

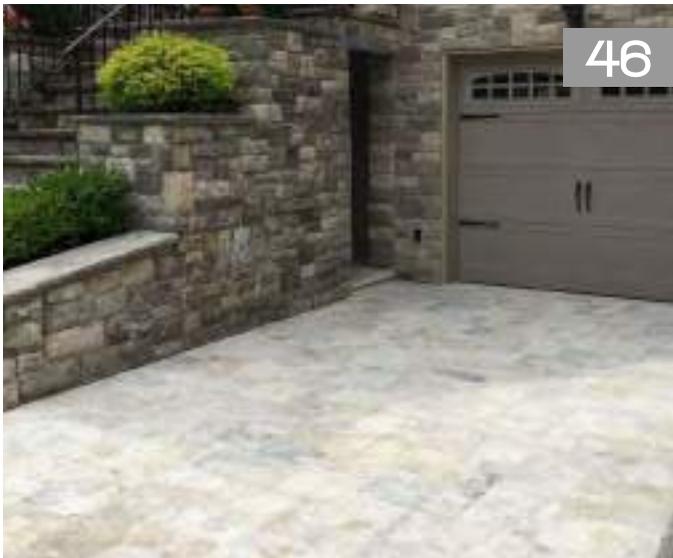
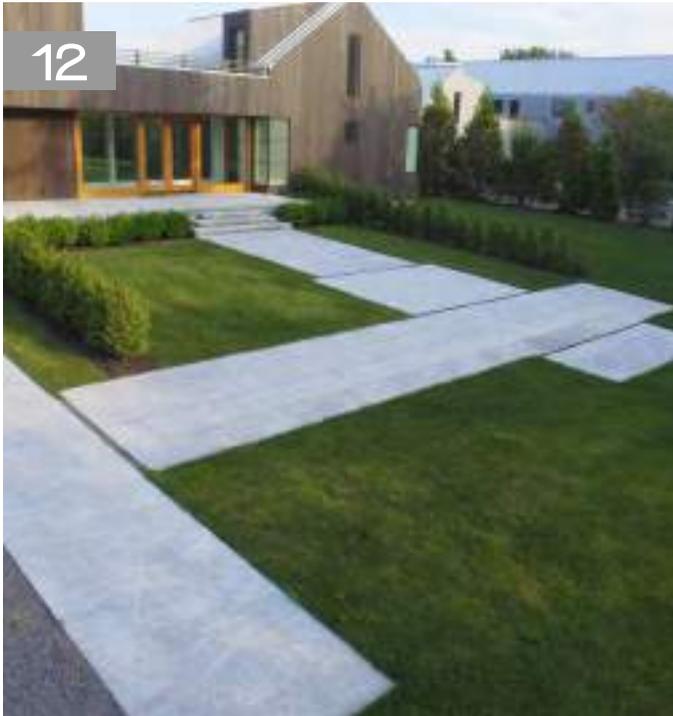
MARMIRO STONES®

CREATED BY NATURE. CRAFTED WITH PASSION.®

HARDSCAPE MAGAZINE VOLUME 2.0 2018

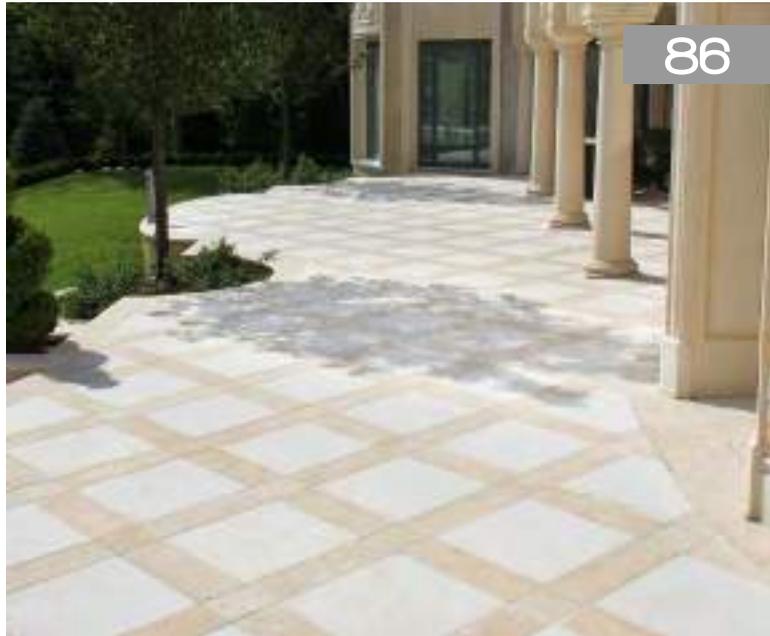


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ABOUT US





Timeless Tradition & Beauty

For over a decade, Marmiro Stones® has provided high quality natural stone products to customers across the United States and worldwide. We are proud of our reputation as an honest, loyal, and consistent company.

Marmiro Stones® owns two factories located near our quarries in Turkey. We are able to control all aspects of production - from the selection and extraction of blocks, to the importation and distribution of natural stones. The products are shipped from our distribution centers or directly from our factories in Turkey, following all of the international packaging standards for slabs and tiles, ensuring the products' safe transport and arrival.





CREMA EDA® MARBLE QUARRY

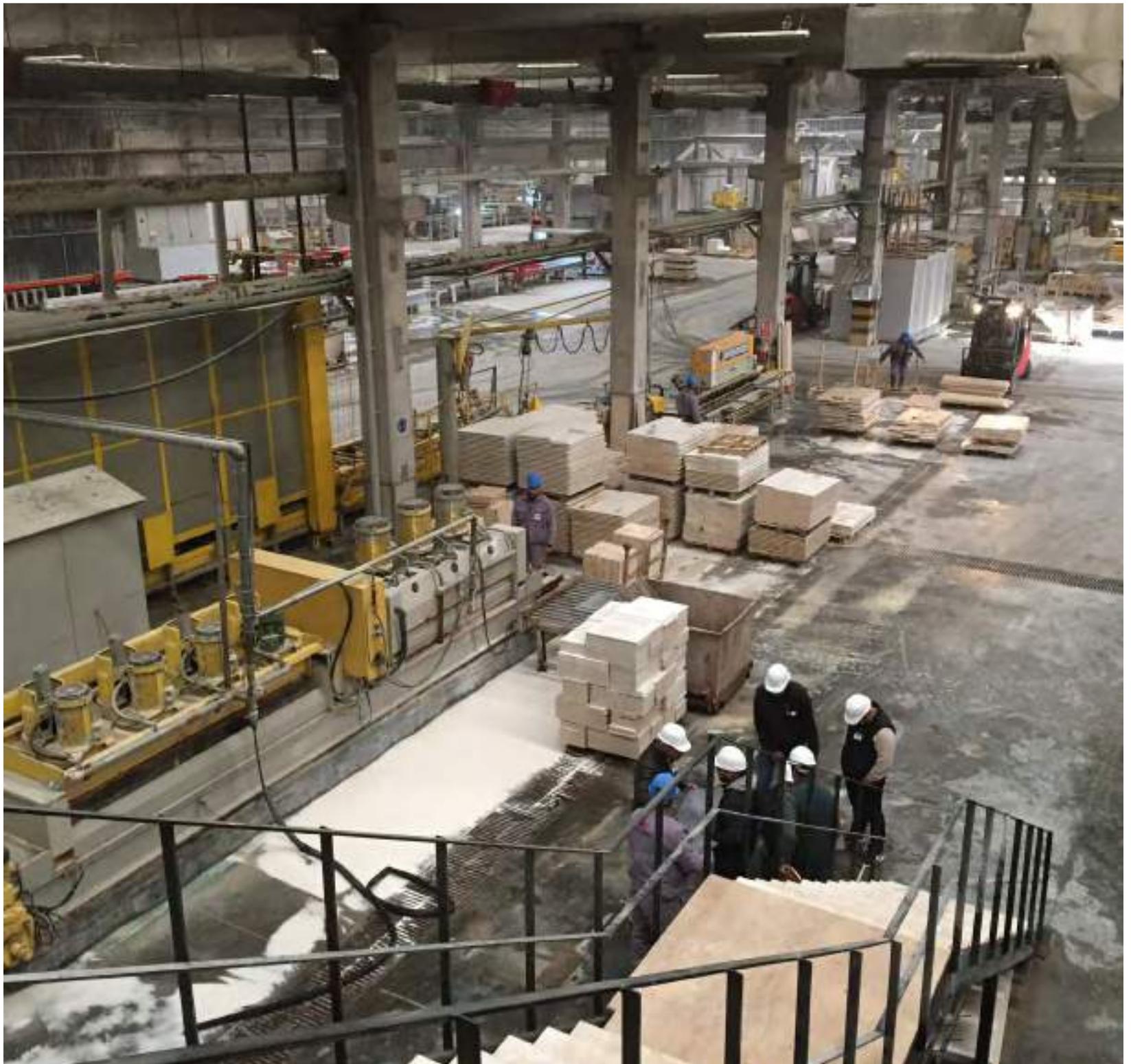
About Marmiro Stones®

From Turkey, where our own quarries and manufacturing factories have been since 1959, the second generation of our family owned business continues the tradition of producing and exporting the highest quality of natural stone.

Our factories, equipped with the newest technology and training, are conveniently located near the quarries in Turkey. With our state of the art machinery, including 10 block cutters and 4 gang saws, our company produces over 500,000 square feet of tiles, slabs, pavers, coping, veneer, and cut to size products each month.

The U.S. office is located in the tri-state area, and our mobile showroom is prepared to travel to meet your design needs. When building long lasting relationships with clients, our family like culture grows exponentially as our products become a part of their daily lives. We are a company passionate about our products, and remain committed to high level work and creative professionalism.

We refer to our employees as our "Chosen Family" and Marmiro Stones® would like to be an extension of your home, as your "Chosen Stone."





QUARRY	LOCATION	SINCE
Deep Blue® & Afyon Cloud®	Iscehisar, Turkey	1971
Crema Eda® & Crema Eda® Rosa	Sivrihisar, Turkey	1989
Terra	Denizli, Turkey	2005
Orcca®	Sivrihisar, Turkey	2012
Azura®	Sivrihisar, Turkey	2013
Grano® & Grano® Silver	Sivrihisar, Turkey	2013
Avena®	Denizli, Turkey	2015

Our Studios

Our two studios located in Carlstadt, NJ and Water Mill, NY strive to make the designing process easy for you. For both your exterior and interior stone needs, Marmiro Stones® is enthusiastic about helping create dream spaces. Clients visiting our design studio are not only purchasing our stone and tiles, but investing time, passion and quality into their homes and life styles.

We are excited to share our extensive hands-on experiences, services and modern techniques of maintaining our high-end products with you.



ABOVE PHOTO: Water Mill Studio RIGHT PHOTOS: Carlstadt Studio



PAVERS





Natural stone has been a crucial building block in all aspects of architecture. Today, it has been paving its way into the commercial and residential markets to enhance landscapes across the country. Marble and travertine pavers are durable, long lasting options for all horizontal surfaces.

