

StoneDimensions

Showcasing the beauty of genuine stone.



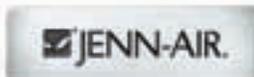
Like Jewelry for Your Home
From the Quarry to Your Home
To Seal or Not to Seal
Gallery of Ideas
Exotic Stones



FOR THE LOVE OF COOKING.™



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From the Publishers

In the world of consumer publishing, there are a number of magazines that feature the beauty of residential natural stone installations, but none that regularly publish a significant collection of kitchens, baths and other residential uses of stone.

That's why the Marble Institute of America (MIA) is launching *StoneDimensions*, a quarterly magazine that will mainly focus on the use of natural stone in the home, but also include interesting non-residential applications, too. These non-residential stories and photos will concentrate on religion, education, government and other non-commercial applications.

The genesis for *StoneDimensions* was a showroom DVD created by MIA to showcase a collection of outstanding residential uses of stone. With more than 165 natural stone applications included on the DVD, it became obvious that we needed to share the beauty created daily in the stone industry, in print, with the widest audience, on a regular basis.

We hope that *StoneDimensions* will do just that. We look forward to creating a highly meaningful publication that provides its readers with solid ideas they can use throughout their homes as they plan new homes or remodel existing dwellings. We welcome your suggestions!



Garen P. Distelhorst
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Marble Institute of America



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2007



Features

Like Jewelry for Your Home.....	5
From the Quarry to Your Home.....	10
To Seal or Not to Seal.....	14
Gallery of Ideas	15
Featured Designer: Kristan Welch-Swanson <i>The Endless Opportunities of Remodeling</i>	20
Making the Old Look Just Like New <i>The Challenge at Duke Universtiy</i>	24
Exotic Stones <i>Definitely for those who want something very different</i>	26
Q & A with Chuck Muehlbauer <i>The Marble Institute of America's Technical Director</i>	29
Index of Photographs.....	30

Like Jewelry for Your Home

Of all the accolades that have been said about the inherent beauty of natural stone, nothing says more about this wonder of nature more eloquently than the comment by a lady from the Midwest when she stood surveying her new black granite countertop, the centerpiece of a remodeled kitchen. "It's like jewelry for your home," she said.



It's true! Selecting granite, marble, travertine or other natural stone products is a lot like going to a jewelry store and choosing a fine gem. Only in the case of jewelry, the beauty and quality of the stone is ultimately discerned under a powerful microscope. With natural stone it's right there for the naked eye to see.

Real stone is the natural choice for individuals who desire something unique in countertops, vanity tops, shower stalls, floors and other elements in the home. When a homeowner chooses natural stone, he or she is assured that no other home in the world will have stone that is an exact duplicate.

In addition to beauty and uniqueness, real stone is durable, versatile, cleanable and a real value for homeowners seeking to install a modern kitchen or bath in an existing home or those who are building a new structure. Real stone adds value to a home when it's time to sell. In fact, studies show that homeowners who remodel and use natural stone recover

between 80 and 86 percent of their remodeling cost at the time of resale.

It's important to know that natural stone will never go out of style. It is, by far, the first choice in materials for kitchens and baths around the world and growing by double-digit increments annually.

Making an intelligent choice

The more you know about the jewel-like qualities of real stone, the better you can make an intelligent decision about materials for that new or remodeled kitchen and bath projects.

Consumers have a wide choice of materials to choose from other than natural stone: plastic laminates, stainless steel, concrete and quartz surfaces. Quartz materials are available in over 30 different brands and are generally made from quartz granules mixed with resin, various colored pigments and other materials such as mother of pearl, pieces of mirrors and semi-precious stones, which are processed in a factory.

For some kitchen and bath applications, these other materials might be perfectly acceptable, depending on the budget, the scope and intent of the job and the "look" the client is trying to achieve.

But none of them are truly natural or offer you the opportunity to proudly proclaim, "You won't find a countertop exactly like this one anywhere else in the world!"

That's why those who sell multiple types of materials say that once the facts about natural stone versus other competing products are presented to their customers, the majority select the real thing.

Challenging the myth that natural stone is expensive

The fact is natural stone, with all of its inherent qualities, represents one of the great values in the home building and remodeling arenas. In most cases, real stone is less expensive than other premium materials available for countertops, vanities, shower stalls, floors, etc.



The reasons: supply, demand and technological improvements. The industry is booming as part of the recent globalization of the natural stone business. New technologies and new quarries have significantly increased the output of natural stone in the United States as well as in India, Brazil, Spain, China, Africa, Russia and other parts of the world. With supplies from the United States, Italy and other traditional sources of marble, granite and other natural stone, there is a significant amount of stone now available for the world to savor. It's virtually unlimited.

