2021 ARCHITECTURAL COLLECTION

NILOCIC

Bringing YOUR to Life

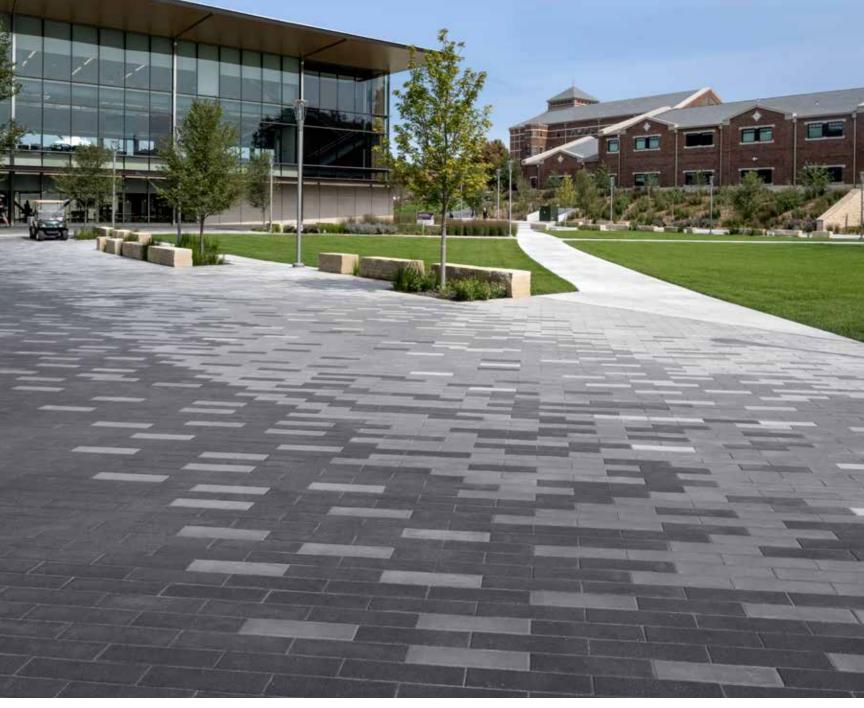
Designed and installed in some of the most prestigious commercial spaces in North America, Architects, Landscape Architects and Engineers trust Unilock to bring their architectural vision to life and to withstand the toughest rigor of a commercial environment.



CONFLUENCE. THE PAVERS SELECTED FOR THIS UNIVERSITY CAMPUS BRING PROMINENCE TO THE QUAD SPACE CREATING A 'THERE'.

DESIGNED BY





PROJECT: Kansas City University, Kansas City, MO. DESIGN: Confluence. PRODUCT: Promenade" plank pavers with Smooth Premier finish in Dark Charcoal, Steel Grey and a custom color.

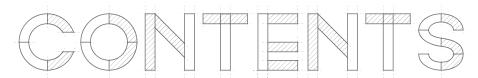
KCU transformed the entire west side of their urban Kansas City campus with the addition of the Center for Medical Education Innovation (CMEI). The campus was deficient in open and engaging pedestrian space for students to relax, socialize and study. The development of a new quad became the heartbeat of campus and the spatial glue that connects the proposed CMEI building to surrounding existing buildings – creating a 'there'.

The campus environment dramatically shifted from vehicular oriented to pedestrian focused with the quad and adjacent plaza. However, the project's

biggest hurdle was creating pedestrian focused space with the requirement of providing a 20' wide vehicular fire lane around the new quad. The incorporation of pavers would be crucial in creating a plaza environment that downplays the emergency access route. Establishing a strong paving pattern placed emphasis on the pedestrian experience while bringing prominence to the quad space. Unilock Promenade plank pavers with a Smooth Premier finish provided the desired color palette to contrast the gradation from true white to deep charcoal grey, offering the ideal paver that set the project up for success and brought together the design vision.



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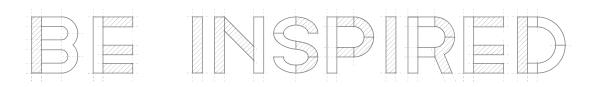
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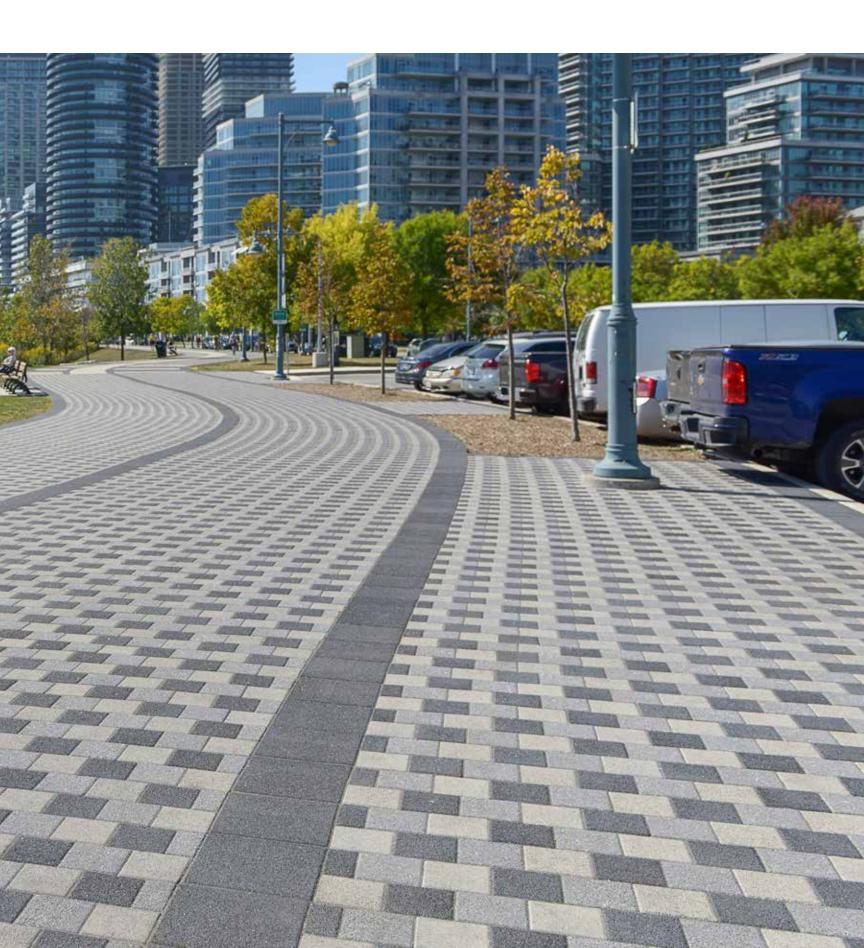
Got a pressing deadline? See which products you can get most quickly.

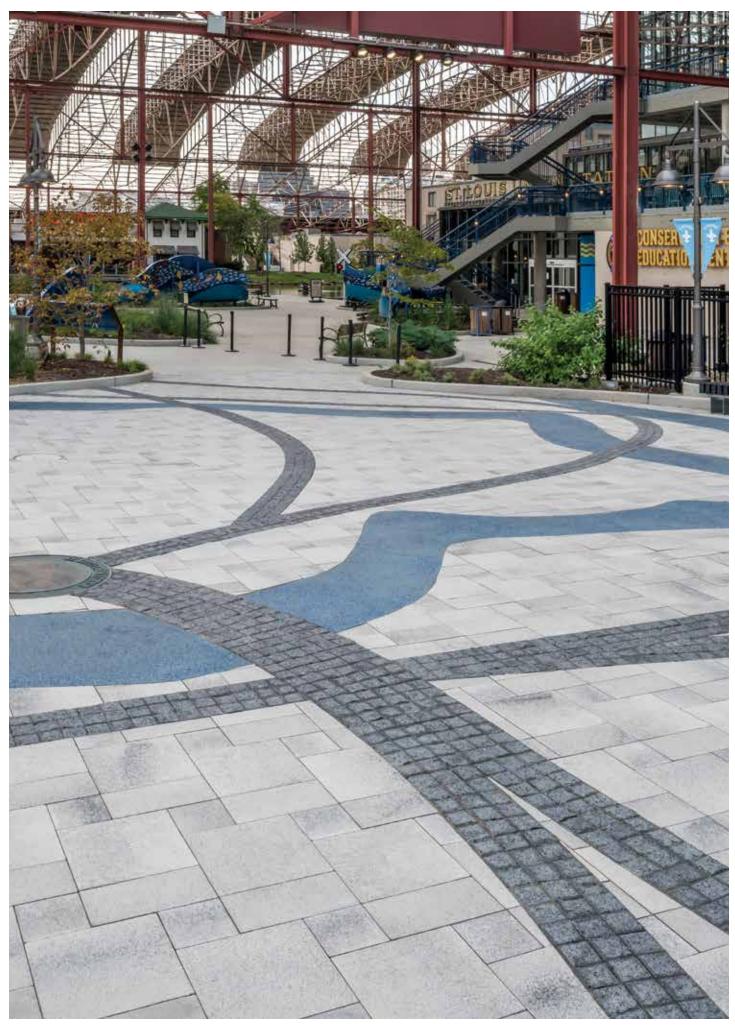
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The possibilities are endless. Let's see what we can create together.

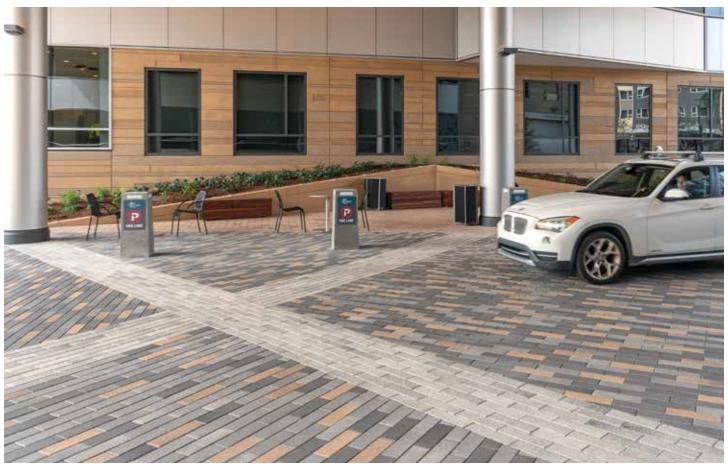
PROJECT: Humber Bay Shores Park, Toronto, ON. **DESIGN:** LEES+ Associates. **PRODUCT:** Squares with Series" finish in Black Granite, Ice Grey and Mountain Mist.







PROJECT: St. Louis Aquarium at Union Station, St. Louis, MO. DESIGN: PGAV Destinations. PRODUCT: Umbriano" in Winter Marvel. Unigranite" in Dark Charcoal.



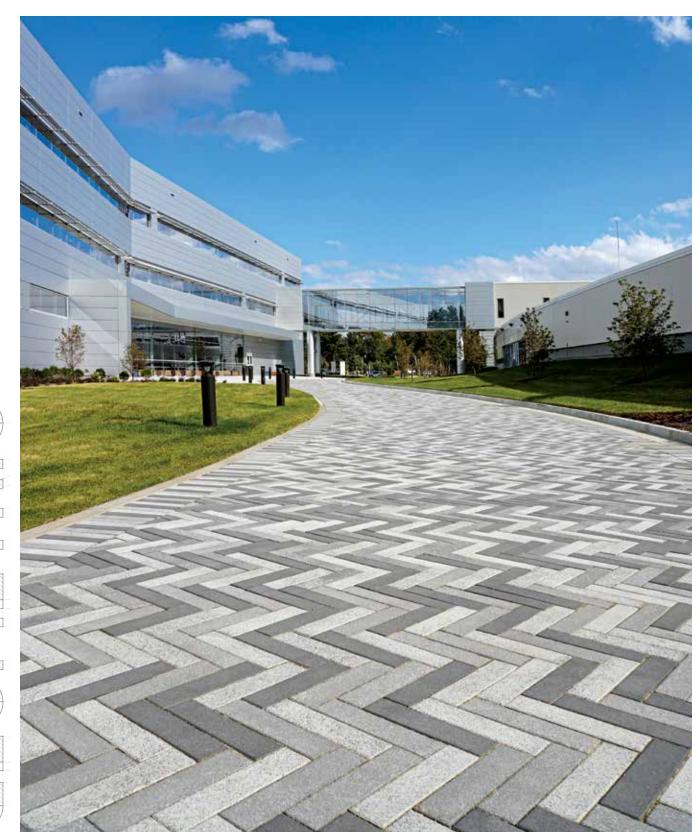
PROJECT: Cambridge Discovery Park, Cambridge, MA. DESIGN: Paul Finger Associates. PRODUCT: Planks with Umbriano" finish in Autumn Sunset, French Grey, Midnight Sky and Winter Marvel.



PROJECT: Mount St. Mary's, Cincinnati, OH. **DESIGN:** McGill Smith Punshon Design. **PRODUCT:** Umbriano" in Summer Wheat and Rectangles with Series" finish in Onyx Black



PROJECT: University of Delaware - Biopharmaceutical Innovation Center, Newark, DE. **DESIGN:** Ground Reconsidered. **PRODUCT:** Rectangles with Umbriano" finish in French Grey, Midnight Sky and Winter Marvel.



PROJECT: Corporate Park, Walpole, MA. DESIGN: Jacobs Engineers. PRODUCT: Planks with Umbriano" finish in French Grey, Midnight Sky and Winter Marvel.

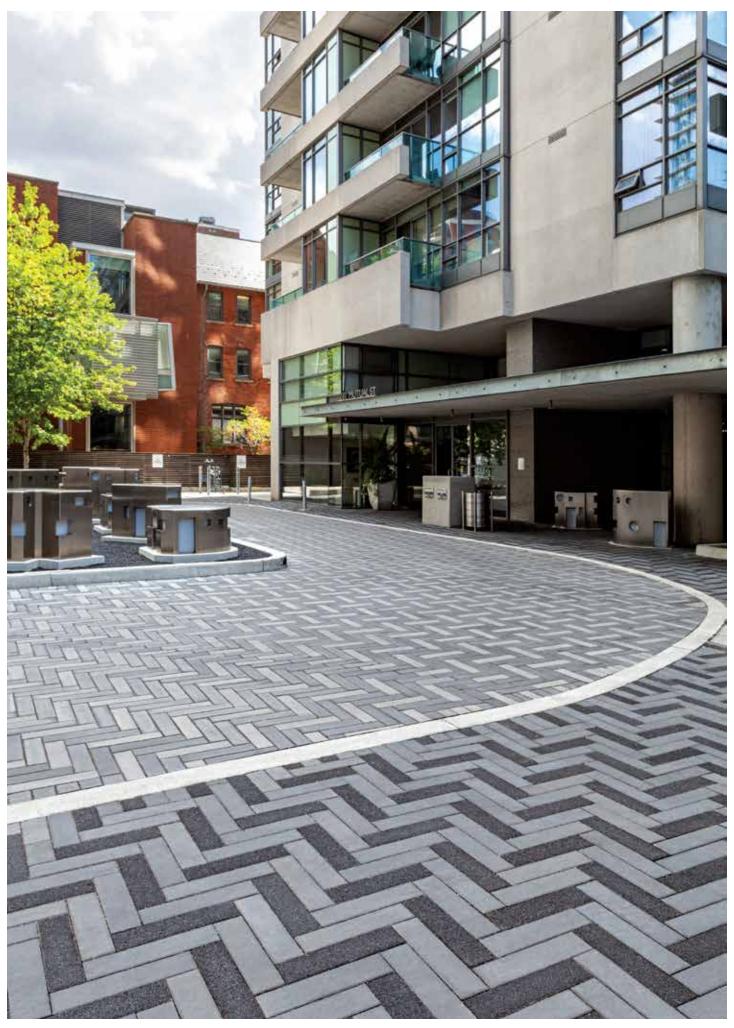
GEOMETRIC DESIGN has roots in prehistoric and early modern art and is currently on-trend. Patterning used with standard shapes such as squares and rectangles can deliver strong geometric execution, achieving a truly unique design.



PROJECT: Tower Crossing, Naperville, IL. DESIGN: Napleton Auto Group. PRODUCT: Umbriano" in Summer Wheat and Midnight Sky, Il Campo in Granite Blend.



PROJECT: 1001 W Fulton Roof Deck, Chicago, IL. **DESIGN:** Ilekis Associates | Gutierrez Landscaping Services, Inc. **PRODUCT:** Arcana" in Covara, Modena and Vivanto.



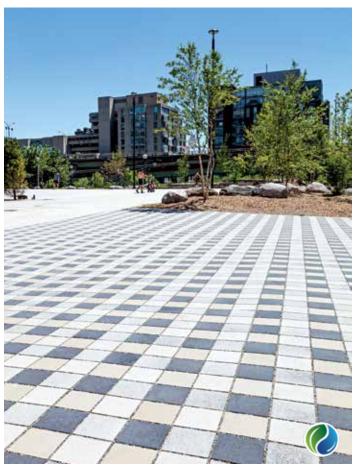
PROJECT: Radio City Condos, Toronto, ON. **DESIGN:** Martin Wade LA MWLA. **PRODUCT:** Planks with Series" finish in Black Granite and Smooth Premier finish in Steel Grey Blend.



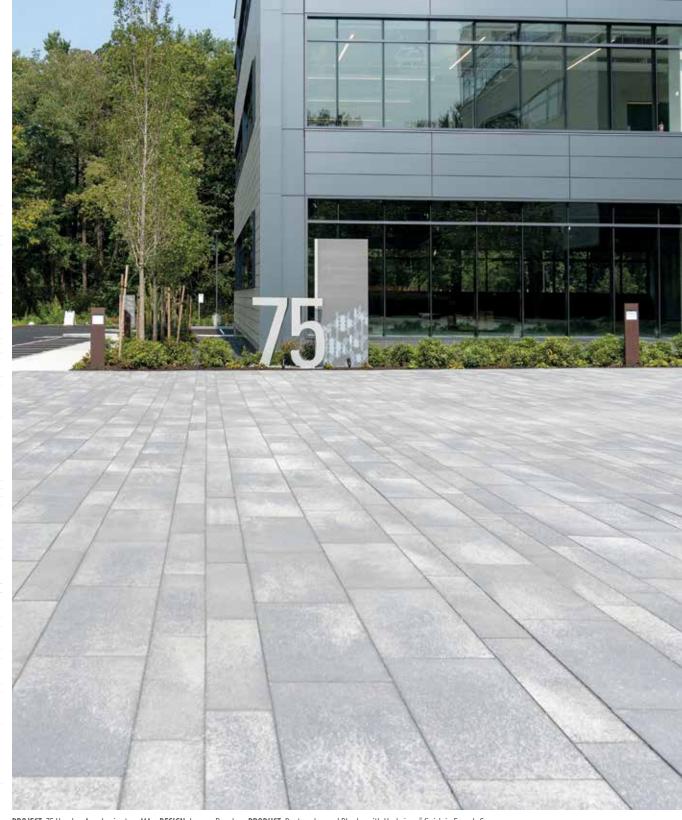
PROJECT: Huron Street - Chinatown, Toronto, ON. DESIGN: The Planning Partnership. PRODUCT: Holland Premier" in Charcoal and Natural. Bronte Street Paver in Charcoal.



PROJECT: Bower Condos, Oakville, ON. **DESIGN:** NAK Design Strategies. **PRODUCT:** Hex / City Park Paver" with Series" finish in Black Granite and Glacier.



PROJECT: Jean Lumb Public School Park, Toronto, ON. **DESIGN:** The Planning Partnership. **PRODUCT:** Squares with Senzo* finish in Bianco and Cremo. Umbriano* in Winter Marvel and Midnight Sky.

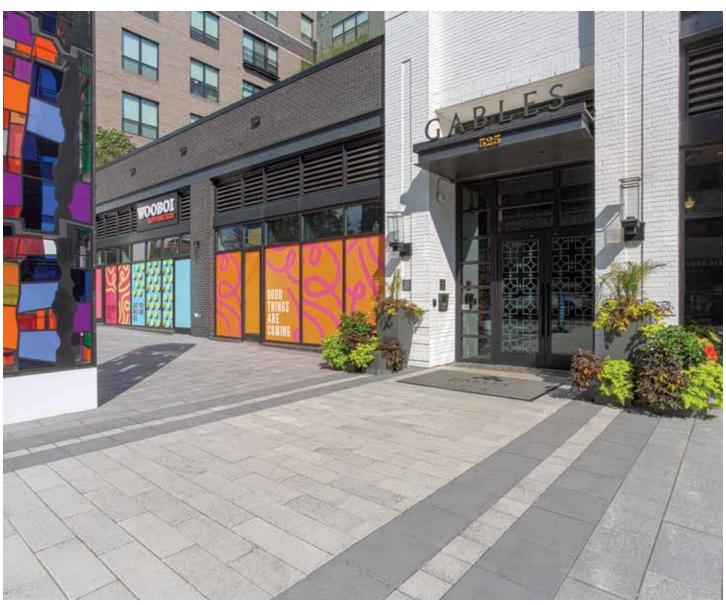


PROJECT: 75 Hayden Ave, Lexington, MA. DESIGN: Lemon Brooke. PRODUCT: Rectangles and Planks with Umbriano" finish in French Grey.

CLEAN, UNCLUTTERED LINES are the foundation for a contemporary project. Often achieved with large format slabs and pavers, the unique and modern finishes of Unilock products allow smaller format pavers to create distinctive, modern landscapes.



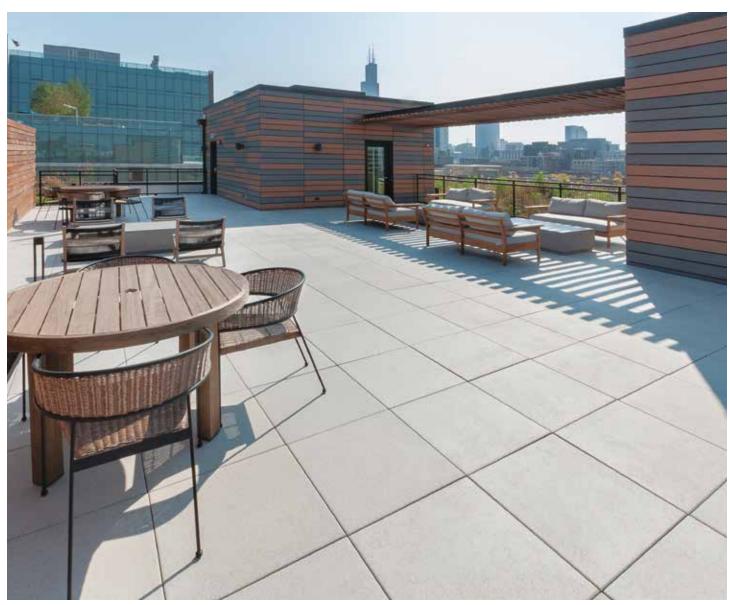
PROJECT: 740 Aberdeen Roof Deck, Chicago, IL. **DESIGN:** Hitchcock Design Group. **PRODUCT:** Arcana" in Corvara.