Sizes
8"x8" 8"x16" 12"x24" 16"x16" 16"x24" 24"x24" 24"x36" French Pattern Washington Pattern

Finishes
Antiqued Sandblasted Leather

Thickness
3/4" 1 3/16" 2.25"

LEFT PHOTO: Deep Blue® Sandblasted





CREMA EDA® SANDBLASTED





Crema Eda[®] Marble

A neutral, creamy beige to match any color palette.



Antiqued: Aged look with smooth surface and tumbled edges.



Sandblasted: A lightly textured surface with modern, straight edges.



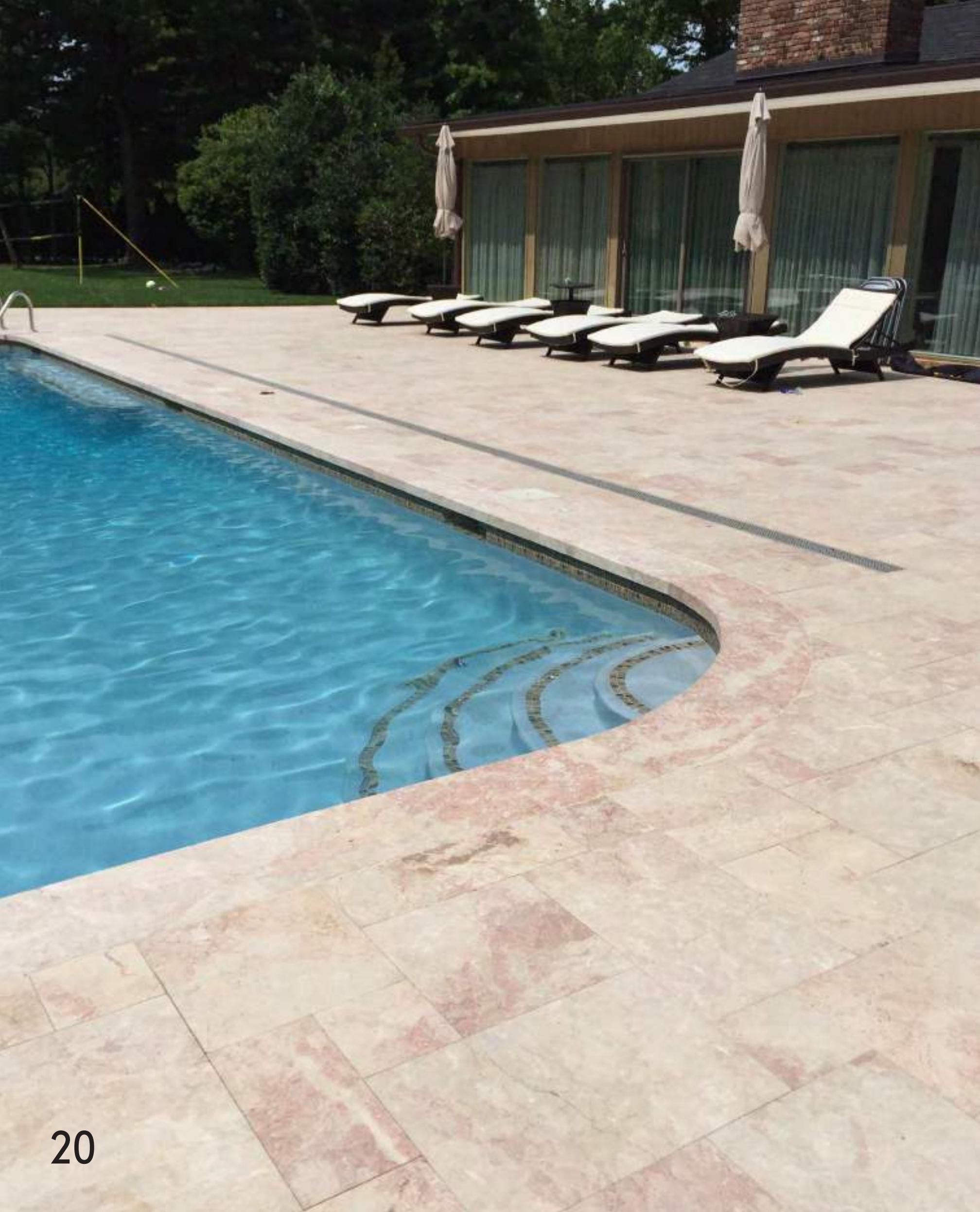
Leather: A soft but textured surface gained by sandblasting followed by brushing.

LEFT PHOTO: Antiqued Finish TOP RIGHT PHOTO: Sandblasted Finish





CREMA EDA® ROSA SANDBLASTED ENHANCED





Crema Eda[®] Rosa Marble

A creamy beige with wisps of red veins.



Antiqued: Aged look with smooth surface and tumbled edges.



Sandblasted: A lightly textured surface with modern, straight edges.

LEFT PHOTO: Sandblasted and Enhanced Finish TOP RIGHT PHOTO: Antiqued Finish





AFYON CLOUD® SANDBLASTED ENHANCED



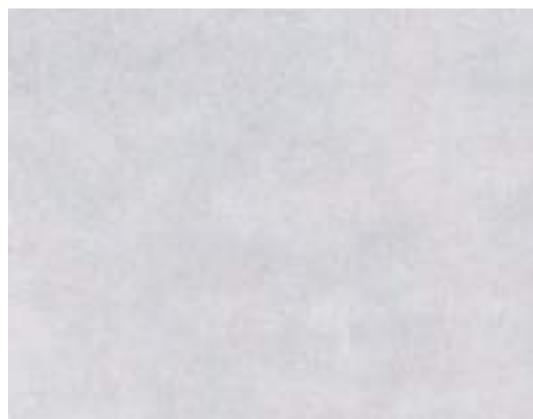


Afyon Cloud[®] Marble

A blend of light and dark greys to match the puffy clouds in the sky.



Antiqued: Aged look with smooth surface and tumbled edges.



Sandblasted: A lightly textured surface with modern, straight edges.



Leather: A soft but textured surface gained by sandblasting followed by brushing.

LEFT PHOTO: Antiqued Finish TOP RIGHT PHOTO: Sandblasted Finish





DEEP BLUE® ANTIQUED





Deep Blue[®] Marble

A deep bluish grey with unique pattern characteristics.



Antiqued: Aged look with smooth surface and tumbled edges.



Sandblasted: A lightly textured surface with modern, straight edges.



Leather: A soft but textured surface gained by sandblasting followed by brushing.

LEFT PHOTO: Sandblasted and Enhanced Finish TOP RIGHT PHOTO: Sandblasted Finish





TERRA ANTIQUED





Terra Travertine

A rustic variation of light and dark browns and tans.



Antiqued: Aged look with smooth surface and tumbled edges.

LEFT PHOTO: Antiqued Finish TOP RIGHT PHOTO: Antiqued Finish





GRANO® ANTIQUED





Grano[®] Travertine

A perfect blend of taupes, tans, and greys.



Antiqued: Aged look with smooth surface and tumbled edges.



Sandblasted: A lightly textured surface with modern, straight edges.

LEFT PHOTO: Sandblasted Finish TOP RIGHT PHOTO: Antiqued Finish





GRANO® SILVER ANTIQUED





Grano[®] Silver Travertine

A unique blend of cool silver, warm greys and creamy beige.



Antiqued: Aged look with smooth surface and tumbled edges.

LEFT PHOTO: Antiqued Finish TOP RIGHT PHOTO: Antiqued Finish





AVENA® ANTIQUED





Avena[®] Travertine

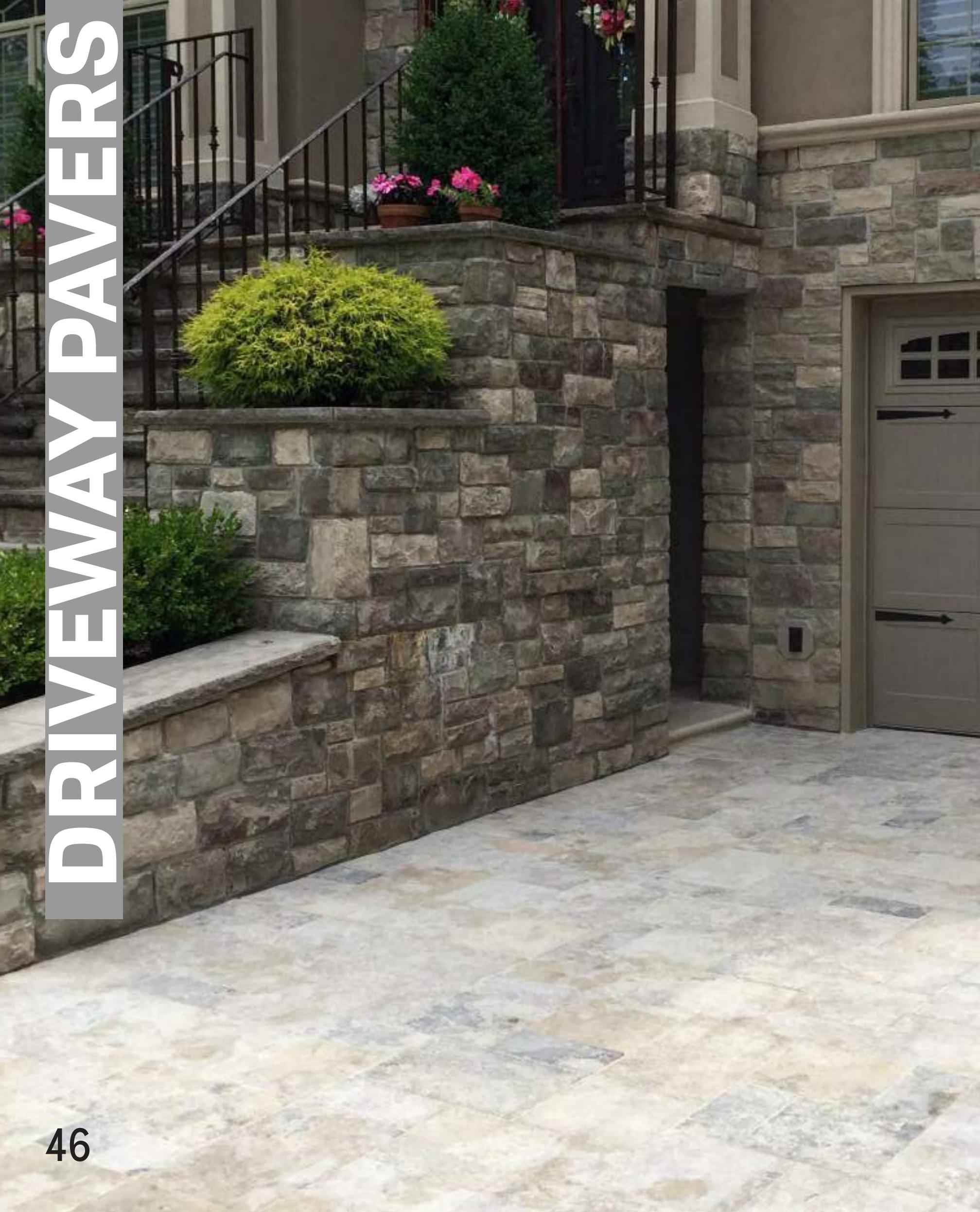
A perfect combination of creamy beige and hints of tan.



