

JUNE 2018

Stone World

www.stoneworld.com

A **bnp** PUBLICATION
media

Building Stone Report from China



A photograph of a modern stone building with a large tree in the foreground. The building is constructed from light-colored, horizontally-laid stone blocks. A large, mature tree with a thick trunk and dense green foliage stands to the left of the building. The scene is set on a green lawn with a concrete walkway leading to the building's entrance. The sky is bright and clear.

BUILDING STONE

A personal connection to stone design

With an appreciation for natural stone, designer Darwin Harrison carefully chose regional limestone in diverse sizes and textures to create a unique and comfortable home for him and his partner in Austin, TX.



When building his own home in Austin, TX, designer Darwin Harrison turned to unique pieces of regional stone to create an authentic design.

Photos by Paul Bardagjy, except where noted



Darwin Harrison grew up and studied architecture in West Texas. His passion and appreciation for all things design-related has resulted in a career path that has taken many turns and varied pathways. He is a graduate of Texas Tech University College of Architecture and went on to the graduate program at University of Texas School of Architecture. Early in his career, he was an instructor at Texas Tech University College of Architecture and a field representative for Holzman Moss Bottino Architecture in New York

City. Harrison went on to establish his own firm, Darwin Harrison Design, in Austin, TX, working as a freelance designer, photographer and writer.

Recently Harrison designed his own home, where he lives with his partner. Inspired by innovative designs and the landscape around him, the designer passionately visited local quarries and thought outside the box to create their dream home. Overall the design intent was to use a varied palette where each material was expressed in a compelling and authentic manner, yet was part of a cohe-

sive whole when considered in totality.

Stone World had the opportunity to delve deeper into Harrison's thoughts behind the design and stone selection process. Here's what he had to say:

SW: What was the inspiration for the residential design?

Harrison: This is a tough first question. There are so many, too numerous to mention them all and some are larger scale and others smaller in scale. There are a few key ones though.



"The use of rhythms and interior courtyards, along with the elegant detailing and a complex palette of diverse materials, showed me how all these varied items work in concert to create something greater than the sum of its varied parts and materials," said Harrison.

The shape of the main stone facade is the classic gable shape that a child might sketch when asked to draw a house. I am drawn to iconic shapes that present a clear illustration of the spaces contained within. A very different example is the perfect glass cube of the breakfast room.

Years ago, just after graduating from architecture school, I was enthralled when I visited the Cistercian Monastery in Irving, TX, by Gary Cunningham. Seeing that project showed me the beauty and presence possible with big blocks of natural stone. It was also a great learning

experience to work with Holzman Moss Bottino Architecture (HMBA) [of New York, NY] and see their clever and unique use of stone in so many of their projects and how you have to work out a lot of details for it all to work like you envision.

I am inspired by designs that convey a sense of realness, a quality named and explained in the writings of Michael Benedikt. Realness is defined in several ways, including having an assertive presence, a tactile and clear expression of materials – where things exhibit their true innate character and composition

without artifice – and the result conveys a significance to inhabitants, as well as viewers from afar. In my work, I strive to always use materials that exhibit this quality. Another example besides stone is the rammed earth used at the studio and outdoor spaces. It is a material literally pulled from the ground and shaped into a functional space.

Another illustration of realness and a major source of inspiration for many years is the Kimbell Museum in Fort Worth, TX, by Louis Kahn. The subtle and subdued serenity, yet powerful presence at



The designer explained that he wanted a wall that offered a lot of privacy and presence so the height was set at 7 feet, 4 inches tall, but he also did not want it to feel too enclosed and confining so the blocks were staggered with the open slits to feel less solid — creating some amazing strips of sunlight at times.

the same time, is astounding. The use of rhythms and interior courtyards, along with the elegant detailing and a complex palette of diverse materials, showed me how all these varied items work in concert to create something greater than the sum of its varied parts and materials.

SW: Did you know from the start that you wanted to use natural stone in the design? If so, why?