In the past, the stone industry was aware that some potential sources of beautiful stone existed, but the cost of extracting the stone from the earth was prohibitive. As in other industries, natural stone producers and their suppliers have developed advanced technologies for extracting stone from the earth, cutting the blocks of stone into slabs and processing/polishing them for eventual fabrication and installation in the home. These advancements, combined with favorable labor rates in

some quarrying and fabricating countries around the world, have helped to make natural stone very competitive.

That's why kitchen and bath professionals can't go wrong recommending real stone.

What makes natural stone different?

In a word, time. It has taken millions, if not billions of years, for Mother Nature to create natural stone. There are many factors that affect the ultimate graining and coloration of natural stone. These factors include underground springs, mineral deposits, earth shifts, temperature, natural solutions in the earth and the pressure exerted on these elements over time. Obviously, there is no way to duplicate these factors in a laboratory or manufacturing environment.

Because of the vast differences in the conditions that created the stone, every block extracted from the earth is different. The hand of man has played no role in the process. Even after the stone has

been removed from the quarry, there is little human intervention, except for cutting and polishing, to bring out all of the uniqueness and natural beauty. Nothing is done to alter the natural state of the stone.

That's why the number of different colors and patterns of natural stone is virtually limitless. True, some common types of stone have a similar "look," but no two pieces are ever exactly alike.

Different real stone for different kitchen and bath applications

With the use of natural stone comes the knowledge that there is a wide pallet of colors and materials from which the kitchen and bath professional or designer can choose to give the customer the look and personality desired.

Kitchen countertops: Granite, one of the world's hardest materials, is the most popular choice for kitchen countertops and other heavily used surfaces. It's durable, easy to maintain and available





in a virtually limitless array of colors and patterns. Marble and slate can also be nice choices for countertops.

Kitchen and Foyer Floors: Because of its durability, granite tile makes for a lovely kitchen floor. The beauty and elegance of marble make it a popular choice, too. Marble features veining patterns and colors that add a sophisticated element to any design. Marble is also highly resistant to moisture when sealed, and therefore, is an ideal choice for floors. Travertine, with its beautiful graining, also can add a classy look to floors and complements granite.

Baths: Marble is perhaps the most popular natural stone choice for bathroom walls, showers and floors. Not only is it beautiful, it is highly resistant to moisture and it is easy to maintain.

Other household applications: In addition to the stone listed above, natural stone materials like slate, sandstone, limestone and travertine can add a unique design

element to kitchens and great rooms, staircases and fireplace facings.

Nature made real stone easy to clean

That's one of the major advantages. Warm water, mild dishwashing liquid and a soft cloth are all that is needed to maintain most natural stone surfaces and to preserve their beauty for years to come. In the case of an unfortunate stain, it can usually be removed with a poultice mixture obtained from stone suppliers.

A new study shows marble, granite and engineered stone have the same level of cleanability.

In 2006, The Hospitality Institute of Technology in Minneapolis, Minnesota conducted a study comparing four widely used countertop materials – two granites, one marble and one quartz surface – which showed that all are easily cleaned to meet FDA sanitizer criteria of 5-log reduction pathogens on the surface.

“Overall, there was no statistical difference in reduction after wash and rinse for any of the four surfaces,” said Dr. O. Peter Snyder, Jr., president of the Hospitality Institute. “This indicates that the differences in surfaces used in the tests did not make a significant difference in food safety cleanability. The study, funded by the Marble Institute of America, showed that typical stone countertop materials are easily cleaned to meet FDA guidance for reducing food contact surfaces to a safe level.”

The 2006 study is a follow-up to one that Dr. Snyder conducted in 1999. Granite was also named tops in cleanability in that test which involved several other surfacing materials including stainless steel, concrete, tile, wood, and plastic laminate. More information on both studies is available at www.marble-institute.com.

Comparing granite countertops to those manufactured from other materials including quartz granules

