Xanadu by the Sea Property Owners Association

What we Know So Far

Treasurer Work Product

Memorandum

To: Board of Directors
From: Mary Lauritano - Treasurer
Date: 9/6/2013
Re: Project #2: What we know so far .....PRELIMINARY ESTIMATES.
formal RFP to come

Square footage Project #2: 35,492 vehicle area plus 1755 sq ft for center islands **plus 5-10% waste factor depending on who you talk to.** **39,000 sf**	**Repair & Paint**	**Replace with Stamped Concrete**	**Replace with Concrete Pavers**	**Replace with Clay Pavers**
Useful life	6 months to year for paint. concrete repair last 25-40 years	25-35+ years	possibly a permanent solution; cul –de-sac replacement could be eliminated as a reserve item. However concrete pavers may loose color over extended periods and need to be replaced	permanent solution; cul- de-sac replacement would be eliminated as a reserve item
Ongoing maintenance	repairs are ongoing and will result in "patched concrete" look at cul de sacs (see 500 cul de sac) We have been advised that repairs are temporary fixes		weeding; installation critical to minimize weeds annual or bi-annual sealing may be desired to protect against staining at estimated cost of $1-2 SF.	weeding; installation critical to minimize weeds no sealing required one contractor recommended clay brick pavers vs. Chicago brick pavers as they could be installed with less room for weeds to grow through
Preliminary Costs: **Includes: material/removal of existing stamped concrete, 4 inch rock base material compaction and dump fees .Must also include waste factor 5-10% depending on who**	North Branch: Cost from proposal submitted April 2012 to repair 80 SF in 300 cul de sac. Includes demolition, flat work, re-coating with Xylene: $4,140 plus permitting; $51.75 SF	3 proposals were received by Board in late 2010 (prior to my Board appointment) for 7 cul de sacs as 100 was replaced. Square footage quoted was 32,432. No change to islands. estimates are 3 years old	So far.....Lowest non-binding estimate is $4.85 SF for entire project or $5.50 SF if one by one.	So far.....Lowest bid is now $7.50 **including** 10% waste factor $266k; $7.49 SF. Estimate received 9/2013. If cul de sacs to be done one at a time cost increases to $8 SF plus permitting.

you talk to		Ademy: $186k includes labor, material, removal, permits, seal, 4 inch concrete. Proposal dated Nov 2010 = $5.74 SF RT Site development: $171,740k done as one phase or $181,350 done in 7 phases. proposal Jan 2011 = $5.30SF to $5.60 SF M&M asphalt (who performed recent road paving that upset many owners): $99,490 proposal. = $3.07 SF If done individually an extra $2500 mobilization fee per time. Why is this proposal ½ cost of the other two? This proposal was received January 2011. from reserve study: future stamped concrete replacement to be $396k at end of useful life of this alternative in 25-25 years	Paver Cost Only: so far lowest cost per concrete paver $1.80	Paver Cost Only: so far lowest cost per concrete paver $2.45; or approximately $24k additional cost to project if clay chosen over concrete pavers.
Additional Costs: **Engineer if required** **Permitting** **Legal fees if loan used**	only have 1 estimate to date at $2k-$5k per cul de sac depending on need of cul de sac. permitting estimated at $9300 if done all at once. extra permit fees required if project done one by one.			
PROS		smooth surface 100 cul de sac done	colorfast material but may fade over time 30-40 years smooth surface minimal maintenance	permanent solution. eliminates future cost of replacement of approximately $396k in 25-35 years colorfast material. does not require periodic sealing minimal maintenance beyond

			beyond weeding permeability to assist drainage	weeding less waste factor (5%) than with concrete pavers (10%) smooth surface if use clay brick in lieu of Chicago brick No sealing required; colorfast forever Permeability to assist drainage. Boral brick pavers are permeable. SRI: 4 color combinations of Boral bri surpass the LEED Solar Reflective Inde threshold of 29. Where paved surface are required, using materials with a hi SRI will reduce the heat island effect, consequently reducing the demand fo conditioning, improving air and storm water runoff quality, and providing mo comfort to people interacting with the space.
CONS	Temporary and "patched look"	replacement needed in 25-35 years; which is situation today with stamped concrete cul de sacs in Xanadu fading cracking lack of permeability to assist drainage	Weeding. Weed barrier or annual treatment of weeds recommended. most likely not a permanent solution due to fading of concrete pavers over time may require periodic sealing. estimated cost $1-2 sf. This gets expensive Originally thought this solution would be more expensive than stamped concrete but have determined it is possible to find reputable vendor at cost less than stamped concrete.	Weeding. Weed barrier or annual treatment of weeds recommended. clay pavers more expensive than concrete.(estimate that clay adds $23k in material; $1.85 vs. $2.45). however does not need sealing at $1-2 SF ongoing or $35-70k