Harrison: A very big YES. I have always been drawn to materials that have a strong presence and natural inherent qualities that are clearly evident — materials that look good, but just as importantly, feel good and age well. Natural stone — especially in larger block form and highly textured, or simply unique in coloration — always capture my attention. From the outset, this project was an opportunity

to use some of my favorite materials, and stone was high on that list from day one.

SW: What specific stone did you select for the design? Who supplied it?

Harrison: There were two primary suppliers for the bulk of stone. One was TexaStone Quarries in Garden City, TX. They supplied the large roughback blocks that were cut to specified sizes and used on the front facade and the backside of this same wall, which is the living room. The same stone was also cut into large blocks with amazing shifting, bending, corduroy-like lines that resulted from the cutting process. I was told by Quade Weaver at TexaStone Quarries that this is from a Fantini blade from Italy. They are quite large and thick blocks — each one by itself is a work of art.

TexaStone was also the supplier of the various ‘scrap’ pieces used around the exterior for landscape elements.

Secondly, AJ Brauer in Jarrell, TX — a division of Materials Marketing in Austin, TX — supplied the additional stone. I have used stone from Brauer in the past for the same reason as TexaStone Quarries — they have amazing options and the ability to supply large-scale blocks, as well as thicker in width. I used what they call a Strawberry block, also a roughback stone that is simply called that because some pieces have a more pitted rougher face. This block was dry-stacked at a freestanding curving screen wall along the driveway. The main reason this stone was used at this location was due to the fact I wanted a single-block-wide wall, but I wanted the engaging texture on both sides of the wall as it is very prominent along the driveway but also from inside



From the start, Harrison planned to use stone for his new home for its strong presence and natural inherent qualities.

the house on the courtyard side. So, you get the amazing effect on two distinctly different areas. I also needed the right thickness to be self-supporting. The stone from Brauer came out of the ground in 12- to 16-inch overall widths, so that size was perfectly suited to my desired configuration. The curve is a response to the driveway, but also a way to make the wall stronger laterally and be able to be only one stone wide.

SW: What were some reasons for choosing the stone you did for the project? How long did the selection process take?

Harrison: The house was actually for my partner and I. Designing and building a house for yourself was a crazy process — stressful and exciting. Many answers I've already stated, but beside these reasons, there were a few additional factors.

I did want a limestone that fit into the Austin neighborhood, but at the same time was not exactly like all the other Hill Country limestones, so I did want that coloration but with unique iconic variations. I used Brauer again, as I do love what they have to offer and they are regional so it fits the landscape of this area. For TexaStone Quarries, there was also several past connections. My partner and I both grew up in West Texas. I lived in Lubbock for many years and he is from Big Spring. He has known the Edwards family (Connie and Brenda) for years, so we loved the idea of using stone from our 'home' area and long-time friends of his as well. Added to that, my best friend is a partner at HMBA, and I have even worked for them during the time they did the Student Union building at Texas Tech University, which I know has been featured in *Stone World* in the past. I have learned a lot about stone

by being associated with HMBA and seeing their work develop over the years. I also had visited the quarry in the past so I knew the great materials TexaStone Quarries offers.

The selection process took about two to three months. My partner was included in all the decisions, but I had a vision and would show him samples and images and where materials would be used and he would offer feedback. We were on the same page as far as stone, as he appreciates the same qualities I do, and he also really liked using stone from our hometown region.

SW: Did you visit the quarry at all? If so, what were some things you were looking for?

Harrison: Yes, multiple times. I had been to both quarries for other projects so I



The shape of the main stone facade is the classic gable shape that a child might sketch when asked to draw a house, explained Harrison. "I am drawn to iconic shapes that present a clear illustration of the spaces contained within," he said.

knew a lot of information before going, but in each case, I was confirming selections and availability, etc. I also met with the quarry owners to discuss their individual capabilities as far as size limitations and cutting techniques, and I looked around the quarries to see color and texture variations each one offered.