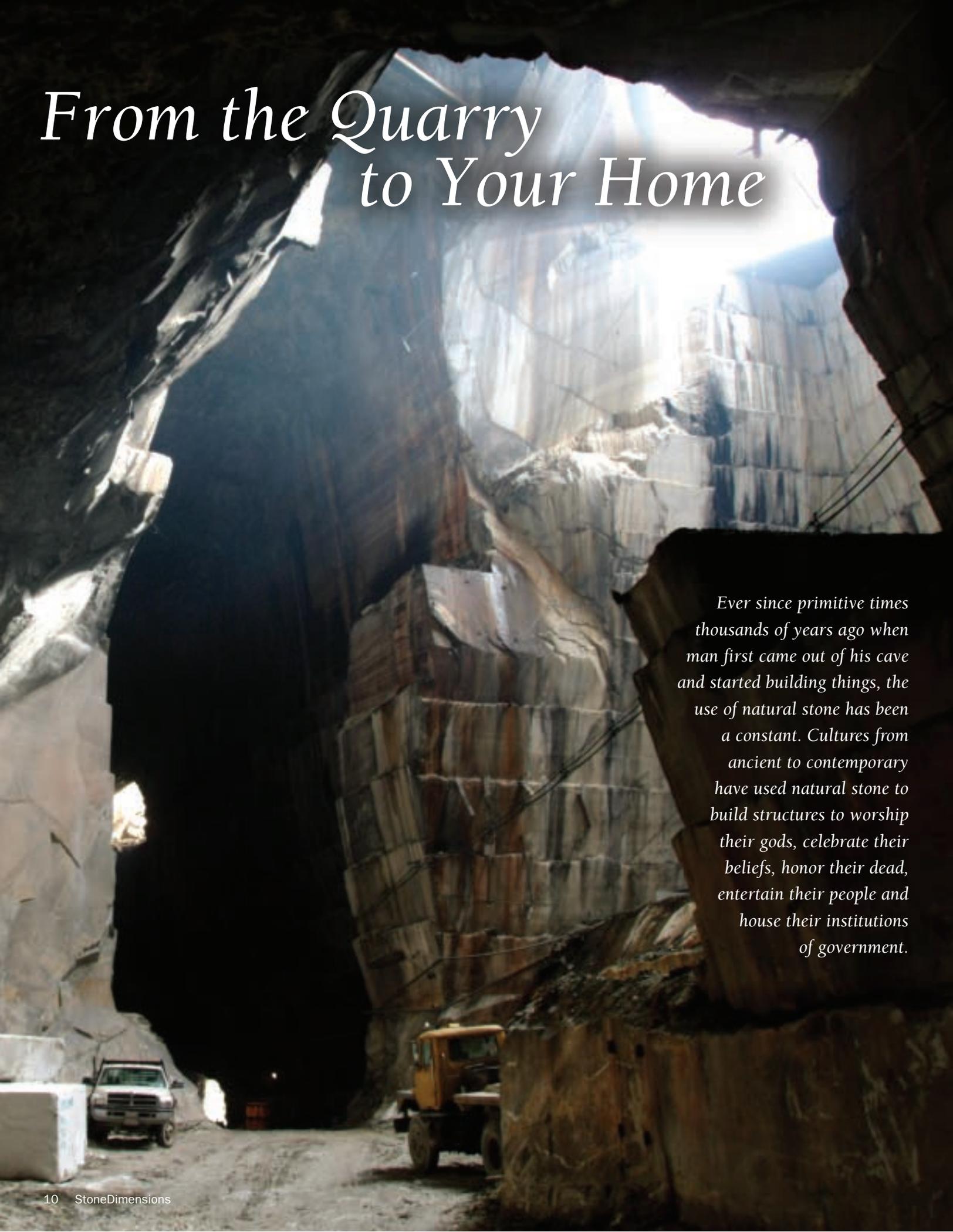
When it comes to resistance to bacteria, heat, scratching, staining and overall performance, granite is in a class by itself. Unlike other countertop surfaces, granite is highly heat resistant, which is a very important consideration in kitchen applications. Quartz surfaces will reportedly burn at just over 330 degrees. With too much heat, other surface materials may warp, crack and/or discolor, ruining an otherwise successful job. It is virtually impossible to damage a granite surface by accidentally placing a hot pot on it. You cannot say that about other countertop materials.

There are other reasons why granite is in a class by itself

Granite is one of the hardest materials on earth and is extremely scratch resistant, which is another important consideration for any kitchen.

Contrary to a major misconception, most granite countertops do not have to be sealed although many are for customer peace of mind and for an additional level of protection. Most granite will not fade in sunlight, which tends to be a problem with some artificial surfaces. In the unlikely event a countertop is stained or otherwise damaged, it usually can be restored to near original beauty and utility. That's not always the case with other surfaces. And, finally – indoors or out – granite is an all-purpose material, which makes it the perfect choice for the newly popular outdoor kitchens. So, now that you know the facts, the choice is easy. Genuine natural stone: created by nature over billions of years. 



A large quarry with stacked stone blocks and a yellow truck. The scene is viewed from a dark, cavernous opening, looking out onto a vast area of stacked stone blocks. A yellow truck is visible in the lower center, and a white pickup truck is on the left. The lighting is dramatic, with bright light coming from the opening and deep shadows in the surrounding rock.

From the Quarry to Your Home

Ever since primitive times thousands of years ago when man first came out of his cave and started building things, the use of natural stone has been a constant. Cultures from ancient to contemporary have used natural stone to build structures to worship their gods, celebrate their beliefs, honor their dead, entertain their people and house their institutions of government.



Thanks to new technology, the use of natural stone has expanded broadly (beyond its traditional use for exteriors and interiors of major buildings of all kinds) and is now commonly used for a variety of applications. Consumers have discovered the beauty and luxury of this unique, all-natural material for countertops, floors, baths, fireplaces and other applications.

The journey from the quarry to your kitchen can begin right here in America or in quarries in such faraway lands as Brazil, Italy, India, China, Spain, Turkey, Africa and more.

