

At Work

MAGAZINE

MATT'S
200 S. State St.

BEES TO HONEY

See how Tupelo Honey is revitalizing both an old train station and a small downtown.

LUXURY BUILDING ON A BUDGET

DC developer pulls off beautiful apartments under budget with General Shale products.

SUSTAINABLE PRACTICES

How Arriscraft has become an industry leader in the Wild West of green building.

SETTING THE STANDARD

A product offering that sets the bar high for the rest of the masonry industry.



Welcome to AT WORK MAGAZINE

You may have noticed that our annual publication has a new name! As General Shale evolves and grows, so has our magazine. This year, we have divided it into two halves—"At Home" and "At Work"—to better meet the needs of all of our customers and partners in the residential and commercial spheres.

In this issue of At Work, we highlight several commercial projects such as a collection of luxury townhomes near Washington, D.C., as well as a popular eatery in Johnson City, Tennessee, where our main office is located.

We also feature a report on Arriscraft and its sustainable practices that are making the company a leader in environmentally friendly building materials.

This is starting out to be an exciting year for General Shale! We are expanding our commercial offerings, and builders are taking note.

It is our hope that you will enjoy reading this year's At Work magazine and will find inspiration for your next commercial project!

Dawn

Dawn Duncan Henning
Editor, At Work Magazine



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SETTING THE STANDARD

General Shale offers all of the high-quality products commercial builders need—from architectural brick to Arriscraft Building Stone to Thin Veneers and even Outdoor Living products.



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Arriscraft has been working since the 1950s to hone its environmentally friendly practices. Find out how this company has become a leader through recycling, reduced energy usage, improved air quality and more.

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SETTING THE STANDARD

General Shale builds solid foundation in commercial brick market

For more than 85 years, General Shale has served as the premier supplier of building products for a variety of commercial, institutional and specialty architectural projects. We offer a comprehensive product line that includes architectural brick, building stone, thin veneers, landscaping, concrete block, outdoor living products and other building materials. With our massive selection of colors, styles, sizes and textures, your design options are only as limited as your creativity.

Strong, durable and maintenance-free, General Shale products are the ideal choice for multi-unit family buildings, hotels, hospitals, educational institutions and other commercial structures, backed with technical assistance and data that make specifying the right project fast and easy.

ARCHITECTURAL BRICK

With its unmistakable aesthetic qualities and strong sense of permanence, brick offers architects and builders an impressive list of practical advantages over other exterior materials.

Our brick options range from traditional reds and earth tones to pastel pinks, misty grays, browns and deep burgundies. In addition, we provide smooth to heavily textured bricks that can help you create any look you desire.

General Shale provides the commercial building industry with the broadest portfolio and most unique choices available for architectural





featured product:
BRICK: Coliseum

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and commercial applications. The Cleveland County Plant (CCP) line supplies unique brick selections to complement any commercial design. The products are manufactured from clay and shale native to North Carolina—creating exclusive colors and textures and even custom shapes that architects, contractors and designers expect for their commercial applications.

ARRISCRAFT BUILDING STONE

Just as tough as natural stone, Arriscraft building products stand up to the elements and the test of time with no cracking or fading. All natural and offering the extraordinary qualities of quarried stone, Arriscraft stone brings earthy, natural aesthetics to commercial applications. We offer a compelling selection of commercial stone products, from Renaissance® and Building Stone, to cutting-edge Thin-Clad products.

THIN BRICK AND THIN ROCK

Enhance the aesthetic appeal of any commercial space with unique designs using General Shale Thin Brick and Thin Rock—providing ideal design solutions for commercial interiors and exteriors. Our Thin Brick is made from real clay brick and our Thin Rock is real quarried rock. Both are cut thin for easy installation, offering limitless design possibilities while providing unique accents and total freedom of expression when a natural environment is the perfect solution.

OUTDOOR LIVING

More and more commercial spaces are incorporating touches with a homelike feel. Fire pits, fireplaces, water features and outdoor kitchens are just a few of the many products available from General Shale's line of outdoor living products. Our products add charm and comfort to any outdoor environment, allowing the creation of beautiful patios, walkways, terraces, courtyards and other outdoor spaces that are intimate and inviting.

Glen Frankling, Vice President of Sales and Distribution for Arriscraft, says his Architectural sales team of nearly a dozen people has found success emphasizing the uniqueness of all of the products offered by General Shale and by being a solution for architectural needs.

"Typically we start with the architect; they have a lot of influence over what products the project is built with," Frankling explains. "A lot of times they have a look that they are trying to achieve, and we try to service that need with our products."

Protect what is important.



Go big and come home.

Larger than standard-size bricks, General Shale's Endurance RS4™ Bricks are perfect for buildings in areas prone to high winds, tornadoes and earthquakes. These bricks virtually eliminate the need for load-bearing wood or steel sub-framing, living up to the RS4 name: Real Strong, Real Safe, Real Sustainable, Real Smart!

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LITTLE RED SCHOOLHOUSE

A classic look for a new facility

The Charlotte-Mecklenburg school district is in the midst of a building boom for new schools to help alleviate overcrowded and outdated facilities.

In the past few years, the district, which is the 19th largest in the United States and serves more than 1.3 million students, has completed more than 20 infrastructure projects. It is slated to start five more soon and is in the middle of construction of yet another five.