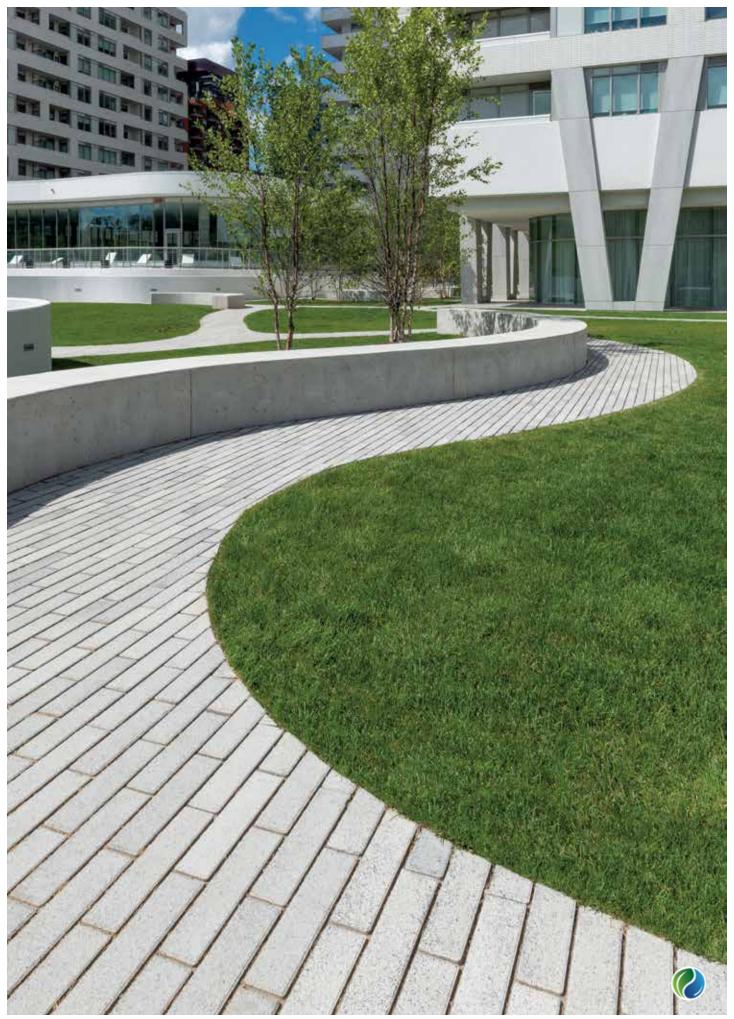
PROJECT: Gables Old Town North, Alexandria, VA. **DESIGN:** Mahan Rykiel. **PRODUCT:** Rectangles with Umbriano" finish in French Grey, Midnight Sky and Winter Marvel.



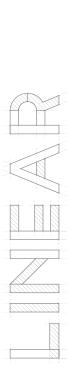
PROJECT: University of Toronto - Mississauga Campus, Mississauga, ON. DESIGN: Plant Architect. PRODUCT: Planks with Series" finish in Ice Grey and Smooth Premier finish in Steel Grey.

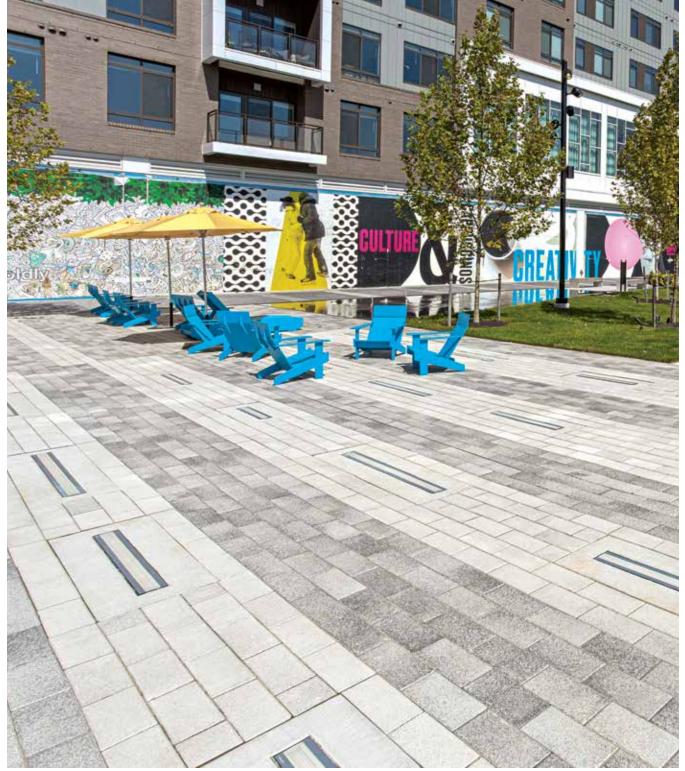


PROJECT: 1035 W Fulton Roof Deck, Chicago, IL. **DESIGN:** Hartshorne Plunkard Architecture | Summit Design + Build **PRODUCT:** Arcana" in Modena.



PROJECT: Lillian Park, Toronto, ON. DESIGN: Janet Rosenberg & Studio. PRODUCT: Permeable Planks / Eco-Promenade" with Umbriano" finish in Grenada White.





PROJECT: Crescent Merriweather, Columbia, MD. DESIGN: Mahan Rykiel Associates Inc. PRODUCT: Rectangles with Umbriano" finish in French Grey and Winter Marvel.

LINEAR, PLANK PAVING DESIGN styles have emerged as a paving trend. Whether directing the flow of traffic or creating a dramatic destination, Unilock offers an extensive range of sizes along with unique finishes to ensure your design vision is achieved.



PROJECT: Parmer Research Triangle Park, Durham, NC. **DESIGN:** O'Brien Atkins. **PRODUCT:** Permeable Planks / Eco-Promenade" with Umbriano" finish in Winter Marvel.



PROJECT: University of Maryland, Baltimore County, Baltimore, MD. **DESIGN:** Mahan Rykiel Associates Inc.. **PRODUCT:** Rectangles with Series" finish Ice Grey and Smooth Premier finish in Granite Blend and Nantucket.



PROJECT: Marshfield Plaza, Chicago, IL. DESIGN: Christy Webber Landscapes | Terra Engineering, LTD. PRODUCT: Permeable Planks / Eco-Promenade" with Umbriano" finish in French Grey and Winter Marvel.



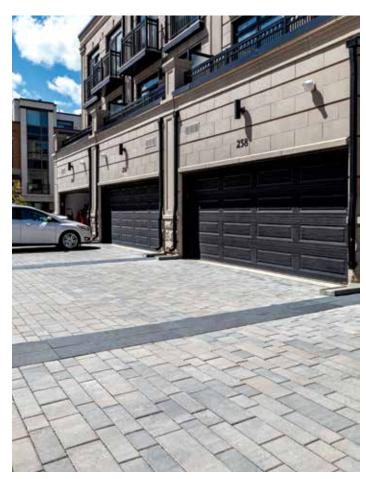
PROJECT: Buffalo Exchange Street Station, Buffalo, NY. **DESIGN:** Sowinski Sullivan Architects. **PRODUCT:** Planks with Smooth Premier finish in Opal, Sandstone and Steel Mountain.



PROJECT: lowa Culinary Institute at Des Moines Area Community College, Ankeny, IA. **DESIGN:** Shive Hattery Inc. **PRODUCT:** Planks with Umbriano" finish in French Grey and Series" finish in Onyx Black.



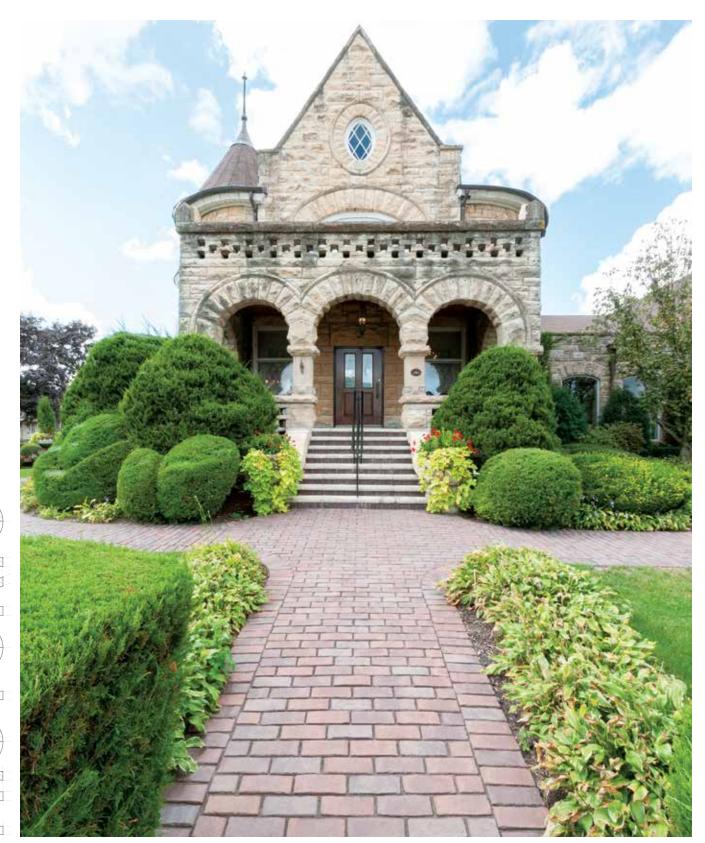
PROJECT: 145 Broadway, Cambridge, MA. DESIGN: Sasaki. PRODUCT: Planks with Umbriano" finish in Summer Wheat, French Grey and Winter Marvel.



PROJECT: Unionville Gardens, Markham, ON. **DESIGN:** Strybos Barron King Landscape Architecture. **PRODUCT:** Artline" with Smooth Premier finish in Almond Grove.



PROJECT: West Eau Claire Park, Calgary, AB. **DESIGN:** 02 Planning + Design. **PRODUCT:** Rectangles / Planks with II Campo® and Smooth Premier finishes.



PROJECT: The Haley Mansion, Joliet, IL. DESIGN: 3D Brick Paving Co. PRODUCT: Town Hall in three colors blended on site.

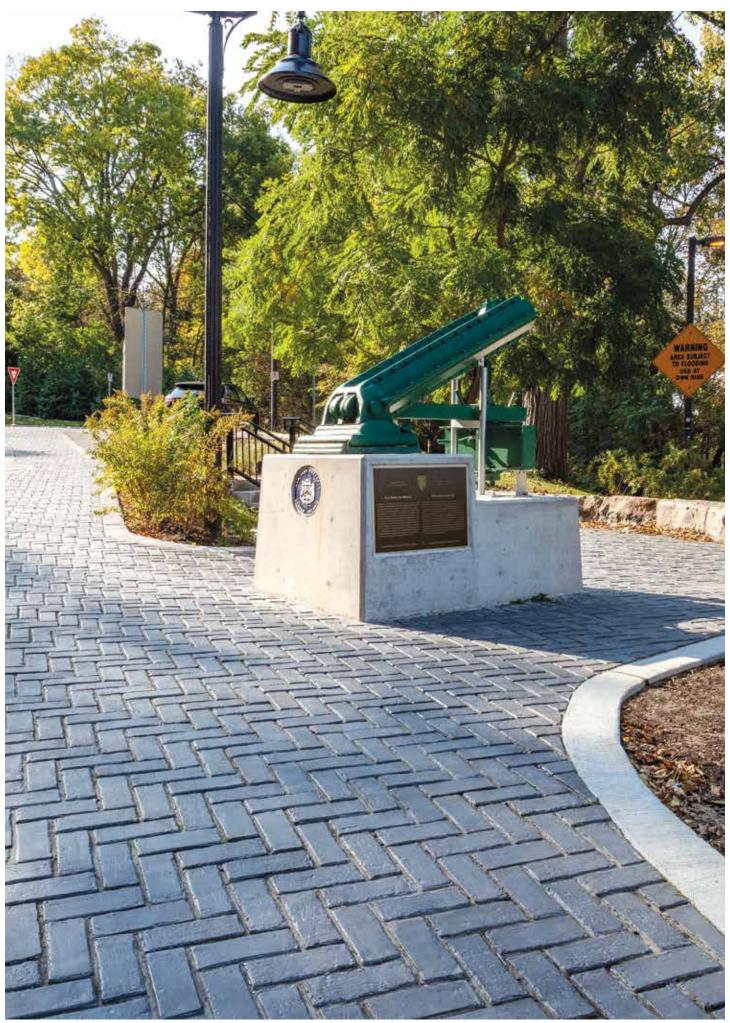
DESIGN HAS EVOLVED through the ages but sometimes the right style is not the most recent. From old-world cobblestones to historic brick style street pavers, Unilock offers authentic surface textures, colors and the assurance of the latest technology to deliver durable long-lasting products for your designs.



PROJECT: Newton Streetscape, Newton, NC. DESIGN: Allison Platt and Associates. PRODUCT: Richcliff* in Dawn Mist. Town Hall* in Burgundy Red and Burnt Clay.



PROJECT: Peabody's Interiors, Brown Deer, WI. **DESIGN:** Breezy Hill. **PRODUCT:** Courtstone* in Basalt.



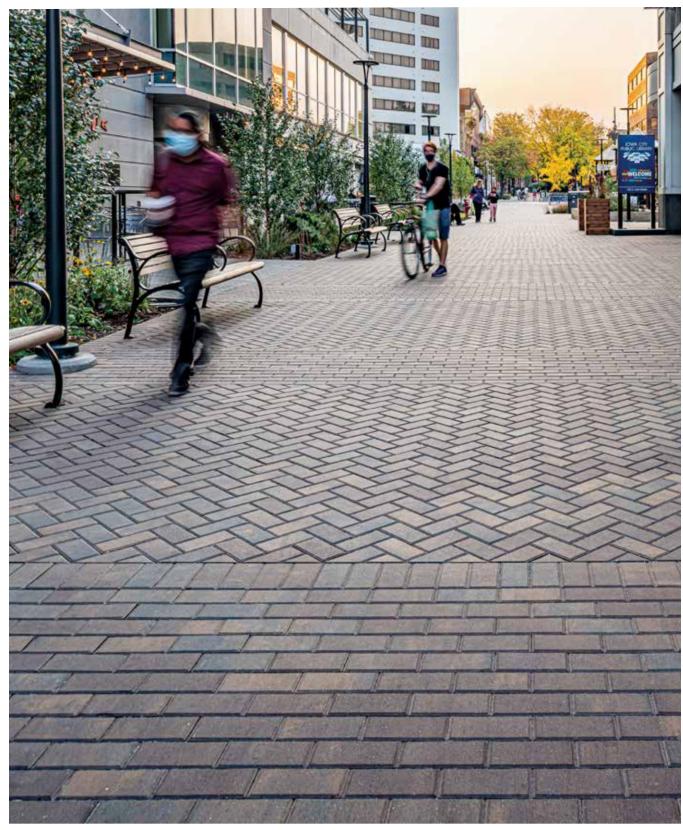
 $\textbf{PROJECT:} \ \textbf{Blackfriars Bridge Parkette, London, ON.} \ \ \textbf{DESIGN:} \ \textbf{Dillon Consulting.} \ \ \textbf{PRODUCT:} \ \textbf{Town Hall" in Basalt.}$



PROJECT: Newton Streetscape, Newton, NC. DESIGN: Allison Platt and Associates. PRODUCT: Richcliff® in Dawn Mist. Town Hall® in Burgundy Red and Burnt Clay.

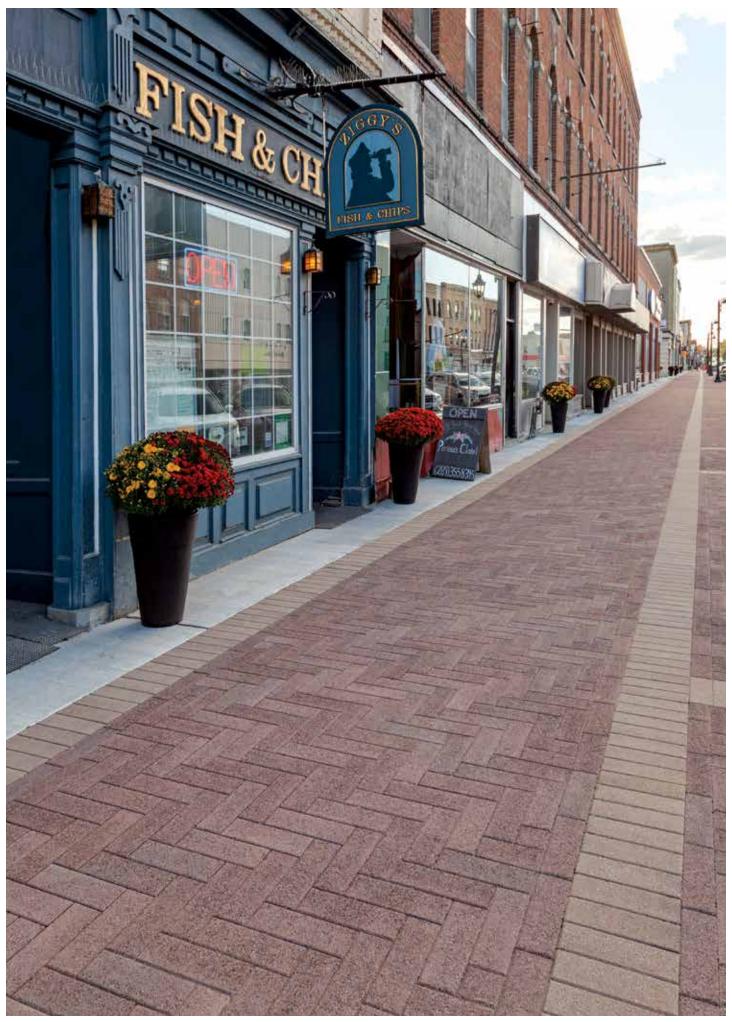


PROJECT: Plainville Public Safety, Plainville, MA. **DESIGN:** Kaestle Boos Associates. **PRODUCT:** Copthorne® in Burgundy Red, Burnt Clay and Old Oak.



PROJECT: lowa City Pedestrian Mall, lowa City, IA. DESIGN: Genus Landscape Architects. PRODUCT: Rectangles with Smooth Premier finish in Sierra.

THERE ARE MANY INTERPRETATIONS of traditional paving design from formal to rustic. Explore possibilities in this expansive style from standard brick pavers to natural stone, smooth surfaces or riven flagstone. Whether your preference is simple rectangle or multi-unit random collections, there are many product styles to consider for your traditional design.



PROJECT: Lindsay Downtown Streetscape, Lindsay, ON. **DESIGN:** CIMA+ Bowmanville. **PRODUCT:** Planks with Series" finish in Heritage Brown and Golden Sand.



PROJECT: University of Maryland, Baltimore County, Baltimore, MD. **DESIGN:** Mahan Rykiel Associates Inc. **PRODUCT:** Rectangles - Standard finish Nantucket, Granite Blend. Planks - Standard finish in Granite Blend.



PROJECT: Blackhawk Country Club, Madison, WI. **DESIGN:** Olson Toon Landscaping, Inc. **PRODUCT:** Beacon Hill* Platform with Flagstone finish in Bavarian.



PROJECT: Riverside Metra Station, Riverside, IL. **DESIGN:** Christopher B. Burke Engineering. **PRODUCT:** Permeable Rectangles with II Campo* finish in Heritage Brown and Smooth Premier finish SS0080 stripes.



PROJECT: Des Moines Area Community College - Student Center, Akeny, IA. **DESIGN:** RDG Planning & Design. **PRODUCT:** Rectangles with Smooth Premier finish in Brown, Charcoal and Sandstone.



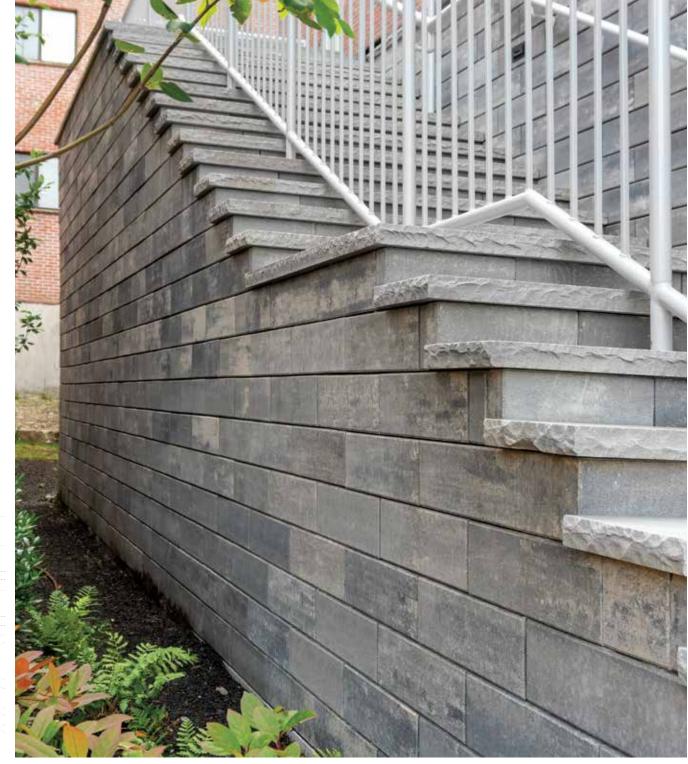
PROJECT: Cambridge Discovery Park, Cambridge, MA. **DESIGN:** Paul Finger Associates. **PRODUCT:** Rectangles with Standard finish in Rustic Red.



PROJECT: Vaughan Subway Station, Vaughan, ON. DESIGN: Claude Cormier et Associés. PRODUCT: Planks with Smooth Premier finish in Dark Charcoal.