It all starts in the quarry. Giant blocks of granite, marble, limestone, travertine and other natural stones are cut out of the earth with technically-advanced cutting





systems which have drastically reduced the effort it takes to achieve this once time-consuming task.

The giant blocks are then moved to new high-speed gang saws which are so sophisticated and powerful that they have reduced the time it takes to slice the twenty-ton blocks into slabs by more than half. The slabs are then polished on high-speed polishing lines which feature multiple heads to speed the process. Some of the finished slabs are immediately cut into floor tile, while the rest are shipped to wholesalers and fabricators like those in your town.

Many fabricators – and even architects – travel the world to hand-select the raw material in blocks or as slabs – the same ones you may inspect as you pick the perfect natural stone material for your home.

Once you have selected the material that is perfect for your home, your local fabricator will do the rest - with your input, of course.

While some fabricators still rely on standard measuring techniques, the most popular method for achieving a perfect fit is to prepare templates of the areas to be covered by marble, granite or other materials. The typical template is fabricated from thin wood strips that are ultimately glued together to produce a perfect replica of the area to be covered. Since walls are not necessarily 100 percent perfect, the template process takes that factor into account.

In recent years, there has been a growing trend toward digital templating, too.

In the shop, the templates are placed on the selected slab or piece of natural stone and adjusted to maximize the beauty of the stone.

Once the template has been adjusted, the stone is cut by a precision water-cooled saw.

Automated computer-guided cutting systems assure that cut-outs for stove tops, sinks, faucets and other kitchen appliances are correct. The pieces of natural stone are then edged with automated equipment or by hand. Most edging is done with powerful diamond routers using specific bits to profile the desired edges. The final shop steps are edge polishing and, possibly sealing.

When all of the shop work is completed, the stone makes its final trip to your home, where skilled craftsmen install the project.

From the quarry to slabbing and polishing; to measuring and templating; to cutting, edging and polishing – and, finally, installation – people in the natural stone industry strive for two things – enhancing the beauty of natural stone through perfection and your ultimate satisfaction. <=>



To Seal or Not to Seal

After several months of discussions, a special task force formed by the Marble Institute of America (MIA), the world's leading trade association for the natural stone industry, has issued a policy statement covering the need to seal natural stone countertops. The following is the official MIA position:

Most granite countertops do not need to be sealed! Before 1995, there were very few quality penetrating sealers on the market and there were very few cases of staining. Both prior to and after the availability of penetrating sealers, no cases of food poisoning, radon or food preparation issues associated with treated or untreated granites have been reported. If homeowners clean their countertops after each meal, they will rarely, if ever, have staining or cleanliness issues with granite. All this being said, many granite countertops receive additional benefits from being sealed. That benefit is the further reduction of moisture migration into an already moisture resistant surface.

Should natural stone counters be sealed? In many cases it makes sense to seal marble and granite countertops with a quality sealer. The product should have a life

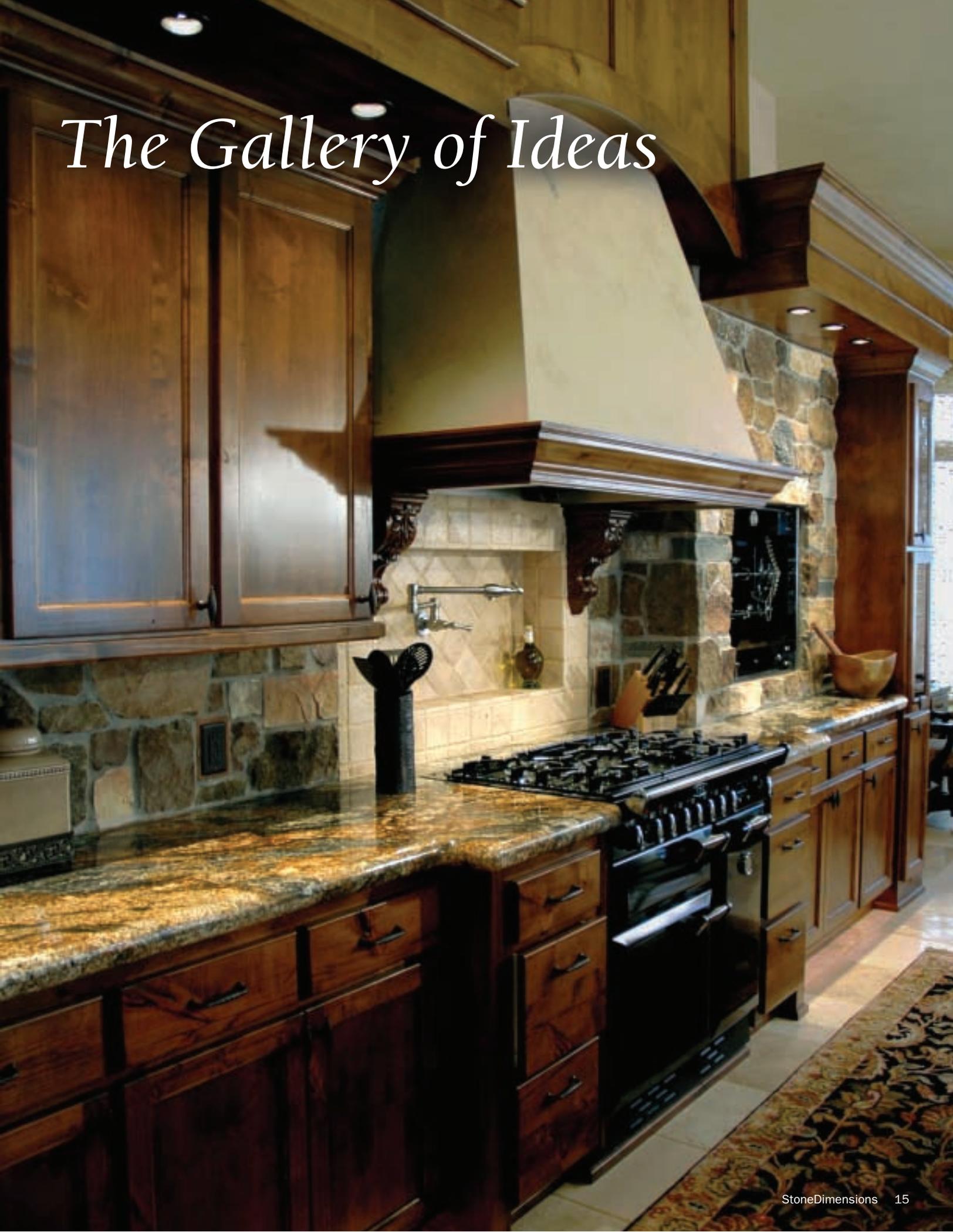
expectancy of 10 to 15 years and be of an oliophobic (resistant to water and oil-based stains) nature. Once properly sealed, the stone will be more resistant to everyday dirt and spills.