From internet search: Lots of helpful information on the PROS and CONS of concrete vs. clay pavers Looking for unbiased opinions.. A few opinions and tips

#1: *How to Choose Between Brick and Concrete Pavers*

By: Julie Day
http://pinterest.com/pin/create/button/?url=http%3A%2F%2Fwww.todayshomeowner.com%2Fhow-to-choose-between-brick-and-concrete-pavers%2F&media=http%3A%2F%2Fwww.todayshomeowner.com%2Fwp-content%2Fuploads%2F2011%2F03%2Fbrick-vs-concrete-pavers-1.jpg&guid=E79iRT8GuWfq&description=

A paver walkway adds curb appeal to your home.

What's the difference between brick and concrete paving stones? We want to build a walkway and are trying to decide between the different kinds of paver materials. *-Anita*

The term "paver" refers to thin, flat stones designed for use in paving projects such as walkways, patios, and driveways. Both brick and concrete pavers are installed the same way, and both offer years of use and durability.

The choice between brick and concrete pavers largely depends on your personal taste. However, here are some tips to help you make your decision:

Brick pavers have a classic, timeless look.

Brick Pavers

Bricks are made from clay that's formed into shape and cured by baking in a kiln (like pottery). However, be careful when shopping for pavers, since the word "brick" is sometimes used to describe the shape of the stone – rather than the material – so you might see "concrete bricks" that aren't technically bricks at all.

Advantages of Clay Brick Pavers:

- **Color Retention:** Bricks are naturally colored by mixing in various types of clays, so they retain color better than concrete, particularly when exposed to UV rays.

Bricks are made from natural clay.

- **Last Longer:** Bricks may chip or crack over time, but they last for generations. Bricks tend to break in response to stress (such as ice, traffic or moisture) while the surface on concrete pavers can erode and fade over time.
- **Less Maintenance:** Clay bricks resist staining and require less maintenance and cleaning than concrete pavers.
- **Timeless Style:** Bricks have a distinct edge in looks and style. An aged, worn brick walkway retains its charm while cracked or chipped concrete merely looks worn out.
- **Eco-Friendly:** In addition to being made from all natural materials, bricks are frequently salvaged, cleaned, and reused, making them a more sustainable choice.

Disadvantages of Brick Pavers:

- **Higher Cost:** Brick can be up to 15% to 20% more expensive than concrete.

Bricks are more expensive.

- **Limited Choices:** Because they're colored with natural clays, bricks have more limited color choices. They're generally rectangular in shape and only come in a few sizes.
- **Size Variance:** Due to the variables of kiln firing, bricks vary slightly in their dimensions, making them a little trickier to install.
- **Increased Labor:** Bricks are harder to cut and may cost more for labor to install.
- **More Breakable:** While all pavers are durable, bricks are more likely to crack under heavy vehicle traffic. They're also more likely to chip or shear, but the solid coloring makes small blemishes less noticeable than on concrete pavers.

Concrete pavers offer more choices than brick.

Concrete Pavers

Concrete pavers are made from cement and aggregate that is poured into forms, compressed, and air cured. Concrete can be formed into all sorts of shapes and sizes and pigmented in a wide range of colors.

Advantages of Concrete Pavers:

Concrete pavers can mimic stone.

- **Less Expensive:** Concrete pavers are less expensive than brick, due to the lower cost of raw materials.
- **More Choice:** Concrete offers far more design and color options than brick. If you can imagine it, you can make it happen with concrete pavers.
- **Innovation:** New and better concrete pavers are being designed all the time, so you might even find choices that correct the known downsides of concrete.
- **Easier to Install:** Concrete pavers are precisely uniform and easier to cut, so they're a popular choice for DIY projects.

Disadvantages of Concrete Pavers:

- **Color Can Fade:** Since they're dyed with color pigments rather than natural clay, concrete pavers can fade over time, especially in sunny areas.