At TexaStone Quarries, once I determined the layout and sizes for the final design, I made another trip and hand-picked each large uncut block to use — to cut the items to size so I could get the stones that had the most interesting clef marks, colors and even some that had unique markings, etc. During this trip, I was also enthralled with the acres of scrap stone [pieces] that were either defects or maybe had blemishes, etc. It was at this point I inquired about acquiring a selection of the scraps that caught my eye for uses I was not even

certain about at that time. The stones were just calling to me to be used somehow. I worked with TexaStone Quarries to basically get as many scraps that would fill the last truck so as to not waste space. I was able to get 16 quite varied stones that were each very unique and ranged in size from smaller blocks to a giant solid block now used as an outdoor bench.

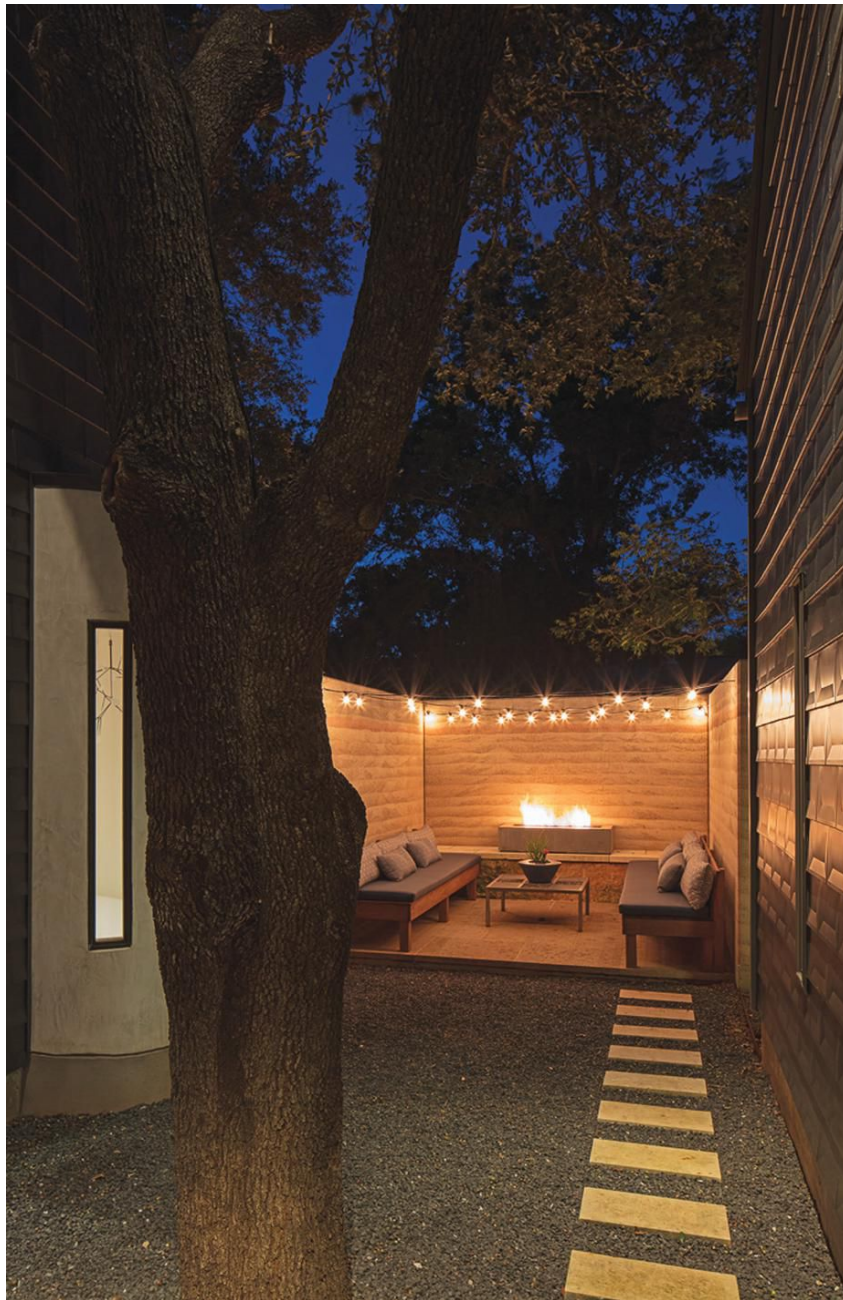
SW: Approximately how much stone was used for the home's design?

