CITY OF SOMERVILLE, MASSACHUSETTS
INSPECTIONAL SERVICES DEPARTMENT
KATJANA BALLANTYNE - MAYOR

TO: Zoning Board of Appeals
FROM: Nicholas Antanavica, Superintendent of Inspectional Services Department (ISD)
RE: 16-20 Medford St Administrative Appeal (ZP24-000090)
DATE: October 9, 2024

This is a response to Argument #5 as described in the Administrative Appeal Narrative dated 9/6/24 concerning ISD's response to the appellant's request for enforcement of the Somerville Zoning Ordinance (SZO) at 16-20 Medford St. This argument is novel and was not included in the original request for enforcement that is the subject of this Appeal.

Argument #5: The lot coverage for the project associated with B24-000161 was calculated incorrectly, as 1) it doesn't count landscaped areas that are overhung by the building towards lot coverage, and 2) the permeable paver runoff coefficient of 0 is "factually incorrect." Adjusting for these factors in the calculation would lead to the project violating the maximum lot coverage.

Response: Per SZO 2.4.2.c.i.b, lot coverage is expressly "measured from the outside of the exterior walls at the ground story, including covered porches and other building components." While portions of the proposed building at 16-20 Medford St do overhang landscaped areas per the approved plans, they do so at the second and subsequent stories of the building. Because the proposed building overhangs landscaped areas above but not at the ground story, and lot coverage is measured at ground story, these portions of the building are not included in the lot coverage calculation.

Regarding the runoff coefficient, please note that lot coverage is "calculated using the runoff coefficient provided by the manufacturer" pursuant to SZO 2.4.2 c.i.c. Where the manufacturer specifications indicate that the runoff coefficient is 0, as in the case of 16-20 Medford St, lot coverage is calculated using this value as it is provided by the manufacturer. Manufacturer specifications for the pavers, provided by the landscape architect associated with B24-000161, are attached. Any dispute the Appellant may have with the manufacturer of the proposed pervious pavers as to the accuracy of the specifications they provide for their product is outside the scope of ISD's review for compliance with the SZO.

Thus, it is ISD's position that the lot coverage of the property was properly calculated, in accordance with the SZO.

318 Harvard Street
Suite 25
Brookline, MA 02446
617.735.1180
Verdantla.com

Date: 10/07/24

To: Inspectional Services, City of Somerville
From: Erin Hossaini-Fitch, Verdant LA
Re: 16-20 Medford Street

To Matt and Whomever this May Concern,

Please see the following Unilock paver specification sheet for the permeable pavers to be utilized within the site at 16-20 Medford, and Unilock manufacturer literature describing the rainwater runoff and infiltration technical properties of their Unilock paver products (Pg 15-17 from *Unilock 2018 Permeable and Heavy-Duty Segmental Unit Pavers Technical Guide)*. 'Eco-Promenade' permeable pavers by Unilock shall be used within the site.

As per manufacturer literature, the runoff coefficient of the Eco-Promenade pavers is zero. 'The C value of [Unilock] 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.' As per landscape and civil drawings, all permeable paver areas are designed at slopes <5%.

If an alternate permeable paver shall be selected, the alternate permeable paver shall be 'Aqua-Bric 8' or 'Andover' by Ideal. As per Ideal manufacturer literature, both pavers provide '100% stormwater infiltration.' Please see Ideal paver specification sheets included herein as needed.

Sincerely,

Verdant Landscape Architecture, Inc.

Erin Hossaini-Fitch, PLA
LEED Green Associate
Associate Landscape Architect

Eco-Promenade®

1-800-UNILOCK | UNILOCK.COM

UNILOCK®
PAVERS & WALLS

ECO-PROMENADE®

ENDURACOLOR™ PERMEABLE

OPAL BLEND

Other finishes available: Il Campo®, Series™ & Umbriano®.

PRODUCT ATTRIBUTES

Visual Appearance	Long, linear look and feel for any contemporary permeable application.
Finish	By special order, you may select from a variety of standard and architectural finishes; Premier *(smooth)*, Il Campo® *(brushed)*, Series™ *(exposed aggregate)* and Umbriano® *(mottled)*.