In today's natural stone industry, many species of granite receive a resin treatment at the factory where the blocks of granite are cut into slabs and then polished. The treatment is used to fill microfissures, indentations and other minor characteristics that are found in many natural stones. The reason for the resin treatment is to address what most consumers consider as imperfections, but in reality are 'birth marks.'

The consuming public gravitates to perfection, defined as no 'birth marks,' and so the marble and granite industry tries to fulfill the desire. Both resined as well as unresined slabs will outlast most of our lifetimes. Granite should, and in most cases will, be the last countertop surface a person will buy, providing a strong return on investment. The bottom line: sealing resin treated countertops may increase the resistance of the already resistant nature of stone. <=>



The Gallery of Ideas











The Endless Opportunities of Remodeling



Kristan Welch-Swanson
Design Representative/Interior Designer,
Montelongo Homes & Remodeling

Why move when you can upgrade your home – and your lifestyle – by remodeling? In most markets, you can generally recoup up to 90 percent of the cost of a remodel if you sell the house within a year of completion of work. What a guaranteed return! So whether you're seeking to sell your home or just increase your own enjoyment of it, remodeling can be a fun and functional way to create a transformation right before your eyes.

Kitchens and baths are among the most popular rooms to remodel – and among the biggest selling points when your home is on the market. When remodeling a kitchen, always look for ways to consolidate spaces and make your work areas more functional. Rather than set up your workspace in the traditional triangle, think about establishing several work stations so that multiple people can work in the kitchen at the

same time. You can consolidate your wall oven, microwave and warming drawer into one unit, or look into one of the newer ranges with double ovens. You also can create two separate islands; you can seat visitors or children at one island and use the other as a preparation area, possibly with a vegetable sink.

Strategic lighting is a simple way to instill a sense of openness in your working space. Remove your traditional fur downs and fluorescent lighting, and opt for installing taller cabinets and recessed can lighting. Staggering the wall cabinetry and adding crown molding generates even more visual interest and an undeniably finished look. Rope lighting along the top of upper cabinets can light up the ceiling to create a sense of increased height, and task lighting under your wall cabinets can light up your countertops and designer backsplash.





Installing decorative pendant lights above the island or the bar areas also update the room.

When choosing countertop materials, I recommend that my clients use solid granite countertops. Granite has a timeless beauty with depth and movement, and adds an unmatched “wow” factor to any space. It’s also very durable and low maintenance. Clients that select granite countertops often install an under-mount sink, which makes it easy to keep the granite clean and adds about an inch or more in depth to the sink basin for large pots and pans. Continuing the granite up the backsplash provides a more contemporary feel, or you can use travertine or slate tiles in decorative patterns which creates a beautiful focal point that is very aesthetically pleasing.