Antiqued: Aged look with smooth surface and tumbled edges.

LEFT PHOTO: Antiqued Finish TOP RIGHT PHOTO: Antiqued Finish

DRIVEWAY PAVERS





The best way to come home is to a driveway with character. Complete the front of your home with a custom pattern of driveway pavers. Durable enough to withstand the family SUV, but elegant enough to make a statement.

Sizes

6" x 12"
Gateway Pattern

Thickness

2.25"

Finishes

Aged
Reclaimed

Colors

Crema Edda®	Grano® Silver
Deep Blue®	Terra

LEFT PHOTO: Grano® Silver Aged Gateway Pattern





DEEP BLUE[®] RECLAIMED



CREMA EDA® AGED



CREMA EDA® RECLAIMED



DEEP BLUE® AGED



DEEP BLUE® RECLAIMED



GRANO® SILVER AGED



GRANO® SILVER RECLAIMED



TERRA AGED



DEEP BLUE® RECLAIMED

GATEWAY PATTERN[®]



12" X 18" X 2.25" (33%)

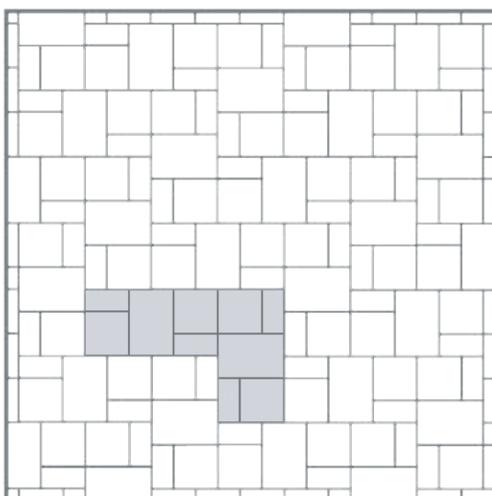
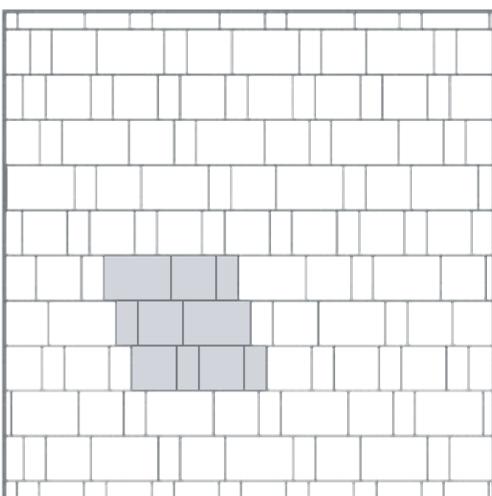
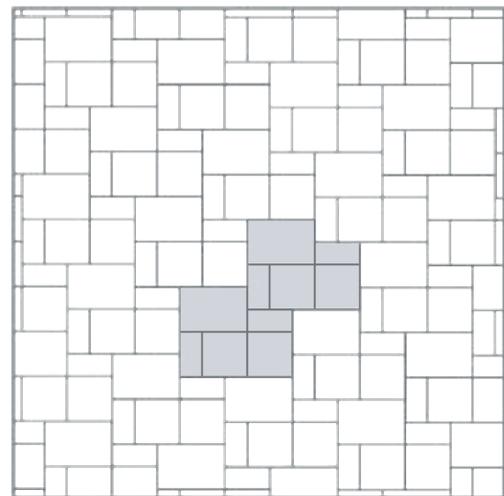
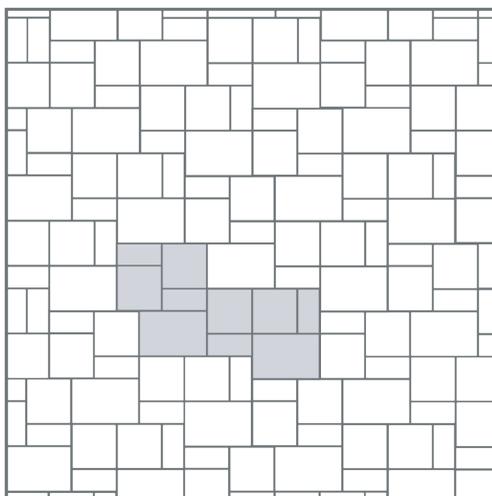
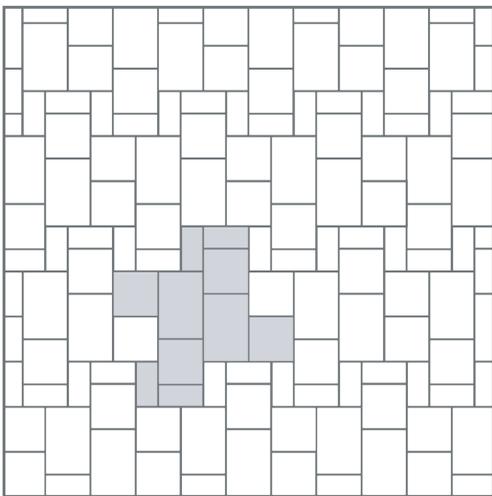


12" X 12" X 2.25" (45%)



6" X 12" X 2.25" (22%)

5 LAYING PATTERNS



APPLICATIONS

Patios, Walkways & Stairways
Poolsides, Driveways, Outdoor Living

AVAILABLE COLORS

Cream Eda[®], Deep Blue[®],
Grano[®] Silver and Terra

COPING & TREADS





An essential add on to any project, coping and treads are key to all pool and landscape designs. From a modern straight edge, to a classic bullnose, we can accommodate all project styles.

Sizes

8"x16" 12"x24" 12"x48" 12"x72"
14"x48" 14"x72" 16"x24" 16"x48"
16"x72" 24"x24" 24"x36" 24"x46"

Thickness

1 3/16"
2.25"
6"

Edge Detail

Bullnose
Straight
Eased
Splitface

Colors

Available in all colors

LEFT PHOTO: Afyon Cloud® Sandblasted

CREMA EDA®



CREMA EDA® ROSA



AFYON CLOUD[®]



DEEP BLUE[®]







DEEP BLUE® SANDBLASTED ENHANCED

TERRA



GRANO[®]



GRANO[®] SILVER



Antiqued Bullnose 2.25"



Antiqued Straight Edge 2.25"



Sandblasted Bullnose 2.25"



Sandblasted Straight Edge 2.25"

Dimensional Treads



Sizes

14" x 48"

Finish

Natural

Thickness

6"

Colors

Crema Eda®
Crema Eda® Rosa

Deep Blue®
Grano® Silver

TOP PHOTO: Crema Eda® Natural Finish

Irregular Treads



Sizes

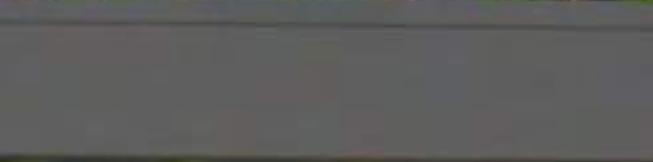
15" - 24" WIDE X 24" - 42" LONG X 6" THICK
15" - 24" WIDE X 42" - 48" LONG X 6" THICK

Colors

Orcca®
Grano® Silver

VENEER





Take your project to the next level with the beauty of veneer. A multi-functional stone, veneer can be used on various surfaces such as barbecues, fire pits, outdoor kitchens, water features, and much more.

Veneer
Splitface
Grass
Ledgestone



Deep Blue® Full Corner

LEFT PHOTO: Deep Blue® Splitface

Splitface Veneer



CREMA EDA®



CREMA EDA® ROSA



AFYON CLOUD®



DEEP BLUE®



ORCCA®



AZURA®



TERRA



GRANO®

* LIMITED STOCK OF ORCCA® & AZURA®







CREMA EDA® SPLITFACE





Sizes

4" x Random 6" x Random
 3"-6"-9" x Random

Full 90° corner available for all sizes

Thickness

5/8" - 1 3/16"

LEFT PHOTO: Afyon Cloud® Splitface TOP RIGHT PHOTO: Crema Eda® Rosa Splitface





DEEP BLUE® GRASS

Grass Veneer



CREMA EDA®



CREMA EDA® ROSA



AFYON CLOUD®



DEEP BLUE®



TERRA



GRANO®



Sizes

12" x 24"

Thickness

3/4"