PRODUCT SPECIFICATIONS

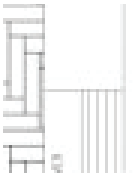
2⅞ x 12 x 4"
75 x 300 x 100mm

EDGE DETAIL

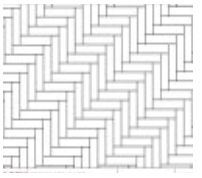
ROUNDED EDGE

LAYING PATTERNS

ECO-PROMENADE® A



ECO-PROMENADE® B



RECOMMENDED SAND

Gator Aqua Rock

- For Residential & Commercial applications
- For permeable paver joints
- Helps prevent erosion due to climatic conditions
- Use as bedding and jointing material
- Graded to meet ASTM No. 9 water rate
- Long term high infiltration performance
- 2,200 lb Supercack available for large applications

Coverage:

Size	Area
50lb. bag	20-25 sqft
2,200 lb. Super Sack	880-1100 sqft

(Based on 60mm paver.)

PERMEABLE PAVEMENT DATA

Small: 1/4" Joint

JOINT MATERIAL	JOINT WIDTH*	VOID SPACE*	SURFACE INFILTRATION RATE**	MIN. INFILTRATION RATE FOR RAINFALL OF: 2" / HR	4.5" / HR	6.5" / HR	11" / HR
ASTM #9 SEK Chip	7 MM	10.12%	934" / HR	20	44	64	109

*Joint Width is measured at the top of the paver. Void Space is calculated at the base of the paver. **Infiltration rate is based on testing done when first installed and is an approximate. Permeable spacers are available for use with extended range of Unilock products.

TECHNICAL INFORMATION

ASTM C 936 Standard Specifications for Solid Concrete Interlocking Paving Units

Conforms to:

- C140 for Absorption 5% avg - 7% max
- Compressive Strength > 7,200 PSI avg.
- C67 for Freeze-thaw Durability
- C418 for Abrasion Durability
- Dimensional Accuracy **+/- 3 mm**

Test results available upon request

Meets the U.S. Architectural & Transportation Barrier Compliance Board Slip-Resistance Surfaces Advisory Guidelines

TECHNICAL ADVANTAGES

ENDURACOLOR

Refined surface and long-lasting colour

DRIVE FRIENDLY

Can handle vehicular loads

Ask about our base stabilization system

PERMEABLE

Can be installed to allow water to flow through

SOLAR REFLECTIVE INDEX (SRI) TESTING DETAILS

Product	Solar Reflectance	SRI
Opal Blend	0.32	34 (34 SRI)

LEED INFORMATION

Materials & Resources: LEED V4:

Building Product Disclosure and Optimization
Sourcing of Raw Materials - Sourcing of Raw Materials and Extraction • **1 point**
Sourcing of Raw Materials - Leadership Extraction Practices • **1 point**
Material Ingredient Reporting - Material Ingredient Reporting • **1 point**
Material Ingredient Reporting - Material Ingredient Optimization • **1 point**
Environmental Product Declaration • **1 point**

PRODUCT DATA

	Unit	SqFt Per				Per Bundle		Soldier LnFt Per			Sailor LnFt per			Units Per			Lbs Per		
Stones & Bundling	Thickness	Bundle	Layer	Section	Stone	Layers	Sections	Unit	Section	Bundle	Unit	Section	Bundle	SqFt	Section	Bundle	Layer	Section	Bundle
Georgetown Manufacturing																			
2 7/8" x 12" Permeable	4" (100mm)	53.28	10.66		0.24	5	-	0.92	-	57.7	0.25	-	216.50	4.13	-	220	488	-	2,439

Notes: **Sold in full bundles only and is produced and sold on a required, refundable skid**. Custom finish and color options are available. **Special order - lead time is required.** Minimum quantities apply. *Weights vary depending on plant of manufacture & finish. **Important: A urethane rubber paver mat must be used to prevent scuffing.** For permeable installations, Unilock recommends using granite chips for joint filler. All measurements are nominal. Contact your Unilock Territory Manager or call 1-800-UNILOCK for further information. *For custom options, please contact your Unilock Territory Manager.