A decorative, custom vent-a-hood above the cook top area can be an attractive centerpiece to your newly remodeled kitchen. It does not have to be functioning – it can merely house lighting to show off a new large range or cook top. The vent-a-hood can be built out of the materials that are used on the exterior of the home like stone, brick or stucco, allowing you to bring the

outside in and creating a wonderful opportunity to show off a decorative stone mosaic or medallion above the cook top. For maximum effect, the vent-a-hood should be larger than the cooking area and should reach to the ceiling.

The current trends for bathrooms are spacious and functional with all the latest technology, including multiple shower heads, body sprays, air jetted whirl pool bathtubs, heated floors and defogging mirrors. Adding any of these features helps fashion a spa-like sanctuary to come home to at the end of a busy day.

Having large showers with benches and grand soaking tubs are very desirable and allow the opportunity to show off beautiful tile designs. I prefer to use natural materials like large travertine or limestone tiles on the floors and walls with minimal grout lines to create a clean open space. Then you can accent with glass or metallic tiles to achieve a custom design. Installing a frameless shower door allows you to keep the wet area contained without closing up the space with the traditional bulky metal shower frames.

Granite and marble are the most popular materials used for the vanity countertops.

Onyx, another countertop material, can be lit up underneath to create a romantic glow. Warm colored woods are now being used more as tub decks and countertops along with stone vessel sinks.

When remodeling your bathroom, consider installing taller base cabinetry to reduce the need to bend as much to reach the sink and countertops, or installing a sloped shower entrance instead of traditional thresholds that you would have to step over. Lighting is important too, while recessed cans are great in bathrooms, it is not good for putting on make-up or shaving. In addition to recessed cans, install decorative sconces coming out of the mirror or above the mirror to give you appropriate amount of light.

There is an endless amount of materials and technology for kitchens and baths that can appeal to every homeowner looking for an update or a change. When you are ready to create your dream kitchen or bath, make sure to call a designer to help you with the space planning, materials and colors. A designer can pull it all together and make the remodel more pleasing for you. The possibilities are endless... ↔





“I can’t quite figure where the new begins and the old ends” I thought, we’ve succeeded.”

The Reverend Dr. L. Gregory Jones, Dean, Duke Divinity School



Making the New Look Just Like Old

When Duke University decided to design and build a 45,000 square foot addition to its acclaimed Duke Divinity School, the challenge was staggering: Create a structure that seamlessly completed the cloister that is formed by the Duke Chapel, built in 1926 and the “New Divinity,” wing, erected in 1970, and the open loggia linking it to the original Divinity building.

As Dr. Jones indicated, “The design and construction team succeeded, a fact that was reinforced when the Marble Institute of America presented Rugo Stone, LLC, of Lorton, Virginia, the project stone fabricator and installer, with an Award of Merit in its prestigious Pinnacle Awards competition.”

The Duke Divinity School addition reflects an age of skilled stone carvers of native materials. The design of the addition takes advantage of a sloped site with three terraced floors. The upper and middle levels of the addition align with the first and basement floors of the Old and New Divinity

buildings, with ramps and stairs providing the connection.

Months before installation, stone masons from Rugo Stone worked in Duke’s own Hillsborough quarry preparing thousands of linear feet of precise, right angle building corners required by the design’s complex geometry. In all, over one thousand tons of Duke stone was delivered for installation of nearly 15,000 square feet of cladding.

However, the most intriguing aspect of this historically accurate architectural gem is all in smooth finished Indiana Limestone: twelve delicate arches, decorative bands, carved wall copings, and, of course, the twelve historically accurate ornamental finials. These were created by master carvers in the same Rustic Buff Indiana Limestone as the original buildings. Forty-eight truckloads were required for the 380 tons that were quarried and processed into 2,100 flawlessly installed individual pieces. Each finial alone necessitated 280 hours of shop labor to

replicate plaster models which themselves were created from castings of in-place finials existing on campus.

In addition to many Indiana Limestone window surround elements and arch trim, another interesting historical twist was added by Rugo Stone for interior applications of stone. Originally specified in a domestic slate, approximately 4,000 square-feet of stone, flooring steps and sills and 1,100 linear feet of base were supplied and installed by Rugo’s masons with traditional Pietra Serena stone from Italy. This material is the traditional building stone of Florence and historical texts state that the great artist Michelangelo himself toiled in his youth as a quarry worker in the Pietra Serena quarries.

In addition to Rugo Stone, other key team members included Hartman-Cox Architects, Skansa USA, general contractor, and Bybee Stone Company, Indiana Limestone supplier and fabricator. <=>





Exotic Stones

Definitely for those who want something very different

One of the things very alluring about natural stones, such as marble and granite, is that you can travel the world and never find two pieces exactly alike. That literally makes your stone installation one of a kind.

While less than 100 granite and marble varieties generally make up the color pallet from which U.S. consumers select their kitchen and bath stones, there are literally thousands of potential stone varieties when you parlay color and graining.

If you are looking for stones that are truly unique and generally pretty pricey, exotic stones could fill the bill.