Harrison: TexaStone Quarries basically supplied three full 18 wheelers. There were 332 cut blocks of varied sizes and 16 of the scraps, as mentioned. The cut blocks equaled approximately 93,000 pounds — 46.5 tons.

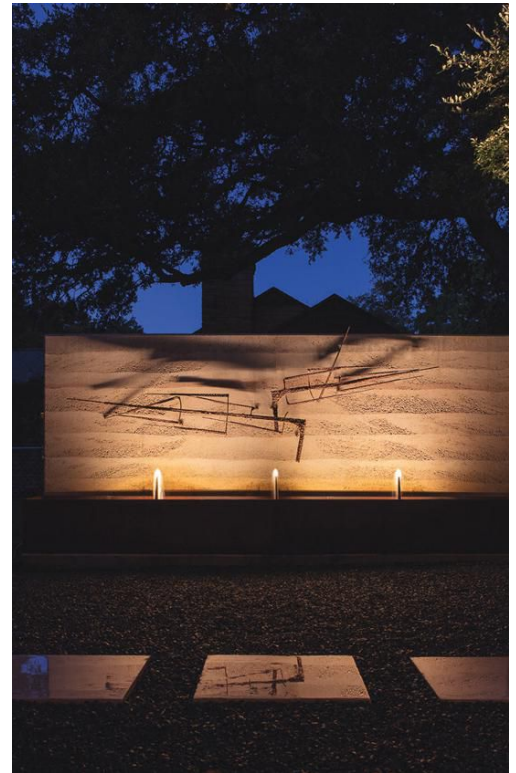
AJ Brauer supplied 78 varied sizes of the large strawberry blocks.

SW: For what specific applications was the stone used? On average, what were the size of the pieces?

Harrison: The blocks from TexaStone Quarries were used for the exterior and interior end wall of the living room. The natural roughbacks are the primary selection for the exterior facing the street, with a smaller percentage of the smoother Fantini blade-cut stone used at the fireplace stack. On the interior, that configuration reverses with the primary wall being blade-cut blocks with a Fantini tractor-mounted chainsaw from Italy and a single row of the roughbacks at the base below a custom metal shelving unit built to coordinate with the course lines of the stone. The Fantini blade-cut interior wall was lit with a dramatic hidden linear light fixture that showcases all the corduroy-like ribs and cut lines.



The local limestone was employed for many and diverse applications throughout the residential design, including as a backdrop for an outdoor seating area.



Additionally, a large stone slab creates a stunning fountain in the backyard.

The largest blocks were 22 inches tall x 43 inches long x 6 to 8 inches thick based on the rough surface. Other blocks were exactly half that length and then there were a lot of 8-inch-high cap blocks and a custom-shaped piece to cap the peak of the gable with a single stone.

The Brauer stone was typically 24 inches tall with varied lengths between 30 inches up to 42 inches long and on average between 12 to 16 inches thick. This stone was used for a curving wall along the driveway/courtyard.

SW: The curved wall with the large textured stone blocks and slits in between is rather unique. How did that come about?

Harrison: I had seen a couple stone walls that were moderately similar in that they were dry-stack applications of large blocks. I wanted a wall that offered a lot of privacy and presence so the height was set at 7 feet, 4 inches tall, but I also did not want it to feel too enclosed and confining so the blocks were staggered with the open slits to feel less solid — creating some amazing strips of sunlight at times. It gives the wall a mixture of solidness and openness. The slits are occasionally filled with 2-inch-thick colored glass plugs from Italy to further add some interest and character. The curve, as mentioned, was both a functional response to enhance the structural integrity of a single wide stone wall,

but also a way to shape the driveway area and courtyard spaces into an interesting curved volume up against the more rectilinear shapes of the house.