APPLICATIONS


Permeable (Heavy Duty)


Pedestrian


Residential Vehicular


Commercial Vehicular


Borders and Accents


*Wall pairing suggestion- U-CARA® Wall -matching colour and finish

***Paver Maintenance Tips:**

- Equip plow scrapers and blades with shoes or high-density plastic blades to reduce the risk of damaging paver joints and the surface
- Only apply min. amount of de-icing salts necessary to melt the snow and ice. Remove excess salt after ice melts
- Regular cleaning routine should include sweeping or blowing loose debris from the pavement surface, and less frequently, deep cleaning with cleaning products and/or water
- Unilock pavers do not require sealing, however, some people choose to do so for aesthetic purposes

Things to know:

Efflorescence is a naturally occuring calcium salt that can sometimes appear on the surface of concrete and clay products. Efflorescence does not affect the structural integrity of concrete, it is a purely aesthetic issue that typically disappears with no further intervention after a season of rainfall. If desired, the process can be accelerated by washing the surface with an Efflorescence Remover.

For Permeable applications- it is recommended that the jointing material be regularly maintained, including vacuuming, cleaning and reapplying to keep infiltration at its maximum potential.

Daniel Neviackas
Commercial Sales - Unilock New York, Inc. Boston Division
Office: 508-278-4536 | Mobile: 508-341-4306 | Fax: 508-278-4572
35 Commerce Drive, Uxbridge, MA 01569
UNILOCK.COM | 1-800-UNILOCK

PERMEABLE PAVER DESIGN CONSIDERATIONS

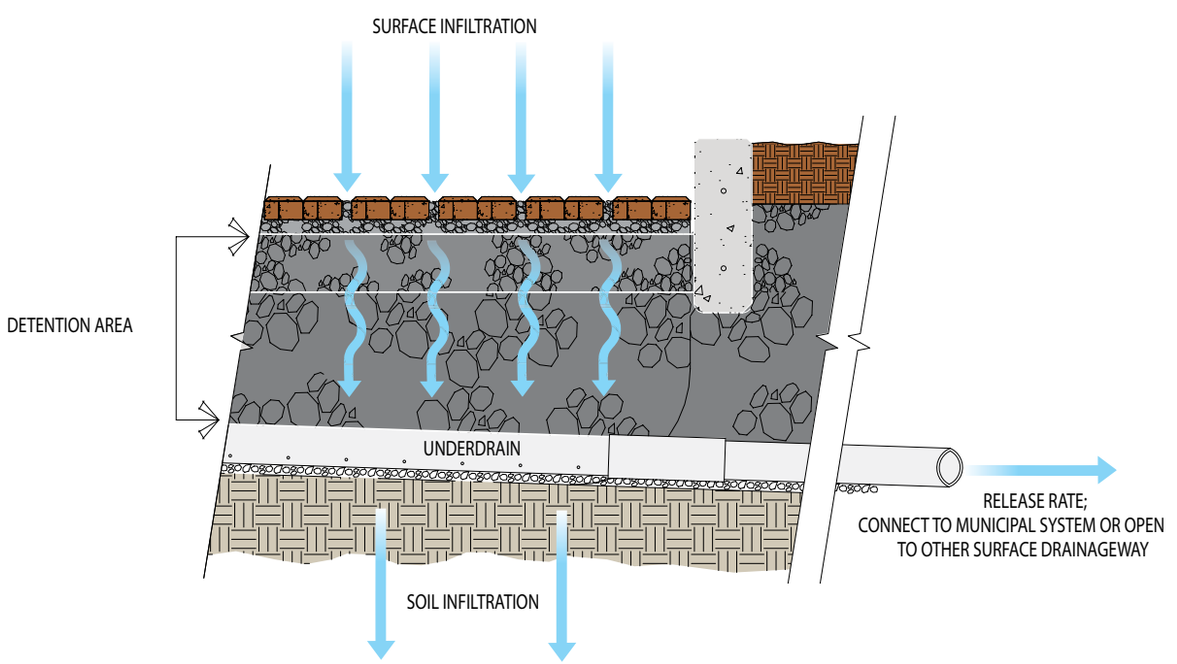
RAINFALL INTENSITY AND DURATION are typically analyzed together for traditional non-permeable surfaces. However, with a permeable paver surface, intensity is less of a factor as the surface infiltration rate will exceed the capabilities of most storms. A permeable paver surface is capable of handling 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 pre-development 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.



INFILTRATION

GREEN COMMUNITY DESIGN

The Iowa Green Streets Project serves as a catalyst to revitalize the local economy in West Union, attract and support local businesses and stimulate further investment to the historic downtown.