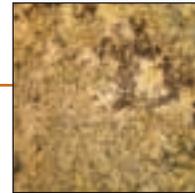
“Exotic can be used to describe a multitude of different stones, depending upon the customer,” said Mark Shedrofsky of Stone Source of New York, a major U.S. stone supplier. “Some clients want the most dramatic, unusual and expensive

stone, and to satisfy these people, we need to think about Onyx, sodalite, quartz and agates. These stones are easily identified as exotic by their captivating opulence and by their high price tag.”

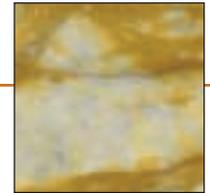
“When other clients are thinking exotic, they have in a very unique selection of common marble or granite in mind. But, the one-of-a-kind appearance is exotic and appealing because it fits a design or sometimes the stone just ‘speaks’ to a client.”

Shedrofsky says some exotic stones are neither dramatic nor one of a kind, but the stone is exotic because it is not very well-known.

“Sometimes these stones are rather common in the country where they are quarried, but in our market these stones have yet to make much of an appearance,” he explained. “Some of the rocks can be subtle and elegant. At first glance they



Giallo beach



Yellow symphony



Paonazetto



Crow's foot schist



Brulee onyx



Dune



may not fit the common description of exotic, but when the job is finished and the project is both unique as well as a striking success, the stone is every bit deserving of the description 'exotic.' Imagine a Zen-like bathroom made of simple charcoal colored basalt, with subtle markings and shading. To me, this can be considered mysterious and exotic."

Darlene Spezzi, owner and president of Mystic Granite and Marble of Orlando, Florida, one of the southeast's largest stone distributors, has traveled the world looking for unique stones that qualify as exotic. In a recent tour of her Orlando indoor warehouse, she unblushingly showed magnificent slabs with a price tag of \$22,000 each, which means that the stone alone for a kitchen might run upwards of \$100,000, without fabrication. That's the really high end of the spectrum. Spezzi

says exotics are determined by stone quality and availability.

"They are usually harder to quarry than the more standard materials and there may be only a limited quantity of that type of stone in the quarry," she said. "Location of the quarry and the difficulty in reaching the stone way up in a mountain are factors. Exotic stones are usually harder than traditional stone and may take twice as long to cut, which adds to the cost."

"Materials can become exotic if they become less abundant. A major factor in determining the price is how rare the stone is. Excellent exotic stones can range in price from \$100 to \$400 per square foot, but can be worth every penny of it in terms of the finished product." Spezzi said.

The countries that produce the most exotic stones include Madagascar, The Ukraine, Russia, Finland, Pakistan, Brazil, Ireland, Australia, Sri Lanka and Italy. Shedrofsky said picking the right fabricator is as important as selecting the right stone.

"Working exotic stones can be difficult," he said. "Each stone will behave differently and the learning curve can be frustrating and expensive to overcome. While most high quality fabricators are familiar with working some exotic stones, no shop can claim they have mastered each and every one, especially with new exotic stones appearing every year. An experienced fabricator will typically realize the unique characteristics of a stone and then have the experience necessary to research and learn before beginning the job." <>



Q & A with Chuck Muehlbauer



Chuck Muehlbauer, Technical Director
Marble Institute of America

Q: Must I always use a Marble Institute of America (MIA) or Tile Council of America (TCA) recommended method to install tile flooring? My installer is proposing a method that is not shown by either association, but he says he has used it before and had good success with it.

A: There are floor installations throughout the country that do not comply with either MIA or TCA recommendations. In some cases, the methods used demonstrate reliable and repeatable performance. It is even possible that some of these methods will someday be incorporated into the documented installation methods. In many cases, however, the method has only proven to demonstrate sufficient performance in one installation, and only for a limited period of time. A slight change in one of the installation variables (i.e. stone type, span, subfloor/underlayment, traffic, etc.), or simply increased time in service could result in a failure of the installation. Therefore, we do not encourage installers to invent their own systems of installation. Using a non-standard method of installation places much greater liability on the shoulders of the designer and installer should a failure occur.

Q: We're installing stone tiles where part of our substrate is concrete slab and part of our substrate is wood frame. Are there any special considerations for this type of installation?

A: Yes, the two areas must be treated as separate projects. The thin-set adhesive used should be one that is approved for the particular substrate, which could mean that two different thin-set adhesives must be used. There must be a movement joint directly over the transition from concrete to wood frame. Care should be taken to rake this joint clean, ensuring that no rigid material bridges this joint. Fill the joint with a construction joint sealant that has adequate extension, compression, and shear movement capabilities to accommodate the anticipated movement between the two substrates. If a sealant with adequate movement capability cannot be sourced, the width of the joint must be increased to allow the sealant to perform.

Q: I cannot find information on the flexural strength or modulus of rupture for a stone tile that I'd like to use in my project. Shouldn't the supplier have this information available?

