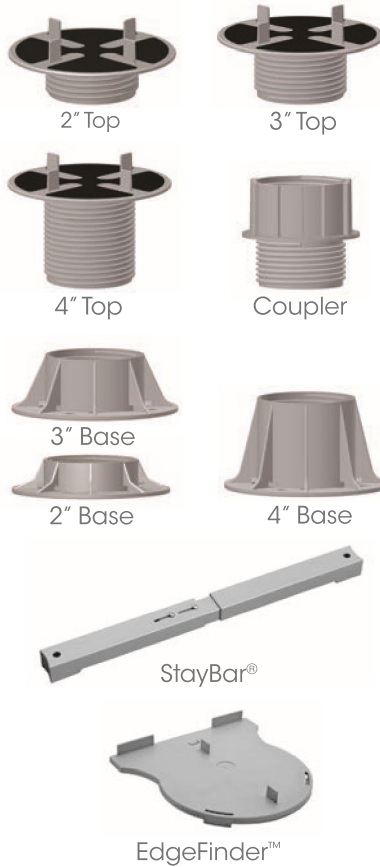
All specific configurations of cross tying should be reviewed with a Hanover® Sales Representative.



ELEVATOR® CROSS BRACING WITH STAYBAR®
Patent Pending

ELEVATOR® SYSTEM UNITS

PACKAGING: 50 PIECES/BOX



Please Note: All units are packaged separately.

Hanover's Elevator® Pedestal System meets:

- LA City Building Codes for Seismic Stability
- Flame Spread Requirements (CC1)

(ASTM D-1929 and D-635 for plastic materials)
Research Report: RR 25823 (CSI #10270)

NEW EDGEFINDER™



With one flat edge designed to act as an edge restraint, the EdgeFinder™ snaps securely onto the no tab Elevator® Top Plate when pavers must be terminated. This prevents pavers from "walking" and creates a more solid feel when transitioning from a paved area to a grass area or planting bed. EdgeFinder™ can be installed with the use of adhesive or metal straps. Contact Hanover® for installation guidelines.

The Elevator® can be used with other Hanover® Pedestal Systems. In order to accommodate required elevations in the most efficient manner, Hanover's Pedestal Systems can be used in various combinations. The chart below demonstrates possible height solutions using Elevator® System from 2" to 24". The High-Tab® Pedestal must be used for heights from 5/8" to 2".

HANOVER® ELEVATOR® PEDESTAL SYSTEM HEIGHTS

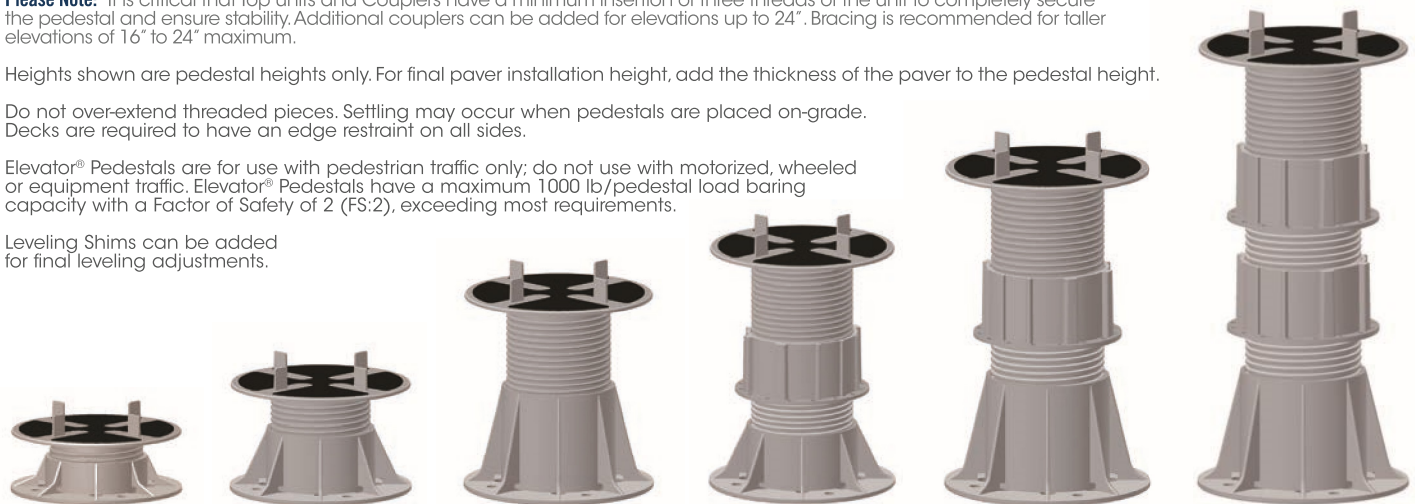
Please Note: It is critical that Top units and Couplers have a minimum insertion of three threads of the unit to completely secure the pedestal and ensure stability. Additional couplers can be added for elevations up to 24". Bracing is recommended for taller elevations of 16" to 24" maximum.

Heights shown are pedestal heights only. For final paver installation height, add the thickness of the paver to the pedestal height.

Do not over-extend threaded pieces. Settling may occur when pedestals are placed on-grade. Decks are required to have an edge restraint on all sides.

Elevator® Pedestals are for use with pedestrian traffic only; do not use with motorized, wheeled or equipment traffic. Elevator® Pedestals have a maximum 1000 lb/pedestal load bearing capacity with a Factor of Safety of 2 (FS:2), exceeding most requirements.

Leveling Shims can be added for final leveling adjustments.



2" BASE & TOP
2" - 3"

3" BASE & TOP
3" - 4 3/4"

4" BASE & TOP
4 3/4" - 7 3/4"

3" BASE, 4" TOP & COUPLER
7 3/4" - 10"

4" BASE, 4" TOP & COUPLER
9" - 12"

4" BASE, 4" TOP & 2 COUPLERS
12" - 16"*

*The use of additional couplers will attain heights up to 24". Heights of 16" to 24" require special bracing installation details.