The complete renovation of six blocks in West Union replaced aging water, storm and sanitary sewer infrastructure. The project also showcases innovative sustainable design strategies as a model for other communities, including permeable pavement roadways using Eco-Optiloc, pedestrian crosswalk treatments with Eco-Priora, rain gardens, energy efficient lighting, and a district-wide geothermal heating and cooling system.

Prior to design and construction, a cost analysis was completed for the permeable unit paving system. The analysis compared the cumulative cost of permeable unit paving versus that of a traditional bituminous asphalt surface. Analysis showed a payback period of approximately 15 years. Conservatively, the entire system is projected to save over $104 million in operation costs within the next 50 years.

Product: Eco-Priora™ & Eco-Optiloc™

Location: West Union, Iowa
Project: Green Streets Pilot
Design: Conservation Design Forum

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
A	Sand	8.27"	210 mm
A	Loamy Sand	2.41"	60 mm
B	Sandy Loam	1.02"	26 mm
B	Loam	0.52"	12.7 mm
C	Silt Loam	0.27"	6.8 mm
C	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
ADA COMPLIANT	Small: 1/4" Joint	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
		Eco-Priora™ Herringbone	ASTM #9 - SEK Chip	7 mm	7.08%	676	28	64	92	155
		Eco-Priora™ 5 x10	Kafka - 1/8 to 3/16"	7 mm	6.8%	633	29	66	96	162
		Eco-Priora™ Pattern H	ASTM #9 - Roscoe Chip	7 mm	5.7%	509	35	79	114	193
		Eco-Priora™ Pattern H	IDOT FA 22	7 mm	5.7%	347	35	79	114	193
		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
		City Park Paver™	ASTM #9 - SEK Chip	10mm	4.2%	934	48	107	155	262
	Large: 3/8" to 1/2" Joint	DuraFlow (Eco-URCS)	ASTM #8 IDOT CA-16	12mm	8%	912	25	56	81	138
		Eco-Optiloc™	HPB	12 mm	7.3%	404	27	62	89	151
		Eco-Optiloc™	ASTM #8 IDOT CA-16	12 mm	7.3%	912	27	62	89	151
	Extra Large: >1/2"	Tribeca Cobble™		10mm	5.6%	400	36	80	116	196
		Thornbury™	ASTM # 9 Aqua Rock	18mm	4.4%	385	45	102	148	250
		Eco-Stone™	ASTM #8 IDOT CA-16	6 mm	10.18%	784	19	42	60	102
		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.

Aqua-Bric® 8 Pavers

Pavers by Ideal®
IDEAL CONCRETE BLOCK CO.

Aqua-Bric® 8 Pavers

INTRODUCTION

Aqua-Bric 8 is designed to accomodate heavy-duty traffic loads with a pedestrian-friendly ADA compliant surface. The 4 1/2" x 9" units are a classic rectangular shape manufactured and packaged in a herringbone layout designed to take advantage of the economy of mechanical installation.

FEATURES

- Provides 100% stormwater infiltration - up to 10" of rainfall per hour over the 30-year+ design life of the pavement
- Less de-icers needed - snow and ice melt drain through the openings, which means less slip hazard for pedestrians and vehicles
- Openings capture sediment at the surface where it is accessible to conventional sweepers
- Pavers are fully cured when delivered to job site and can be installed year-round, and for underground repairs, the pavers can be lifted and reinstated without leaving an unsightly patch
- Cost is comparable or better than conventional impervious pavement with traditional drainage

COMPOSITION & PERFORMANCE

Aqua-Bric 8 permeable pavers are manufactured under controlled factory conditions offering superb quality, strength and durability. Aqua-Bric 8 pavers form a skid and slip-resistant surface with notched openings that comply with ADA criteria for joint spacing and chamfer width. Aqua-Bric 8 is suitable for residential, commercial and municipal pavement applications and can be mechanically installed for cost savings on larger projects. Aqua-Bric 8 is capable of supporting H20 loads.

PHYSICAL CHARACTERISTICS

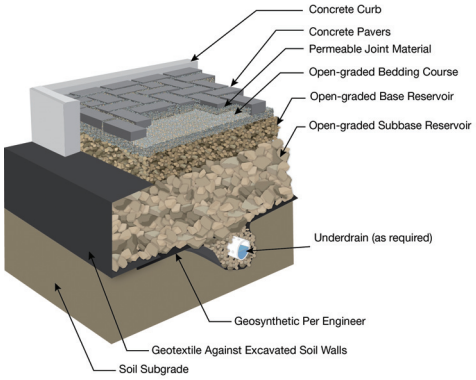
Aqua-Bric 8 pavers meet or exceed North American industry standards, including the requirements of ASTM C 936 for Solid Concrete Interlocking Paving Stones and CSA Standards for freeze-thaw performance. Out strict quality control ensures consistent strength, color, and size.