TOP PHOTO: Afyon Cloud® Grass Finish



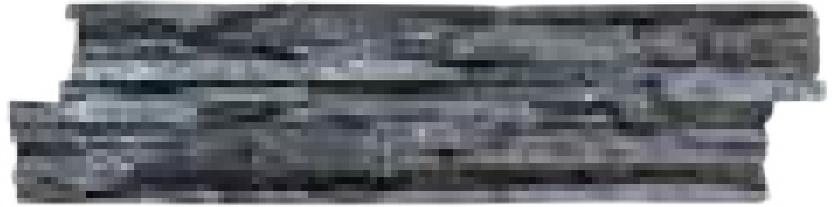


WAINSCOTT ROCK FACE

Ledgestone



SAGAPONACK SPLITFACE



WAINSCOTT ROCK FACE



WATER MILL SPLITFACE



WATER MILL ROCK FACE



SAG HARBOR SPLITFACE



MONTAUK ROCK FACE



AMAGANSETT SPLITFACE



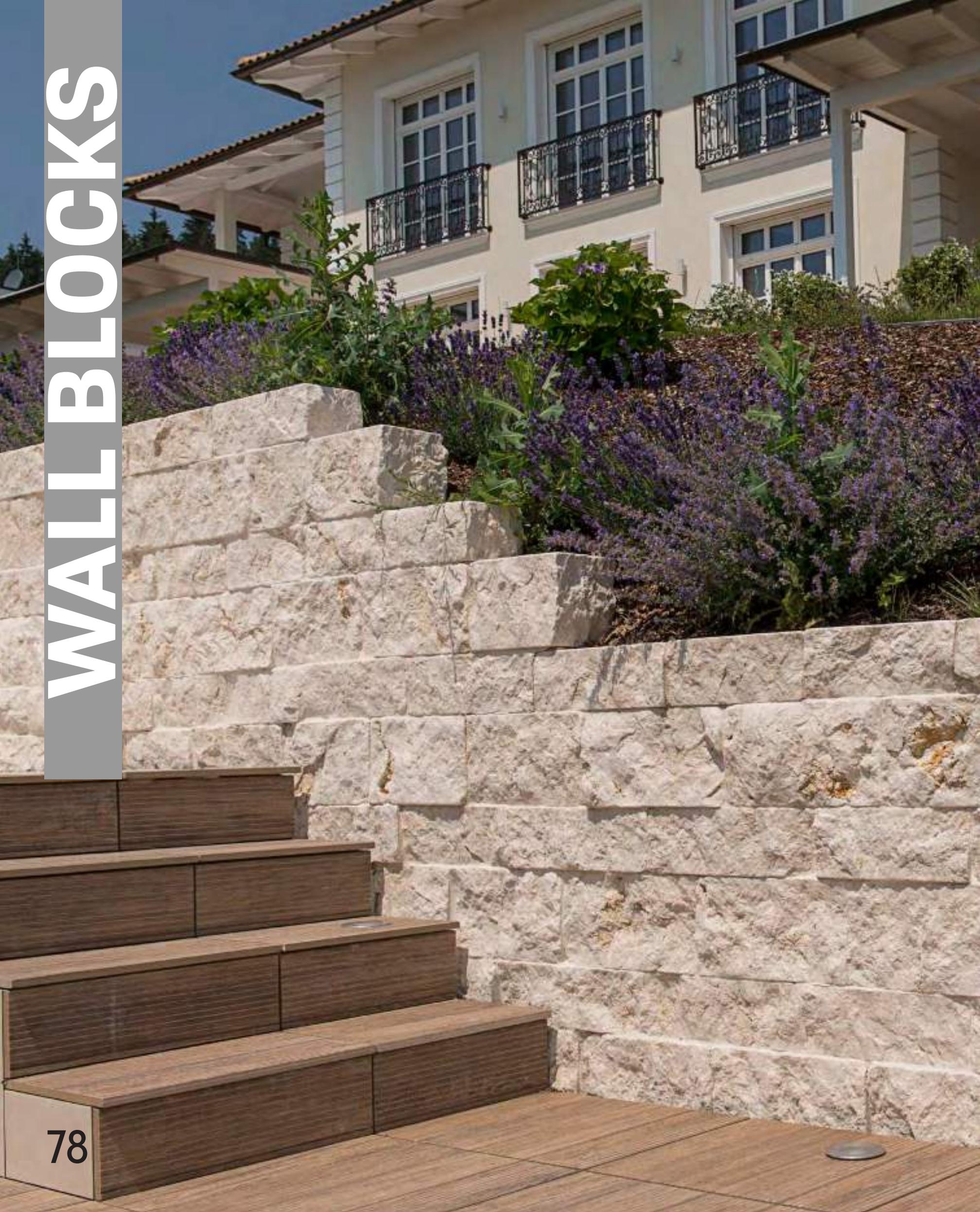
Sizes

6" x 24" Panels
6" x 24" Interlocking Corners

Thickness

5/8" - 1.25"

WALL BLOCKS





Enhance your exterior spaces with a bold product by using wall blocks. Easy to stack and install, and durable enough to last a lifetime.

Sizes

3" High x 12"-16" Long
6" High x 12"-16" Long
9" High x 12"-16" Long

Corners Available

Widths

8" Wide

Available in all colors

Corners

6" x 6"

6" x 12"

3 sided splitface



Crema Eda®

LEFT PHOTO: Crema Eda®





CREMA EDA® WALL BLOCKS



6" High Tapered Wall Blocks

Sizes	Widths
6" High x 8.6"-10" Long 6" High x 10.6" - 12" Long 6" High x 12.6" - 14" Long	8" Wide

Colors
Orcca® Grano® Silver



Circle Firepit

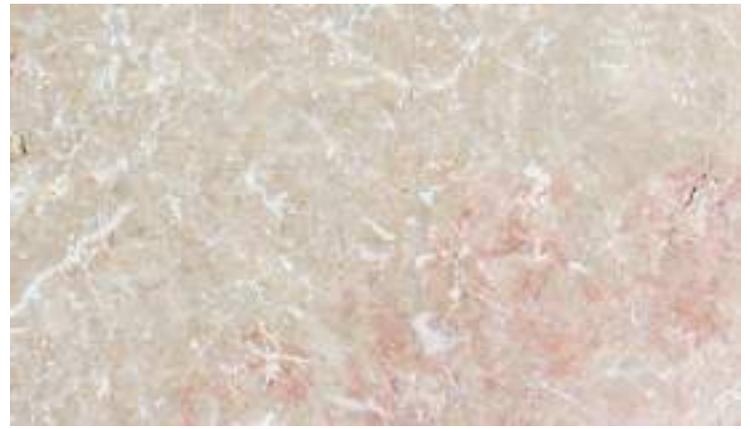
Sizes	Widths
6" High x 7" - 10" Long x 8" Wide	8" Wide
Diameter	Colors
Inside Diameter: 35"-36" Outside Diameter: 51" - 52"	Crema Eda® Orcca® Grano® Silver

TOP PHOTO: Grano® Silver Circlepit

SLABS



CREMA EDA®



CREMA EDA® ROSA



AFYON CLOUD®



DEEP BLUE®



ORCCA®



AZURA®



TERRA



GRANO®



Go for the “wow” factor with slabs. A versatile product that can be used in many ways - countertops, radius cuts, and large pier caps to name a few. Opportunities are endless.

Thickness	Finishes
2cm (.75") 3cm (1.25") 2.25"	Polished Brushed Natural

Sizes
Sizes Vary

PATTERNS





Express yourself through your hardscape pattern. From sleek modern squares, to the traditional modular French Pattern, let your visions come to life in stone.

Patterns

French Pattern
Washington Pattern

Custom Patterns

Alternating Vertical
Basketweave
Basketweave Horizontal
Checkerboard
Diagonal Staggered
Diamond Staggered
Herringbone
High Rise
Hopscotch
Mckeon
Patchwork
Pinwheel
Staggered Vertical Brickwall
Staggered
Tahari
Tic Tac
Walkway

LEFT PHOTO: Crema Eda® Antiqued and Sandblasted Finish Tahari Pattern

French Pattern



Pattern Breakdown

8" x 8" (11%)	8" x 16" (11%)
16" x 16" (44%)	16" x 24" (34%)

* Our Patterns are Based on Zero Grout Joint

Washington Pattern

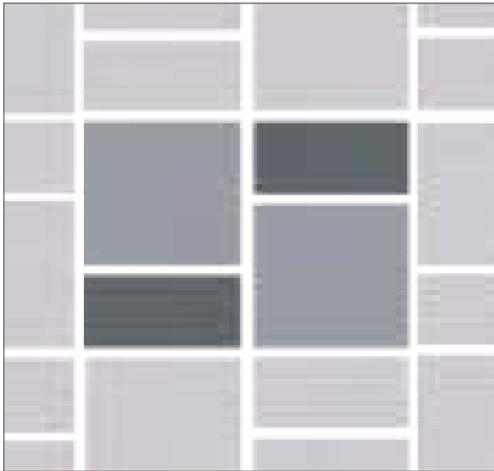


Pattern Breakdown

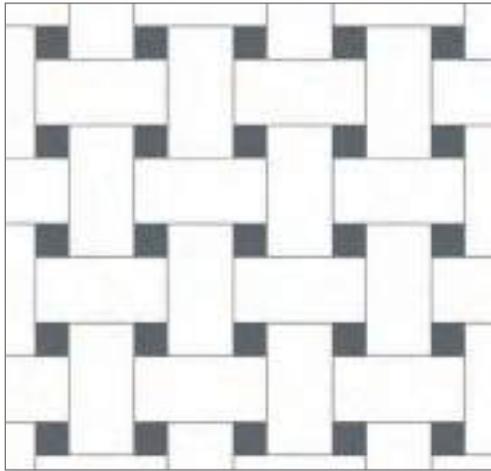
12" x 12" (6%)	12" x 24" (22%)
24" x 24" (22%)	24" x 36" (50%)