One of those finished schools is Grand Oak Elementary in Huntersville, North Carolina.

The two-story, \$15.3 million facility on Stumptown Road welcomed just over 600 students on its first day in August 2013.

Matthews Construction and ADW Architects worked on the project.

Robert Woodruff, Senior Principal with ADW Architects, says his firm has done

nearly a dozen projects for the district and understands the needs of modern educational facilities. "This school was required to have 39 classrooms, with core space including a technologically advanced media center," says Woodruff. "It is meant to ultimately hold 1,100 students. With that growth in mind, we need these buildings to last 30 years, so brick is the obvious choice for a building material because of its longevity."

Although there is no hard rule that schools need to use red brick, by using locally sourced Red Velour Brick from General Shale, building costs were lowered. Graystone Velour from General Shale was used as a complementary brick.

Several brick providers sent samples in a bid to win the project, but General Shale's product had the look the architect was trying to achieve.

"General Shale's consistency and shape and

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featured products:
BRICK: Red Velour & Graystone Velour

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probably the sharpness of the clay color are what caught our eye,” explains Woodruff. “We looked at using two mortar colors and the client decided to stick with one... so we sought a mortar that complemented both bricks.”

The façade features a banding pattern that runs horizontally at the base through both the red and the gray bricks. With the recesses in the veneer, the gray brick appears to be set behind the red. It adds some appealing visual aesthetics to the building.

“We tend to put heavier materials on the base and then transition as you go up,” says Woodruff. “Also, by keeping a darker color at the base it’s easier to keep the brick near the ground level cleaner during construction.”

A clean, modern look is important for presentation, whether in a public or a private school.

And Woodruff is pleased with the end result.

“I think it presents itself very nicely. The whole picture or composition turned out well,” he says.



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Different brick patterns, in addition to brick color and mortar color, can dramatically change the look of a building.
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LIKE BEES TO HONEY

Diners embrace eatery at old train depot

After years of sitting abandoned, the century-old former Carolina, Clinchfield & Ohio railroad depot in Johnson City, Tennessee, is now the home of popular regional restaurant Tupelo Honey Café.

But it didn't become the popular venue it is without some major repairs and rebuilding of the brick structure, built in 1909.

According to developer Greg Cox of Prudential Greg Cox Real Estate, when he bought the building it was relatively sound, but it needed major repairs to the roof, trestles and at least one wall.

"The depot was built by train engineers, so it had great footers and the understructures were good, but the roof had tons of water damage," says Cox. "The freight section was shot and there was one wall that needed to be replaced."

The transformation of the historic station began with roof repairs, refinishing the existing wood flooring, installing an open cathedral ceiling with exposed beams and outfitting the existing pedestrian platform.

But it was the work on the exterior brick of the building that created the biggest challenge.

“At the end of the train station they had patched and repatched the brick at least seven or eight times over the past 100 years. So there were about half a dozen different size and color bricks and none that are manufactured today.”

Cox turned to General Shale for help.

And although the brick manufacturer couldn't supply the same size brick to match, General Shale sales reps worked to find replacement bricks in the same color. They were the same height but different depth. Those bricks were used to patch walls and doors that were being filled in.

Cox also was able to use reclaimed bricks from another downtown building that had been torn down. But again, the sizes were different than the original brick, and the

crew needed to rebuild an entire wall. Cox says Fred Campbell with Creative Masonry came up with a great idea to mask the use of the unmatched brick.

“The west wall that had to be replaced was of utmost importance because it was actually going to be the entrance to the restaurant,” explains Campbell. “So we decided to take the bricks we could salvage from the original wall and use those to make columns on each end to match the sides of the building. And then in between we put a new wall using the reclaimed bricks. An ordinary person wouldn't know it is different bricks.”

Campbell says that when restoring an old brick building, it's not just matching the brick that is a challenge; mortar is important as well. “We try to get the mortar color just

right. We want an aged look. We use Type O mortar. You don't want a mortar that is stronger than the old brick you are using,” he explains. Even the technique used for the mortar joints needs to be considered when trying to match new with old.

“Now, masons use mostly a concave or a grapevine technique, but if you look at the way it was done a century ago, it's more at an angle. My guys and I had to keep looking at the original part of the building for reference and use our modern-day tools to give it that old look,” Campbell says. “And lastly you have to make sure you seal these reclaimed bricks to be waterproof.”

Inside the restaurant, the brick walls were left exposed for aesthetics. Cox says they did put extra insulation on the ceiling, but with the walls' being three bricks thick, it

was naturally well insulated. Campbell also built an outdoor fireplace using General Shale's material to keep patrons cozy while waiting to be seated at the new restaurant.

Although this was one of Cox's first renovations of a historical building, it won't be his last, as the downtown area is seeing more and more buildings being renovated and reused.

“It does create a challenge, but you can't be scared of the condition,” Cox advises. “I think keeping your history is important. If you want to redevelop downtowns and create identities, it's vital to keep your history and your original buildings if possible.”

Cox says there's a huge sense of pride in seeing the building being used daily now, as the restaurant is one of the more popular eateries in Johnson City.

Johnson City Mayor Ralph Van Brocklin told local media he's excited to see the depot functioning again. “This type of investment creates a huge amount of interest in our downtown, and our hope is that it will serve as a cascade for other businesses coming in and developing and building the city back to the way it used to be,” Van Brocklin said.