PROJECT: St. Isaacs Jogues Church, Hinsdale, IL. **DESIGN:** Daniel Weinbach & Partners, Ltd. **PRODUCT:** Squares / Rectangles with Series* finish in Golden Tan and Squares with Smooth Premier finish in Sycamore.

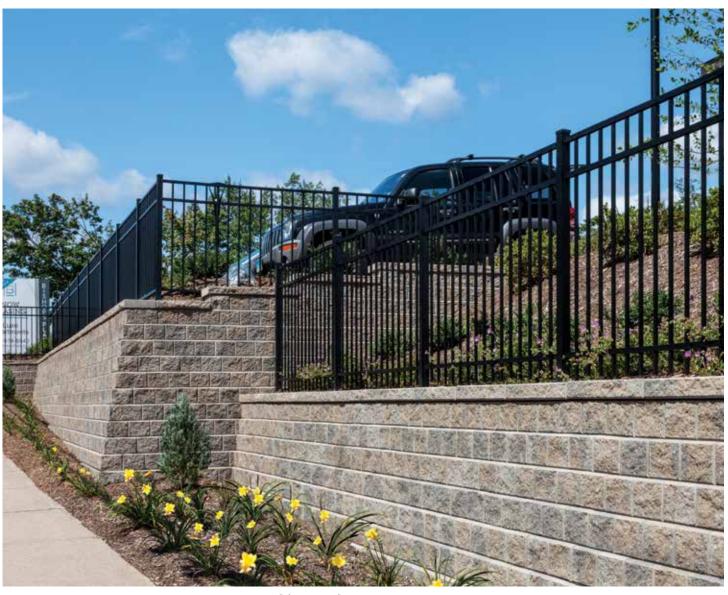


PROJECT: Langley Terrace, Newton, MA. DESIGN: G2 Collaborative. PRODUCT: U-Cara* Multi Face Wall with Smooth Premier fascia panels in Steel Mountain.

RETAINING WALLS range from structural to non-structural, contemporary to natural, and large-scale to small. Unilock offers many different styles to meet the needs of the application and aesthetic for your project with additional resources, such as design support available as you need it.



PROJECT: Peoples Bank Yankee Peddler, Holyoke, MA. **DESIGN:** Tighe & Bond in partnership with Coweeset Engineering. **PRODUCT:** Rivercrest* Wall in Coastal Slate.



PROJECT: Bishops Place, West Hartford, CT. **DESIGN:** CR3 LLP. **PRODUCT:** Pisa2" / Concord Wall" in Almond Grove.



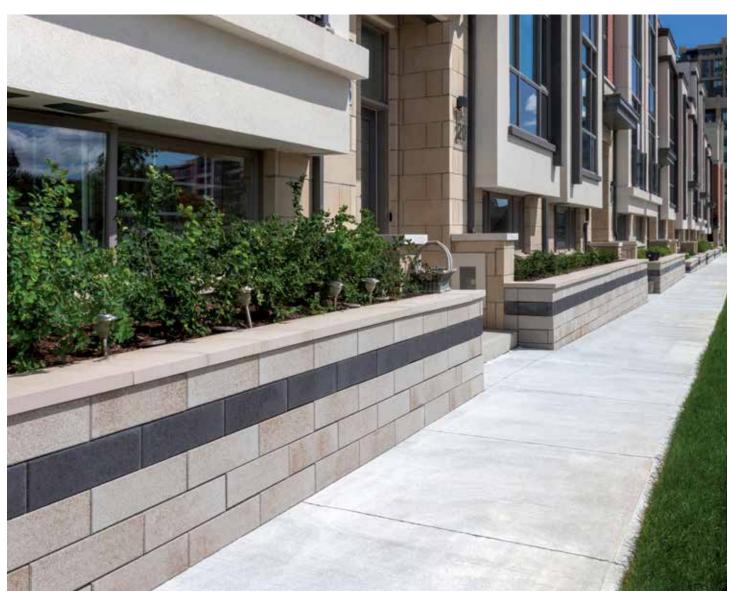
PROJECT: Langley Terrace, Newton, MA. **DESIGN:** G2 Collaborative. **PRODUCT:** U-Cara* Multi Face Wall with Smooth Premier fascia panels in Steel Mountain.



PROJECT: Roxbury Latin School, Roxbury, MA. **DESIGN:** Stantec. **PRODUCT:** SienaStone" in Granite Blend.



PROJECT: Auburn Hills Amphitheater, Auburn Hills, Ml. **DESIGN:** OHM Advisors. **PRODUCT:** Rivercrest* Wall and Ledgestone* Coping in Buff.

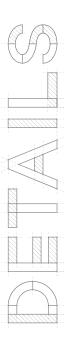


PROJECT: Crystal Gardens, Markham, ON. DESIGNER: Cosburn Nauboris Ltd. PRODUCT: U-Cara" Multi-Face Wall with Umbriano finish fascia panels in Summer Wheat and Midnight Sky.

Every project's success is directly proportionate to the attention paid to the many details. At Unilock, we take pride in supporting designers with those fine details, from product choice and finish selection, to cross-sections, construction documents and installation guidelines. We're present from the very beginning of your design process right through to project completion.







THE BEST Product

SUPERIOR CHOICE

Surfaces must be engineered to withstand the test of time. Unilock pavers not only satisfy requirements for structural integrity, safety, cost, environmental impact, maintenance and field-proven performance, but they also provide superior skid resistance and weathering. Because of the unique combination of product strength, ease of maintenance, aesthetics and reusability, they have a better life-cycle cost than other products. Pavers are a flexible system, so their surface area can move slightly without jeopardizing structural integrity. Concrete pavers require less maintenance than other products and can withstand heavy loading. They can also be manufactured in different shapes, colors and finishes for your large scale projects.

STRENGTH AND DURABILITY

All Unilock pavers and walls are manufactured to meet and exceed the ASTM standards without compromising the composition. They are stronger than other materials with their higher compressive strength, which is achieved by a specialized manufacturing process, and have lower absorption rates that are essential in freeze thaw climates. At Unilock, we will not sacrifice quality for cost.

STANDARDS & TEST METHODS

ASTM STANDARDS - PAVERS & SLABS

Туре	ASTM	Compressive Strength	Water Absorption	Freeze/Thaw (49 cycles)	Flexural Strength	Flexural Strength	Dimensional Accuracy
PAVERS	ASTM C936	8,000 PSI MIN.	< 5%	<500 G/M2			<u>+</u> 1/16" (1.6MM)
SLABS	ASTM C1782	8,000 PSI MIN.	< 5%	<500 G/M2	>725 PSI AVG.	>650 PSI MIN.	± 1/16" (1.6MM)

Unilock" meets and exceeds C936 paver manufacturing standards and C1782 Standard Specification for Paving Slabs.

Pavers

- > C140 for Compressive Strength and Absorption
- > C1645 for Freeze-Thaw Durability

Slabs

- > C140 for Absorption and Compressive Strength
- > ASTM C1645 for Freeze-Thaw Durability
- > ASTM C1782 or CSA 231.1 for Flexural Strength

ASTM STANDARDS - WALLS

ТҮРЕ	ASTM	ASTM/ NCMA Compressive Strength	Water Absorption	Freeze/Thaw (50 cycles)	Dimensional Tolerances
WALLS	ASTM 1372 NCMA Zone 3	3000/5,500 PSI MIN.	< 7LB/FT²	≤1.5%	<u>+</u> 1/8" (3.2MM)

Unilock meets and exceeds C1372 Standard Specification for Dry Cast Segmental Retaining Wall Units.

Dry Cast Retaining Walls

- > C140 for Compressive Strength and Absorption
- > ASTM C1262 for Freeze-Thaw Durability
- > NCMA Zone 3 with de-icing salt exposure guidelines

ACCESSIBILITY

The American with Disabilities Act Accessibility Guidelines (ADAAG) provides measurable criteria to determine compliance, not individual product evaluation. Gaps, joints or openings, greater than ½" horizontal and ¼" vertical should be avoided as they can disrupt wheelchair maneuvering. (United States Access Board - Guidelines and Standards)

THE IMPORTANCE OF ASPECT RATIO

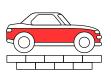
Simply defined, aspect ratio is the overall length of a paver divided by its height.

LENGTH/HEIGHT = ASPECT RATIO

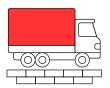
If an insufficient aspect ratio is used, any flexing or rocking caused by movement on the surface such as pedestrian or vehicular traffic, could result in breakage of the paver units. Not only is this breakage unsightly, but it can also compromise the integrity of the segmental system.



OVER 5:1 Pedestrian Only



4:1 Light-Duty Vehicular

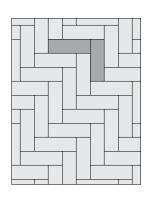


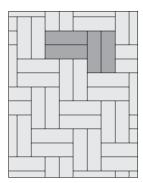
3:1 OR LESS Heavy-Duty Vehicular

LAYING PATTERN CONSIDERATIONS

The laying pattern used in your application can also add a significant amount of strength to your design. A herringbone pattern provides the best 'lock-up', adding strength against rotational forces such as tires at a roadway intersection in the same way the 'L' shaped paver provides maximum performance.

SPEAK WITH YOUR UNILOCK REPRESENTATIVE FOR MORE INFORMATION.



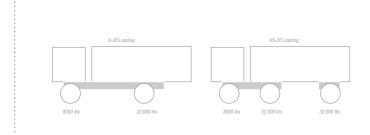


HEAVY-DUTY CONSIDERATIONS

Unilock has a variety of shapes and sizes available to fit your heavy-duty application and style preferences. For maximum performance where twisting and tipping will be factors, consider the unique "L" interlocking shape as it provides superior resistance under heavy loads. The patented locking features work in tandem with the "tri-axis" technology. The result? A stronger, more stable pavement surface.

Heavy-duty Unilock paving systems are also designed for rapid mechanized installation, making them competitive and affordable.





H-20 & HS-20 LOAD RATING

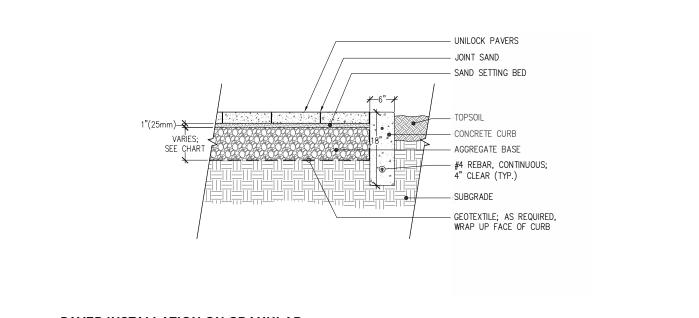
Similar to top of deck stresses per AASHTO H-20 loading conditions (32,000 lbs/14,500 kg), Unilock pavers can support 3-4 axle vehicles. This would include delivery, fire and semi-truck and trailer traffic in light-duty roadway applications.

APPLICATION BY SIZE, THICKNESS & PRODUCT

Product	Product Size	Thickness	Pedestrian	Commercial Pedestrian*	Light-Duty Vehicular	Commercial Vehicular	Heavy-Duty	Permeable
Anchorlock™		80 mm	~	·	~	~	~	
Artline [™]		100 mm	✓	✓	✓			
Artline™		70 mm	✓					
Beacon Hill™		80 mm	✓	✓	✓			
Beacon Hill™		60 mm	✓					
Bristol Valley®		60 mm	✓					
Brussels Block®		70 mm	~	~	•			
Brussels Dimensional [™] Paver		100 mm	✓	-	~	-		
Hex / City Park Paver™		70 mm	✓	~	•	~		✓ (80 mm)
Copthorne*		60 mm	✓	•	•	~		
Courtstone"		60 mm	✓	~	~	~		
Dura-Mat		100 mm			_			~
Eco-Line*		100 mm	•	~	_	~	•	~
Eco-Optiloc™		80 mm	•	•	•	~	~	J
Mattoni™		70 mm	•	•	,		·	•
Optiloc*		80 mm	•	į į	,	~	~	
Richcliff"		60 mm			Ž	•	•	
		70 mm	J	y	Š			
Thornbury*								~
Town Hall [®]	76 76	70 mm	•	V	~	~		~
	36 x 36	100 mm	•					
	18 x 36	100 mm	~					
	24 x 24	100 mm	✓	✓	✓			
	24 x 24	70 mm	•					
	24 x 24	50 mm	✓					
	18 x 24	50 mm	✓					
	16 x 24	100 mm	✓	✓	✓ **			
	12 x 36	100 mm	✓					
	12 x 24	150 mm	✓	~	✓	✓		
	12 x 24	100 mm	~	~	→ **			
	12 x 24	70 mm	•					
	12 x 24	50 mm	•					
	12 x 18	100 mm		•	~	~		
	8 x 24	150 mm	J	J	Š	•		
	8 x 24	100 mm	,	Š	* **			
	6 x 24	150 mm	•	-	~	~		
	6 x 24	70 mm	→					
	16 x 16	100 mm	•	V	~	~		
	16 x 16	80 mm	~	~	~			
	16 x 16	70 mm	~	V	~			
	8 x 16	100 mm	✓	✓	✓	~		
	8 x 16	70 mm	~	•	•			
	7 x 14	60 mm	✓					
	7 x 14	70 mm	✓	✓	✓			
	7 x 14	80 mm	✓	✓	✓			
	4 x 16	100 mm	✓	~	~	~		~
	12 x 12	100 mm	•	•	~	~		
	12 x 12	70 mm	•		•			•
	6 x 12	100 mm		·	,	~	•	
	6 x 12	80 mm	J	•	Š	•	·	
	6 x 12	70 mm	, , , , , , , , , , , , , , , , , , ,	Ž	Š	,		
	10 x 10	80 mm	, , , , , , , , , , , , , , , , , , ,	Š	Ž	.4		4
	5 x 10	80 mm	, , , , , , , , , , , , , , , , , , ,	Y	Š	y	✓	<i>y</i>
								•
	8 x 8	100 mm	•	V	~	~	~	
	8 x 8	80mm	~	~	~	~		
	8 x 8	70 mm	~	-	~	~		
	6 x 8	70 mm	✓	✓	✓	~	✓	
	4 x 12	100 mm	•	~	~	~	~	
	4 x 12	80 mm	✓	✓	~			
	4 x 12	70 mm	•	•	•			
	3 x 12	100 mm	✓	~	~	✓	✓	•
	6 x 6	80 mm	•	•	~	~		
	6 x 6	70 mm		•	, , , , , , , , , , , , , , , , , , ,			
	5 x 5	80 mm	J	T T	Ž			~
	4 x 8	80 mm	, , , , , , , , , , , , , , , , , , ,	~	Ž	-	•	*
	4 x 8						•	
		70 mm	•	Y	y	~		
	4 x 8	60 mm	~	~	~			
	4 x 4	70 mm	~	-	~	~		
	3 x 6	100 mm	✓	~	~	✓	✓	

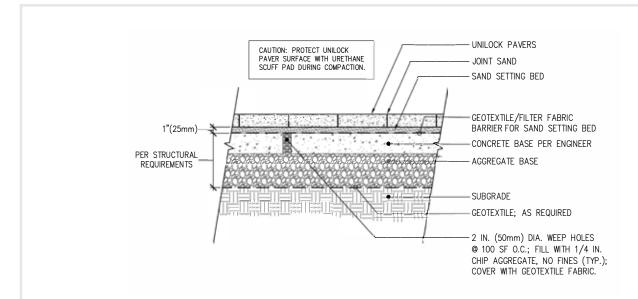
NON-PERMEABLE INSTALLATIONS

Commercial environments are demanding and having the correct base design is essential. Below are a couple of examples of the base detail; however, every base detail must be specific to site conditions and load capacity. Contact your Unilock Representative to learn more.



PAVER INSTALLATION ON GRANULAR

From pedestrian to heavy-duty applications this detail is tried and true. Contact your Unilock Representative to learn more. Specific installation details may vary based on site conditions.

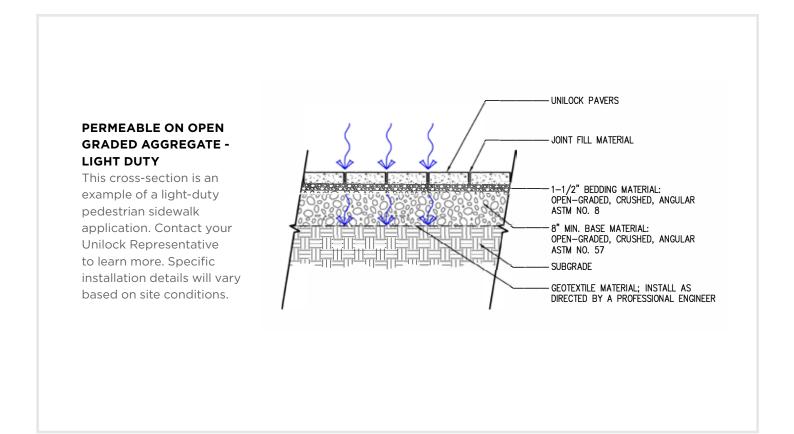


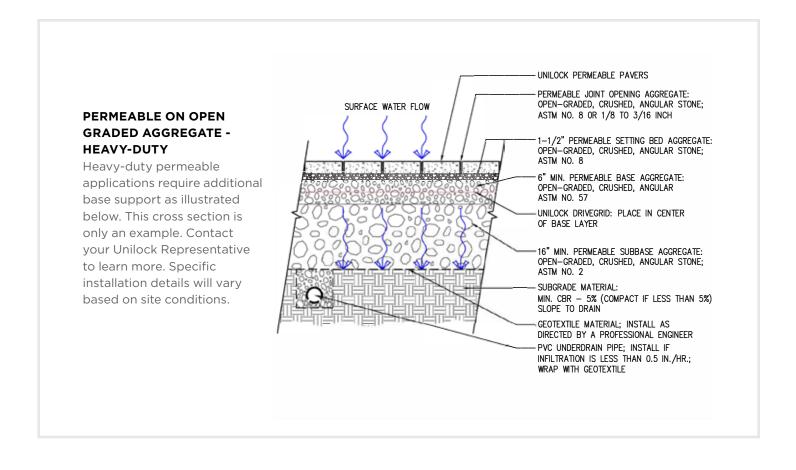
PAVER INSTALLATION ON SAND OVER CONCRETE

Ideal for heavy-duty applications, this detail ensures adequate base support under heavy loads. Approving the proper sand type and gradation is critical for lock up and drainage in vehicular applications. Contact your Unilock Representative to learn more. Specific installation details may vary based on site conditions.

PERMEABLE INSTALLATIONS

Similar to the non-permeable paver systems structural component, permeable paver installations offer secondary purpose for capturing and detaining rainwater. Common uses can range from sidewalk and plaza areas, to heavy-duty parking lots and roadways and include various base depths as shown in the two details below.





ARCHITECTURAL SLABS

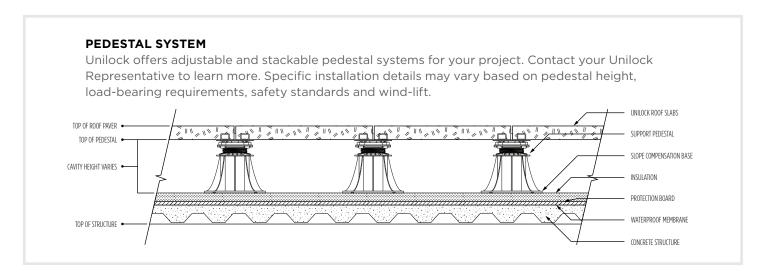
Unilock has many options for paving products on roof decks. Various installation methods will determine the appropriate products for the application. While pedestal installation typically utilizes the square or large slabs, a granular installation will extend your product choice and design flexibility.

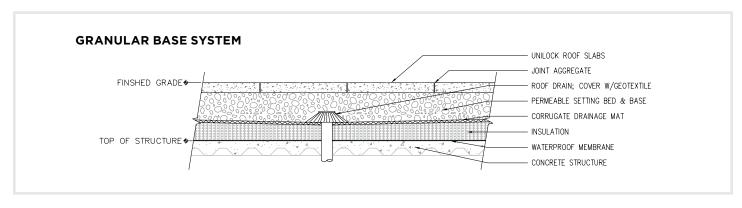
Ask your Unilock Representative for details.



Product Type	Thickness	Shape	Product Weights
Arcana™ + Skyline™	50mm	606 x 606mm	24 lbs/sq.ft.
Beacon Hill™ XL	60mm	900 x 540mm** 720 x 540mm**	27.5 lbs/sq.ft.







The cross sections shown are examples of the type of installation systems and technical features of Unilock products. Unilock shall not be deemed responsible for improper use of the product or of damage deriving from any use different from those recommended

and/or installation procedures not in line with the following instructions relevant to a raised installation. All roof top slab/pedestal installations must be engineered by a professional engineer.

LEED Credit Opportunities

LEED, Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices that have a positive impact on the health of occupants, while promoting renewable, clean energy. To receive LEED certification, building projects satisfy prerequisites and earn points to achieve different levels of certification. Unilock products can help with your certification goals.

POTENTIAL LEED CREDITS FOR UTILIZING PERMEABLE PAVERS

Rainwater management: LEED v4.1

Up to three points can be achieved for retaining rainwater onsite based on the percentile kept. 85% (zero lot line projects only) • 3 points, 95% - 2 points and 98% - 3 points. (all except Healthcare - subtract one point). See LEED v4.1 for more specific project/site details.

Heat Island Reduction - Non-Roof: LEED v4.1

Paving materials with a three-year aged solar reflectance (SR) value of at least 0.28. If three-year aged value information is not available, use materials with an initial SR of at least 0.33 at installation OR use an open grid pavement at least 50% pervious • 2 points (except Healthcare - 1 point). See LEED v4.1 for more specific site calculations.

Solar Reflectance

Solar Reflectance Index (SRI) is a criterion used by USGBC that measures values of sunlight and radiation bouncing from built surfaces. It is used to measure urban heat island effects in city centers. Dark pavement absorbs heat during the day and then releases it at night. This process creates a situation that causes urban centers to stay warmer all the time which contributes to air pollution and increased energy consumption. Careful selection of materials and colors can help reduce urban heat island effects.