Nominal Size/Coverage Each Unit: 4 1/2" x 9" • 3.55 pcs/sf
Each layer of Aqua-Bric 8 is comprised of: 28 standard units and 8 units with full and half stones
Thickness: 3⅛" (8cm) • **Compressive Strength:** 8500 psi minimum **Water Absorption:** 5% maximum • **Freeze Thaw:** No Effect **Slip & Skid Resistance:** Excellent to ADA

Magnesium, Potassium and Calcium Chlorides, including products that contain a blend of these chemicals, are NOT suitable deicers for concrete pavers. Please see our Deicing Advisory for detailed information.

DESIGN & CONSTRUCTION

Permeable interlocking concrete pavements use open-graded crushed aggregates for the base, setting bed and joint fill. *(Please consult us when used over base comprised of dense graded aggregate.)* The illustration shown below represents a typical installation, though permeable interlocking pavements should be designed by design professionals to meet project parameters. The base/subbase must be of adequate thickness to support traffic and meet hydrological requirements. A perforated pipe is typically used to remove excess water, particularly when subgrade is comprised of slow-draining Type C and D soils.



MAINTENANCE

Permeable interlocking concrete pavements offer years of structural performance while mitigating stormwater runoff. Good housekeeping practices are important to maintain infiltration that can be compromised due to fines and debris naturally accumulating on the surface of pavements and where sanding is often unavoidable in the winter. Practices include keeping the pavement free of leaves, weeds, and sediment, and spreading sand sparingly when necessary. Cleaning at regular intervals is prescribed to remove sediment trapped at the surface in the drainage voids. A stiff bristle broom works well for residential walks and driveways, while a conventional commercial sweeper is appropriate for parking lots. If severely clogged, aggregate in the openings can be removed and replaced with clean stone to restore infiltration to 100%. Do not pressure wash.

TECHNICAL SERVICES

Please contact our sales office or visit our website at *www.PaversbyIdeal.com* for comprehensive technical information and literature.

Always comply with OSHA requirements when cutting or sawing concrete products.
A white deposit known as efflorescence may appear naturally on any concrete or masonry product. It does not effect the structural integrity and will dissipate over time. Efflorescence is not indicative of a flawed product. For more information, ask for our Efflorescence Advisory.

Pavers by Ideal®
A Registered Trademark of Ideal Concrete Block Co.

Traditional & Permeable Pavers ■ Landscape Retaining Walls ■ Natural Stone
Manufactured by Ideal Concrete Block Co.
45-55 Power Rd., Westford, MA 01886 ■ 232 Lexington St., Waltham, MA 02452
(781) 894-3200 ■ info@IdealConcreteBlock.com ■ www.PaversbyIdeal.com

AB8 -500-06/21

Andover 5511™
Permeable Concrete Pavers

Pavers by Ideal®
IDEAL CONCRETE BLOCK CO.

Andover 5511™ Permeable Pavers

INTRODUCTION

Andover 5511 pavers offer a traditional shape scaled to complement the trend for larger paver units. They can be used for a traditional interlocking concrete pavement or, with proper design and the use of open-graded aggregates, a highly-effective permeable interlocking pavement.

FEATURES

- Provides 100% stormwater infiltration - capable of exceeding 10" of rainfall per hour over a 30-year pavement design life.
- Withstands NaCl deicing salts and snow can be safely and easily removed with snow shovels, blowers or plows.
- Qualifies for credits under the LEED® and other green building and infrastructure certification systems
- Cost is comparable to conventional impervious pavement with catch basins and underground pipe conveyance infrastructure
- Outperforms other types of porous pavements

COMPOSITION & PERFORMANCE

Andover 5511 pavers are manufactured under controlled factory conditions offering superb quality, strength and durability. In the event underground repairs are required, the pavers can be lifted and reinstated without leaving an unsightly patch. Andover 5511 pavers form a skid and slip-resistant surface and are suitable for pedestrian and vehicular pavements (limited to personal vehicles) in residential, commercial and municipal applications. Typical uses include walkways, patios, pool decks, sidewalks, courtyards, plazas, driveways, and light parking areas.