* Our Patterns are Based on Zero Grout Joint

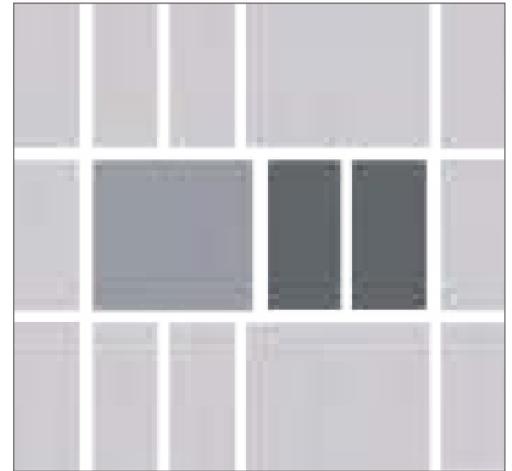
Custom Patterns



ALTERNATING
VERTICAL



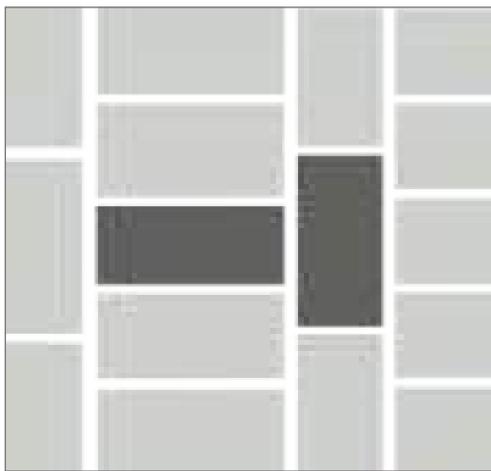
BASKETWEAVE



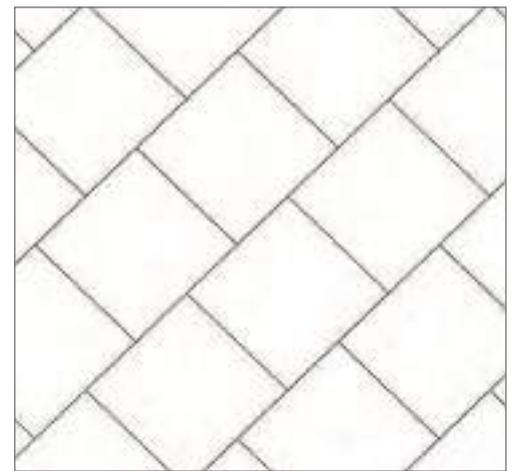
BASKETWEAVE
HORIZONTAL



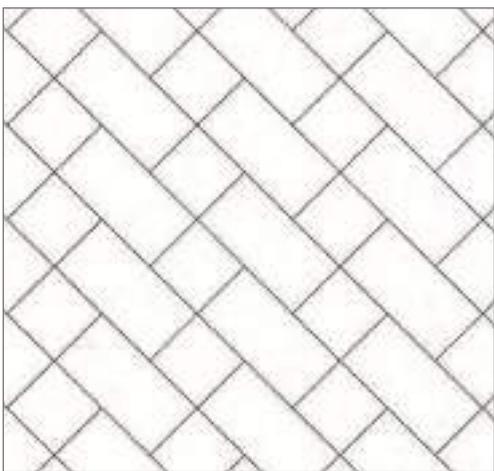
CHECKERBOARD



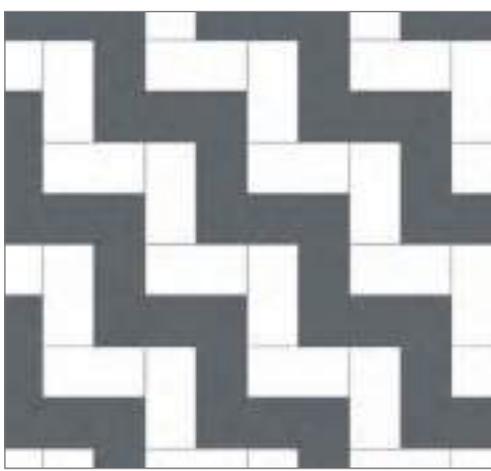
CORRIDOR
HORIZONTAL



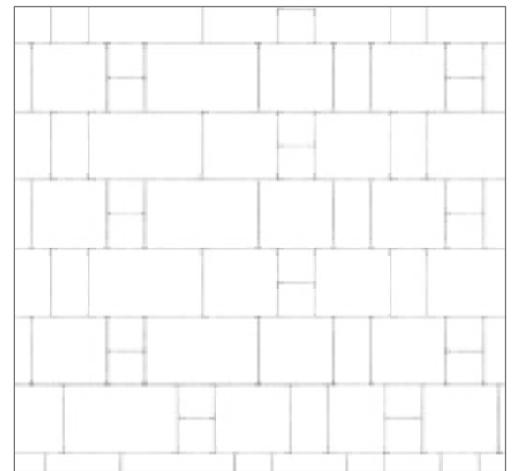
DIAGONAL
STAGGERED



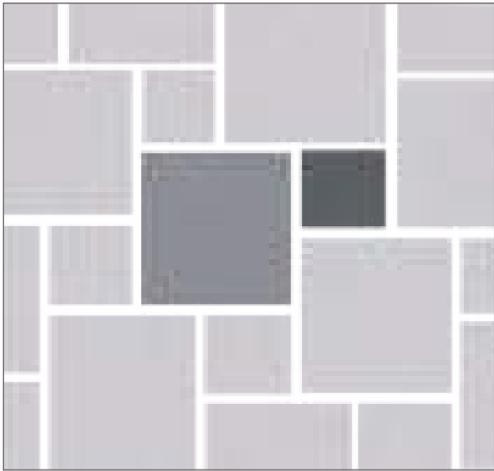
DIAMOND
STAGGERED



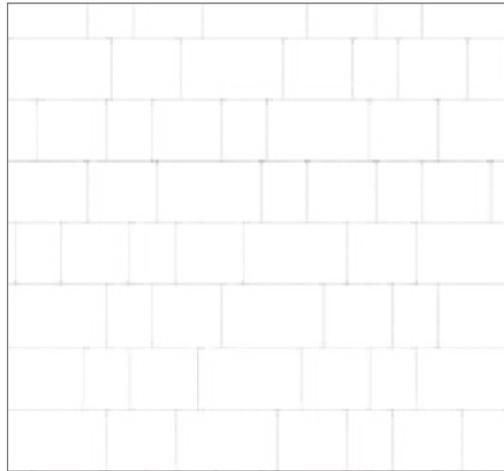
HERRINGBONE



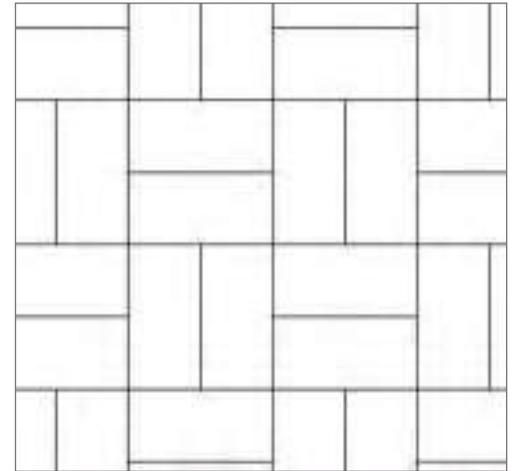
HIGH RISE



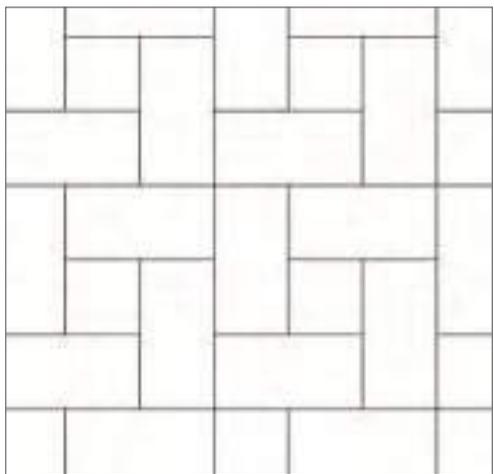
HOPSCOTCH



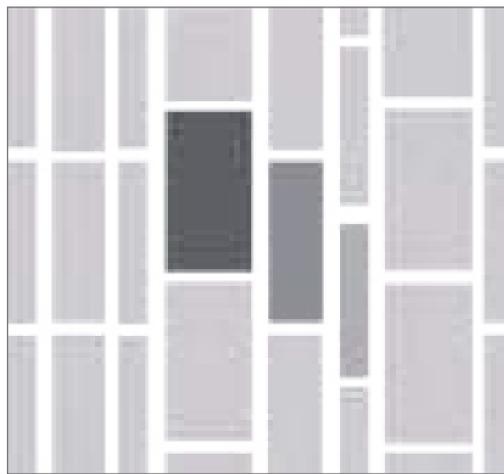
MCKEON



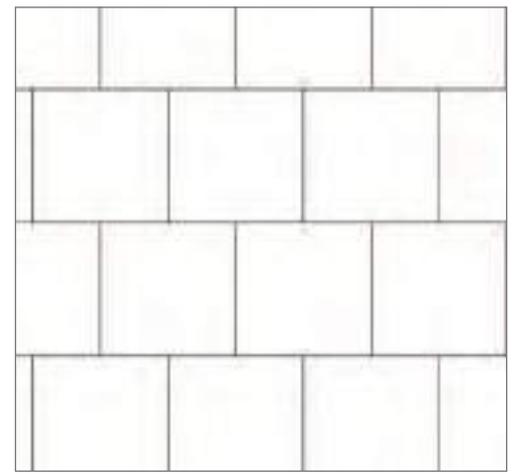
PATCHWORK



PINWHEEL



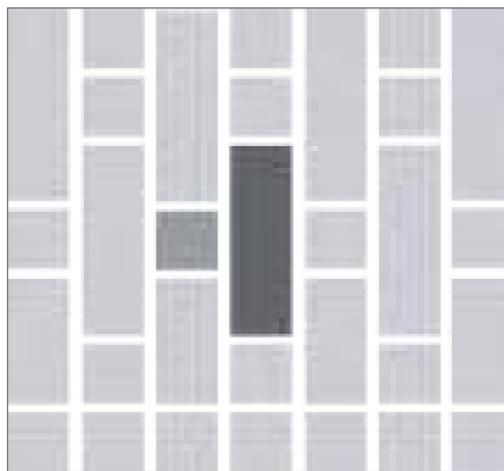
STAGGERED
VERTICAL
BRICKWORK



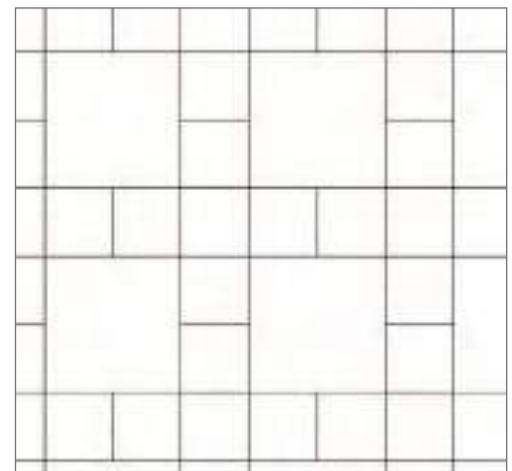
STAGGERED



TAHARI



TIC TAC



WALKWAY

FABRICATION





Your one stop shop for all your custom ideas. Bring your creations to life with state of the art machine technology. Our educated manufacturing team is equipped to handle all projects, big or small. No idea is a bad idea.

Custom Projects

Radius Pool Coping

L Shape Pool Corners

Radius Cut Steps

Outdoor Firepits

Fireplaces & Hearths

Outdoor Kitchens

Medallions

These are just some of the many projects we can do.



Top Left Photo:

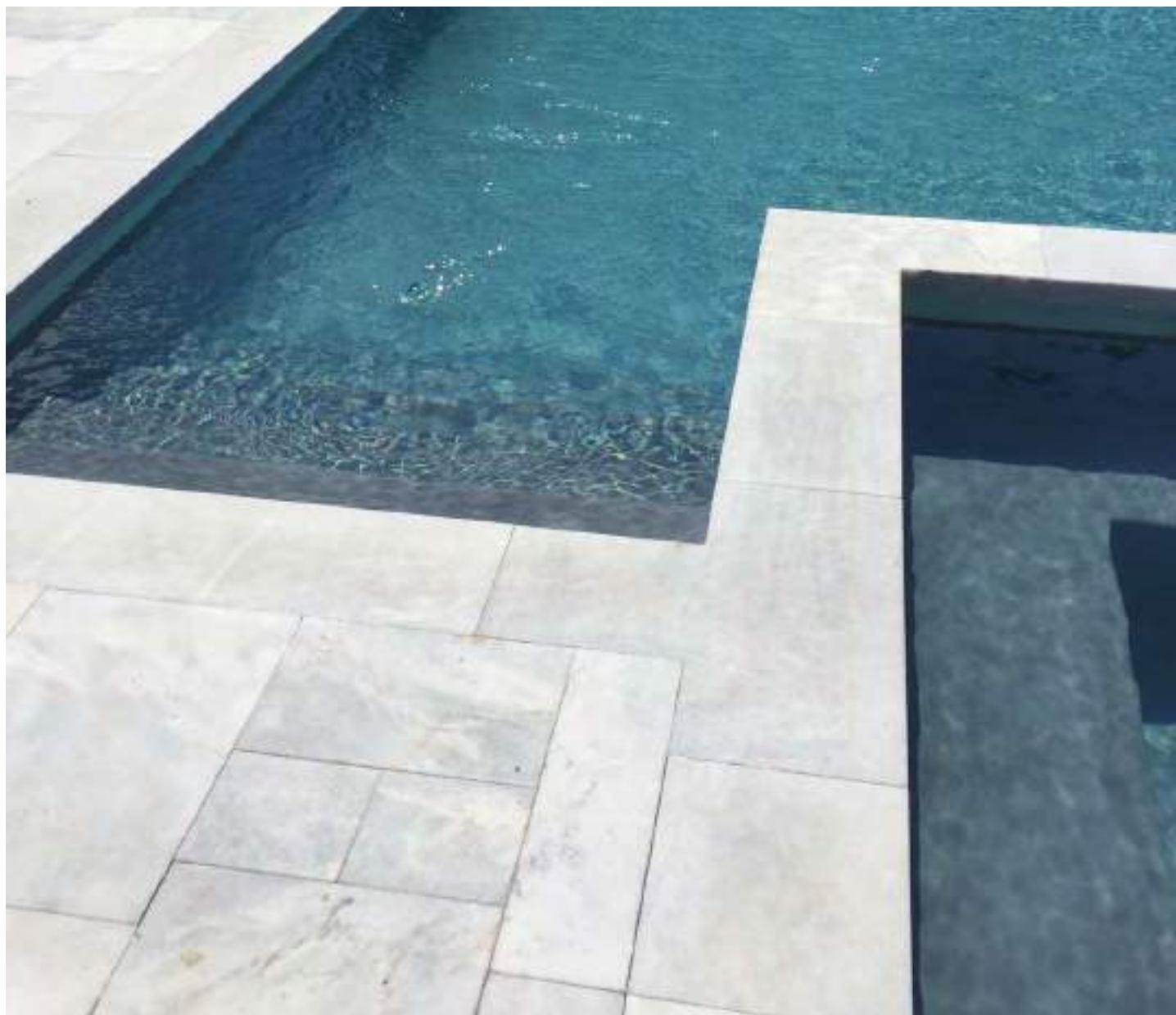
Azura® Sandblasted Radius Cap

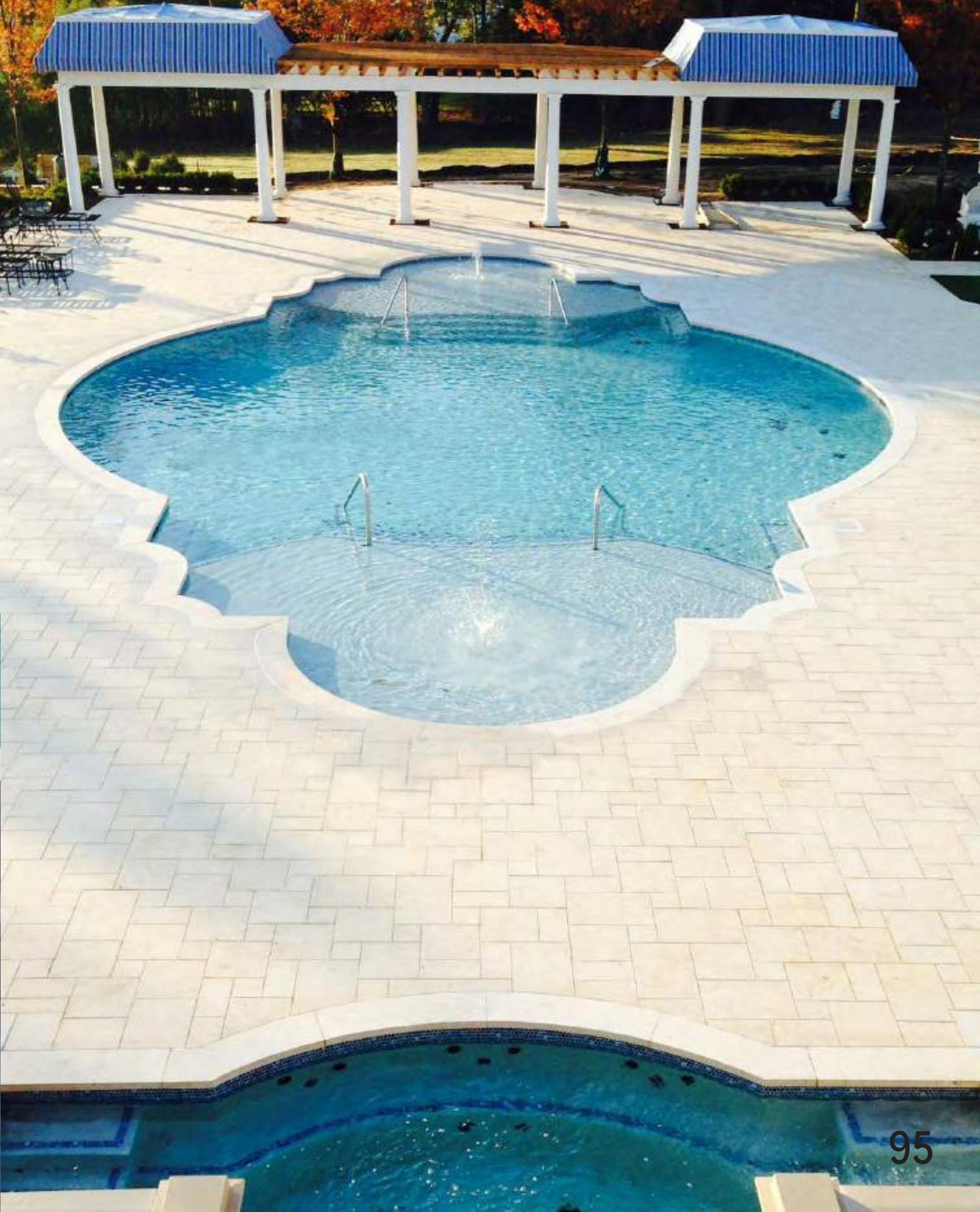
Bottom Left Photo:

Afyon Cloud® Sandblasted
Coping with T Corner

Right Photo:

Crema Eda® Sandblasted Radius
Coping









Top Right Photo:

Deep Blue® Natural Enhanced
Countertop

Bottom Right Photo:

Terra Natural Countertop

Left Photo:

Orcca® Natural Countertop

ACCESSORIES





Put the final touches on all of your projects. Custom to your order, we can create matching pieces to accent your color palette. Leave no detail left unstoned.

All Accessories

Pool Tiles

Skimmer Covers

Drain Covers

Corners

Spillways

Stepping Stones

Medallions

Planters

Wall Caps

Window Sills

Edging

Slabs



Stone Pool Tiles

Sizes: 6"x6", 6"x12", 6"x24"

Finishes: Leather, Brushed, Polished



Glass Pool Tiles

Sizes: 12"x12" Sheets



Skimmer Covers

12"x12" with 1" Center Hole

Sizes are Custom to Order



Drain Covers

6"x24", 12"x24", 16"x24" with Cut Drain Holes

Sizes are Custom to Order



Cover Boxes

Sizes: 24"x24", 24"x36", 24"x48"

Edge Detail: Straight or Bullnose

Sizes are Custom to Order



Pool Corners

Sizes: 24"x24", 24"x36", 24"x48"

Edge Detail: Straight or Bullnose

Sizes are Custom to Order



Radius

Radius Sizes are Custom Order



Spillways

Custom Designed per Project



Stepping Stones

Sizes: 24"x24", 24"x36", 24"x48"
Sizes are Custom to Order



Medallions

Custom Designed Per Project



Planters

Custom Designed Per Project



Wall & Pier Caps

Depth: 12", 14", 16", 24"
Length: 2', 4', 6'
Thickness: 2.25"



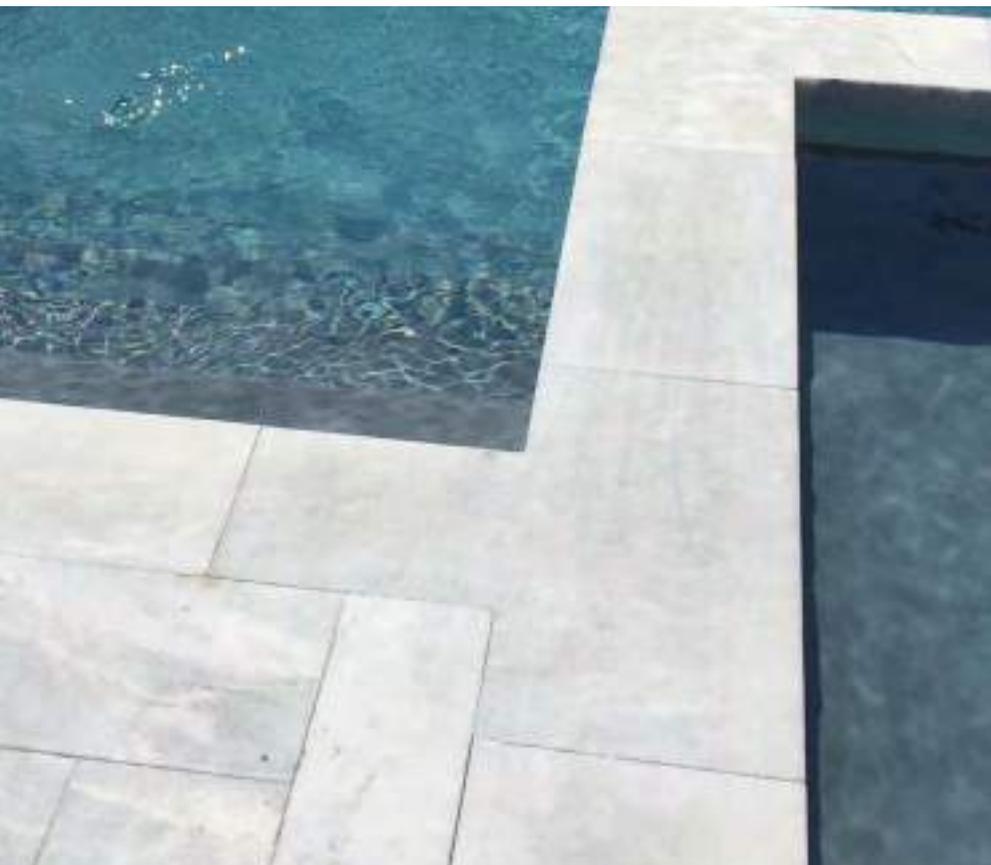
Window Sills

Edge Detail: Straight or Bullnose
Custom Sized Per Project



Edging

Edge Detail: Straight or Bullnose
Custom Sized Per Project



T Corners

Sizes: 24"x36", 24"x48"
Edge Detail: Straight or Bullnose
Custom Designed Per Project



Hearths & Mantles

Edge Detail: Straight, Bullnose, Splitface
Thickness: 2.25"
Custom Designed Per Project

COMPATIBILITY

Think Outside The Box and Use Our Products in a Variety of Ways

	Outdoor Deck	Pool & Spa Coping	Pool Cover Boxes	Spillways	Stairs	Risers	Stepping Stones
1 3/16" Pavers	●	●		●	●	●	●
2.25" Pavers	●	●	●	●	●		●
Coping & Treads	●	●		●	●		●
Veneers				●		●	
Slabs	●	●	●	●	●		●
Pool Tiles				●		●	
Wall Blocks					●	●	

Edging	Wall Veneers	Wall Caps	Pier	Pier Caps	Firepits	Firepit Caps	BBQ Veneer	Countertops	Driveways
●	●		●		●		●		
●	●	●	●	●	●	●	●	●	●
●		●		●		●		●	●
	●		●		●		●		
	●	●	●	●	●	●	●	●	
	●		●		●		●		
●	●		●		●		●		

Marmiro Stones® Natural Stone Pavers (MSNSP) Installation Guideline Dry-Laid (Lobascio System)

Review

- The aggregate base material, thickness, surface tolerances, compaction, and elevations are according to specifications.
- Location, installation, type, and elevations of edge restraints around the perimeter area to be paved.
- Sub-grade preparations, elevations, and compacted density vary upon specifications.