Worn concrete showing aggregate.

- **May Need Sealing:** Optional sealants can help prolong the color in concrete pavers but add to maintenance.
- **Surface Erosion:** While brick tends to wear by chipping or cracking, concrete wears more gradually, eroding away the smooth finish and exposing more of the aggregate underneath. Over time, the surface of concrete pavers might look worn while brick stays retain their surface.
- **Varying Quality:** Concrete varies widely in strength and durability depending on the manufacturer's recipe, and sometimes it's hard to know what kind of quality you're getting. I've seen gorgeous concrete pavers that looked like natural stone, and I've also worked with cheap ones that crumbled and cracked before I even got started.
- **Shorter Life Span:** While initially holding up better to traffic than brick, concrete pavers have a shorter lifespan (a couple of decades vs. generations).

Julie

Further Information

2. Clay Pavers or Concrete Pavers – Unbias Answers

Clay vs Concrete has been a difficult question for many Jacksonville homeowners and property managers for years. It can be difficult sorting through all the myths and misconceptions out there, particularly since there may be some loyalty or preference for the person or company you are working with in one or the other.

The truth is, there are valid advantages, limitations, and weaknesses on both sides of the coin.

In each case, installation skill and technique is a very important factor no matter what pavers you choose for your patio, walk, courtyard, or driveway. Choosing a skilled paver contractor who knows how to handle and install the pavers is crucial. When installed properly, either option will provide many decades of service.

The manufacturing process of concrete pavers will accommodate a much greater variation of colors, sizes and shapes than clay. By comparison, just in Jacksonville - concrete pavers can be made in more than 45 different colors and 25 different shape combinations. This flexibility creates an almost endless array of design options. With clay, more choices of color and shapes are slowly becoming available, however presently; you have the traditional 4 x 8 paver, and 2 piece cobble available in a dozen or so colors.

The strength and life cycle of the two pavers are still up to some debate. Both materials have the compressive strength and moisture absorption ratings to withstand 30 plus years of service under normal circumstances. Clay pavers are much more prone to chipping and cracking with a heavy loading such as a driveway application. You will almost never see a clay paver project that has been in place for some time that does not have corners missing and a slight "rough" feel to it. Concrete pavers will erode slightly over time, similar to poured concrete - if you have rain running off a roof or a drain pipe, a fraction of an inch of concrete will wear off the surface after many years, exposing some of the aggregate. Neither of these issues is considered to be serious problem or defect.

Color longevity, or colorfastness is another important factor in your choice of pavers. To correct a common myth about concrete pavers; every concrete paver manufacturer in Jacksonville uses a color through process with pigment mixed all the way through. So the argument of 'color all the way through' and wearing off the surface doesn't apply. However, a viable point is the Ultra Violet resistant properties of pavers. The nature of a clay paver will resist fading longer than an untreated (un sealed) concrete paver. Some overall fading will occur in both concrete and clay pavers. The cost factor of sealing should be factored into the overall life cycle cost of concrete pavers.

Have you ever seen a driveway that was 30 or more years old? Did you notice how you could see a lot of the aggregate (stone) peeking out from the concrete? When concrete is poured, it has aggregate stone spread homogenously throughout the

mix. As that mix is worked into the forms and flattened, a 'cream' comes to the surface, hiding that aggregate. Little by little, over a period of years, traffic on the pavement wears tiny particles of that top layer, exposing the aggregate underneath. This is what happens slowly over time with concrete pavers, too. That cream and pigment are slowly worn off the surface of the paver, exposing a sometimes white colored aggregate, giving the appearance of 'fading'. Some manufacturers make their pavers with a darker aggregate so this is less noticeable. While this isn't really fading, it is changing the appearance of the paver. This process can be slowed with the application of an acrylic sealer. Many of these sealers also help protect concrete pavers against UV breakdown of pigment, though this is much less of an issue compared to simple wear and tear.

Many clay paver makers sell pavers that do, in fact, have color throughout. And most of the time it's the same color as the one you see on the top of the paver. There are also times when the center is gray, while the rest is brown. And often in sand-molded clay pavers, the pigment is only in the top 1/8" of the paver. You can see the top color of these two pavers is very different, but the inside is virtually the same. So when choosing this type of paver we like to make sure the client will like it now, and later when the pigment begins to wear off.