SAMPLE OF QUALIFIED UNILOCK COLORS (≥33)

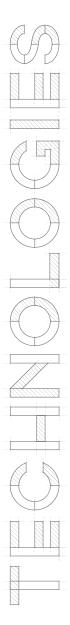
Surface Finish	Color	Swatch	Solar Reflectance	SRI*
	Grenada White		0.45	52
Umbriano™ (mottled)	Summer Wheat		0.42	48
	Winter Marvel		0.35	38
	SS0025		0.42	48
	SS0016		0.41	46
	Golden Tan	WIND BY	0.40	45
Series™	Chardonnay Tan	新型。水温度	0.39	44
(Exposed Granite)	Peppered Granite		0.38	42
	Coral Gem		0.37	41
	SS0026		0.37	41
	Ice Grey		0.35	38
	Mineral Ice Grey		0.31	33
Arcana™	Lugano		0.46	53
Arcana	Modena	计过滤器	0.46	53
	Cream	- 55 7	0.49	57
	TX Active White		0.46	53
Smooth Premier	SS0080		0.44	50
Premier	Chamois		0.41	46
	Tuscany Blend		0.39	44
	Steel Mountain		0.30	32
	Canvas	light se	0.33	36
Standard Finish	River		0.32	34
	Nevada		0.31	33

Materials and Resources: LEED v4.1

- > Building Product Disclosure and Optimization Sourcing of Raw Materials
 - Sourcing of Raw Materials and Extraction 1 point
- > Building Product Disclosure and Optimization Material Ingredient Reporting
 - Material Ingredient Reporting 1 point

Values may change slightly by region due to variations in local aggregate and granite.

Please be sure to contact your Unilock Representative for a comprehensive and current list of SRI product values.





Unilock is the only company in

North America with memberships in Eurobeton and Stein + Design, two prestigious European concrete product innovation groups, which give us exclusive access to **leading edge product designs** and manufacturing processes.





ENDURACOLOR®
ARCHITECTURAL
FINISHES

Only Unilock offers EnduraColor Architectural Finishes. These products set a new standard for everlasting beauty thanks to proprietary blends of some of nature's highest performing minerals such as granite and quartz, combined with manufacturing technologies that are unique to Unilock.



ENDURACOLOR

The refined surface of Unilock EnduraColor products is achieved with a two-step manufacturing process that combines a base of coarser aggregates for a **stronger** foundation, with concentrated color and wear-resistant finer aggregates on top. This process protects the surface from the appearance of fading over time because the top layer prevents large, lighter color aggregates from ever showing through. Now, with U-Cara®, walls are available with EnduraColor too!



CLASSIC

Unilock Classic pavers and walls are manufactured to exceed ASTM standards for quality and strength. Available in classic shapes and styles, these products utilize a traditional product mix of large and small aggregates, that is consistent from top to bottom, with color mixed throughout.

Unilock TECHNOLOGIES

All **products are not created equal**. Many products look great when they're first installed, but after time the difference shows. For **over 48 years**, the very best designers and contractors have **relied on Unilock** to supply cutting edge paver and wall products that enable them to build extraordinary projects that stand the test of time.







Reala™

Utilizing Reala technology, a multitude of natural stone surfaces, brick and historic cobblestones are cast to create a wide variety of authentic textures with consistent dimensions that are more cost efficient to install.

Products with Reala:

COPTHORNE', COURTSTONE', RICHCLIFF', TOWN HALL', RIVERCREST' WALL, LEDGESTONE", AND MACKINAW"

Ultima™

Only Unilock has the technology in North America to manufacture Ultima Concrete resulting in pavers up to four times stronger than poured concrete. With Ultima, the look you purchase is the look that will last.

Products with Ultima:

COPTHORNE', COURTSTONE', RICHCLIFF' AND TOWN HALL'





EasyClean[™]

With EasyClean, the occasional spill doesn't have to leave a lasting mark on your new pavement. Unlike costly after-market sealers which merely coat the top, EasyClean goes beyond the surface and becomes integral to the product during manufacturing, making spills and other debris easier to clean before a stain can develop. Ask your Unilock Representative for more information about adding EasyClean to the products on your commercial projects.

Products with EasyClean:

ARCANA™, GRANITO™, MATTONI™, UMBRIANO™, SENZO™, AND U-CARA®

Nothing protects pavers from stains like EasyClean.

- ✓ Pavers are pre-sealed at the factory
- ✓ Enhanced resistance to weathering
- ✓ Reduced dirt absorption
- Stains from leaves, coffee, ketchup, mustard, wine and BBQ oils are easier to remove

ColorFusion[™]

The look of natural granite is achieved when color and granite particles are randomly dispersed using proprietary ColorFusion technology to achieve a unique mottled surface.

Products with ColorFusion:

UMBRIANO™ AND U-CARA®

Classic Coat

Factory sealed standard finish pavers are available with Classic Coat to protect the surface texture and color. Ask your Unilock Representative for more information about using products with Classic Coat on your commercial projects to save time and money post installation.

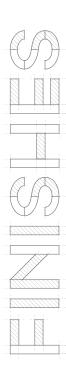
Products with Classic Coat:

CONSULT YOUR REGIONAL PRODUCT DATA

Unilock has an extensive collection of in stock and quick ship products to suit your project. Our vast array of sizes, edges, finish and color options make it easy to achieve your design vision. Speak with your Unilock Representative about in stock options available in your market.







ENDURACOLOR

ARCHITECTURAL FINISHES

Proprietary blends of some of nature's highest performing minerals such as granite and quartz are combined with manufacturing technologies that are exclusive to Unilock.



Umbriano™ Mottled Finish with ColorFusion™ and EasyClean™



Senzo™ Matte Finish with EasyClean™



Series[™] Exposed Granite Finish



Il Campo[®] Brushed Finish



Smooth Premier Finish



Flagstone Premier Finish



Granito™ Boldly Mottled Finish with EasyClean™



Revela[™] Shot-Blast Finish



Classic Thru-Mix Finish

CLASSIC FINISH

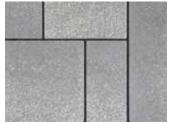
Classic finish utilizes a traditional product mix of large and small aggregates, that is consistent from top to bottom, with color mixed throughout. Rest assured they are manufactured to exceed ASTM standards for quality and strength.

UMBRIANO™

Design award winner 2011

Rich, mottled granite particles with a non-slip texture.

COLORS







Midnight Sky



Summer Wheat (SR 0.42)



Winter Marvel (SR 0.35)

SPECIAL ORDER COLORS



Autumn Sunset (SR 0.30)



Grenada White (SR 0.45)



Harvest Brown

Squares	16 x 16 x 2 ³ / ₄ " (70mm) 24 x 24 x 2 ³ / ₄ " (70mm) 36 x 36 x 4" (100mm)	Rectangles	4 x 8 x 23%" (60mm) 7 x 14 x 31/8" (80mm) 8 x 16 x 23/4" (70mm) 12 x 24 x 23/4" (70mm) 18 x 36 x 4" (100mm) 21 x 35 x 23/8" (60mm)
Planks	4 x 12 x 4" (100mm) 8 x 24 x 2 ³ / ₄ " (70mm)	Hex / City Park Paver [™]	8 x 8 x 2 ³ / ₄ " (70mm)
Artline™ Platform	Random Bundle (70mm)	Beacon Hill" Platform	Random Bundle (60mm) Random Bundle (80mm)



SERIES™

Timeless micro-pebbled exposed granite.

COLORS



SPECIAL ORDER COLORS



Squares	6 x 6 x 2¾" (70mm) 8 x 8 x 2¾" (70mm)	Rectangles	4 x 8 x 2¾" (70mm) 8 x 16 x 2¾" (70mm)
Planks	4 x 12 x 3½" (80mm) 4 x 12 x 4" (100mm) 8 x 24 x 4" (100mm)	Beacon Hill™ Platform	Random Bundle (60mm)



PROJECT: Washington University, St. Louis, MO. **DESIGN:** Michael Verguson Landscape Architects, LTD. **PRODUCT:** Plank Pavers with Series" finish in special order colors.

SENZO™

Contemporary finish with integral surface protection from stains.

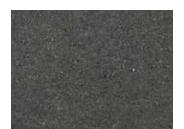


PROJECT: Jean Lumb Public School Park, Toronto, ON. DESIGN: The Planning Partnership. PRODUCT: Squares with Senzo" finish in Bianco and Cremo. Umbriano" in Midnight Sky and Winter Marvel.

COLORS







Midnight Charcoal



Mocha Brown

SPECIAL ORDER COLORS







Castano



Grigio (Grey Blend)



Mediterrano (SR 0.35)



Nuvola

SIZES

Rectangles

8 x 16 x 2³/₄" (70mm)

IL CAMPO®

Brushed finish for rich detail. Striking and slip resistant.



PROJECT: Ronald McDonald House, Kansas City, MO. DESIGN: Viero. PRODUCT: Rectangles with II Campo finish in Granite Blend.

COLORS



Bavarian Blend



Dark Charcoal



Granite Blend



Granite Fusion



Light Grey



Mocha



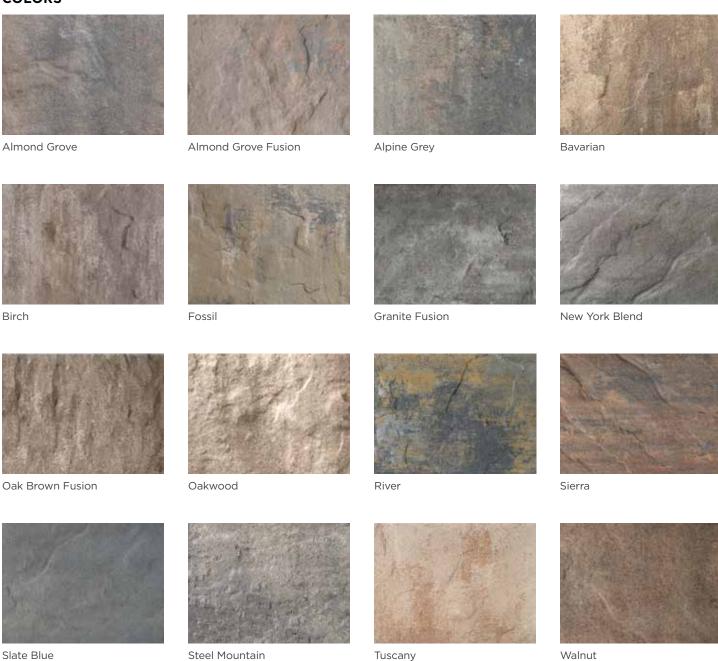
Sandstone

Rectangles	4 x 8 x 2¾" (70mm) 7 x 14 x 3½" (80mm) 8 x 16 x 2¾" (70mm)	Planks	4 x 12 x 4" (100mm) 8 x 24 x 4" (100mm)
Artline [™] Platform	Random Bundle (70mm)		

FLAGSTONE PREMIER

Long-lasting, colorfast, flagstone texture.

COLORS



Rectangles	21 X 35 x 2¾" (60mm)	Thornbury [™] Platform	Random Bundle (70mm)
Beacon Hill™ Platform	Random Bundle (60mm) Random Bundle (80mm)		



PROJECT: Orland Park Nature Center, Orland Park, IL. **DESIGN:** Upland Design Group. **PRODUCT:** Thornbury" in Bavarian Blend.

SMOOTH PREMIER

Long-lasting, colorfast, smooth, contemporary finish.

COLORS



Skyline™	23% x 23% x 2" (50mm)	Beacon Hill™ Platform	Random Bundle (60mm) Random Bundle (80mm)
Rectangles	4 x 8 x 2½" (60mm) 7 x 14 x 2½" (60mm)	Permeable Rectangles	5 x 10 x 31/8" (80mm)
	7 x 14 x 2¾" (70mm) 21 x 28 x 2¾" (60mm) 21 x 35 x 2¾" (60mm)	Permeable Planks	3 x 12 x 4" (100mm)
Planks	2½ x 9½ x 2¾" (70mm) 4 x 12 x 3½" (80mm) 4 x 12 x 4" (100mm) 4 x 16 x 4" (100mm) 8 x 24 x 4" (100mm)	Thornbury [™] Platform	Random Bundle (70mm)
Artline [™] Platform	Random Bundle (70mm)	Hex / City Park Paver™	8 x 8 x 2 ³ / ₄ " (70mm)



GRANITO[™]

Unique and boldly mottled color finish.



PROJECT: Unilock Outdoor Idea Center, Georgetown, ON. **PRODUCT:** Hex / City Park Paver" with Granito finish in Notte.

COLORS





Beacon Hill™ Platform	Random Bundle (60mm)
Hex / City Park Paver™	8 x 8 x 2 ³ / ₄ " (70mm)

REVELA[™]

Shot-blasted paver surface added to your favorite finish.



PROJECT: Tempo Cambridge, Cambridge, MA. **DESIGN:** Copley Wolff Design Group. **PRODUCT:** Rectangles with Revela[™] finish in special order colors.

COLORS



Metallic Grey (Shot Blast - Series[™] Finish)



Mica Grey (Shot Blast - Smooth Premier)



Pewter (Shot Blast - Smooth Premier)



Savannah (Shot Blast - Series[™] Finish)

Slabs	21 x 35 x 23¾" (60mm)
Beacon Hill™ Platform	Random Bundle (80mm)

STANDARD

A classic thru-mix paving stone surface.

COLORS



Sierra

Terra Cotta

Squares	8 x 8 x 2¾" (60mm)	Permeable Rectangles	5 x 10 x 31/8" (80mm)
Rectangles	4 x 8 x 2 ³ / ₈ " (60mm)	Eco-Optiloc™	10½ x 10½ x 3½" (80mm)



PROJECT: Valhalla Condominiums, Etobicoke, ON. **DESIGN:** Schollen & Company. **PRODUCT:** Rectangles with Standard finish in Buff and Charcoal.

SHAPES & SIZES





Not all shapes and sizes are available in all regions, or in all finish or edge options (not shown). Consult your Unilock Representative for more information. All measurements are nominal.

T = height / thickness of the slab or paver



ARCANA[™]

Silky, matte, and speckled slabs with exposed granite, quartz and marble.



PROJECT: 465 N Park Roof Deck, Chicago, IL. **DESIGN:** Hitchcock Design Group. **PRODUCT:** Arcana* in Corvara.

COLORS



Corvara (SR 0.30) *



Lugano (SR 0.46)



Modena (SR 0.46) *



Vivanto * (SR 0.18)



11% x 23% x 2" (301 x 606 x 50mm)



17% x 23% x 2" (453 x 606 x 50mm)



23% x 23% x 2" * (606 x 606 x 50mm)

SKYLINETM

Smooth and contemporary slabs, ideal for pedestrian or roof deck applications.



PROJECT: 99 Tremont @ Oak Sq., Brighton, MA. DESIGN: Radner Design Associates, Inc. PRODUCT: Skyline" with Smooth Premier finish in New York Blend.

COLORS



Chamois (SR 0.41)



Medium Grey



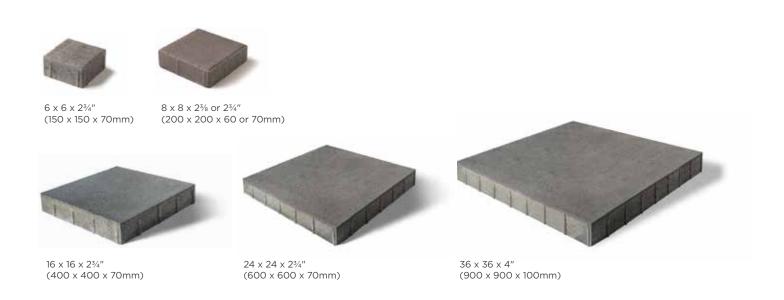
Silver Grey

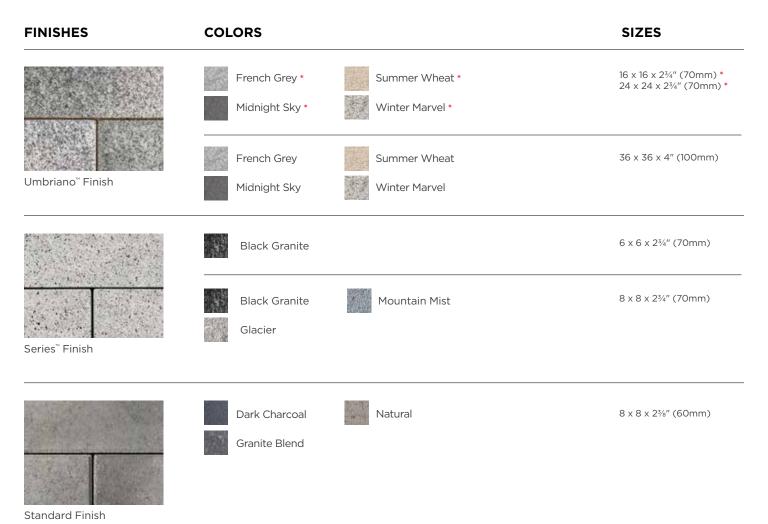


23% x 23% x 2" (606 x 606 x 50mm)

SQUARES

A collection of square pavers available in a variety of finishes and colors.



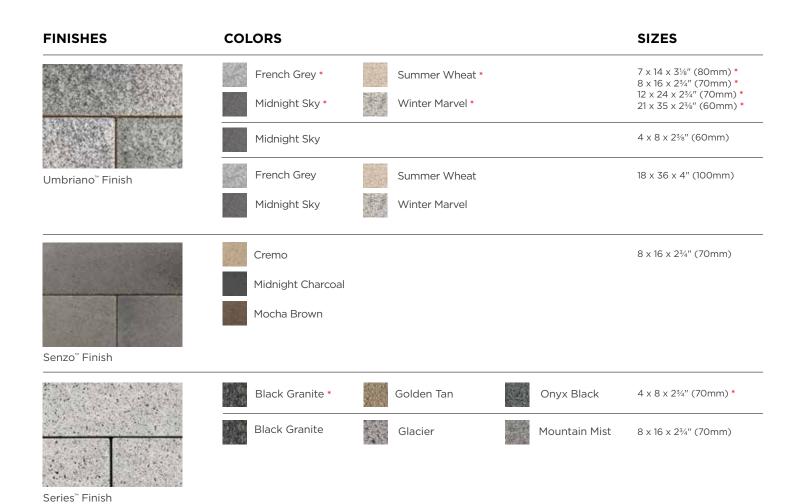


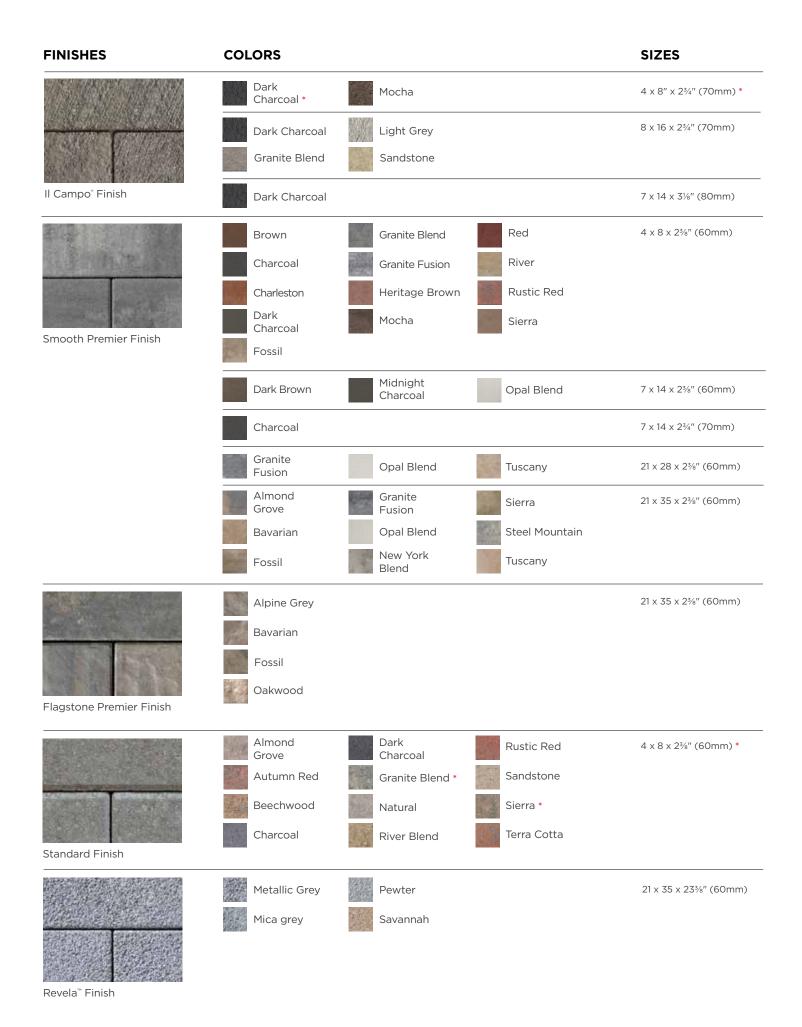


RECTANGLES

A collection of rectangle pavers available in a variety of finishes and colors.

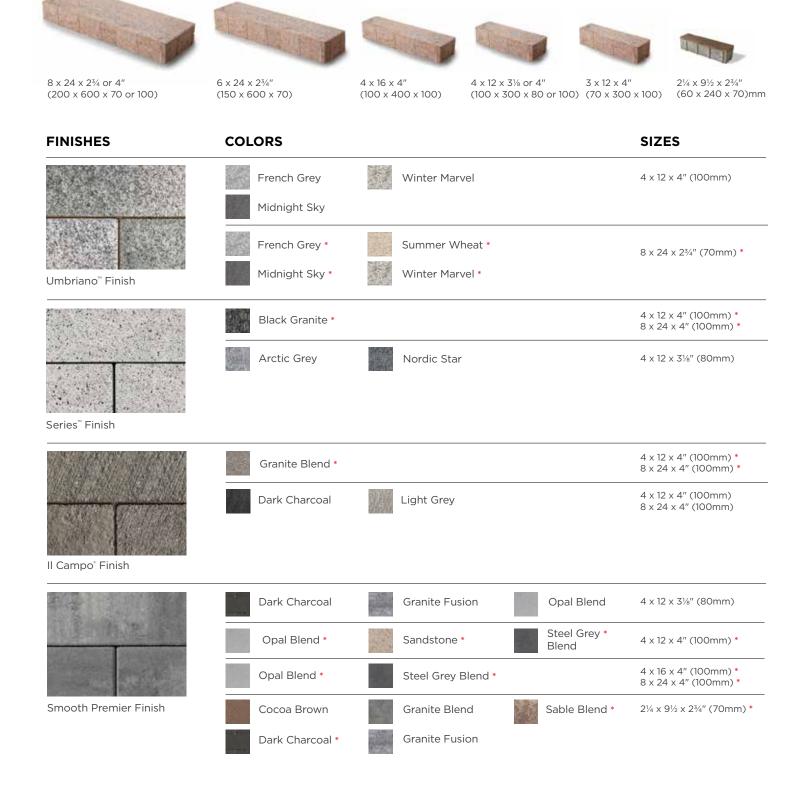






PLANKS

A collection of plank pavers available in a variety of finishes and colors.