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Brick is a great material to bring an aging historic building back to life.
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Build naturally.

Waterloo North Hiale / McCallum Sathar Architect and WALTERFEDY Architects // Shadow Stone® Driftwood

- Natural Edge®
- Selection
- Solutions
- Education
- Innovation

Naturally made, premium stone products.

Only Arriscraft's Natural Process technology delivers the aesthetics, performance and aging characteristics of quarried stone, plus the tight tolerances of manufactured stone. Our premium, naturally manufactured stone products support LEED® and sustainable design. Visit our website to view our diverse selection.

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BIGGER & BETTER WITH BRICK

University grows with the flow

At one time Christopher Newport University was known as a small commuter school with only 220 residential students on campus.

In 1996 President Paul Tribble led the commitment for the public liberal arts university to be more competitive. Since then the university has overhauled its academic programs and the admission process, as well as increased its size and student population.

Now the growing university is a centerpiece of Newport News, Virginia, development, with more than 3,700 students living on campus. And according to published reports, applications have risen by more than 700%, the average SAT score of entering freshmen has increased by 240 points and the campus has been transformed by nearly \$1 billion in capital construction. One of those new construction projects is the Rappahannock River Residence Hall, completed in 2013.

Glavé and Holmes Architecture designed the building in the Neo-Georgian style that has become the established style for the developing campus. Andrew Moore is a Principal at the firm and its Director of Urban Architecture.

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featured products:
BRICK: Buckingham & Fort McHenry

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He says although the architectural style on campus has been pre-established, he feels there is a certain degree of interpretation within the category that lends itself to design variation.

“One of the less understood aspects of the traditional design language is it does permit a great deal of expression within it,” Moore explains. “Just like the English language, you have the same letters but can put them together in a different way. And it works as

long as you understand the rules and how you can bend them.”

General Shale’s Buckingham Tudor and Fort McHenry as the campus standard bricks combined with an Essroc mortar were the colors Moore used, but in a unique way, with Arriscraft’s Renaissance® Wheat Stone, Rocked and Sandblasted.

With the design of Rappahannock River Hall, Moore was able to alternate between the

two colors of red brick on accents around windows and jack arches on the first floor as well as on the upper floors in recessed areas of the building to create an eye-catching contrast.

“There’s a rhythm where you see pavilions of the darker brick with the keystones and jack arches, and then there’s a connector where there are lighter colors,” Moore says. “There’s a lot of variety within the same, language. We could have made all the

windows the same but we took advantage of the opportunity to have some variations. It’s restrained and subtle but enough to make it interesting.”

Moore’s firm has had the privilege to design nearly a dozen of the new buildings on campus and says one challenge with this one is that it was financed by the University’s Foundation and had a lower cost-per-square-foot allowance, but he is still very pleased with the end result. “We managed to craft a high-



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When designing multiple buildings, like on a college campus, architects often get creative in the way the buildings look together, not just individually.
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quality building on a fairly low budget,” he remarks. “I feel there was no compromising at all, even on some of the things that were less expensive... the cast stone and the windows were all very much in keeping with campus standards.”

And while some other materials are used occasionally, such as metal panels, the majority of the exterior materials are the red brick, pre-cast or Arriscraft stone, and the slate roof to keep a uniform style.

“The campus is doing an exceptional job creating an iconic architectural style for the school... one that communicates the type of school Christopher Newport is striving to be,” Moore adds.

Many more construction projects are in the works for the firm and the school, including another residence hall, an alumni center, a Greek housing complex and an expansion to the dining facility... all breaking ground in 2015.



LOOKING ON THE LIGHT SIDE

*General Shale builds solid foundation
in commercial brick market*

featured product:
BRICK: Silverstone Velour

*“They wanted the mortar
to match exactly to give the
building a seamless look.”*

It's no secret that buildings constructed of brick serve more than their original purpose as a home, office or arena. Many of these durable, long-standing structures can be considered works of art, or even legacies to a person or time period. When the object of a building is to make such a statement, builders often seek unique colors or textures of brick.

With the acquisition of the Cleveland County Plant (CCP) in North Carolina and the thin veneer line, General Shale provides the commercial building industry with the broadest portfolio and most unique choices available for architectural and commercial applications.

CCP is known for the light-colored bricks it produces. CCP produces bricks using a local source of kaolin, a white clay that is often used to make china. The light-colored brick that is made from kaolin is popular with commercial builders and in architectural design. One of the more popular colors of brick is Silverstone Velour, which is available in seven different sizes.

The brick made at CCP has a unique rock-face texture that allows architects to change from a traditional brick texture to a chiseled stone texture without changing body color. It also has the same fired-clay body, so any expansion and contraction movement will be the same in the brick courses despite the texture.

Some interesting projects that have used bricks produced at CCP include Floyd E. Kellam High School in Virginia Beach, Virginia; the Raleigh Convention Center in Raleigh, North Carolina; and the Barclay Tower project in New York City.

FLOYD E. KELLAM HIGH SCHOOL

A \$102 million school project that had the additional task of striving to be certified Gold under the U.S. Green Building Council's Leadership in Energy & Environmental Design program, or LEED, was built in Virginia Beach using Silverstone Velour in the Monarch size (3⁵/₈" x 3⁵/₈" x 15⁵/₈").

While it was challenging, the project at Floyd E. Kellam High School was well within the wheelhouse of CCP.