Another topic is the texture options of pavers. Concrete pavers have surpassed clay in creating a palette of different paver textures such as tumbled, textured and antiqued. Until recently, you only had one choice with new clay pavers: smooth. Clay pavers are now offered with tumbled and textured edges and the new sand-molded clay pavers that look as though they were installed 100 years ago.

In general clay pavers are more expensive than concrete. While this difference can sometimes be substantial, in Jacksonville average paver choice affects the price of a project by 15% to 20%

Opinion #3: NATURAL CLAY BRICK PAVERS VS CONCRETE PAVERS

Considering the right paver to use for your hardscape project can be a difficult decision. That is why being an informed consumer can help in making that decision. A lot of factors come into play when making the decision as to what paver to use. How long will I be in my home? How much maintenance will I have to do to keep my pavers looking good? Will I have to seal my pavers often? Will my pavers fade? These are all questions that a homeowner wants to ask when making a large purchase of installing pavers. With clay pavers being color fast and, being kiln fired for permanence, they don't require sealers. This can make the "appearance" of an inexpensive concrete paver job become more costly over time than installing clay pavers from the start, not to mention the hassle and inconvenience of adding sealers year after year.

Opinion #4: There are two primary types of brick pavers: clay brick and concrete brick. Decades ago, the rage was to install colored concrete brick pavers that required no mortar. They interlocked with one another and, if made correctly, could withstand all that Mother Nature could dish out.

This paving product is maturing, and the designs, colors and shapes of concrete brick continue to expand. One advantage of this material is that you can have a new sidewalk installed and completed in hours, not days. That might be a major consideration for you.

But understand that the color of concrete paving brick will change and fade over time. The color is achieved by adding pigments to the concrete mix. These pigments become part of the cement paste that coats the sand and gravel in the brick. But over time, this ultra-thin cement paste on the top surface of the brick wears off, exposing the true color of the sand and gravel. You may not like that faded color in five or 10 years.

Climate is a big factor with brick sidewalks. Brick pavers in, say, South Florida and other warm areas that never see freezing temperatures will survive longer than they will in a colder climate. If you use concrete brick, consider applying a brick paver sealer every few years to minimize water penetration into the brick.

Opinion #5: While putting together an estimate for a clay paver sidewalk today I came to a startling realization. **Clay pavers are just as durable and similarly priced to concrete pavers.**

I have gone to seminars by many paver manufacturers and I bought the hype, concrete is the only way to go because of the high psi, color variations, ease of install. It turns out that there are a ton of color and texture options in clay brick, with the only limitation being they are all rectangular. The installation methods are exactly the same as with pavers.

Clay pavers they are coming in around the same price as a tumbled paver. I have been assured that you can run a compactor over clay pavers without cracking them. You should put a pad on the bottom of your plate. I will concede that Concrete pavers offer more uniform dimensions.

Why have concrete pavers taken over the market? I admit that the range of colors and textures is appealing. However, clay pavers don't seem to be as difficult to install as the paver companies make them out to be. I like the look and variation of the clay pavers.