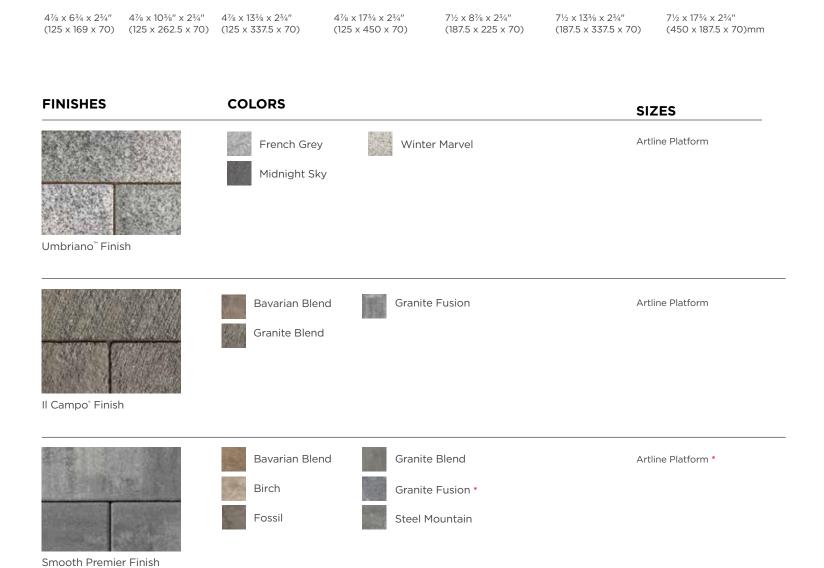




PROJECT: University of Toronto - Mississauga Campus, Mississauga, ON. **DESIGN:** Plant Architect. **PRODUCT:** Planks with Series" finish in Peppered Sand and Smooth Premier finish in Steel Grey Blend.

ARTLINE™ PLATFORM

An assortment of rectangular pavers with long, clean lines.



RANDOM BUNDLE (all units sold together)

100mm (4") Artline is available by special order only. Minimum quantities apply.

* Available for quick ship across North America.



PROJECT: Nieman Road Plaza, Shawnee, KS. **DESIGN:** Stantec. **PRODUCT:** Artline" Platform with Smooth Premier finish in Steel Mountain.

BEACON HILL™ PLATFORM

A collection of three shapes that create a classic random appearance.

RANDOM BUNDLE (all units sold together)



LARGE RECTANGLE 14 x 21 x 23% or 31%" (360 x 540 x 60mm or 80mm)



SQUARE 14 x 14 x 2³% or 3¹%" (360 x 360 x 60mm or 80mm)



SMALL RECTANGLE 7 x 14 x 2% or 3%" (180 x 360 x 60mm or 80mm)

ADDITIONAL INDIVIDUAL SIZES 7 x 14 x 2% or 3%" (60mm or 80mm) 21 x 35 x 2%" (60mm) (US) 21 x 28 x 2%" (60mm) (CDA)



PROJECT: Deer Creek, Ajax, ON. DESIGN: Daniel J. O'Brien & Associates and B.K. Baun Landscape PRODUCT: Beacon Hill Platform with Smooth Premier finish in Almond Grove Fusion.

FINISHES COLORS SIZES



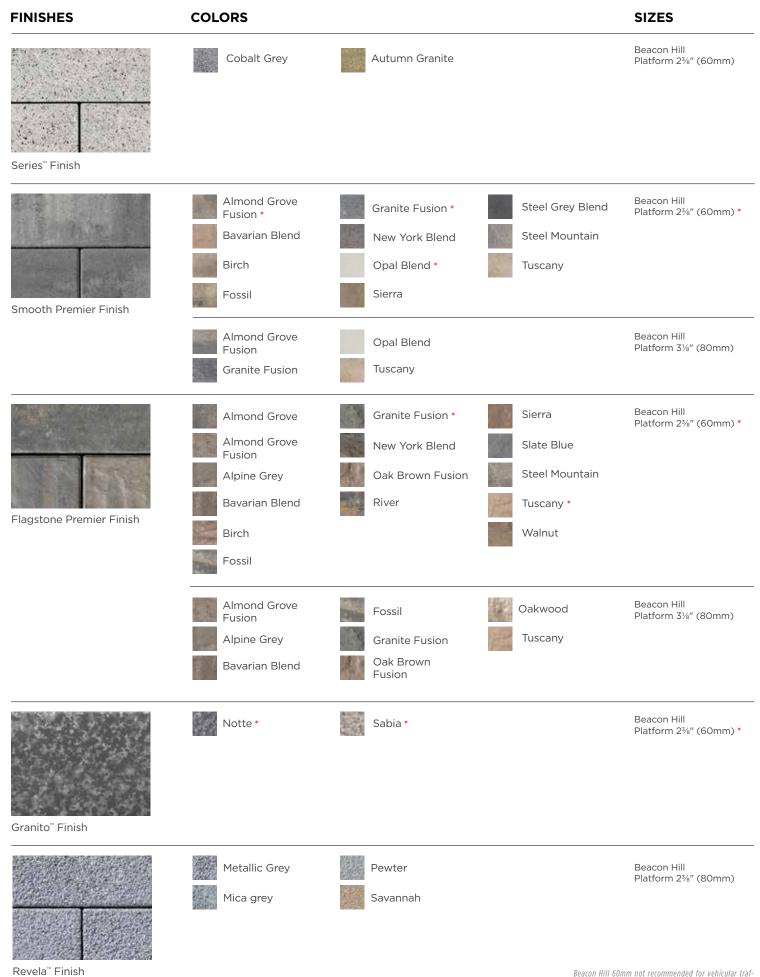
Umbriano[™] Finish

French Grey *

Midnight Sky *



Beacon Hill Platform 2³/₈" (60mm) * Beacon Hill Platform 2³/₈" (80mm) *



HEX / CITY PARK PAVER™

A modern twist on a traditional urban paver hex shape.



PROJECT: Bower Condos, Oakville, ON. DESIGN: NAK Design Strategies. PRODUCT: Hex / City Park Paver" with Series" finish in Black Granite and Glacier.



Smooth Premier Finish



8 x 8 x 2³/₄" (200 x 200 x 70mm)

OPTILOC™

A heavy-duty, L-shaped industrial paver with tri-axis locking, offering a sleek, rectilinear look.



PROJECT: Pearl Street, Brookline, MA. DESIGN: City of Brookline. PRODUCT: Optiloc" with Smooth Premier finish in Granite Blend and Rustic Red.

FINISHES COLORS SIZES



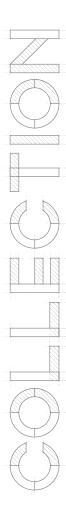
Standard Finish



10½ x 10½ x 3½" (80mm)



10¼ x 10¼ x 3⅓" (260 x 260 x 80mm)





Deep, rich colors and a multitude of unique Reala™ textures combine to deliver the timeless beauty of Unilock Elegance. From the timeworn look of European cobblestones, to the classic luxury of riven natural stone slabs, our Elegance collection offers styles you can't get anywhere else. And thanks to Ultima Concrete, the look you purchase is the look that will last, with up to 4x the strength of poured-in-place concrete.











TOWN HALL®

Modeled after historic North American clay street pavers, Town Hall textures were cast from a multitude of different surfaces using Reala™ Technology, and Ultima™ Concrete Technology was used to create superior durability. Installed in traditional or permeable applications.



PROJECT: Riverside Metra Station, Riverside, IL. DESIGN: Christopher B. Burke Engineering. PRODUCT: Town Hall' in Burgundy Red, Burnt Clay and Old Oak.



Basalt *



Burgundy Red *



Burnt Clay *



Heritage Clay *



Heritage Red *



Old Oak *



4 x 9³/₄ x 2³/₄" * (100 x 250 x 70mm)



RICHCLIFF®

Inspired by the texture of natural cut flagstone. Richcliff is cast using Reala™ Technology, which ensures a completely random and natural appearance. Ultima™ Concrete Technology makes Richcliff up to four times stronger than conventional poured concrete.



PROJECT: Old Orchard Mall, Skokie, IL. **DESIGN:** Herrera Landscape & Snow Removal, Inc. **PRODUCT:** Richcliff* in Smoke Shale.



Dawn Mist *



Pebble Taupe *



Smoke Shale *



LARGE RECTANGLE 9 x 12 x 23/8" (226 x 300 x 60mm)



SQUARE 9 x 9 x 23/8" (226 x 226 x 60mm)



SMALL RECTANGLE 6 x 9 x 2³/₈" (150 x 226 x 60mm)



LARGE RECTANGLE * $12 \times 21 \times 2^{3}/8$ " (302 x 528 x 60mm)

COPTHORNE®

Inspired by the rich color and timeworn beauty of European street pavers and cast using Reala™ Technology for an authentic surface appearance, Copthorne uses Ultima™ Concrete Technology to deliver up to four times the strength of conventional poured concrete.



PROJECT: Plainville Public Safety, Plainville, MA. DESIGN: Kaestle Boos Associates. PRODUCT: Copthorne® in Burgundy Red, Burnt Clay and Old Oak.



Basalt *



Burgundy Red *



Burnt Clay *



Old Oak *



Steel Blue *



2½ x 7% x 2¾" * (65 x 200 x 60mm)

COURTSTONE®

Courtstone brings a luxurious, old-world elegance to every project with Ultima™ that provides up to four times the strength of conventional poured concrete. Using Reala™ Technology, the unique shapes were cast from real European cobblestones but manufactured with a consistent base for efficient installation.



PROJECT: Hilliard Roundabout, Columbus, OH. DESIGN: James Burkhart. PRODUCT: Courtstone" in Basalt and Belgin Blue.



Basalt *



Belgian Blue *



Dawn Mist *



Pebble Taupe *



XL RECTANGLE 5% x 8% x 2%" (130 x 215 x 60mm)



LARGE RECTANGLE 51/8 x 71/4 x 23/8" (130 x 185 x 60mm)



RANDOM BUNDLE (all units sold together) *

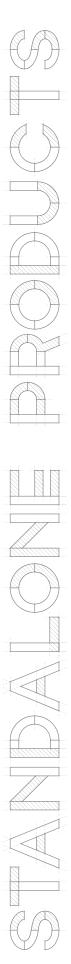
RECTANGLE 5% x 6½ x 2¾" (130 x 165 x 60mm)



SMALL RECTANGLE 51/8 x 53/4" x 23/8" (130 x 145 x 60mm)



SQUARE 5% x 5% x 23%" (130 x 130 x 60mm)



Unilock paver collections include products that are available only in a stock range of colors. Special-order colors may be an option for this range of products but please speak with your Unilock Representative for more information. These are **tried and true products lines** that will suit a wide range of commercial applications.





BRUSSELS BLOCK®

Brussels Block is the original tumbled paver. Its timeless warmth, relaxed appearance and tumbled finish reflect natural quarried stone.



PROJECT: Pier 27. Toronto, ON. **DESIGN:** The MBTW Group. **PRODUCT:** Brussels Block* Dimensional Paver in Limestone.



Almond Grove



Midnight Charcoal





River



Limestone * (SR 0.28)



Sandstone * (SR 0.41)



Mahogany *



Sierra *



DIMENSIONAL PAVER 8 x 12 x 4" (200 x 300 x 100mm)



XL STONE * 8½ x 13¾ x 2¾" (208 x 348 x 70mm)



STANDARD STONE * 6% x 8½ x 2¾" (174 x 208 x 70mm)



HALF STONE * 41/8 x 67/8 x 23/4" (104 x 174 x 70mm)

BRONTE® STREET PAVER

Ideal for heavy-duty applications with superior load-bearing properties. The interlocking tongue and groove provides maximum performance where vehicle turning creates a twist load on the paver.



PROJECT: Ron Joyce Children's Health Centre. DESIGN: Vertechs Design Landscape Architects. PRODUCT: Bronte Street Paver in Limestone and Natural.



Natural - Distressed Finish SPECIAL ORDER



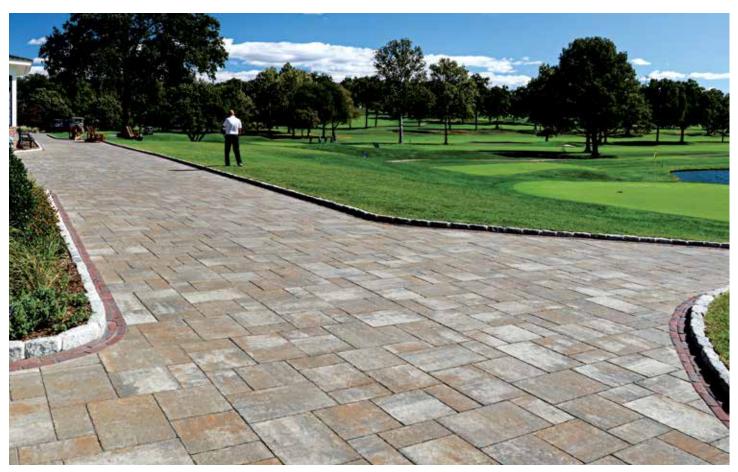
THIS PRODUCT IS AVAILABLE IN A VARIETY OF SPECIAL ORDER FINISHES AND COLORS.
ASK YOUR UNILOCK REPRESENTATIVE ABOUT SPECIAL ORDER OPTIONS IN YOUR REGION.



5½ x 85% x 4" (140 x 220 x 100mm)

BRISTOL VALLEY®

The subtle surface texture and understated edge detail of Bristol Valley brings a new, refined elegance to projects.



PROJECT: Upper Montclair Country Club, Montclair, NJ. **DESIGN:** Stonefield Engineering & Design. **PRODUCT:** Bristol Valley in Bavarian.



Bavarian



Copper Ridge



Fossil



Granite Fusion



Steel Mountain



LARGE RECTANGLE 14 x 21 x 2³/₈" (360 x 540 x 60mm)



SQUARE 14 x 14 x 23/8" (360 x 360 x 60mm)



SMALL RECTANGLE 7 x 14 x 2³/₈" (180 x 360 x 60mm)



XL RECTANGLE 21 x 35 x 23/8" (540 x 890 x 60mm)

MATTONI™

Mattoni reinterprets classic slender Roman brick with a surface that is antiqued for a distressed, timeworn appearance.



PROJECT: Wellfield Botanical Gardens, Elkhart, IN. DESIGN: Rustic ROCKS. PRODUCT: Mattoni" in Sable Blend and Dark Charcoal.



Cocoa Brown



Dark Charcoal *



Granite Fusion



Granite Blend



Sable Blend *



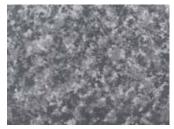
2½ x 9½ x 2¾" * (60 x 240 x 70mm)

GRANITO[™]

The unique and boldly mottled color of Granito is achieved with proprietary Artista[™] Color Technology, combined with EnduraColor[™] for a refined surface texture and long-lasting color.



PROJECT: Rodeo Walk, Toronto, ON DESIGN: MWLA Landscape Architects. PRODUCT: Hex / City Park Paver* with Granito* Finish in Sabia.



Notte *

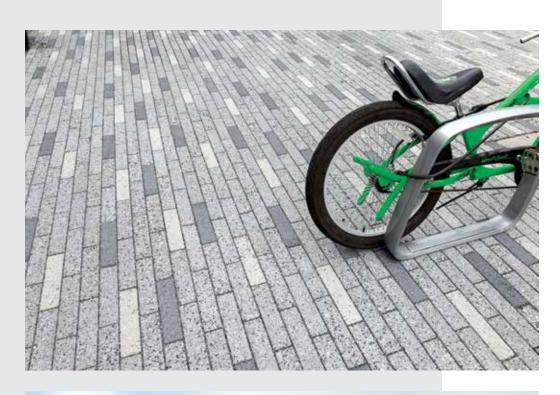


Sabia ³

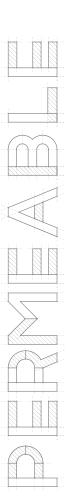


7% x 7% x 2¾" (200 x 200 x 70mm)

Since Unilock introduced permeable pavers to North America more than twenty-five years ago, we have steadily increased our selection of sizes, shapes, colors and finishes. Our permeable pavers are suitable for a variety of applications and have joint spacing that complies with the Americans with Disabilities Act.







Permeable Paver Innovation

Unilock introduced permeable paving to North America in 1991, and has continued to lead the charge with new innovative products. Our extensive involvement in permeable paving and long-standing international alliances have allowed us to gain valuable knowledge, experience, and best practices that we can share with clients to help ensure their projects are a success.





















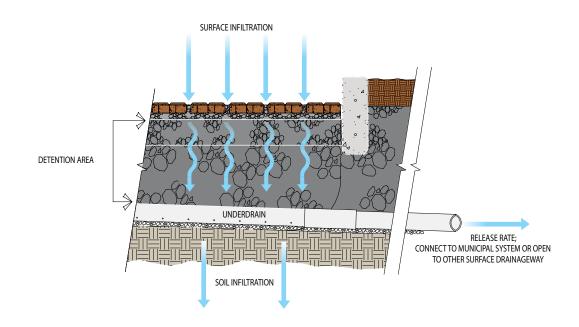


The problem with stormwater is that it has to have somewhere to go, ideally back into the ground. Today's urban environments are covered with impervious hard surfaces such as rooftops, parking lots and highways in excessive amounts, instead of pervious fields and forests. This runoff flows into storm drains and ultimately into local rivers, lakes and streams, carrying heavy metals, bacteria and other pollutants that foul our water and put our health at risk.

Some communities use separate systems for sewage and stormwater, however, older urban communities use

combined sewer systems that allow for overflow from the two inputs that release directly into local rivers and coastal waters when the system is overloaded. This allows for millions of gallons of raw waste and other pollutants into the waters we may fish, swim, boat or may be sources of drinking water.

Storm frequencies, intensities and duration are shifting and in many regions more severe storms occur more frequently than expected. Increased rainfall and snowfall will place increased demands on stormwater sewer and flood control systems.





PROJECT: Yolanda Garcia Park, Bronx, NY. DESIGN: New York City Parks. PRODUCT: Permeable Hex / City Park Paver" with Smooth Premier finish in Dark Charcoal, Medium Grey and White.

Permeable Paver DESIGN CONSIDERATIONS

Rainfall intensity and duration are typically analyzed together for traditional non-permeable surfaces. However, with a permeable paver surface, intensity is less of a factor as the surface infiltration rate will exceed the capabilities of most storms. A permeable paver surface is capable of handling more than 100" (2,540 mm) per hour. The paver joints must be adequately maintained to allow for maximum infiltration.

Although many rainfall events only last for a few minutes, for larger rainfall events, the impact of duration is important to recognize. A heavy rain could fall at the intensity rate of 6" (152 mm) per hour, but the duration may only last for 10 minutes with a resulting actual rain amount of only 1" (25 mm). Longer duration events can often be more demanding, even with less intensity. Actual monthly rainfalls in the Midwest U.S., for example, average 4" (100 mm). Therefore, permeable paving systems can easily contain most rainfall events.

Runoff coefficient (C value) is used to measure the percentage of water that runs off different surface types. For example, bituminous asphalt has a C value of 0.85. This means that during a rainfall, 85 percent of the water will run off the surface. (Source: Design and Construction of Sanitary and Storm Sewers, American Society of Civil Engineers, New York, p. 332, 1969). In comparison, turf has a C value of 0.15 or 15 percent. The C value

of permeable paving, with up to a 5 percent slope, is actually zero, unless the rainfall intensity exceeds the surface infiltration rate or the entire open-graded base reaches capacity. With a properly designed permeable paver system, capacity will rarely be reached. To achieve maximum surface infiltration, maintenance of the joints may be necessary.

Soil infiltration is another way to absorb runoff. During the site investigation project phase, conducting a geotechnical or porosity test will determine the soil infiltration rate, which will establish stormwater design requirements. Typical industry recommendations suggest installing an underdrain for soil with less than 0.5" (13 mm) per hour of infiltration. It is possible for underdrain systems to be eliminated for soils with infiltration rates greater than 0.5" (13 mm) per hour.

Release rate refers to the volume of water that is allowed to be discharged into a municipal system or waterway, usually measured in cubic feet per second. Many stormwater regulatory agencies require that the post-development release rate not exceed predevelopment conditions. Permeable paving slows and detains stormwater in the open-graded base so that it can be gradually released. Local jurisdictions should be contacted for required release rates.

Benefits of INFILTRATION

Rainwater infiltration is extremely important to the groundwater supply. According to the U.S. Geological Survey, one of America's most important natural resources is groundwater. Half of the drinking water in the U.S. comes from groundwater, with the balance coming from lakes and rivers. It is vital to agriculture and other industries, as well as essential for ensuring the health of rivers, streams, wetlands and other water bodies. Urban sprawl contributes to the decrease in pervious area for rainwater infiltration and reduced groundwater levels. Soil infiltration is a simple method for ensuring future water availability.

Installing a permeable paver system above porous soils allows for rainwater infiltration, reducing runoff and flooding. Most soils, even clay, allow for some infiltration. Soils with high porosity, such as sand, can have a higher infiltration rate than the actual rate of rainfall. For example, if it is raining at a rate of 2" (51 mm) per hour, and the soil has an infiltration rate of 4.5" (114 mm) per hour, the soil will absorb water before it can run off. Even poor soil with a low infiltration rate will work. For example, a soil with 0.25" (6 mm) per hour of infiltration will have complete infiltration after about four hours per inch of rainfall.