Matt Mara Sr., Architectural Representative for General Shale, explains the Cleveland County Plant is certified by Bishop Labs at Clemson University for Recycled Content, which is a result of the LEED certification.

The national building program is designed to encourage designs focused on lowering energy consumption, increasing recycled content and lowering construction's impact on our environment. The Cleveland County Plant was the first plant in the U.S. to receive this certification, which allows architects to design with eco-friendly products without spending time investigating each building product themselves.

Representatives from CCP met with school officials to incorporate many design ideas using brick that would help achieve the Gold LEED designation. These were things like using the brick as an interior application to reduce having to paint over block, using larger wall units to save on wall costs and even using rock-faced brick for texture to match natural landscaping rocks on the exterior of the building.

When constructing publicly funded buildings, construction costs are always a factor.

"It makes it more expensive up front," Mara admits, "but I talk a lot about wall cost with brick and saving money on the labor side, so it does pay off in the long run cost-wise."

In addition to the Silverstone Velour, General Shale's Red Velour brick and shaped accent pieces from Arriscraft were also used on the project.

RALEIGH CONVENTION CENTER

The \$200 million Raleigh Convention Center, located in downtown

Raleigh, North Carolina, was meant to be an iconic project for the designers Thompson, Ventulett, Stainback & Associates.

The center was built using 400,000 units of Silverstone Velour in Norman size (3⁵/₈" x 2¹/₄" x 11⁵/₈").

Mara says the look that the architect wanted to achieve was very monochromatic. "They wanted the mortar to match exactly to give the building a seamless look. We actually did several mock-ups in an attempt to get it right."

The 500,000-square-foot building was the largest construction project ever attempted by the City of Raleigh and Wake County. It's said that the design team facilitated more than 100 public meetings during the project's development.

The building is certified Silver under the U.S. Green Building Council's LEED rating system.

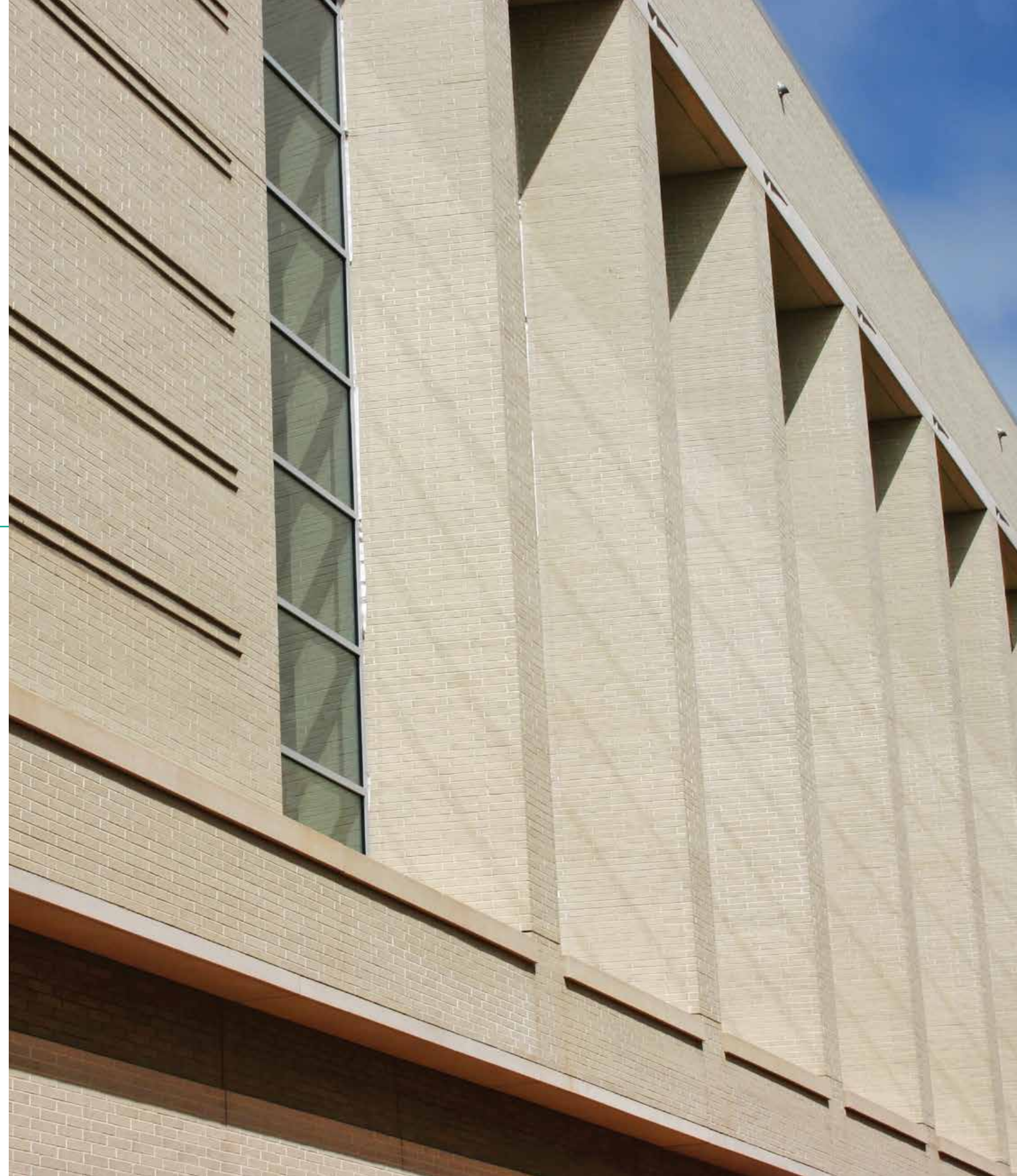
BARCLAY TOWER

When you think of a modern skyscraper in New York City, it may be the glass buildings that come to mind, as brick isn't traditionally seen as a high-rise material. But the Barclay Tower, developed by Donald Trump, is 56 stories of Silverstone Velour brick and is currently the 52nd tallest building in New York City.