SW: Did you spend much time on the jobsite during the stone installation? If so, what were some things you were looking for?

Harrison: I was the builder and superintendent and designer, on-site so I practically lived at the site during construction. I was present almost every day, and as such, I was there as all stone items were installed so our mock-up process was more an actual piece-at-a-time

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The designer hand-picked which stones went in what location for much of the living room wall to get a better distribution or markings (above). Large glass windows add a nice contrast to the heaviness of the stone blocks (below).



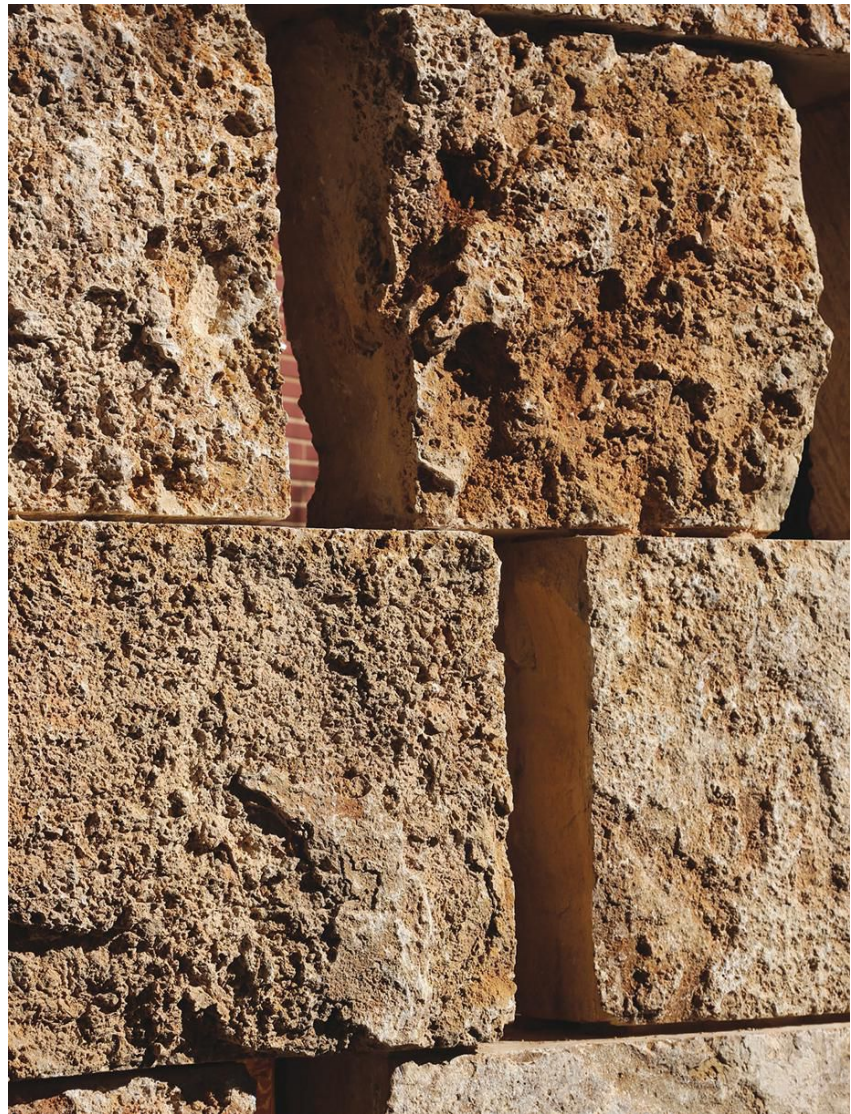
The designer chose a Strawberry block, which is also a roughback stone that is referred to as that because some pieces have a more pitted rougher face.

process — especially at the beginning where we worked out logistics. I also hand-picked which stones went in what location for much of the living room wall to get a better distribution or markings. I also looked at multiple grout color samples, grout line methods, etc. It was a collaborative process with the mason, as I did listen to them and their expertise to insure the best installation.

SW: What would you say was the most challenging aspect of the stone installation? Why?