TYPICAL INFILTRATION RATES OF VARIOUS SOIL GROUPS

Soil Conservation Service Group	Typical Soil Type	Saturated Infiltration Rate			
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	in/hr	mm/hr		
А	Sand	8.27"	210 mm		
А	Loamy Sand	2.41"	60 mm		
В	Sandy Loam	1.02"	26 mm		
В	Loam	0.52"	12.7 mm		
С	Silt Loam	0.27"	6.8 mm		
С	Sandy Clay Loam	0.17"	4.3 mm		
D	Clay Loam and Silty Clay Loam	0.09"	2.3 mm		
D	Clay	0.06"	1.5 mm		

INFILTRATION RATES FOR UNILOCK PERMEABLE PAVERS Newly Installed

		PAVER	JOINT MATERIAL	Joint Width*	Void Space*	Infiltration Rate**	Minimum Infiltration Rate** for Rainfall intensity of:			
							2"/hr	4.5"/hr	6.5"/hr	11"/hr
		Eco-Line*	ASTM # 9 Aqua Rock	6.25mm	5.8%	560	34	78	112	190
		Eco-Promenade*	ASTM #9 - SEK Chip	7 mm	10.12%	934	20	44	64	109
	loint	Eco-Priora™ Herringbone	ASTM #9 - SEK Chip	7 mm	7.08%	676	28	64	92	155
Ш	Small: 1/4" Joint	Eco-Priora™ 5 x 10	Kafka - 1/8 to 3/16"	7 mm	6.8%	633	29	66	96	162
SIBLI	Smal	Eco-Priora™ Pattern H	ASTM #9 - Roscoe Chip	7 mm	5.7%	509	35	79	114	193
ES		Eco-Priora [™] Pattern H	IDOT FA 22	7 mm	5.7%	347	35	79	114	193
ACCES		Eco-Priora™ 10 x 10	Kafka - 1/16 to 3/16"	7 mm	4.6%	327	43	98	141	239
	Medium: 1/4" to 3/8" Joint	Town Hall*	Kafka - 1/8 to 3/16"	9mm	6.5%	784	31	69	100	169
ADA	Mediur to 3/8'	City Park Paver™	ASTM #9 - SEK Chip	10mm	4.2%	934	48	107	155	262
	Joint	DuraFlow™	ASTM #8 IDOT CA-16	12mm	8%	912	25	56	81	138
	Large: 3/8" to 1/2" Joint	Eco-Optiloc™	HPB	12 mm	7.3%	404	27	62	89	151
	3/8"	Eco-Optiloc™	ASTM #8 IDOT CA-16	12 mm	7.3%	912	27	62	89	151
	£.	Tribeca Cobble™	ASTM #9 Aqua Rock	10mm	5.6%	400	36	80	116	196
	Je: >1/2	Thornbury™	ASTM # 9 Aqua Rock	18mm	4.4%	385	45	102	148	250
	Extra Large: >1/2"	Eco-Stone™	ASTM #8 IDOT CA-16	6 mm	10.18%	784	19	42	60	102
	۵	Ecoloc*	Kafka - 1/8 to 3/16"	7 mm	12.18%	1060	18	41	59	99

NOTE: The 2", 4.5", 6.5" and 11" per hour Rainfall Intensity examples are based on common 5 minute rainfall intensity charts and are not the same as total rainfall quantity. *Joint Width is measured at the top of the paver. Void Space is calculated at the base of the paver. **Infiltration rate is inches per hour based on testing done when first installed and is an approximation.

Detention and VOLUME CONTROL

BASE STORAGE CAPACITY

Traditional surface detention ponds which act as holding facilities for rainfall are an inefficient use of space. For most land uses and all impervious areas, such as roofs, roads and parking lots, stormwater runoff flows through a system of pipes that release it into detention or retention ponds. This valuable surface area could be much more effectively utilized.

A permeable paving base for stormwater detention is a very efficient use of land. With this system, the surface is pervious, allowing detention area to be contained underneath. The detention is created under every square foot of permeable paving, as deep as necessary.

Permeable paver systems use crushed, angular, open-graded aggregate base materials. These materials are entirely different from those used for traditional impervious roads and parking lots. Those traditional systems use dense-graded aggregates containing fines, making them extremely slow-draining. Conversely, the use of open-graded aggregates provides a void space or porosity of approximately 40 percent. This is utilized for detention and allows for a rapid surface infiltration rate of over 500" (12,700 mm) per hour (see page 30 for aggregate infiltration rates).

CRITERIA		RAINWATER HARVEST VOLUME		BASE STORAGE CAPACITY		SURPLUS / (DEFICIT) STORAGE							
Rainfall In/Hr (mm/hr)	Surface Area Ft2 (m2)	Base Depth In (mm)	Void Space	Cubic Ft (m3)	Acre Feet	Gallons (m3)	Cubic Ft (m3)	Acre Feet	Gallons (m3)	Cubic Ft (m3)	Acre Feet	Gallons (m3)	% USED
1 (25 mm)	43,560 (4,047 m²)	14 (35 mm)	40%	3,630 (103 m³)	0.08	27,154 (103 m³)	20,328 (576 m³)	0.47	152,064 (576 m³)	16,698 (473 m³)	0.38	124,910 (473m³)	17.9%
1 (25 mm)	43,560 (4,047 m ²)	18 (46 mm)	40%	3,630 (103 m³)	0.08	27,154 (103 m³)	26,136 (740 m³)	0.60	195,511 (740 m³)	22,506 (637 m³)	0.52	168,357 (637 m³)	13.9%
1 (25 mm)	43,560 (4,047 m²)	22 (56 mm)	40%	3,630 (103 m³)	0.08	27,154 (103 m³)	31,944 (905 m³)	0.73	238,958 (905 m³)	28,314 (802 m³)	0.65	211,804 (802 m³)	13.9%
3.04 (77 mm)	43,560 (4,047 m²)	14 (35 mm)	40%	11,035 (312 m³)	0.25	82,548 (312 m ³)	20,328 (575 m³)	0.47	152,064 (575 m³)	9292.92 (263 m³)	0.21	69,516 (263 m³)	54.3%
3.04 (77 mm)	43,560 (4,047 m²)	18 (46 mm)	40%	11,035 (312 m³)	0.25	85,548 (312 m³)	26,136 (740 m³)	0.60	195,511 (740 m³)	15,101 (428 m³)	0.35	112,963 (428 m³)	42.2%
7.58 (19 mm)	43,560 (4,047 m²)	14 (35 mm)	40%	27,515 (779 m³)	0.63	205,827 (779 m³)	20,328 (575 m³)	0.47	152,064 (575 m³)	(7,187) 203 m³)	(0.16)	53,763 (204 m³)	135.4%
7.58 (19 mm)	43,560 (4,047 m²)	22 (56 mm)	40%	27,515 (779 m³)	0.63	205,827 (779 m³)	31,944 (905 m³)	0.73	238,957 (905 m³)	4,429 (125 m³)	0.10	33,131 (125 m³)	86.1%

Detention volumes or storage capacities for permeable paving are based on different rainfall events.





PROJECT: Southwest Park, Hoboken, NJ DESIGN: Starr Whitehouse. PRODUCT: Permeable Plank with Series" Finish

CASE STUDY

Southwest Park by **Starr Whitehouse**

Hoboken, New Jersey

As part of an extensive resiliency plan to mitigate flooding in a Hoboken neighborhood, a one-acre parking lot was turned into a unique park. The new space offers a refined spot for a variety of recreational activities with moveable seating areas, a lawn, child-friendly play zones, and much more.

Permeable pavers helped the park meet the city's demand for sustainability with integrated green infrastructure capable of managing 200,000 gallons of stormwater in its underground water detention system. Permeable Planks were designed to direct rainwater back into the subbase and detention system through the joint material and keep it away from sewer systems.

The paving pattern was achieved using three colors of special order Unilock Series™ finish in the Permeable Plank shape. The colors play on the hues of neighborhood buildings creating an interesting and vibrant space for all to enjoy.

Improved WATER QUALITY



MEDIAN POLLUTANT REMOVAL

Without water, life cannot survive. For fish, wildlife and humans, clean water is a necessity. Even plants need a certain quality of water. The infiltration process of a permeable paving system will remove harmful pollutants such as oil. The EPA recognizes permeable paving as a best management practice (BMP) for non-point source pollutants. Utilizing permeable pavers is a simple step to ensure cleaner water and to minimize increases in water temperature. Often forgotten, water temperature is an important quality issue. Increased water temperatures can increase the amount of bacteria and algae, and can decrease aquatic life. Allowing the water to immediately drain from the surface ensures it

will not be heated from an impervious surface before it reaches a runoff area.

The Interlocking Concrete Pavement Institute (ICPI) has conducted tests that determine water quality. Their findings indicate that cleaner water results from being filtered through a permeable paving system. Traditional systems have no means for cleaning water. Many municipalities in North America have begun to implement strategies to improve water quality by using BMPs like permeable paver systems. Even smaller communities have joined in the effort to create more sustainable water management systems.

	INFI	INFILTRATION TRENCHES & POROUS PAVEMENT		
POLLUTANT	0.5 in (13mm) Runoff per Impervious Acre	1.0 in (25mm) Runoff per Impervious Acre	2-Year Design Storm Treatment	Median Pollutant Removal**
Total Suspended Solids	60-80%	80-100%	80-100%	95%
Total Phosphorous	40-60%	40-60%	60-80%	70%
Total Nitrogen	40-60%	40-60%	60-80%	51%
Biological Oxygen Demand	60-80%	60-80%	80-100%	-
Bacteria	60-80%	60-80%	80-100%	-
Metals	60-80%	60-80%	80-100%	99% (Zn)

^{*}Note: These rates are not based on actual data since monitoring what enters and leaves any infiltration facility is difficult to measure. This data is based on land application of pollutants and their treatment through soils. **Actual monitored removal rates.





Geometric Eco-Optiloc™

CASE STUDY

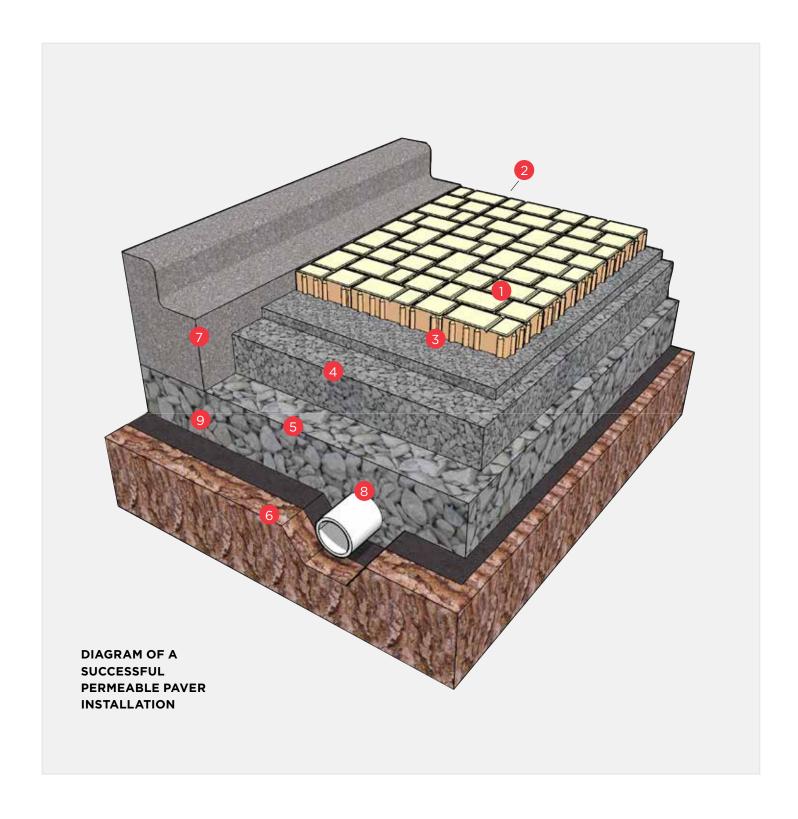
Cleveland Clinic Hospital by **Cawrse & Associates, Inc.**

Avon, Ohio

WETLAND REQUIREMENTS. Cleveland Clinic Hospital located in Avon, Ohio needed to expand in order to continue meeting the health care needs of its community. The clinic identified the need to build a new, multi-story tower and significantly increase parking on a tight budget. The challenge the design team faced was that much of the available property and the adjacent property was wetland. Stormwater runoff from the parking lot was not allowed in order to protect the wetland.

The design team, in conjunction with the Army Corps of Engineers, decided that permeable pavers were the best approach to deal with the stormwater sensitivities. The high infiltration rate of Eco-Optiloc meant that stormwater would be reabsorbed below ground and the 'L' interlocking shape of Eco-Optiloc provided superior resistance to heavy vehicular and truck traffic. The mechanical installation of the pavers, coupled with the low cost of maintenance, kept the project on budget in the short and long term.

Nine components of a highly Successful Permeable Pavement



1 Unilock Permeable Interlocking Concrete Paver

With various aesthetically pleasing colors and textures, creative choices are not compromised by function. Permeable Interlocking Concrete Pavers (PICPs) are the most durable of any porous pavement material. Unilock's minimum 8,500 psi (57 MPa), high-strength, no-slump concrete allows water to infiltrate between paver units instead of through the material. The joint sizes vary between paver options, ranging from 0.25" (6 mm) to 0.5" (13 mm), which meet the Americans with Disabilities Act specifications for permeable pavement, and allows a minimum of 100" (2,540 mm) per hour of surface infiltration.

2 | Joint Aggregate - ASTM No. 8 OR 9

As the initial filtering layer, the 0.25" (6 mm) crushed, angular, chip stone captures approximately 80 percent of debris in the first 1" (25 mm) to 2" (51 mm). The secondary function of the joint aggregate is to increase the positive interlock between the paver units, which is essential to the structural stability of the PICPs. The joint aggregate must always remain filled to the lip of the PICP units to reduce unnecessary clogging.

3 | Setting Bed Aggregate - ASTM No. 8

Using the 0.25" (6 mm) crushed, angular, chip stone, instead of sand, provides a smooth leveling course for placing pavers and additional structural interlocking of the PICPs. Unlike sand, the setting bed aggregate allows for rapid water infiltration with over 500" (12,700 mm) per hour through the 40 percent void-space. Sand must be avoided as a setting bed in a PICP application.

4 Base Aggregate - ASTM No. 57

When subsoil conditions are conducive to supporting the ASTM No. 57 (12.5-25mm) crushed, angular, open-graded base material without migration, it can be used without ASTM No. 2 (50-63mm) subbase aggregate. Minimum thickness must be designed to sufficiently support anticipated loads, as well as accommodate stormwater detention in the 40 percent void space of the material. The ASTM No. 57 base aggregate, with a minimum thickness of 4" (102 mm), serves as a transition material between the ASTM No. 8 (2-10mm) setting bed and the ASTM No. 2 subbase aggregate. The infiltration rate of the ASTM No. 57 is over 500" (12,700 mm) per hour.

5 Subbase Aggregate - ASTM No. 2

Subsoil conditions will dictate the necessity of this larger ASTM No. 2 (50-63mm), crushed, angular, open-graded subbase aggregate thickness. Installation of such material will provide increased structural stability on sites with poor soil conditions. A minimum thickness of 8" (203 mm) is required for effective performance. Subbase aggregate thickness must be designed to sufficiently support anticipated loads. As an added feature, the ASTM No. 2 subbase aggregate temporarily detains stormwater runoff in the 40 percent void-space of the material. The ASTM No. 2 also has an infiltration rate of over 500" (12,700 mm) per hour.

6 Subgrade

Existing soil materials will determine the performance capabilities of the PICP system. Pre-construction soil analysis, including percolation, California Bearing Ratio and penetrometer measurements (blow counts), are mandatory for proper design. Subsoils with less than 0.5" (13 mm) per hour of infiltration may require underdrainage, scarification and potentially amendments. Subsoils with greater than 0.5" (13 mm) per hour are considered highly permeable. Subsoil compaction can cause a detrimental reduction in permeability and can be eliminated.

7 Edge Restraint

PICP containment is vitally important to the success of interlocking properties. Lack or failure of an edge restraint will negatively impact the integrity of the pavement surface. For all vehicular PICP applications, an edge restraint, such as a concrete curb, is required. For non-vehicular and pedestrian areas, a plastic edging is sufficient when properly anchored into the subbase

8 Underdrain

In PICP systems, the underdrain pipe is based on several factors, such as the permeability of the subsoil, detention requirements, and stormwater release rate of the site. With highly permeable subsoils over 0.5" (13 mm) per hour, the underdrain pipe could be eliminated. Underdrain pipe size is inconsequential, provided the flow rate is greater than the release rate.

9 Mechanical Base Stabilization

Subsoil characteristics will determine the need for base stabilization. Specifically designed geogrid style systems, such as DriveGrid™ system, can be placed between the subsoil and ASTM No. 57 (12.5-25mm) base aggregate or ASTM No. 2 (50-63mm) and subbase. DriveGrid is not required between aggregate material layers. The base stabilization must be determined by soil conditions specific to each project. DriveGrid should be considered for any weaker subsoils.

Design and TECHNICAL INFORMATION

Typical Runoff Coefficients for the Rational Method

Land Use Type	Recommended Value
Industrial	0.75
Downtown Business District	0.85
Single-Family Residential	0.40
Multi-Family Residential	0.60
Parks	0.20

Source: Design and Construction of Sanitary and Storm Sewers. American Society of Civil Engineers, New York, p. 332, 1969.

Surface Type	Recommended Value
Bituminous Asphalt	0.85
Pour-In-Place Concrete	0.85
Lawns - Sandy Soils	0.13
Lawns - Heavy Soils	0.20
Permeable Pavers	0.0*

^{*} Actual value until detention in permeable base reaches capacity.

Coefficients are based on 5 - 10 year storm frequencies.



			SOIL SUBGRADE TEXTURE / INFILTRATION RATE INCHES / HOUR (MM/SEC)									
		Sand	Loamy Sand	Sandy Loam	Loam	Silt Loam	Sandy Clay Loam	Clay Loam	Silty Clay Loam	Sandy Clay	Silty Clay	Clay
Criterion	T _s (hrs)	8.27 (6x10 ⁻⁵)	2.41 (2x10 ⁻⁵)	1.02 (7x10 ⁻⁶)	0.52 (4x10 ⁻⁶)	0.27 (2x10 ⁻⁶)	0.17 (1x10 ⁻⁶)	0.09 (6x10 ⁻⁷)	0.06 (4x10 ⁻⁷)	0.05 (3x10 ⁻⁷)	0.04 (2x10 ⁻⁷)	0.02 (10 ⁻⁷)
f x T _s /V _r	24	496 (12.6)	145 (3.7)	61 (1.5)	31 (0.8)	16 (0.4)	10 (0.25)	5 (0.12)	4 (0.1)	3 (0.07)	2 (0.05)	1 (0.02)
for	48	992 (25.2)	290 (7.4)	122 (3.1)	62 (1.6)	32 (0.8)	20 (0.5)	11 (0.3)	7 (0.17)	6 (0.15)	2 (0.15)	2 (0.05)
(V _r = 0.4)	72	1489 (37.8)	434 (11)	183 (4.6)	93 (2.4)	149 (1.2)	31 (0.8)	16 (0.9)	11 (0.13)	9 (0.2)	7 (0.17)	4 (0.1)

T_s = Maximum allowable storage time

 V_r = Voids ratio

Lowest values unless base exfiltration is supplemented with drain pipes.

Maximum allowable depths, inches (m) of storage for selected maximum storage times (Is in hours), minimum infiltration rates and inches/hour (mm/sec)(31).

The Natural Resources Conservation Service (NRCS) method typically uses 24-hour storm events as the basis for design. Therefore, this design method is based on controlling the increased runoff for a specific 24-hour storm. The specific duration and return period (e.g., 6 months, 1 year, 2 years, etc.) are provided by the locality. If the increase in peak discharge associated with the storm event cannot be managed, a first-flush event should be the minimum selected for design.

BASE & AGGREGATE CHARTS

Careful selection of base material, as described below, ensures that an installation can handle almost any amount of rainfall. Testing results of all the aggregates listed below show a void ratio of approximately 40 percent. Choosing the correct void filter is critical as well. The aggregate infiltration rates below illustrate the performance of the system.

Aggregate Infiltration Rates

Approximate Particle Size	Permeability (k) in./hr (m/s)
ASTM No. 8 (2 - 10 mm)*	1,400 - 4,000 (3 x 10 ⁻¹ to 1 x 10 ⁻²)
ASTM No. 9 (2 - 5 mm)	140 - 1,400 (1 x 10 ⁻² to 1 x 10 ⁻³)
ASTM No. 10 (1 - 3 mm)	14 - 140 (1 x 10 ⁻³ to 1 x 10 ⁻⁴)
ASTM No. 57 (12.5 - 25 mm)*	500 - 2,000
ASTM No. 2 (50 - 63 mm)*	>1,000

Permeability ranges of joint fill aggregates for permeable pavers.

Setting Bed Aggregate

Sieve Size	Percent Passing
0.5" (12 mm)	100
0.375" (9.5 mm)	85 - 100
(4.75 mm) (No. 4)	10 - 30
(2.36 mm) (No. 8)	0 - 10
(1.16 mm) (No. 16)	0 - 5

Grading requirements for ASTM No. 8 bedding and joint / opening filler. Setting bed aggregate can be used as joint aggregate for Eco-Optiloc*.

Base Aggregate

SIEVE Size	Percent Passing
1.5" (37.5 mm)	100
1" (25 mm)	95 - 100
0.5" (12 mm)	25 - 60
(4.75 mm) (No. 4)	O - 10
(2.36 mm) (No. 8)	0 - 5

Grading requirements for ASTM No. 57 base.

Subbase Aggregate

Sieve Size	Percent Passing
3" (75 mm)	100
2.5" (63 mm)	90 - 100
2" (50 mm)	35 - 70
1.5" (37.5 mm)	O - 15
0.75" (19 mm)	0 - 5

Sieve sizes for ASTM No. 2 aggregates.

BASE THICKNESS

Permeable paving is not a typical segmental pavement. Unilock recommends that a professional engineer design a site-specific plan based on available site information. Along with information provided in this brochure, Unilock offers comprehensive software solutions, and industry-experienced consultants to assist you in the design of your pavement.

Pavement Use	Subbase ASTM No. 2	Base ASTM No. 57	Minimum Total
Heavy-duty industrial	14" (355 mm)	6" (152 mm)	20" (559 mm)
Municipal street	12" (305 mm)	6" (152 mm)	18" (457 mm)
Light-duty parking lot	8" (203 mm)	6" (152 mm)	14" (356 mm)
Residential driveway	n/a	12" (305 mm)	12" (305 mm)
Non-vehicular sidewalk	n/a	10" (254 mm)	10" (254 mm)

Notes: 1) All permeable pavers require a 1.5" (38 mm) setting bed of ASTM No. 8 for placement. 2) All thicknesses are after compaction. 3) Geotextiles between subgrade and ASTM No. 2 are optional and based on soil conditions. 4) Geotextiles are not required between the subbase, base or setting bed layers.