"In Manhattan they are looking for permanent materials that don't have to be maintained, so this actually was a great option," explains Mara. "But typically you have a steel frame of the build that supports a brick veneer. But this is full-faced brick where we used an angle iron. So every story starts over sitting on angle iron to give it the maximum support."

Silverstone Velour was used in Norwegian size (3⁵/₈" x 2³/₄" x 11⁵/₈") for the residential building, which rises 673 feet above street level. It has 56 floors consisting of 441 rental units and is one of the most desirable residential buildings for families in Tribeca.

While the Silverstone Velour was highlighted for these projects, CCP manufactures brick in 17 different colors, including the popular Cascade White. The products come in several finishes and sizes to offer an architect the freedom to create the most interesting projects with a variety of sizes and colors.





featured products:
BRICK: St. Louis & Rose Range Tudor



featured product:
BRICK: Salem Creek Tudor

“We were looking for a product that had the richness of a handmade brick but at a mass-produced price.”

DC DISTINCTION

General Shale brick brings value to luxury development

When John Segreti was designing the ultra-luxury townhome development Foxhall Ridge in the upscale neighborhood of Georgetown in Washington, D.C., he knew he wanted the best building materials his budget could afford.

The Duball Principal/Executive Vice President contemplated using handmade bricks on the exterior, but the price was just out of reach.

Segreti had never used General Shale before but was impressed with the company’s eagerness to

work with him to find the perfect product for his project. “They helped us pick these bricks that conveyed the beauty we needed,” Segreti says. “We were looking for a product that had the richness of a handmade brick but at a mass-produced price.”

As a self-proclaimed “brick snob,” Segreti admits he was a bit skeptical. But General Shale came through.

“We are incredibly happy. The brick, the mortar, it’s all spot on,” Segreti raves. “We

wanted these buildings to have an authentic look, like they’d been there for years, and General Shale helped us achieve that. I guarantee other developers will drive into this complex and assume we spent a fortune on this brick—but we didn’t.”

The colors of brick used were St. Louis and Rose Range Tudor. Every brick had its own custom-selected mortar. Other General Shale products were used for the sidewalks and driveways.

“Our sidewalks are sanded brick. Our General Shale rep came up with a brick paver that looks like a molded brick. It looks great.” He adds, “Sometimes we grapevined the mortar, and the driveways were meant to look like cobblestone. All these products just really helped make the buildings look authentic.”

Other features of the buildings include synthetic slate roofs, exposed downspouts, casement windows and high-end interior fixtures.

With some units overlooking the Potomac River, the 34-unit complex ranges in home size from 2,000 square feet to 4,100 square feet and each sells for \$1 million to \$2 million. And Segreti says they were sold out within months of completion.

Segreti says he’s so pleased with the end result that he will “absolutely, 100%” use General Shale again.

To find out more about Segreti’s firm, Duball, visit www.duball-llc.com.



TALL ORDERS

Architect teams with General Shale on condo projects and more

For Ed Hickman, architecture is about more than just designing a nice-looking building. He considers it creating a brand and a feeling that he wants to convey, not only to the customer but also to all who see it.

That appreciation and understanding of design and function have made Hickman one of the best architects in the mid-Atlantic area.

As Principal and Director of Architecture for Charlotte, North Carolina's Architect Studio Fusion, he specializes in multifamily, restaurant, hospitality, corporate office, mixed-use, clubhouse and recreational projects.

In his 25 years in the business he's seen the ups and downs of the construction business firsthand.

"When the condo boom happened back a few years ago, we did a tremendous amount of work. It seems condos were being built all over the place," Hickman remembers.

One high-end project Hickman points to is the Roswell Place Condos project in Charlotte. General Shale Rose Range Tudor brick was used to create the luxurious style the development sought.

"What we really need and appreciate is people who are dialed into their product,"

Hickman explains. "That's what we have found with General Shale. We wanted a nice brick for this four-story-high condo project. The style was very vintage and historic, and we needed a brick that complemented that. General Shale provided an aged, tumbled brick that was perfect. They don't waste our time and they bring us exactly what we need and want."

"Building in the upper price range allows us to scour the market to see what's available and go on a shopping spree of sorts to find what we need with flooring and light fixtures, and we do the same for the exterior materials," he adds.

But soon after that condo project was completed, Hickman says the for-sale products of condos and townhomes virtually stopped overnight. Thankfully, the for-rent products, such as apartments, gained popularity and sustained the construction market until the recent resurgence of demand for high-end condos.

Hickman points to the Charlotte market as a good example of an area that is rebounding after the recession. He feels that as long as interest rates stay low, that demand will continue in select geographic areas.