Boral Pavers Solar Reflectance Index

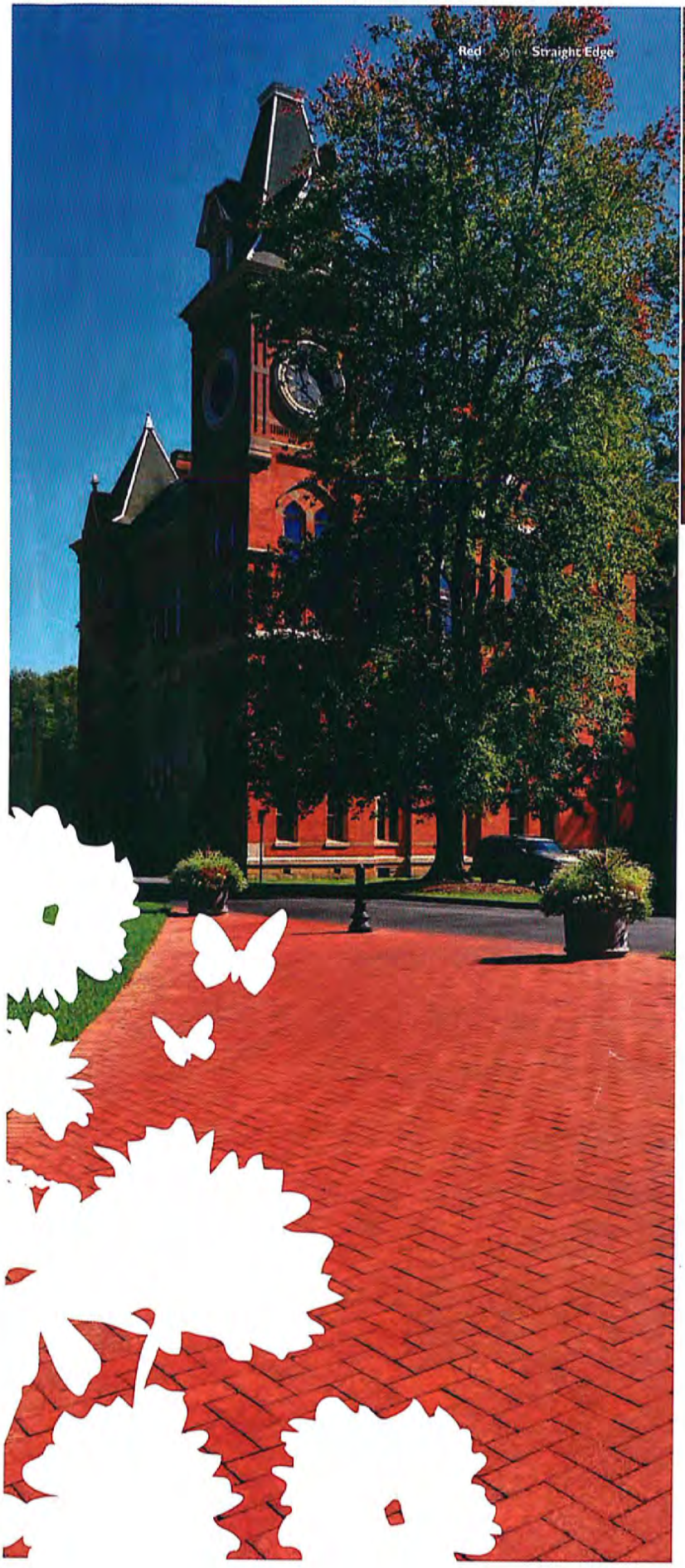
ASTM SPECIFICATIONS

As urban areas develop, buildings, pavements, and other infrastructure replace open land and vegetation. Surfaces that were once permeable and moist become impermeable and dry. These changes cause urban regions to become warmer than their rural surroundings, forming and "island" of higher temperatures in the landscape. In order to power the collective heat island effect, a measurement of the heat contribution of each surface must be attainable. The solar reflectance index is a value that incorporates both solar reflectance and emittance in a single value to represent a material's temperature in the sun. It is calculated using equations based on previously measured values as laid out in ASTM standard E1980. Clay segmental pavements can earn a LEED point under Credit 7.1 - Sustainable Sites "Heat Island Effect, Non-Roof". The requirements can be met if materials that stay relatively cooler in sunlight are used on at least half of the site's non-roof impervious surfaces such as roads, sidewalks, courtyards, and parking lots. The material's solar reflectance index must be at least 29 on a scale from black (0) to white (100). Where paved surfaces are required, using materials with a higher SRI will reduce the heat island effect, consequently reducing the demand for air conditioning, improving air and storm water runoff quality, and providing more comfort to people interacting with the space.

Of Boral's nine standard colors, Parquet Tan, Peachtree Avenue, Red and Burgundy surpass the LEED SRI threshold of 29. Following is a list of all Boral paver colors with their respective SRI range:

- Bourbon Street (15-20 SRI)
- Parquet Tan (45-50 SRI)
- Peachtree Avenue (40-45 SRI)
- Red (35-40 SRI)
- Santee Gray (25-30 SRI)
- Burgundy (30-35 SRI)
- Heartland Flashed (20-25 SRI)
- Savannah Brown (25-30 SRI)
- Cape Town (15-20 SRI)

Actual test reports are available upon request.



WE MAKE BEING SUSTAINABLE EASIER THAN IT LOOKS.