^{*} Unilock recommendations



TOWN HALL®

The Town Hall street paver has been designed to satisfy both traditional and permeable installation methods while maintaining a time-worn, historical and distressed appearance.



PROJECT: High Line, Toronto, ON. DESIGN: IBI Group. PRODUCT: Town Hall" in Burgundy Red, Burnt Clay and Old Oak.



Basalt *



Burgundy Red *



Burnt Clay *



Heritage Clay *



Heritage Red *



Old Oak *



4 x 9³/₄ x 2³/₄" * (100 x 250 x 70mm)

Joint Width 9mm Void Space 6.5% Accessible Joint

PERMEABLE SQUARES **(*)**

Square pavers designed with special spacer bars, the resulting 7mm gap is filled with a clear, fine stone chip that allows rapid penetration of rainwater into the subbase and subsoil.



PROJECT: Harrison PATH Station, Harrison, NJ. DESIGN: Port Authority of New York & New Jersey. PRODUCT: Eco-Priora* with Series* finish in special order colors.



THIS PRODUCT IS AVAILABLE IN A VARIETY OF SPECIAL ORDER FINISHES AND COLORS. ASK YOUR UNILOCK REPRESENTATIVE ABOUT SPECIAL ORDER OPTIONS IN YOUR REGION.



12 x 12 x 3%" (300 x 300 x 80mm) SPECIAL ORDER

Joint Width 7mm Void Space 3.6% Accessible Joint



Eco-Priora™ 10 x 10 x 3½" (240 x 240 x 80mm) SPECIAL ORDER





Eco-Priora[™] 5 x 5 x 3½" ** (120 x 120 x 80mm) SPECIAL ORDER

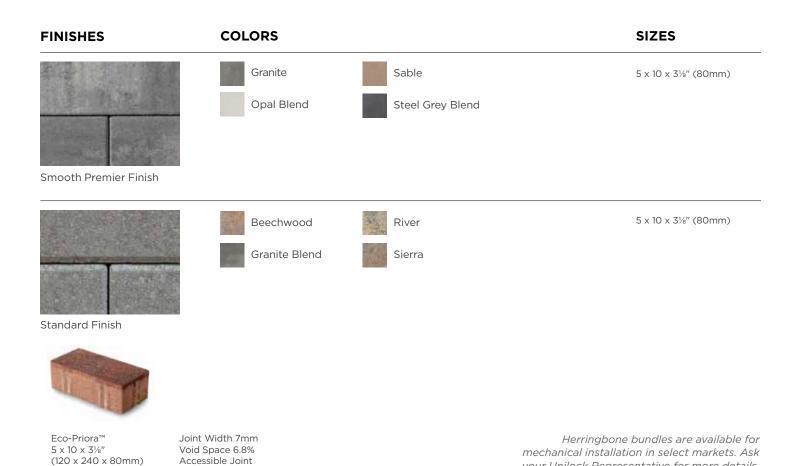
Joint Width 7mm Void Space 9% Accessible Joint

PERMEABLE RECTANGLES **(*)**

Rectangular pavers designed with special spacer bars, the resulting 7mm gap is filled with a clear, fine stone chip that allows rapid penetration of rainwater into the subbase and subsoil.



PROJECT: Mackenzie Vaughan Hospital, Vaughan, ON. DESIGN: PRODUCT: Eco-Priora" with Smooth Premier finish in Granite and Opal Blend.



your Unilock Representative for more details.

PERMEABLE PLANKS **(*)**

Linear, plank pavers designed with special spacer bars, the resulting 7mm gap is filled with a clear, fine stone chip that allows rapid penetration of rainwater into the subbase and subsoil.



PROJECT: Washington University, St. Louis, MO. DESIGN: Michael Verguson Landscape Architects, LTD. PRODUCT: Permeable Planks / Eco-Promenade" with Smooth Premier finish in Opal Blend.

FINISHES COLORS SIZES



Smooth Premier Finish



3 x 12 x 4" (100mm)



4 x 16 x 4" (100 x 400 x 100mm)





3 x 12 x 4" (70 x 300 x 100mm)

Joint Width 7mm Void Space 10.12% Accessible Joint

TRIBECA COBBLE™ PLATFORM **②**

Granite, marble and quartz particles give Tribeca Cobble its unique surface appearance. Ideal for driveways or traffic calming vehicular applications, Tribeca Cobble can be installed traditionally or on a permeable base to allow water to flow through.



PROJECT: Corporate Park, Walpole, MA. DESIGN: Jacobs Engineers. PRODUCT: Tribeca Cobble" in Crystalline Basalt.



Cobalt Grey



Crystalline Basalt *



Peppered Granite *



LARGE RECTANGLE 51/8" x 12" x 23/8" (130 x 30 x 60mm)



RANDOM BUNDLE (all units sold together) *

SMALL RECTANGLE 51/8" x 9" x 23/8" (130 x 230 x 60mm)



SQUARE 5%" x 7" x 23%" (130 x 175 x 60mm)

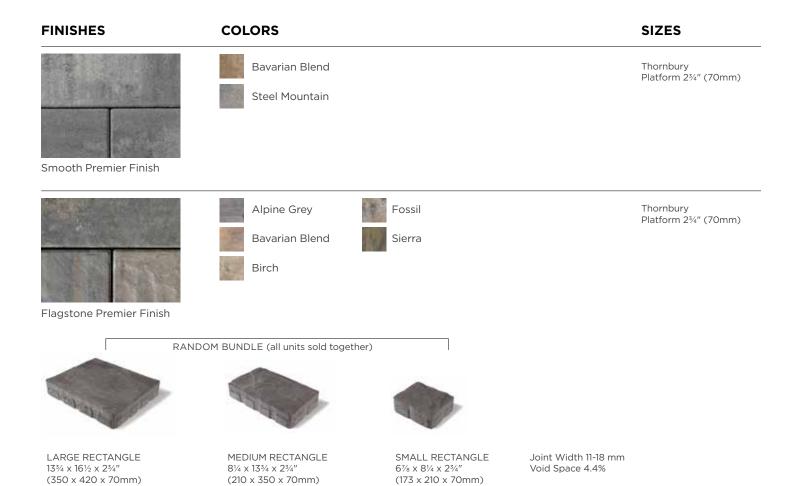
Joint Width 10mm Void Space 5.6%

THORNBURY™ PLATFORM **②**

The larger joint space adds a more rugged look to Thornbury and enables water to flow through when the product is installed on a permeable base.



PROJECT: Christopher Farms, Sheboygan, WI. **DESIGN:** Kelly's Landscape Design. **PRODUCT:** Thornbury" Platform with Flagstone Premier finish in Bavarian and Sycamore.



ECO-LINE® PLATFORM (2)

Permeable, heavy duty unit pavers. With custom finish and color options and the ability to be mechanically installed, this product is not only beautiful, but cost effective.



PROJECT: Hyatt Regency, Schaumburg, IL. DESIGN: Daniel Weinbach & Partners, Ltd. PRODUCT: Eco-Line* with Smooth Premier finish in Dark Charcoal and River.



THIS PRODUCT IS AVAILABLE IN A VARIETY OF SPECIAL ORDER FINISHES AND COLORS. ASK YOUR UNILOCK REPRESENTATIVE ABOUT SPECIAL ORDER OPTIONS IN YOUR REGION.

> Joint Width 6.25mm Void Space 5.8% Accessible Joint









35/16 x 11 x 4" (84 x 277 x 100)



35/16 x 93/8 x 4" (84 x 237 x 100)



4½ x 14 x 4" (114 x 357 x 100)



4½ x 12½ x 4" (114 x 317 x 100)



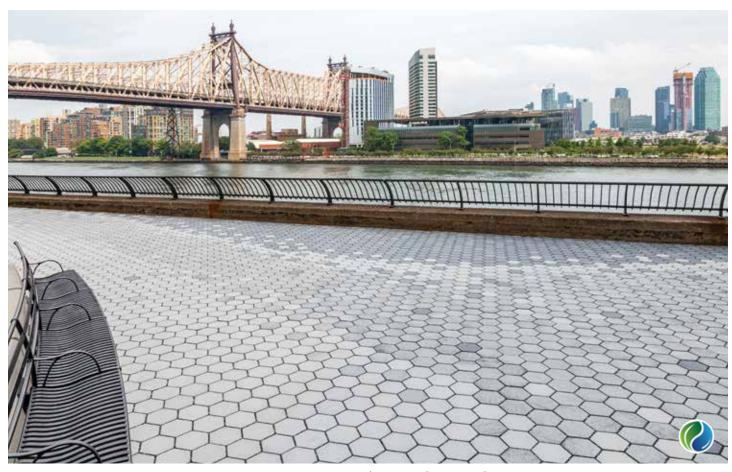
4½ x 11 x 4"



4½ x 9¾ x 4" (114 x 277 x 100) (114 x 237 x 100)mm



A modern twist on a traditional urban paver hex shape, The joint space is filled with a clear stone chip that allows rapid penetration of rainwater into the sub-base and subsoil.



PROJECT: Sutton Place Park, Manhattan, NY. DESIGN: New York City Parks. PRODUCT: Permeable Hex / City Park Paver" with Umbriano" finish in Grenada White, Winter Marvel and French Grey.



THIS PRODUCT IS AVAILABLE IN A VARIETY OF SPECIAL ORDER FINISHES AND COLORS. ASK YOUR UNILOCK REPRESENTATIVE ABOUT SPECIAL ORDER OPTIONS IN YOUR REGION.



8 x 8 x 31/8" (200 x 200 x 80mm)

Joint Width 10mm Void Space 4.2% Accessible Joint

DURAFLOW™ ⊘

This latest evolution of permeable pavement is purposely designed with a joint size, radius and angle to promote flow dynamics and facilitate easier cleaning and joint maintenance.



PROJECT: 180 York Street, Eden Mills, ON. DESIGN: Vertechs Design Landscape Architects. PRODUCT: DuraFlow with Standard finish in Charcoal.



THIS PRODUCT IS AVAILABLE IN A VARIETY OF SPECIAL ORDER FINISHES AND COLORS. ASK YOUR UNILOCK REPRESENTATIVE ABOUT SPECIAL ORDER OPTIONS IN YOUR REGION..



9% x 9% x 3%" (250 x 250 x 80mm)

Joint Width 12mm Void Space 8% Accessible Joint

ECO-OPTILOC[™] **⊘**

Eco-Optiloc™ is one of the best solutions for vehicular pavements. It seamlessly combines both superior load-bearing and drainage capabilities.



PROJECT: North Liberty Centennial Park, North Liberty, IA. **DESIGN:** Shive Hattery. **PRODUCT:** Eco-Optiloc* in Heritage Brown.

FINISHES COLORS Natural Natural River Standard Finish

10¼ x 10¼ x 3⅓" (260 x 260 x 80mm) Joint Width 12mm Void Space 7.3% Accessible Joint

TURFSTONE™



Turfstone is the best solution for areas requiring a supported turf. Its 40% void ratio - filigree design makes it an attractive and permanent solution for emergency access areas, spillways, and environmentally sensitive parking areas.



PROJECT: Radio Flyer, Chicago, IL. **DESIGN:** Gensler / CYLA Design Associates, Inc. **PRODUCT:** Turfstone™ in Natural.

FINISHES COLORS SIZES





Natural

15¾ X 23¾ X 3¾" (80mm)

Standard Finish



15³/₄" X 23⁵/₈" X 3¹/₈" (400 x 600 x 80mm)

DURA-MAT

Dura-Mat interlocking concrete units fasten together on all sides forming a permanent protective carpet. The solid-to-void ratio also allows for vegetation growth where desired.



PROJECT: Retention Pond, Toronto, ON. PRODUCT: Dura-Mat in Natural.

FINISHES COLORS SIZES





Natural

195/8 X 195/8"X 37/8" (80mm)

Standard Finish



195%" X 195%" X 37%" (260 x 260 x 80mm)

A great retaining wall should provide an aesthetic that blends subtly with the environment and surrounding architecture. For decades, Unilock segmental retaining walls have been the choice of Landscape Architects, Designers and Engineers who are looking for classic, clean lines and timeless appeal.





RETAINING WALL Design

SEGMENTAL RETAINING WALLS

Why do so many engineers select Unilock® for retaining walls? In a word: confidence. Confidence that Unilock manufactured products have the structural, safety and weathering capabilities needed for the project. Confidence in the field performance of a vast portfolio of structures. Confidence that Risi Stone will provide the engineering support required to get the job done accurately and expeditiously.



PROJECT: Office Complex Mississauga Rd. Mississauga, ON. DESIGN: RisiStone Engineering. PRODUCT: SonomaStone" in Natural.

	ASTM C1372 / NCMA Zone 3 (de-icing exposure)	UNILOCK STD.
Compressive Strength - Minimum	3000/5500 PSI	5500 PSI
Absorption - Maximum (No individual unit greater than)	15 lb/ft³	7 lb/ft³
Dimensional Tolerance (length, width, or height)	± 1/8" (± 3.2mm)	± 1/8" (± 3.2mm)

SOLID CORE CONSTRUCTION

The solid body tongue and groove design provides engineers with the assurance that the structural properties are guaranteed. Not having to fill a hollow block core and the ability to easily modify blocks on-site is a considerable labor savings. Owners can be confident in the proven long-term performance of the wall's integrity.

QUALITY MANUFACTURING

Each unit's structural integrity and performance is ensured by manufacturing to specifications that meet or exceed American Society of Testing and Materials (ASTM) standards. The Unilock manufacturing system provides peace of mind by exceeding technical standards set by the National Concrete Masonry Association (NCMA) recommendation for Roadway and Non-Roadway Applications - Zone 3 - with exposure to de-icing salts, as well as local building codes.

BUILT TO LAST

Unilock manufactured retaining wall systems are engineered to last. Individual units range from 19lbs (8.6kg) to 1,700lbs (772.7kg), and some can be used to construct walls up to 40ft (12.2m) high. The mechanical installation characteristics of Unilock retaining walls surpass conventional modular wall systems in speed and performance. Vespa.RS advanced engineering software from Risi Stone lets you analyze all important factors including height, differing soil types, unique site conditions and loading requirements directly from CAD, saving valuable time.

SOLID ADVANTAGES

FEATURE	ADVANTAGE	BENEFIT		
Solid Blocks	Provides greater durability	More resistant to breakage and minor damage		
	Easy to split or modify	Blocks can be simply cut/altered with no risk to final wall integrity		
	No hollow cores to fill with gravel & compact	 Ensures maximum weight of each block is present Maximum resistance to overturning Reduced installation time and labour costs 		
Modular System	Wall is flexible, while still retains its structural integrity	Absorbs movement and settlement Requires minimal embedment		
	Array of complementing special blocks	 Easily create site-specific features Coping can be selected for various wall arrangements Pre-fabricated corner blocks intensify corner strength and appearance, while speeding construction 		
	Requires only a compact granular base	Reduces installation cost		
Interlocking Tongue & Groove	Interlocking mechanism is molded directly in to the block	Easy, quick installation No separate pins or clips to install		
	Maximum shear strength	Shear strength is maintained along the entire length of block Allows for superior geogrid connection		
	Automatic alignment & self-battering	Once the first course is installed flat and level, successive blocks stack quickly and easily		
	Blocks are dry-stacked	Lower cost — No mortar requirements Minimal training is required to achieve excellent results		
	Continuous interlock achieved throughout the wall	Creates a stronger, more damage resistant structure		
Combined with Geogrid Reinforcement	Higher walls can be achieved	Able to use the same facia throughout the project on lower and higher walls (i.e. Gravity and geogrid reinforced walls can be mixed as site conditions dictate)		

SUPPORT AND ASSISTANCE

Unilock & Risi Stone*

Unilock manufactures a number of Risi Stone Systems licensed retaining walls: Pisa2™, Concord Wall™, RomanPisa™, Rivercrest® Wall, SienaStone™, SonomaStone™, DuraHold® and DuraHold® 2. With installations more than 25 years old, we offer the most proven SRW systems on the market.

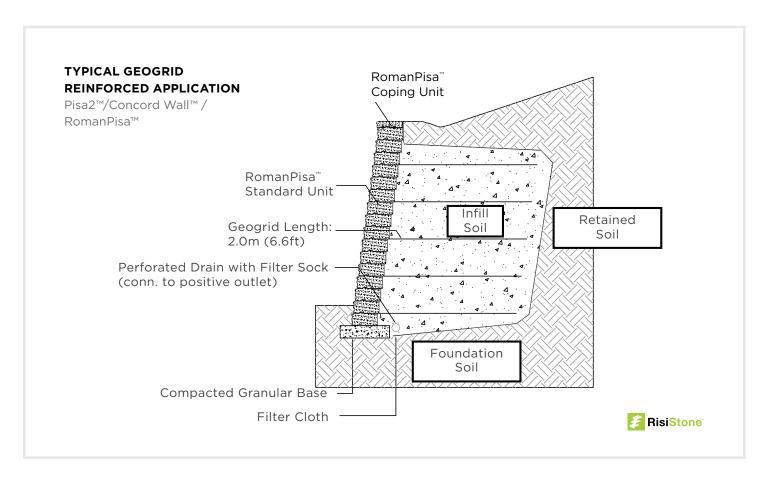
Design assistance

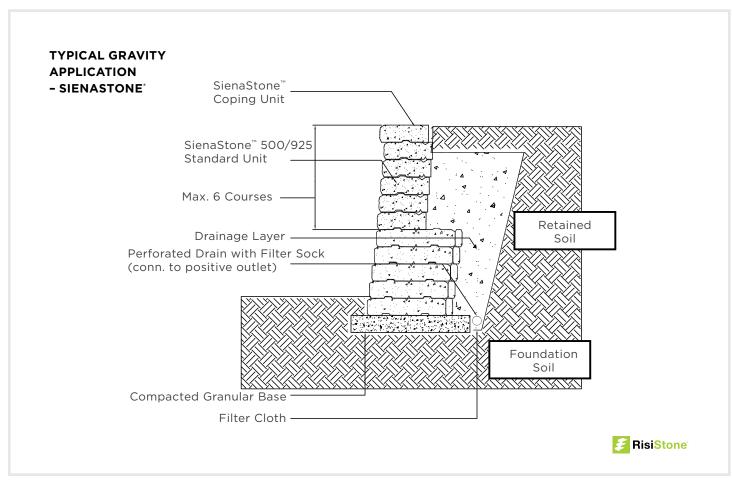
Risi Stone offers many different levels of assistance. From general product information, typical cross-sections and software programs, to site specific final design packages, they will work with you to achieve the best possible design solution.

Preliminary Sections

For preliminary design, bidding or feasibility purposes, Risi Stone Systems have created one of the industry's most comprehensive collections of pre-engineered typical cross-section drawings for a variety of applications. These sections have been designed to meet very specific criteria in an attempt to be as close to your particular project as possible. They are sorted according to the main criteria used in the design of a segmental retaining wall. The search tool at www.unilock.com allows you to select the Risi Stone licensed product, the loading and the height of the wall, according to your project requirements to find cross sections that most closely match your project needs.

TYPICAL CROSS SECTIONS





U-CARA®

U-Cara fascia panels are available in a variety of colors and **textures**, including, exclusive Unilock **EnduraColor**™ finishes.



Did You Know?

In 2019, U-Cara received the "red dot" award for high design quality and innovation.

UMBRIANO® FINISH







Midnight Sky *



Summer Wheat



Winter Marvel 3

SERIES™ FINISH



Black Granite



Onyx Black * (3" Panel Only)

PITCHED FINISH



Almond Grove Fusion



Bavarian



Fossil



Granite



Granite Fusion



Natural



River



Sierra



Steel Mountain

SMOOTH PREMIER FINISH



Almond Grove **Fusion**



Bavarian



Fossil



Granite



Granite Fusion *



Graphite



Natural



Opal Blend *



Sierra



Steel Mountain



Tuscany



PROJECT: Crystal Gardens, Markham, ON. DESIGNER: Cosburn Nauboris Ltd. PRODUCT: U-Cara® Multi-Face Wall with Umbriano® finish fascia panels in Summer Wheat and Midnight Sky.

U-CARA®

This patented system, exclusive to Unilock, is comprised of **SureTrack™ backer blocks** that provide dimensionally accurate structure, and **U-Cara fascia panels** that provide unlimited design opportunity.



PROJECT: Corporate Security Wall, North Chicago, IL. DESIGN: The Lakota Group. PRODUCT: U-Cara* with Smooth Premier finish in Bavarian.



Choose your Block



FOR LOW WALLS

SURETRACK * STANDARD BACKER 6 x 7% x 5%" (150 x 200 x 150mm)



FOR HIGH WALLS

SURETRACK LARGE BACKER 6 x 7½ x 12" (150 x 190 x 300mm) Available in select markets.



FOR HIGH WALLS & CORNERS

SURETRACK *
CORNER BACKER
6 x 7 x 12"
(150 x 175 x 300mm)



Select your Fascia style



6" STANDARD FASCIA PANEL * 5% x 18% x 2%" (150 x 466 x 60mm)



3" FASCIA PANEL *
5% x 18% x 2%"
(150 x 466 x 60mm)
Only available in Onyx Black.