But the downturn in the economy still has a lasting effect when it comes to construction costs.

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"Construction costs have gone up considerably in the past year," Hickman remarks. "The bottom line is shrinking, so we are trying to figure out how to build the larger projects and get the same return."

One project Hickman says will help his bottom line is currently under construction—a high-end luxury condominium project in Greenville, South Carolina.

"We are specifying General Shale brick and also Arriscraft stone products," he explains. "These are going to sell for over a million dollars per unit, and we plan to put brick and masonry on every inch."

When designing multifamily units, Hickman says it's important to know who your buyer or renter is. He says he designs differently for a millennial than he would for an empty nester.

"The younger folks don't really care as much about the building material," Hickman has concluded. "They want swanky, fun, modern and contemporary. They're more interested in wireless Internet, amenities and communal areas, and the architecture needs to reflect that."

Hickman says an interior feature he's been doing for this generation is a large kitchen island almost at a standing height that is open to the living room and serves as a social center.

Hickman says no matter the job—price, size or use—great communication is the key to a successful project.

"We listen carefully until we fully understand our clients' visions and aspirations to produce quality work. And we're happy to work with vendors like General Shale that have the same philosophy. They've really been part of the solution, and the sales staff brings a tremendous value to me with the variety of quality products."

To learn more about Hickman's work and his firm, please visit studiofusionpa.com.



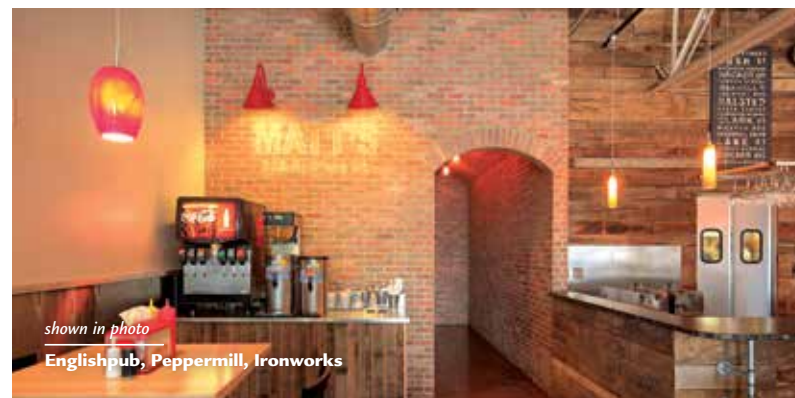
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THINBRICK

CHANGING THE WAY YOU THINK ABOUT BRICK

For commercial projects, every detail matters. Our Old Brick Originals Thin Brick™ line provides a level of distinction and quality unmatched in the industry without the weight of full bed brick. Real kiln-fired brick cut thin, these products are practical for virtually any exterior or interior application. Its light-weight nature is highly advantageous for cost efficiency in new construction.


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Searching for an architect?
Consider their background,
experience, completed projects
and style—not just cost.
.....

MASONRY

A career as durable as brick itself



Larry Evans

When asked how long he has been working in masonry, Larry Evans concludes his “whole life.” And while surely he wasn’t working in mortar while in grade school, it wasn’t long after that when his dad, a mason, started teaching him the trade.

“I guess I was in my early teens,” he recalls. “I went to Northeast State Community College for a couple of years after high school and then just fell back into masonry.”

After working for his dad for several years, the younger Evans started his own company, called Larry E. Evans Masonry. “I enjoy the work,” he says. “I enjoy the actual physical

work of doing the masonry, and then I especially like standing back and looking at a nice brick home that I’ve put together.”

Evans says he works with General Shale products nearly exclusively and has seen an increase in the use of General Shale thin brick and thin rock in the past few years.

“I see a big trend with the thin stone,” Evans remarks. “It has a good look, and General Shale seems to have the upper hand on that market because their product is real brick and stone cut thin, whereas the competitors’ product just doesn’t look real.” Evans says he’s done both interior and exterior applications with General Shale’s

thin veneers, and if done well by a mason it has the same durability as full-faced brick or stone. “I’ve done both. Two years ago we did thin brick on some dormers; I’ve done some thin brick in kitchen areas. It seems like the thin brick is popular inside and the thin stone is done mostly outdoors, but we’ve also done some thin rock inside around fireplaces,” he says.

As far as trends in masonry, Evans says he’s found the tried-and-true methods are best. “Years ago my dad tried to create a few new mortar joints, but it seems like the old way of doing things is the best. There’s a reason why they’ve done it nearly the same way for so many years.”

Like most in construction, Evans says he saw a real slowdown in the industry during the recession, but he feels things are picking back up. “We never completely stopped, but it got really slow. During that time we did quite a few remodels and small jobs. I’m happy to see it picking back up,” Evans remarks.

As far as projects that he feels are ones he can point to for excellent work, a recent job using Arriscraft comes to mind.

“I was really proud of that one. I’ve done some unique brick arches, I’ve done quite a bit of specialized work down through the years that I was happy to show.”



he adheres to—mostly traditional architecture. But he also really enjoys using special-shape bricks and various colors of mortar to construct what he calls “a masterpiece.”

To him, masonry is art.

“I just fell in love with it,” he recalls. “The fact you can build a big building and stand back and look at it and be proud of it is something.”