Boral® Pavers are solid proof that sometimes being sustainable can come easy. As natural as the earth itself, our pavers are made from 100% genuine clay, so their color will never fade. The wide variety of choices and styles make it easy to create the perfect effect in virtually any landscape design. If preserving natural water drainage is a concern, we also offer permeable pavers in both traditional and unique styles. Choose from 27 beautiful products in colors ranging from earthy browns and burgundies to subtle tans and grays. You can specify beveled or straight edges or select from our line of Antique Pavers® to complement any style. Boral Pavers are made using highly sustainable manufacturing processes so what's good for your designs is also good for the environment.

BRICK

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PAVERS

BORAL® THIN BRICK

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BORAL® Pavers

All natural clay pavers with
color that never, ever fades.

BORAL®

Build Green
Build With Boral®

Santee Gray
Peachtree Avenue
Parquet Tan
style – Antique

FRESH IDEAS UNDERFOOT. BEAUTIFUL INSPIRATION ALL AROUND.

Boral® Pavers go anywhere your imagination takes you.

With so many colors and styles to choose from, you have the freedom to define your outdoor spaces and create new features in ways all your own. And because Boral® Pavers are all natural, their beauty will never, ever fade.

DESIGN TIP > 01

As you think about your design, remember that natural clay pavers are as beautiful indoors as out. This lets you create wonderful interior spaces using colors and textures that flow through entryways out into sunrooms, patios, and paved garden areas. You can unify your design by reflecting these themes throughout your landscape, with walkways that encircle your pool, form patios, and lead to fountains or other features.

Savannah Brown
style – **Antique**

Natural charm that stands the test of time.

When you take the time to plan a garden walk, patio, or stately drive, choose products that are low maintenance and will be as beautiful 100 years from now as they are today. Although concrete pavers may lose some of their original color, Boral® natural clay pavers never fade. At Boral®, we put our Transferable Residential Limited Warranty behind every paver. You're protected as long as you own your home. And the Boral® limited warranty also enhances the resale value because you can pass the warranty along to the next owner.

DESIGN TIP > 02

Pavers are the secret to creating multiple areas of interest in your garden. Separate your spaces using pathways, patios, and borders. Let your walkways turn corners and lead to pleasant surprises. Create patios at different heights. Accent entryway steps with pavers. Lay borders using pavers of similar or different colors from walkways. You can even create an "outdoor room". Simply start with an attractive base of Boral® Pavers, and add weather-resistant furniture, a fireplace, and perhaps a low wall or arbor.

Heartland Flashed
style – **Antique**

Red
style – **Antique**

Peachtree Avenue
style – **Antique**

Peachtree Avenue
Heartland Flashed
style – **Antique**

top and bottom right
Parquet Tan
Savannah Brown
style – **Antique**

Endless ways to express your style.

You start with 25 beautiful products. You can mix and match pavers, create unique patterns, and follow the curves and contours of your individual landscape. Choosing from straight or beveled edge pavers, you can express your style in virtually any type of outdoor landscape – from cozy cottage gardens to urbane poolside patios. If understated elegance is more your style, nothing compares to the classic look and feel of our Antique Pavers®.

DESIGN TIP > 03

When choosing your pavers, use color to your advantage. Lighter colors will give an open, airy feel to smaller or darker spaces. If you have wide open areas, then warmer, darker colored pavers will define the space and create more intimacy. Whichever pavers and patterns you choose, you'll be making your life easier. Why? Because instead of having to deal with constant lawn care, you're creating beautiful, inviting spaces that are virtually maintenance free.

parquet tan

Boral® Pavers — the sustainable choice.

Clay pavers are durable, beautiful and timeless – a perfect choice for your home. A truly sustainable material, pavers endure time and the elements. As natural as the earth itself, they are made from 100% genuine clay using highly sustainable manufacturing processes. So, what's good for your landscape is also good for the environment.

Boral Bricks is committed to sustainable manufacturing. We are proud to lead the industry in the development of alternative fuels, waste reduction, equipment maintenance, and upgrades to meet EPA standards. For more information on Boral Bricks' sustainable products, visit boralbricks.com.

DESIGN TIP > 04

To make a truly grand entrance, nothing matches the curb appeal of Boral solid clay pavers. Laying pavers in a 45° herringbone pattern not only creates stunning driveways, but provides the extra structural strength that a driveway needs. For other paved areas, these rectangular pavers let you create a myriad of different patterns and effects. Consider basketweaves. Pinwheels. Running bonds. More. With Boral® Pavers, the possibilities are limitless.