Closed End Panels for Corners

CORNER BUNDLE (units sold together)



STANDARD FASCIA HALF PANEL * 5% x 93/6 x 23/8" (150 x 233 x 60mm)

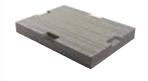


CLOSED-END FASCIA PANEL * 5% x 20% x 23%" (150 x 530 x 60mm)

Coping and Base Units

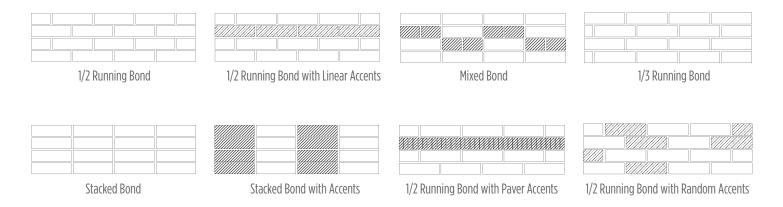


UNIVERSAL COPING * 14 x 19 x 2³/₄" (355 x 482 x 70mm)



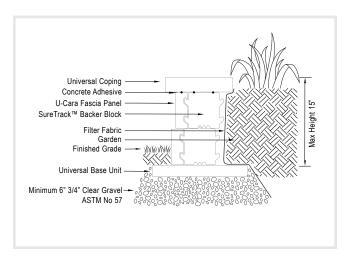
UNIVERSAL BASE UNIT * 14 x 19 x 2" (355 x 482 x 55mm)

CREATIVE PATTERNING

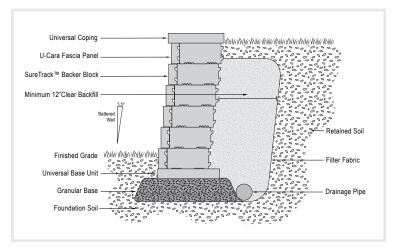


A FEW DETAILS

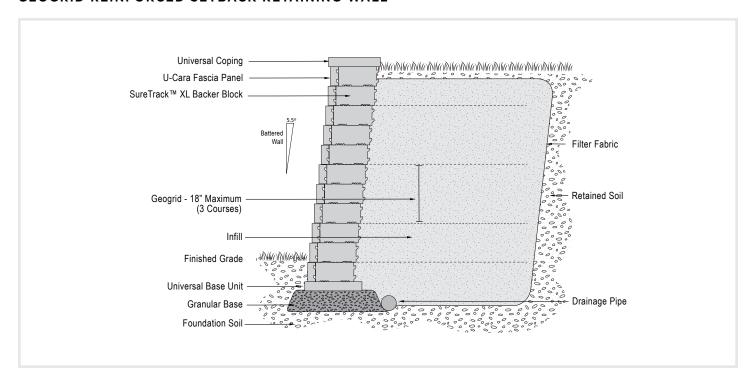
GARDEN WALL



RETAINING WALL UNDER 4'



GEOGRID REINFORCED SETBACK RETAINING WALL



U-CARA® MODULAR SYSTEM

U-Cara is also available as a modular system for easy installation of grill islands, pillars and other free standing architectural features. The structural component of this system is made of prefabricated aluminum frames and the finished exterior is achieved by hanging the U-Cara fascia panels on the built-in tracks.

BASE MODULE



FASCIA PANEL MODULE DIMENSIONS 32 1/2" x 69 1/2" (Outside to Outside) Height 45" including coping

GRILL MODULE



FASCIA PANEL MODULE DIMENSIONS 32 1/2" x 69 1/2" (Outside to Outside) Height 45" including coping

PILLAR MODULE



FASCIA PANEL MODULE DIMENSIONS 24" x 24" (Outside to Outside) Height 45" including coping

APPLICATIONS

Standalone Bar Tables

Fire Tables

Grill Islands

Full Size Outdoor Kitchens

Barriers & Dividers

Planters

U-Cara fascia panels hang easily on the built-in tracks of the modular frame.



U-CARA® WALL MOUNT SYSTEM

The U-Cara Wall Mount System is an adaptation of the wall system. The structural component of this system consists of galvanized steel alignment bars and rails. This system allows the U-Cara fascia panels to be mounted directly to substrate materials such as plywood or concrete.

VERTICAL ALIGNMENT BAR

38 5/8" Tall

Eliminates the need to measure for panel spacing

Pre-Punched every 3" to accommodate both 3" & 6" panels

Installed 32" apart

HORIZONTAL RAIL

8ft long with pre-punched holes every 8" Can be used on both concrete and wood substrates

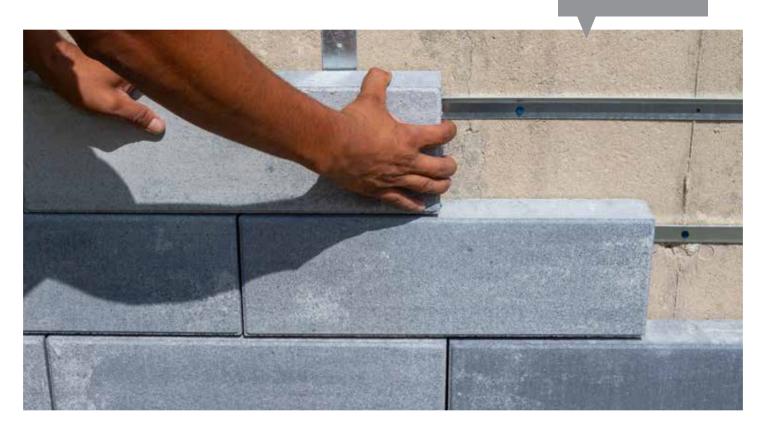
APPLICATIONS

| Wall Cladding | Inte

Integrated Landscape Features

Building Veneer Aesthetic Foundation Coverings

U-Cara fascia panels hang easily on the rails.



PISA2™ / CONCORD WALL™

The built in setback design of Pisa2 / Concord Wall automatically forms the correct slope for retaining walls. Use for gravity walls up to 3.5 ft (1m) and grid reinforced walls up to 25 ft (7.5m) high under typical conditions.



PROJECT: North Village, Douglas, MA. DESIGN: Coweeset Engineering. PRODUCT: Pisa2" XL / Concord Wall" XL in Granite.





STANDARD *
12 x 8 x 6"
(300 x 200 x 150mm)



TAPERED *
12 x 8 x 6"
(300 x 200 x 150mm)



CORNER *
8 x 12 x 6"
(200 x 300 x 150mm)



PISA COPING 12 x 12 x 3" (300 x 300 x 75mm)



XL UNIT 12 x 16 x 6" (300 x 400 x 150mm)

ROMANPISA[™]

The antiqued, split face of RomanPisa makes it a more rugged-looking alternative to Concord Wall/Pisa2. Use for gravity walls up to 3.5 ft (1m) and grid reinforced walls up to 25 ft (7.5m) high under typical conditions.



PROJECT: Private Residence, Foxboro, MA. **DESIGN:** Curbs, Inc. **PRODUCT:** RomanPisa[™] in Nevada.



Granite Riv



River



Sierra



STANDARD 12 x 8 x 6" (300 x 200 x 150mm)



TAPERED 12 x 8 x 6" (300 x 200 x 150mm)



CORNER 8 x 12 x 6" (200 x 300 x 150mm)

SIENASTONE™

Bold and dramatic, this large scale wall block strikes an impressive profile when used for a heavy-duty retaining wall or as treads in large outdoor staircases. Use for gravity walls up to 10 ft (3m) or grid reinforced up to 40 ft (12m) under typical conditions.



PROJECT: Hogan Avenue, Mississauga, ON. DESIGN: Risi Stone Engineering. PRODUCT: SienaStone" in Natural.



Brown



Granite



Mahogany Ash



Natural *



Nevada



Sierra



STANDARD 333 13½" x 39" x 7½" 343mm x 990.5 x 184mm



STANDARD 500 20" x 39" x 71/4" 500 x 990.5 x 184mm



STANDARD 925 36½" x 39" x 7¼" 927 x 990.5 x 184mm



COPING * 20" x 39" x 71/4" 500 x 990.5 x 184mm

SIENASTONE™ SMOOTH / SIENAEDGE™

The smooth face creates a modern profile for this big, bold wall. Use for gravity walls up to 10 ft (3m) or grid reinforced up to 30 ft (9m) under typical conditions.



PROJECT: Private Residence, London, ON. **DESIGN:** Risi Stone Engineering. **PRODUCT:** SienaStone" Smooth in Granite.

WALL



Granite



Sierra (SienaEdge Only)



The standard wall block is also manufactured with intermittent lugs which ensures the bond pattern.



STANDARD 375 14³/₄ x 47¹/₄ x 7" 375 x 1200 x 180 mm



CORNER UNIT 375 14³/₄ x 47¹/₄ x 7" 375 x 1200 x 180 mm



COPING 383 15 x 47¼ x 7" 383 x 1200 x 180 mm



SIENAEDGE STANDARD/CORNER 11½ x 39 x 7" 290 x 1000 x 180 mm



SIENAEDGE COPING 11½ x 39 x 7" 290 x 1000 x 180 mm

STEPS



Light Grey (SienaSmooth Only)



Midnight Charcoal (SienaSmooth Only)



Tan (SienaSmooth Only)



48" & 72" STEP 20 x 47¼ or 70¾ x 7" 500 x 1200 or 1800 x 180 mm

DURAHOLD®

A great alternative to "poured-in-place" concrete. The large size of DuraHold makes it an appropriate choice for demanding structures up to 40ft. (12.2m). Use for gravity walls up to 6ft (1.8 m) in typical conditions.



PROJECT: West London Dyke, London, ON. DESIGN: RisiStone Engineering. PRODUCT: DuraHold" in Natural.



Natural



STANDARD UNIT 24 x 72 x 12" 600 x 1830 x 300mm



HALF UNIT 24 x 36 x 12" 600 x 915 x 300mm



COPING UNIT 24 x 72 x 12" 600 x 1830 x 300mm



CORNER 90 UNIT 24 x 60 x 12" 600 x 1520 x 300mm



TIE-BACK UNIT 24 x 72 x 12" 600 x 1830 x 300mm

DURAHOLD®2

DuraHold2 is similar to DuraHold in appearance, but is almost half the size, making it economical in terms of material cost, speed and efficiency for lower retaining walls. Use for gravity walls up to 4ft (1.2 m) in typical conditions.



PROJECT: Charles H Wright Museum of African American History, Detroit, Ml. DESIGN: Owner. PRODUCT: DuraHold 2 in Natural.



Natural



STANDARD UNIT 12 X 14"X 72" 300 X 360 X 1830mm



COPING UNIT 12 X 14 X 72" 300 X 360 X 1830mm



CORNER 90 UNIT 12 X 14 X 36" 300 X 360 X 900mm



TIE-BACK UNIT 72 X 12 X 14" 1830 X 300 X 360mm

LINEO™ DIMENSIONAL STONE

Contemporary and sleek lines define Lineo Dimensional Stone with a linear multi-length plank look.



PROJECT: Woodbury Common Premium Outlets, Harriman, NY. DESIGN: Simon Property Group. PRODUCT: Lineo" Dimensional Stone in Limestone.



Almond Grove



Sandstone *



Granite *



Sierra



Limestone



Midnight Charcoal *



River

RANDOM BUNDLE (all units sold together) *



UNIT 1 8 x 12 x 4" (200 x 300 x 100mm)



UNIT 2 8 x 16 x 4" (200 x 400 x 100mm)



UNIT 3 8 x 20 x 4" (200 x 500 x 100mm)



UNIT 4 8 x 24 x 4" (200 x 610 x 100mm)



CORNER / PILLAR UNIT * 8 x 16 x 4" (200 x 400 x 100mm)

MACKINAW™ WALL

Mackinaw Wall offers the character of large scale natural stone with Reala™ Technology along with the ease of installation of a precast segmental retaining wall. No coping required.



PROJECT: The St. Clair Inn, St Clair, MI. **DESIGN:** Grissim Metz Andriese Associates. **PRODUCT:** Mackinaw" Wall in Grindstone.



Coastal Slate *



Grindstone *

RANDOM BUNDLE (all units sold together) *



LARGE WEDGE 5½ x 28½ (25½) x 9" 140 x 720 (650) x 230mm



MEDIUM WEDGE 5½ x 20 (17) x 9" 140 x 510 (430) x 230mm



SMALL WEDGE 5½ x 11½ (8½) x 9" 140 x 290 (220) x 230mm



CORNER/PILLAR UNIT * 5½ x 17½ x 9" 140 x 440 x 230mm

RIVERCREST® WALL



With the award-winning Rivercrest Wall system, you get the character and flexibility of natural stone with the durability, affordability and ease of installation of manufactured concrete.



PROJECT: Ursuline College, Pepper Pike, OH. DESIGN: Hiti, DiFrancesco and Siebold, Inc. PRODUCT: Rivercrest' Wall with Ledgestone" Coping in Buff.



Buff * Coastal Slate









CORNER BUNDLE * (units sold together)

STANDARD UNIT 1 8 x 9-10 x 21/4"

STANDARD UNIT 2 9-10 x 12 x 21/4"

STANDARD UNIT 3 9-10 x 12 x 21/4" (200 x 230-250 x 57mm) (230-250 x 310 x 57mm) (230-250 x 310 x 57mm) (230-250 x 425 x 57mm)

STANDARD UNIT 4 9-10 x 17 x 21/4"

LONG CORNER UNIT 9-10 x 12 x 21/4"

SHORT CORNER UNIT 9-10 x 10 x 21/4" (230-250 x 310 x 57mm) (230-250 x 250 x 57mm)

JUMPER BUNDLE (all units sold together) *











PILLAR UNIT * AVAILABLE

JUMPER UNIT 1 8 x 9-10 x 41/2"

JUMPER UNIT 2 9-10 x 12 x 41/2" (200 x 230-250 x 114mm) (230-250 x 310 x 114mm) (230-250 x 310 x 114mm)

JUMPER UNIT 3 9-10 x 12 x 41/2"

STANDARD UNIT 4 9-10 x 17 x 4½" (230-250 x 425 x 114mm)

JUMPER CORNER UNIT * 9-10 x 12 x 41/2" (230-250 x 310 x 114mm)

COPING OPTIONS

LEDGESTONE™ COPING



BUFF *



GREY *



COPING UNIT * or CLOSED END COPING 12 x 24 x 2³/₄" 305 x 610 x 70mm



LARGE COPING UNIT * or LARGE CLOSED END COPING 13½ X 30 X 2¾" 610 x 1220 x 70mm



FULLNOSE COPING * 12 x 24 x 2³/₈" 305 x 610 x 60mm



24" PILLAR CAP *
24 x 24 x 3½"
600 x 600 x 90mm
29" PILLAR CAP
29 x 29 x 4"
740 x 740 x 100mm



ENDURACOLOR® UNIVERSAL COPING



Cream



Light Grey *



Midnight Charcoal *

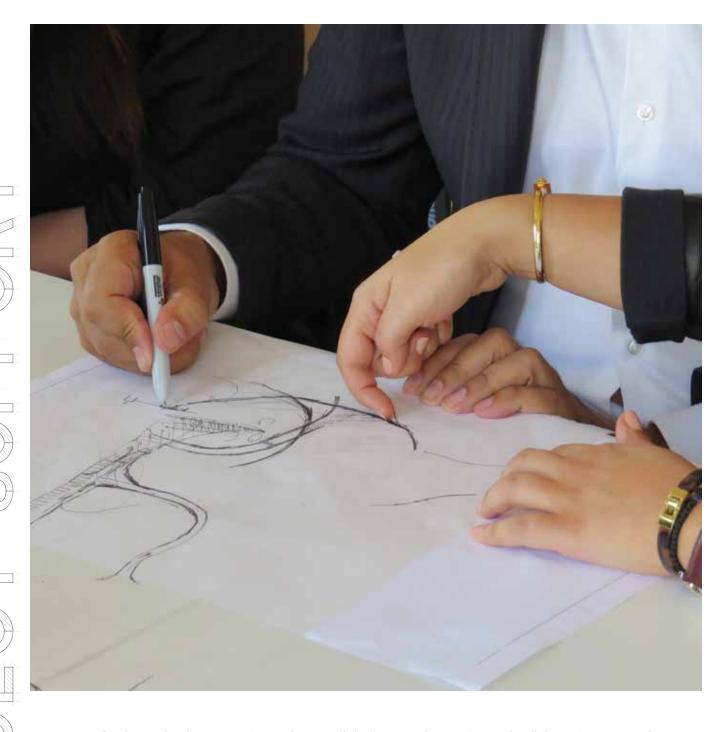


Tan *



14 x 19 x 2³/₄" * 360 x 480 x 70mm





Our years of industry-leading expertise and unparalleled personal attention and collaboration ensure that every intricate detail of your project runs smoothly. Our level of support is tailored to meet your needs:

Details and specs

Cross sections, details, specifications and technical support are assets available to you to build out your documents and drawings. Contact your Unilock Representative for more information.

Uvision* and Samples

Choosing the perfect product has never been easier. Our Uvision design software conveys your design in a rendering to aid your client with visualization. And when the time comes to finalize your product selection, your Unilock Representative will bring you all the real life samples you need.

Outdoor Idea Centers

Unilock Outdoor Idea Centers provide you with the perfect place for inspiration and a great destination for client feedback. When you visit be sure to see, touch and experience all that Unilock has to offer.

Lunch and learn

At Unilock, there is always something new. Ask your Unilock Representative about a Lunch and Learn session that also earns you valuable continuing education credits.

We're here to help through every step of your project. Talk to your Unilock Representative today to get all the details.

QUICK SHIP Summary List

IN STOCK AND READY TO SHIP These products are in stock at a number of Unilock locations and are ready to ship across North America. These products are marked throughout the catalog with a red asterisk (*).

PRODUCT	PRODUCT SIZE		COLOR(S)		FINISH
Arcana™	24 x 24" (50mm)	Corvara	Modena	Vivanto	Shot Blast
Squares	16 x 16" (70mm) 24 x 24" (70mm)	French Grey Midnight Sky	Summer Wheat	Winter Marvel	Umbriano™
	4 x 8" (60mm)	Granite Blend	Sierra		Standard
Rectangles	4 x 8" (70mm)	Dark Charcoal			II Campo*
	4 x 8" (70mm)	Black Granite			Series™
	7 x 14" (80mm) 8 x 16" (70mm) 12 x 24" (70mm) 21 x 35 (60mm)	French Grey Midnight Sky	Summer Wheat	Winter Marvel	Umbriano™
	4 x 12" (100mm) 8 x 24" (100mm)	Granite Blend			II Campo*
	4 x 12" (100mm) 8 x 24" (100mm)	Black Granite			Series [™]
Planks	8 x 24" (70mm)	French Grey Midnight Sky	Summer Wheat	Winter Marvel	Umbriano™
	4 x 12" (100mm)	Opal Blend	Sandstone	Steel Grey Blend	Smooth Premier
	4 x 16" (100mm) 8 x 24" (100mm)	Opal Blend	Steel Grey Blend		Smooth Premier
Artline [™] Platform	Random Bundle (70mm)	Granite Fusion			Smooth Premier
	Random Bundle (60mm) Random Bundle (80mm)	French Grey Midnight Sky	Summer Wheat	Winter Marvel	Umbriano
Beacon Hill™ Platform	Random Bundle (60mm)	Almond Grove Fusion	Granite Fusion	Opal Blend	Smooth Premier
	Random Bundle (60mm)	Granite Fusion	Tuscany		Flagstone Premier
	Random Bundle (60mm)	Notte	Sabia		Granito™
Brussels Block [*]	XL (70mm) Standard (70mm) Half (70mm)	Limestone	Sandstone	Sierra	Classic
Mattoni™	2¼ x 9½" (70mm)	Dark Charcoal	Sable Blend		Smooth Premier
Hex / City Park Paver™	8 x 8" (70mm)	French Grey Midnight Sky	Summer Wheat	Winter Marvel	Umbriano™
Granito"- Hex / City Park Paver™	8 x 8" (70mm)	Notte	Sabia		Granito™
Tribeca Cobble™	Random Bundle (60mm)	Crystalline Basalt	Peppered Granite		Series [™]
Copthorne*	2½ x 7%" (60mm)	Basalt Burgundy Red	Burnt Clay Old Oak	Steel Blue	Reala [™]
Courtstone*	Random Bundle (60mm)	Basalt Belgian Blue	Dawn Mist	Pebble Taupe	Reala [™]
Richcliff*	Random Bundle (60mm) Large Rectangle (60mm)	Dawn Mist	Pebble Taupe	Smoke Shale	Reala™
Town Hall	4 x 9¾" (70mm)	Basalt Burgundy Red	Burnt Clay Heritage Clay	Heritage Red Old Oak	Reala™
U-Cara [*]	SureTrack Standard Backer SureTrack Large Backer 6" Standard Fascia Panel 3" Fascia Panel	French Grey Midnight Sky	Summer Wheat	Winter Marvel	Umbriano™
	Standard Fascia Half Panel	Onyx Black (3" Panel)			Series™
	Closed-End Fascia Panel	Granite Fusion			Pitched
	Universal Coping	Granite Fusion	Opal Blend		Smooth
Pisa2" / Concord Wall [™]	Standard Unit Tapered Unit Corner Unit	Granite	Sierra		
SienaStone™	Coping	Granite	Natural		
Lineo™ Dimensional Stone	Random Bundle	Granite	Midnight Charcoal	Sandstone	
Mackinaw [™] Wall	Random Bundle Corner / Pillar Unit	Coastal Slate	Grindstone		
Rivercrest* Wall	Random Bundle Jumper Bundle Corner Bundle Jumper Corner Pillar Unit	Buff	Coastal Slate		
Ledgestone [™] Coping	Coping Unit Large Coping Unit Fullnose Coping 24" Pillar Cap	Buff	Grey		



PROJECT: Walnut Street, Des Moines, IA. **DESIGN:** Confluence. **PRODUCT:** Rectangles with Series" finish in Arctic Grey, Nordic Star, Onyx Black, Platinum Grey and two special order colors.

GUSTOMZATION

Unilock allows you to customize products to suit your project. Our vast array of sizes, edges, finish and color options make it easy to achieve your design vision. Choose a shape or a finish first and then narrow down the desired color range. Then call your Unilock Representative for all of the special order options available in your market.



STEP 1CHOOSE SHAPES



STEP 2CHOOSE FINISHES



STEP 3CHOOSE COLORS

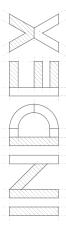


STEP 4CALL YOUR UNILOCK REPRESENTATIVE

Creating products to suit your unique design ideas is what we do best. Call us early in the design process to ensure every aspect is accurate, from shape and finish, to color and edge detail.

Let's see what we can create together!

Products listed as "Special Order" are not currently inventoried and may require additional lead times for manufacturing. Special pricing and minimum quantities may apply. Contact your Unilock Representative to confirm all details before creating your specification.



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TOWN HALL* PERMEABLE	
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U-CARA* MODULAR SYSTEM	
U-CARA* MULTI-FACE WALL	
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ULTIMA™ TECHNOLOGY	
UMBRIANO™	
UNILOCK TECHNOLOGIES	
UNIVERSAL COPING	
WALL DECEDENT DOOLECTS	



PROJECT: Mount St. Mary's, Cincinnati, OH. **DESIGN:** McGill Smith Punshon Design. **PRODUCT:** Umbriano" in Summer Wheat and Rectangles with Series" finish in Onyx Black.

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