One of the largest projects Brodie has done is the Raleigh Convention Center, using brick from General Shale’s Cleveland County Plant (featured on page 22). “It was a challenge, for sure. It was on a busy city street that they didn’t shut down during construction,” Brodie explains. “With everyone driving by, not only was safety a concern, but we also had

an audience the whole time.” But as Brodie proudly says, his company finished the project on schedule and under budget.

Currently Brodie is working on the University of North Carolina at Greensboro’s new Student Recreation Center.

Other Brodie Contractors Projects:

- East Carolina University Heart Institute
- East Carolina Health Science Building
- NCSU’s Mary Fox Science Teaching Labs
- UNC-Chapel Hill School of Public Health
- Wade 1 & 2 Office Buildings
- NCCU Science Complex
- NCSU Gorman Street Dorms (7 buildings)

CONTRACTOR PROFILE

One North Carolina man builds the career of a lifetime

When taking a part-time job in high school, most people would never imagine that it would lead to a career running a multimillion-dollar company. But that’s exactly what happened to Calvin Brodie of Brodie Contractors.

“I started in high school doing masonry work, and when I graduated I liked it so much I just kept doing it,” explains Brodie. “I decided to go into business for myself, and the rest is history, you might say.”

Brodie Contractors, based in Raleigh, North Carolina, employs more than 300 people and has revenues equaling \$29.5 million. Brodie has built a distinguished reputation among other masons and even served as the North Carolina Masonry Contractors Association President (1993-1995).

“The reputation that this company has established for itself is one of dedication, quality work and efficiency,” Brodie says. “Every day, we strive to become leaders not only in regard to masonry and general

contracting but also to safety. The past few years, we have taken the initiative to build up our own safety programs to provide an environment conducive to working in our field.”

Visit nearly any college campus in the North Carolina Research Triangle area and you’ll see Brodie’s work: North Carolina State University, University of North Carolina at Chapel Hill, Duke University and North Carolina Central University, as well as numerous Wake County schools. Brodie says each school has a distinctive brick style that





SUSTAINABLE PRACTICES

Arriscraft helps set the standard for future-oriented construction and aesthetics.

A Green History and Reputation

In the 1950s, Arriscraft pioneered its environmentally friendly manufacturing process and embraced a culture of continuous improvement. Today, Arriscraft is a leader in the production of green masonry units. Its entire process, from raw material extraction to finished product, has proven to be environmentally sound.

Leading institutes in North America confirm that Arriscraft is very well positioned in terms of overall environmental practice. In 2013, Arriscraft received the Environment Award—Excellence in Energy Conservation (from the Cambridge, Ontario, Chamber of Commerce). This environmental award recognizes a business that embraces sustainable best practices and outstanding programs to maintain, protect and promote a healthy environment.

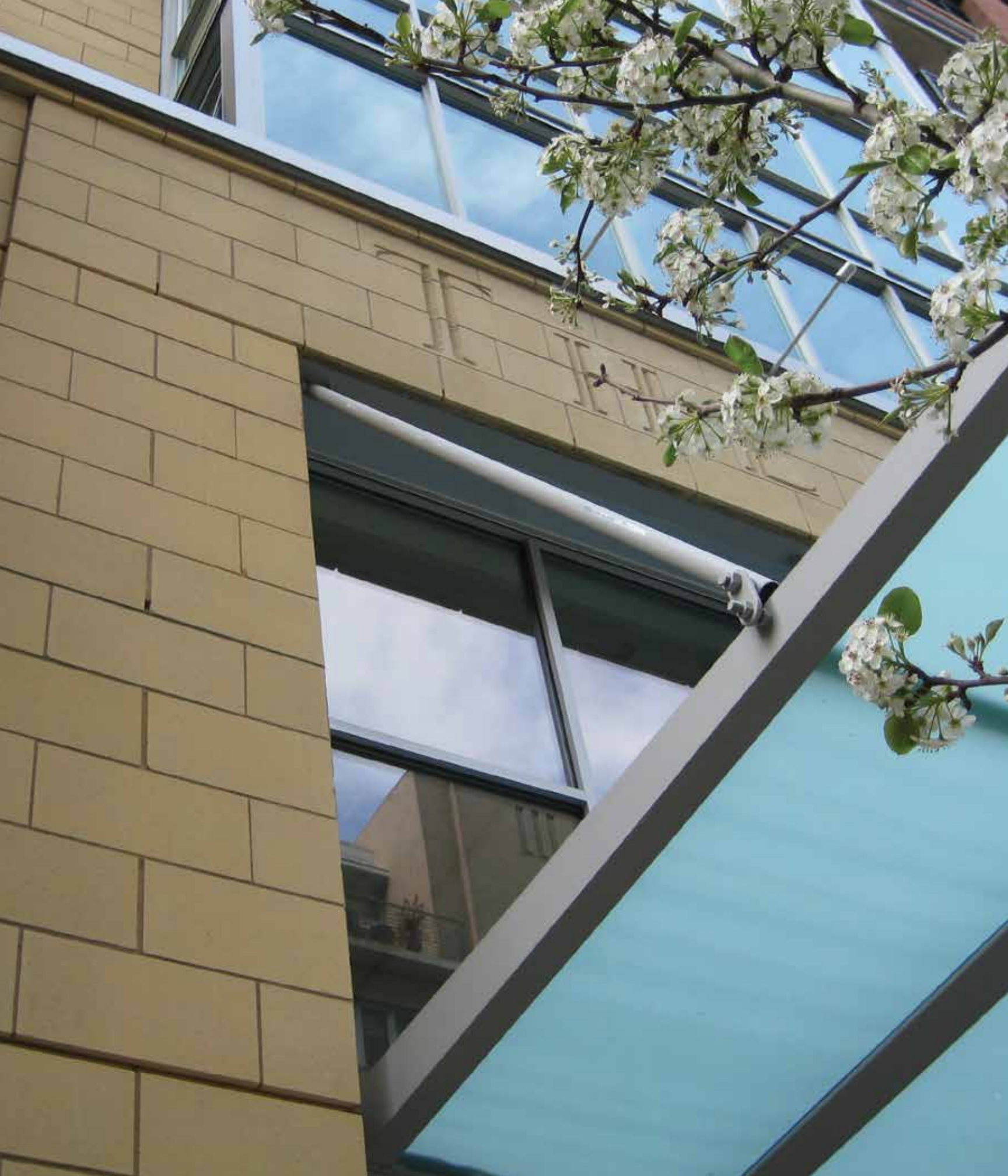
Independent studies commissioned by the Athena Sustainable Materials Institute reported Arriscraft as a leader in every significant category for measuring environmental performance. A Canadian organization, the Athena Institute provides industry data and software tools for planners and manufacturers that generate essential information about the footprint of their projects or materials.