PAV

Peachtree Avenue
Parquet Tan
style – **Antique**

Bourbon Street
style – **Antique**

Heartland Flashed
style – **Antique**

Boral® Pavers Specifications

Finishes and Styles.

Boral® Pavers come in three unique styles: straight edge pavers, beveled edge pavers, and Antique Pavers®. Straight edge pavers create a very classy look that's equally appropriate for traditional and contemporary styles. Beveled edge pavers add distinctive character and highlight the patterns that are formed in your paved space. Our lovely Antique Pavers® provide the perfect accent to a traditional garden or outdoor walkway, creating a unique sense of old world charm and grace.

Antique

Beveled Edge

Straight Edge

Ideas in Color.

With 25 beautiful products to choose from, you can explore all kinds of different outdoor accents and possibilities. From the rich, deep burgundies and earthy browns to our fresh beiges and cool grays, we offer a broad palette of color options that make it easy to match your personal style. Because Boral® Pavers are all clay pavers, you have the added assurance that their strong, true colors will never fade or change, season after season and year after year.

Parquet Tan

Peachtree Avenue

Santee Gray
(Available in Antique only.)

Bourbon Street

Heartland Flashed

Red

Burgundy

Savannah Brown

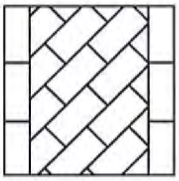
Cape Town

*All paver swatch color options shown on this page are Straight Edge except Santee Gray.

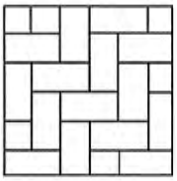
Unlimited Patterns and Possibilities.

Boral® Pavers are an excellent way to define any outdoor feature, such as a pathway or patio, while also adding more character and charm to the overall landscape. Boral® Pavers can be laid in an almost endless variety of patterns and combinations. This lets you create a truly unique look for your property. Here are a few examples to help you get started.

45° Herringbone

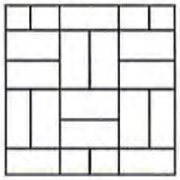


45° Stretcher Bond with flat header course

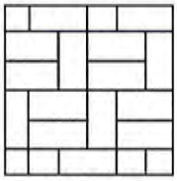


90° Herringbone

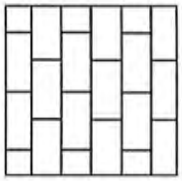
Boxed Basketweave



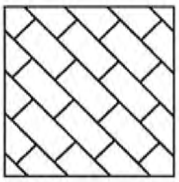
Double Basketweave



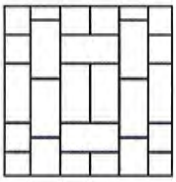
Single Basketweave



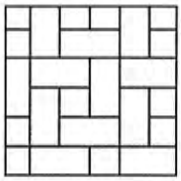
Running Bond



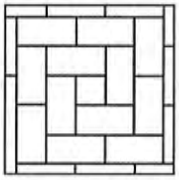
45° Running Bond



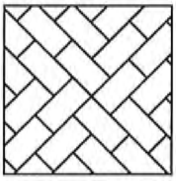
Running Bond Basketweave



Pinwheel



Multiple Pinwheel



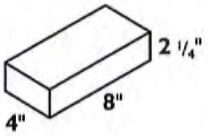
Multiple Whirling Bond

Sizes.

Boral® Pavers are available in the following sizes:

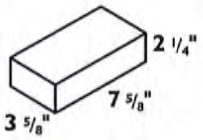
Standard

With straight edge, beveled edge, or Antique Pavers®.



Modular

With straight edge for mortared applications.



Transferable Residential Limited Warranty for Boral® Pavers.

Our pavers are designed to stand the test of time. When you build with Boral® Pavers, you get more than just beautiful pavers – you get a Transferable Residential Limited Warranty that covers you for life, and covers the next resident for life too. Beauty, strength, durability, and low maintenance. These are qualities every homeowner wants. And only Boral Bricks guarantees. It's all part of our uncompromising commitment to outstanding quality in both our products and our service. When you build with Boral®, you build a heritage that will endure for generations.

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For more ideas and information, simply give us a call or visit us online today.

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