Harrison: The large size of the blocks posed a lot of challenges, as it was built by a residential mason so not a big commercial company that might have larger equipment. So, the heaviness and size of the blocks was tough on the installers — especially once they got farther up the wall. The site was also tight with a limited staging area, so moving large heavy pallets of stone around was difficult. The size led to some cursing and frequent fatigue and exhaustion, but they were excited to be a part of the challenging project and very proud of the results. There were funny stories as well, like the extra-large bench block that was too heavy for practically any of the available equipment so they moved it around using the old Egyptian methods with rollers and rods that were positioned to move it slowly into place. The other challenging aspect was rain. It rained so much that whole year, and a lot during stone installation, making it even more difficult to move stone around a literal swamp.

SW: How long did the project take to complete?



Harrison: Overall, around two years. The design phase was about one year and overall construction was 13 months. The stone portions were completed in four to five months.

SW: In general, do you often use natural stone in your designs? If so, what are some reasons for doing so?

Harrison: Yes, I try to as much as clients will allow. I love the feel and look, and there are so many great options and then the various ways it can be cut, etc. I love materials that have an innate realness so stone is one of those materials that is just more authentic than many other materials — especially when used in primary large building block form. I also really love exploring the varied cutting techniques and getting the size proportions just right to have a really elegant joint layout. I love other materials that have a realness and I'm also trying to cre-

ate a palette of materials that complement each other, and stone works well with so many other materials.

SW: Now that your home is completed, what are your thoughts?

Harrison: Since I am the designer, builder and inhabitant my reactions are clearly biased, but I do love living here and still pinch myself that we were able to build our dream house and I was able to use so many of my favorite materials — like the large blocks. Even after being in for a while, I still am surprised by new views, new patterns of sunlight and shadows, and how the home fits into its park-like setting. My partner was really hesitant to build a house; he thought our old “normal” house was good enough. But now he also loves the house and can't imagine not living here. He loves the materials as well, and enjoys hearing people talk about the whole composition.



“During [my trip to TexaStone Quarries], I was also enthralled with the acres of scrap stone [pieces] that were either defects or maybe had blemishes, etc.,” said Harrison. “It was at this point I inquired about acquiring a selection of the scraps that caught my eye for uses I was not even certain about at that time. The stones were just calling to me to be used somehow. I worked with TexaStone Quarries to basically get as many scraps that would fill the last truck so as to not waste space. I was able to get 16 quite varied stones that were each very unique and ranged in size from smaller blocks to a giant solid block now used as an outdoor bench.”



This may sound conceited, but the reaction of friends, colleagues and strangers has been amazing. There are constantly people stopping to look and take pictures. I have had quite a few people be so bold to ring the doorbell and say they just had to ask about the house and then when I give them a tour they are so kind and have such wonderful responses. The best response has been two elderly ladies that repeatedly stopped during construction and then when finished, and I gave them another tour. One sent me a lovely poem by Emily Dickinson. She said the house made her think of it and she said she simply had to send it me. The first two lines of the poem are ‘I dwell in possibility, a fairer house than prose.’ Needless to say, I was flattered someone would go to such trouble and respond in such a fashion. She also said I was building a home that would last 1,000 years with its amazing materials and execution. Another woman said it moved her to tears, so that was an amazing physical response that took me by surprise.

I also have had several designers and builders ask a lot of questions about all aspects of the stone, as they want to know more information.

The whole process was both exciting and stressful, but the experiential nature of the house and the ability to reside in your own vision is worth all the pain and anguish of the design and construction of your own home. □

Private Residence Austin, TX

Client: Robert Buckner / Darwin Harrison

Designer: Darwin Harrison Design, Austin, TX

Design and Production Drawings Consultant: Alex Whitaker

Consulting Architect: Milosav Cekic

Builder: Darwin Harrison / Javier Gonzalez

Stone Suppliers: AJ Brauer, Jarrell, TX; TexaStone Quarries, Garden City, TX (roughback blocks)

Stone Mason: Hurlbut Masonry (Baxter Hurlbut)