PHYSICAL CHARACTERISTICS

Andover 5511 pavers meet or exceed North American industry standards, including the strength, absorption, and freeze-thaw requirements of ASTM C 936 for Solid Concrete Interlocking Paving Stones. Our strict quality control ensures consistent strength, color and size.

Smooth

Grouping

Nominal Size/Coverage:	5½" x 11" x 2¾" (7cm) • 2.38 pcs/sf
Compressive Strength:	8000 psi minimum
Water Absorption:	5% maximum
Freeze Thaw:	No Effect
Slip and Skid Resistance:	Excellent to ADA
Open Area/Infiltration Rate:	7.5% / Initially greater than 100"/hour*

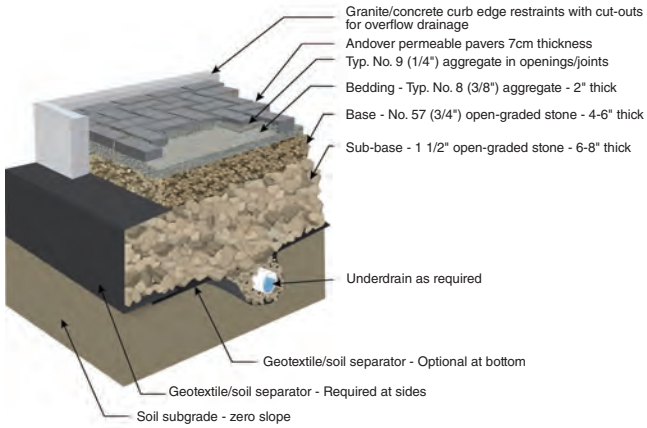
*Laboratory results with #9 stone using ASTM C 1781 Test Method for Surface Infiltration Rates of Permeable Pavers.

DESIGN & CONSTRUCTION

As a permeable interlocking concrete pavement, 5511 uses open-graded aggregates for the base, setting bed and joint fill, providing void space to accommodate stormwater infiltration. The underlying structure must be of adequate thickness to support traffic loads and meet hydrological requirements as calculated by a design professional.

A urethane pad or rollers must be used when compacting 5511 pavers during installation.

Typical PICP Cross-Section



MAINTENANCE

Permeable pavers function as an effective stormwater treatment system and remain clog-free for years with reasonable good housekeeping practices. Keep the pavement free of leaves, weeds, and sediment. Avoid the use of sand in the winter; if used, spread sparingly. Periodically sweep the openings to remove crust that forms on the surface. A stiff bristle broom works well for residential walks and driveways, while a conventional commercial sweeper is appropriate for larger areas. If puddles result from clogging, infiltration rates can be restored to 100% capacity by removing the aggregate from the openings and replacing it with clean material. Do not pressure wash.

TECHNICAL SERVICES

Contact our sales offices or visit *www.PaversbyIdeal.com* for comprehensive technical information and literature.

- ICPI TechSpecs, Detail Drawings & Design Pro Software
- Case Studies, Guides, Research & PICP Master Specification
- Construction of Permeable Base
- Ideal PICP Booklet - Maintenance Guide, Stone Gradations

A white haze known as efflorescence may randomly appear on the surface of units. It does not affect the structural integrity and will dissipate over time. Because efflorescence is a natural by-product of cement hydration, its presence is not indictive of a flawed product and not covered under our warranty. For more information, please ask for our Efflorescence Advisory.

Magnesium, Potassium and Calcium Chlorides, including products that contain a blend of these chemicals, are NOT suitable deicers for concrete pavers. Please see our Deicing Advisory for detailed information.

Always comply with OSHA requirements on PPE and exposure limits when cutting or sawing concrete products.

Pavers by Ideal®
A Trademark of Ideal Concrete Block Co.

Traditional & Permeable Pavers ■ Landscape Retaining Walls ■ Natural Stone
Manufactured by Ideal Concrete Block Co.
45-55 Power Rd., Westford, MA 01886 ■ 232 Lexington St., Waltham, MA 02452
(781) 894-3200 ■ info@IdealConcreteBlock.com ■ www.PaversbyIdeal.com