Another key measurement of environmental performance is the LEED rating system,

developed by the U.S. Green Building Council. Although LEED does not rate building materials, products considered to be LEED-compatible have competitive advantage. Based on their qualities of superb durability, energy efficiency, exceptional life span and timeless architectural appeal, Arriscraft products have been included in many LEED-certified projects throughout North America.

Our Green Practices and Readily Available Raw Materials

Arriscraft has two main raw material inputs: silica sand and lime. Both of these components are readily available and of a benign nature. “Silica sand” is an industrial term used for sand with a very high percentage of quartz (silica) grains. Natural silica stone (silicon dioxide, or SiO₂), or quartz lump, is a simple compound of the elements silicon and oxygen. It is the most abundant mineral on the earth. The most abundant sedimentary rock is limestone, composed chiefly of the mineral calcite. Limestone is extracted and processed into the reactive lime utilized in the Arriscraft stone manufacturing process. The vast availability of these raw materials makes the production of Arriscraft stone highly sustainable. All input materials are locally available (minimizing shipping). Only the production of lime has any real environmental consequences, and suppliers



continued from page 37

have been going to great lengths to improve their environmental performance. All mineral extraction sites are in full compliance with environmental laws.

Controlled Water Usage and Reuse

Water contamination and waste are very important concerns when assessing environmental impact. Arriscraft utilizes a looped settling pond system to minimize water usage. Water is fed into a pond and into the process where needed. The water from various processes is then collected in a settling pond; the clean water is pumped to the original pond and reused. The dredged material (from the settling pond) can be reintroduced into the raw material stream. Many initiatives have been introduced in the manufacturing process to minimize the amount of process water utilized.

Cleaner and Reduced Energy Usage

Clean-burning natural gas is used in generating the autoclave steam. By using natural gas in the production process, Arriscraft's CO² output is one-third of that associated with clay brick products. In the calcium silicate process, natural gas is used only to heat water and not to burn the product. Consequently, the air emissions often associated with kiln firing clay, cement or other materials are not present. Additional energy efficiencies are achieved through preheating autoclaves and boiler feed water with exiting steam from previous cycles.

Lower Embodied Energy

Embodied energy is a measure of how much energy is used in the production and transportation of a product. It is an important gauge

of the environmental impact of a product and its manufacturing process and one of the only ways to directly compare competing products. According to the study commissioned by the Athena Institute, Arriscraft's calcium silicate products have an embodied energy of 1.164 GJ/tonne and 2.4 GJ/m³. To put this into perspective, clay brick is listed as having an embodied energy of 4.58 GJ/tonne and 6.5832 GJ/m³.

Active Recycling Practices

Arriscraft practices the 3R (Reduce, Reuse, Recycle) philosophy of waste reduction. Packaging materials all contain recycled content. On-site recycling includes systems for collecting plastic, Styrofoam, paper, aluminum cans, oil, antifreeze, steel, brass, bronze and cardboard. Of the solid waste generated during the manufacturing process, a portion is reintroduced into the raw material stream and the remainder is crushed into aggregate.

Sustainability through Durability

One of the best environmental characteristics of Arriscraft stone is its high durability. All Arriscraft stone is manufactured to adhere to severe-weathering requirements, is warranted for the lifetime of the building and requires relatively little maintenance over its lifetime.


Indoor Air Quality

Indoor air quality became an important issue for the building industry in the 1980s, when "sick building syndrome" was first identified. When utilized as an interior finish, Arriscraft stone masonry does not emit any harmful gases.



Build to impress.



- Natural Edge 
- Selection
- Solutions
- Education
- Innovation

Arriscraft Thin-Clad products offer beauty and performance.

Arriscraft thin stone veneers simply adhere to a solid substrate, providing an efficient solution for new construction or renovation. All Arriscraft products are naturally made through a unique process that mimics how stone is formed in the earth, creating products with the aesthetics and durability of quarried stone.

arriscraft.com |     



GENERAL SHALE RETAIL LOCATIONS

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