Installation

Excavation

- Remove excess concrete/other material.
- Set forms - 6" or 4" thick concrete to designated length & width. Approximately 4" bigger than actual driveway/walkway/patio.
- Tamp sub-soil according to specifications.
- Place # 6 wire/mesh in the field and on perimeter, put ½" rebar-expansion where needed, can apply this to existing concrete.

Pouring Concrete

- Do not bull float or towel, straight edge concrete only.

Setting up MSNSP

- Set the screed rails, thickness 1" no more than 1½".
- Mix 4 wheelbarrows of concrete sand to 1 bag of Portland Cement.
- Place mixture between rails, spread sand 1" evenly and use a come along rake to tighten the sand.
- Begin screeding the sand and fill the voids, notch the board along the coping or concrete. Set ⅛" to ¼" higher than the existing coping and concrete.
- Fill-in the screed rail with desirable mixture and trowel evenly.

Laying MSNSP

- Lay MSNSP inside the square string line.
- Lay MSNSP in the pattern specified and maintain straight pattern line.
- Hand lay tight to one another as you are standing on MSNSP.

Setting the Edge Restraint

- Mix Portland Cement, gravel mix & sand.
- Place concrete edge restraint on the outer edge.
- Place 2" or 3" under the MSNSP, use mallet to bring material to desirable height.
- To apply edge restraint, only go as far as you are going to tamp.

Apply Joint Sand

- This is a protective barrier before bringing the tamping machine onto the MSNSP.
- Sand will filter into the joint when it appears.
- Sweep the sand evenly on the top of the MSNSP.
- Clean the sand off the top of the MSNSP ¼" down from the top of the joint of each MSNSP.

Tamping MSNSP

- Tamper must have a rubber mat.
- Trench tamper 12" x 24", use a 4 horse power tamper.
- When finished clean sweep sand off MSNSP.

Marmiro Stones® Natural Stone Pavers (MSNSP) Installation Guideline Mortared

Review

- Confirm sub-grade preparation, compacted density and elevations to match the specifications.
- Geotextiles, if applicable, are according to specifications.
- The aggregate base material, thickness, compaction, surface tolerances, and elevations are according to specifications.
- Location, type, installation and elevations of edge restraints around the perimeter area to be paved.

Installation

- If a **masonry surface** is used, it should be clean and free of loose dirt, dust, or other elements. If a **wood structure** is used, make sure the supporting framework is rigid enough to prevent flexing of the area. For interior applications, a wood substructure is recommended. Install a vapor barrier of tar paper or other membrane over the wood sub-flooring.
- For both masonry and wood substructures, prepare a mortar mixture of 3 parts sand to 1 part Portland II Cement, measure ingredients to keep the mix consistent from one batch to another and mix these ingredients dry.
- Add water and any other additives to the dry mix to create a damp mixture. Prepare a bond coat consisting of water and straight cement powder to the consistency of cake batter.
- Apply the mortar bed bond coat to the slab. Lay-out a layer of setting mortar, no less than $\frac{3}{4}$ " for a masonry structure and $1\frac{1}{4}$ " for a wood structure.
- Mortar should cover 95% of the surface area. Dust the surface of the setting bed with a fine layer of dry Portland Cement.
- Coat the back of the MSNSP with bond coat consistent of water and straight Portland Cement and add water. This mix will be used to create suction between the MSNSP and the masonry structure and will hold the stone in place until the mortar cures. Pack the mortar under the edges of the MSNSP to leave no voids.
- Keep the joints between the MSNSP free of loose mortar. It is important to have clean joint cavity to fill with mortar.

Mortar Joints

- Prepare the same mixture used for the setting bed note, the joint mix should be wetter than the setting bed mixture. A "grout bag" is needed in this phase.
- Take a damp sponge and work back and forth across the joint in a 45° direction, compressing the joint and cutting off excess joint mix. Remove as much of joint mix smear as possible from the face of the MSNSP before it dries.
- If the unused portion of the mixture starts to set, do not add more water, as this will result in an inconsistent joint strength and possible color differences.
- Allow the stonework to cure for a minimum of 5 days. In very hot weather you may dampen the joints with a spray bottle to help slow the curing process, making the joints stronger.

Setting the Edge Restraint

- Find the longest straight line, set a string line.
- 90 degree off of that long line at desirable length.
(Note: this applies for new concrete, existing concrete with expansion joint you would need to apply crack membrane to the existing concrete.)

Marmiro Stones® Natural Stone Pavers (MSNSP) Installation Guideline Dry-Laid

Review

- The aggregate base material, thickness, surface tolerances, compaction, and elevations are according to specifications.
- Location, installation, type, and elevations of edge restraints around the perimeter area to be paved.
- Sub-grade preparations, elevations, and compacted density vary upon specifications.

Installation

- Spread the bedding sand evenly over the base course and screed to a normal thickness of 1", no more than 1.5". The screeded sand should not be disturbed then screed enough sand to stay ahead of new laid MSNSP.
- Make sure that the MSNSP's are free of foreign materials before installation takes place.
- Maintain consistent joints between the MSNSP's; $\frac{1}{16}$ " to $\frac{1}{8}$ " wide.
- Fill any gaps at the edges of the paved area with cut MSNSP or edge materials.
- For cutting pavers, utilize a power-driven masonry saw.
- To vibrate the MSNSP into the sand bed, use a low-amplitude high frequency plate.
- To vibrate the MSNSP, sweep dry sand into the joints until joints are full. This may require at least two or three cycles. Do not vibrate within 3 feet of unrestrained edges.
- For all work done within a day should be fully compacted with sand filled joints within 3 feet of unrestrained edges.
- The final surface elevation of the MSNSP should not deviate more than $\frac{3}{8}$ " under 10 foot straight edge.
- The final surface elevation of the MSNSP should be $\frac{1}{8}$ " to $\frac{3}{8}$ " above adjacent drainage inlets, concrete collars or channels.

Marmiro Stones® Natural Stone Thin Veneer (MSNSTV) Installation Guideline

Tools and Materials

Tools Needed	You May Also Need
<ul style="list-style-type: none">• Wet or Diamond Blade Mason Saw• Mason's Trowel• Mortar• Grout Bag• Wide Mouth Nippers• Level• Safety Glasses• Dust Mask• Wheelbarrow and shovel• Whisk Broom	<ul style="list-style-type: none">• Weather Resistant Barrier• Metal Jointing Tool• Metal Lath• Hammer or Staple Gun

Marmiro Stones® Natural Stone Thin Veneer (MSNSTV) may be applied over any masonry surface such as, concrete block, cement, brick etc. Painted surfaces must be sandblasted, or stripped of paint. If it gets difficult to remove paint or if surface is of frame construction, nail metal lath to wall securely, 6" on center, (for exterior, vapor barrier first, then metal lath). Apply a scratch coat to lath. Lath must be covered completely with a thin coat ($\frac{1}{2}$ "- $\frac{3}{4}$ " thick). Use small scrap of lath to lightly rake horizontal grooves in the scratch coat. Allow scratch coat to set-up or cure. Use the following steps below to install MSNSTV.

Step 1: Mix rich mortar (2 parts sand to 1 part cement) to a thick consistency.

Step 2: Install corner units first, if your project includes corners. Notice that the corner units have long and short leg, alternate these to prevent a vertical bonded joint.

Step 3: Surface must be free of dirt, sand or loose particles. If surface is dry, dampen first with a masonry brush but do not saturate. This prevents the wall from pulling the moisture from the mortar, allowing it to set naturally with a better bond. For cleaner installation, begin applying stone at the top of the wall and work towards the bottom.

Step 4: Spread rich mortar on wall with the trowel, approximately ½" thick.

Step 5: Take the MSNSTV and slightly dampen the backside. This frees any dust and prevents moisture loss from mortar.

Step 6: Apply thick coat of rich mortar onto backside of the MSNSTV to fill in pits and create a stronger bond with the wall.

Step 7: Press the MSNSTV into mortar, rotating slightly, forcing some of the mortar to squeeze out freely. Any mortar forced out beyond finished joint must be removed with a trowel, joint tool, or brushed before the mortar is allowed to set up. Narrow joints will provide a nicer appearance.

Step 8: Use a grout bag or trowel to fill all joints. As the mortar stiffens, tool to the desired depth and be sure to brush off all excess.

Durability and Maintenance

Natural stone has very low absorption, high strength, excellent resistance to weathering, and will give you long lasting performance if you follow the few simple guidelines below.

- Keep excess moisture from saturating the wall. Adjust landscape sprinklers, downspouts, etc, to prevent water from constantly wetting the wall .
- Periodically remove any vegetation such as ivy or moss.
- Clean with a gentle water spray to remove dust and dirt. If you have stains, graffiti, or other heavy solid areas, use gentle methods to avoid damaging the mortar and stone. Test any cleaning solution on a small area to check for results.
- Cracks may appear over time as the building shifts and settles. Re-point cracks with new mortar to restore the wall's natural weather resistance.
- Never use acid based materials, or a power washer to clean natural stone.

If Grouting:

Joints should be raked or smeared during this process, use a grout bag to fill in joints. Brush joints to remove loose mortar.

Back wall Surface Specifications

Back wall Surface	Examples
<ul style="list-style-type: none">• Ridged Back wall	<ul style="list-style-type: none">• Wallboard-Plywood-Concrete Board-Paneling-Wall Sheathing
<ul style="list-style-type: none">• Clean & Untreated	<ul style="list-style-type: none">• Concrete -Masonry-Stucco
<ul style="list-style-type: none">• Dirty, Painted, or Sealed	<ul style="list-style-type: none">• Concrete-Masonry-Stucco
<ul style="list-style-type: none">• Metal Buildings	<ul style="list-style-type: none">• N/A

Marmiro Stones® Natural Stone Pool Coping (MSNSPC) Installation Guideline

Installation

- Set the wood from $\frac{1}{4}$ " to a $\frac{1}{2}$ " above the bond beam.
- Apply bonding agent to MSNSPC and allow the bonding agent to set.
- Then apply bonding agent to the top of the bond beam.
- Mortar must then be applied to the top of the bond beam towards your desirable height.
- Set your "String Line" to a desirable length of overhang.
- Mortar joints should not be more than $\frac{3}{8}$ " thick.
- Wipe off with a sponge the excess mortar at the top of the MSNSPC.

Marmiro Stones® Natural Stone Wall Blocks (MSNSWB) Installation Guideline

Excavation

- All utility lines should be clearly marked before starting excavation.
- Follow OSHA recommendations for excavating and bench cutting of slopes.
- Dig out a trench in accordance with the total height of wall or requirements stated for local building codes.
- Minimum depth should be 6" for leveling pad and 1 buried course (embedded depth) of wall stone being used or 10% of the total height of wall, whichever is greater. Never less than 6" buried.
- The width of the trench should never be less than 6" in front of the wall stone and 12" behind the wall stone plus the width of the wall stone.
- Compact and level the excavated trench.

Foundation/Leveling Pad

- Wrap the excavated trench with a geotextiles extending to back of wall then vertical behind the drainage zone ending at the finished height of wall cap.
- Approved level pad material; ASTM #57 washed stone, ASTM C2940 $\frac{3}{4}$ " minus or unenforced concrete.
- Spread the trench with approved leveling pad material. Then compact using a vibratory plate compactor until desired leveling and height. No compaction needed if using unenforced concrete for leveling pad. The leveling pad should be no less than 6" in height.
- A thin layer of $\frac{1}{8}$ " washed stone may be used for ease of leaving first course of wall stone block.

Setting and Leveling First Course

- Place wall stone on leveling pad at the predetermined height as the buried course.
- Set wall stone 6" from front of leveling pad and no less than 12" from back of leveling pad. Level each wall stone front to back, side to side and block to block.
- Set each adjacent unit tight to each other. If there are any voids between wall stones fill with ASTM #57 washed stone.
- Place 4" perforated drain pipe behind first coarse or other specified location based on site conditions, leveling pad type, water sources and embedment depth.

Backfilling

- Placed washed ASTM #57 stone behind and up to the height of the wall stone unit. This is known as drainage zone.
- Place and compact infill soil behind drainage zone to 95% of standard proctor density.
- Use small compaction equipment within 3" directly behind the wall. Compaction lifts should not exceed 6".

Installing Subsequent Courses

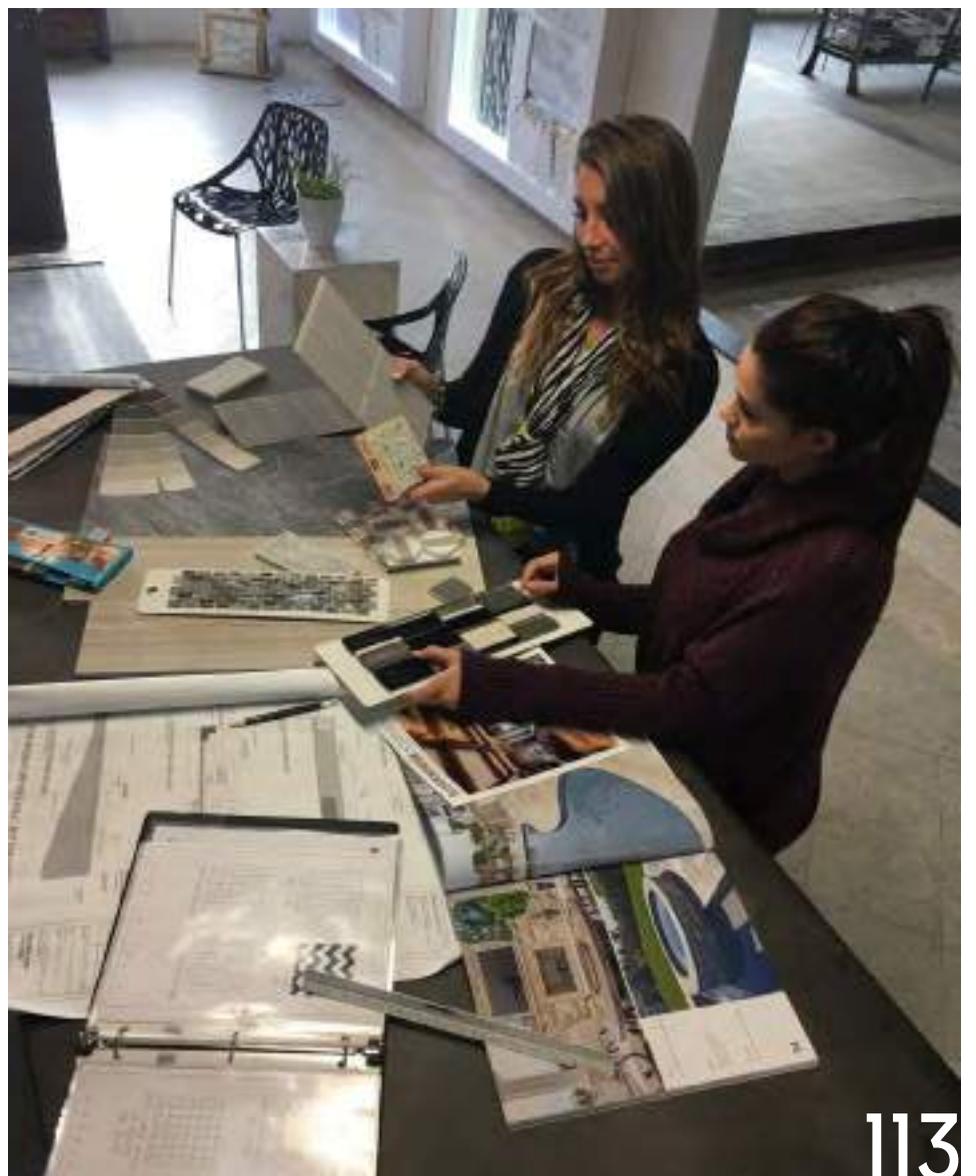
- Continually check for alignment of the wall.
- Clean top of wall stone any debris before setting next course.
- Place and compact ASTM #57 stone behind and up to each subsequent course until desired height is met never exceeding 6" lifts.
- Be sure to offset subsequent courses to avoid vertical seams from course to course.



COMPLIMENTARY SERVICES

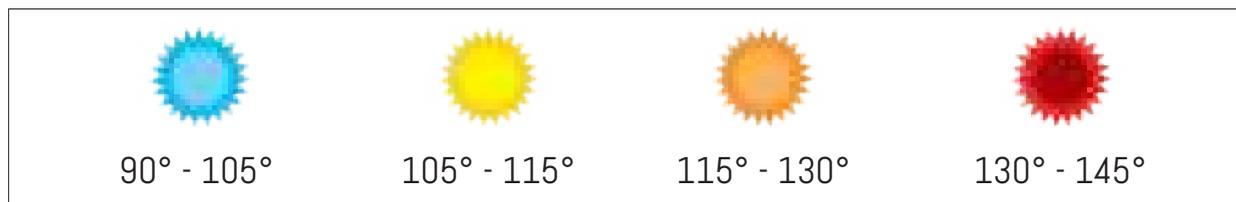
- DESIGN CONSULTATIONS
- DISTRIBUTOR DISPLAYS
- CUSTOM FABRICATION
- MOBILE SHOWROOMS
- EVENT SUPPORT
- CONTINUING EDUCATION





HEAT TESTING

Testing took place at our Carlstadt, New Jersey location. On July 13, 2016 the temperature was 86° and on July 20, 2016 the temperature was 88°. Our products were tested in direct sunlight for duration of the day. This chart gives a range of temperatures for each product and finish.



Disclaimer: Applicable to Marmiro Stones® Products,

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Color Disclaimer

Not all printers and colors are created equal. Photos shown in this catalog are to be taken as a representation of color and texture for our products. Marmiro Stones® cannot guarantee exact color matching due to lighting of photographs and printing processes. Natural stones are products of nature which have unique characteristics and inclusions that are impossible to replicate in a single image. Due to the nature of our quarries, we may discontinue or change any product, shape, size, or color without notification. Actual product colors will vary, before purchasing of any product we recommend requesting a sample set to show range of variations in color and natural pattern.

Compressive Strength - ASTM - C170

Product	Antiqued Finish	Sandblasted Finish
Crema Eda®	13,453 psi	12,808 psi
Crema Eda® Rosa	12,675 psi	13,434 psi
Afyon Cloud®	10,968 psi	10,208 psi
Deep Blue®	12,082 psi	11,929 psi
Azura®	19,718 psi	14,683 psi
Orcca®	14,081 psi	18,682 psi
Terra Travertine	8,645 psi	N/A
Grano® Travertine	7,891 psi	7,945 psi

Flexural Strength - ASTM - C880

Product	Antiqued Finish	Sandblasted Finish
Crema Eda®	N/A	1,284 psi
Crema Eda® Rosa	N/A	1,466 psi
Afyon Cloud®	N/A	1,308 psi
Deep Blue®	N/A	1,878 psi
Azura®	N/A	1,472 psi
Orcca®	N/A	1,505psi
Terra Travertine	1,878 psi	N/A
Grano® Travertine	1,587psi	N/A

Co-Efficient of Friction - ASTM - C1028

Product	Antiqued Finish Dry	Antiqued Finish Wet
Crema Eda®	0.74	0.87
Crema Eda® Rosa	0.74	0.87
Afyon Cloud®	0.74	0.83
Deep Blue®	0.77	0.87
Azura®	0.78	0.85
Orcca®	0.79	0.89
Terra Travertine	0.70	0.89
Grano® Travertine	0.76	0.92

Co-Efficient of Friction - ASTM - C1028

Product	Sandblast Finish Dry	Sandblasted Finish Wet
Crema Eda®	0.91	0.87
Crema Eda® Rosa	0.89	0.87
Afyon Cloud®	0.97	0.83
Deep Blue®	0.99	0.87
Azura®	0.98	0.85
Orcca®	0.99	0.89
Terra Travertine	N/A	0.89
Grano® Travertine	1.00	0.92

Freeze and Thaw - ASTM - C666

Product	Result	Notes
Crema Eda [®]	Pass	No cracks or deformation noted.
Crema Eda [®] Rosa	Pass	No cracks or deformation noted.
Afyon Cloud [®]	Pass	No cracks or deformation noted.
Deep Blue [®]	Pass	No cracks or deformation noted.
Azura [®]	Pass	No cracks or deformation noted.
Orcca [®]	Pass	No cracks or deformation noted.
Terra Travertine	Pass	No cracks or deformation noted.
Grano [®] Travertine	Pass	No cracks or deformation noted.

Water Absorption - ASTM - C97

Product	Antiqued Finish Water Absorption %	Sandblasted Finish Water Absorption%
Crema Eda [®]	0.17	0.19
Crema Eda [®] Rosa	0.17	0.16
Afyon Cloud [®]	0.17	0.16
Deep Blue [®]	0.17	0.18
Azura [®]	0.20	0.19
Orcca [®]	0.42	0.77
Terra Travertine	1.98	N/A
Grano [®] Travertine	2.12	2.24

Density - ASTM - C97

Product	Antiqued Finish Density	Sandblasted Finish Density
Crema Eda [®]	168.5 lbs/ft ³	167.4 lbs/ft ³
Crema Eda [®] Rosa	168.3 lbs/ft ³	169.3 lbs/ft ³
Afyon Cloud [®]	162.4 lbs/ft ³	164.2 lbs/ft ³
Deep Blue [®]	163.8 lbs/ft ³	167.4 lbs/ft ³
Azura [®]	175.5 lbs/ft ³	177.0 lbs/ft ³
Orcca [®]	175.9 lbs/ft ³	175.3 lbs/ft ³
Terra Travertine	153.1 lbs/ft ³	N/A
Grano [®] Travertine	154.7 lbs/ft ³	152.0 lbs/ft ³

* For results on Grano[®] Silver please refer to Grano[®]. Product is quarried from same location.

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