A: When stones are used in cladding, load bearing pavement, or other structural roles, the supplier should absolutely have this information available. In the case of a stone tile, we do not

consider the tile to be a structural element of the assembly. The tile provides abrasion resistance and aesthetic contribution only. When used in tile thicknesses, even the strongest of stones would crack if not properly bedded over an adequately rigid substrate. The bending strength of the stone won't really make much difference in this application.

Q: I see a reference to "blending stones" in the MIA Dimension Stone Manual. What exactly does this mean?

A: The term "blending" is most often associated with stone tile applications. The concept of field blending results from the natural color variation found from slab to slab and from block to block. In the production and packaging of stone tiles, stones within one box, or within consecutive boxes, tend not to include the full color range of the shipment. If the tiles are set sequentially as they come from the boxes, the result is often a patchwork looking floor where 10 or 20 tiles sharply contrast the next 10 or 20 tiles. The recommendation is that the installer randomly takes tiles from five or more boxes on site, so the entire floor is "blended" with the full range of the tile color found in every region of the floor.

Q: What causes the "pits" in a granite? Does the presence of pits make it difficult to clean the surface?

A: Pits occur in most granites and granite-like materials, and are generally the result of mica minerals, most commonly biotite, being "plucked" from the slab during sawing or finishing processes. The mica family of minerals are softer than most of the surrounding minerals and are of a flaky composition, allowing this plucking activity to occur. This is not considered to be a defect in the stone, nor is it considered to make the stone unsuitable for countertop applications. In MIA sponsored studies, stone slabs were intentionally inoculated with E. Coli bacteria, cleaned with normal household practices, and then analyzed to measure the residual levels of the bacteria. Unsealed, extensively pitted granite was selected as one of the tested surfaces, and there was no statistically significant difference noted in the cleanability of it versus other stone surfaces. We do recommend that when stones with significant pitting are sold that the customer's attention be called to the presence of the pits during the selection process. Generally, the pits are much more noticeable in the finished installation, where the slabs are horizontally positioned and under better lighting levels than when viewed in the warehouse.

Q: What is the temperature limit for hot pots or pans being placed directly on a stone countertop?

A: The MIA recommends that trivets be used between any hot pans and natural stone surfaces. The absolute temperature of the cookware is not normally a problem, but the thermal gradient, or temperature differential that results in the stone can be a problem. When a hot piece of metal is placed on the stone surface, the stone rapidly heats up in this area. As the temperature of the stone increases, it expands dimensionally. Because only a small area of the stone is at an elevated temperature, only a small portion of the stone slab is expanding, resulting in stresses within the stone slab. Depending on the thermal expansion properties of the stone, the difference in temperatures within the stone, the dimensions and shape of the stone, and the location of the heat application, these stresses can be great enough to initiate a crack.

Q: We installed some countertops in an upper end home, including granite countertops in the laundry room. The homeowners are now complaining of polish deterioration and even etching in the laundry room countertops. I thought nothing would etch granite.

A: Almost nothing. My guess in this case, is that someone who can afford natural stone countertops in their laundry room can also afford to hire a person to do their laundry. If that is the case, the homeowner might not know of everything to which the countertop has been exposed. The chemical equivalent of an "Achilles heel" for granite is HF, or hydrofluoric acid. This is an acid that attacks silicates, even in very low concentrations. HF frequently occurs as a component of rust removers, such as some toilet bowl cleaners and rust spot removers for clothing. Most likely, the countertop got some level of HF exposure due to a rust spot remover having been spilled on the surface. Unfortunately, the only remedy would be to re-grind to the depth of the damage and repolish the stone.

Index of Photographs

Cover

Project Name: Private residence
City: Akron, OH
Designer: Soraya Interiors
Installer: Mike Firlch
Stone Supplier: Stoneworks
Photo Credit:
William H. Webb, Infinity Studio Photography

Page 5

Project Name: Private residence
City: North Canton, Ohio
Architect: AA Luketic and Associates
Designer: Kim Anderson Interior Design Inc.
General Contractor: Gaetano Contractors Inc.
Fabricator: Crown Tile and Marble
Photo Credit:
William H. Webb, Infinity Studio Photography

Page 6

Project Name: Private residence
City: Austin, TX
Installer: Hill Country Granite
Fabricator: Rocky Mountain Stone
Stone Supplier: Rocky Mountain Stone
Table: Selina Gold Limestone

Page 7

Project Name: Private residence
City: Austin, TX
Installer: Hill Country Granite
Fabricator: Rocky Mountain Stone
Stone Supplier: Rocky Mountain Stone
Coffee table: Multicolor Onyx

Page 8

Project Name: Private residence
City: Canton, OH
General Contractor: George Ford Construction
Installer: US Marble & Granite Corp
Fabricator: US Marble & Granite Corp
Stone Supplier: US Marble & Granite Corp
*Material: Copper Canyon.
Floor/Backsplash: Travertine
Behind cooktop: Waterjet, Honey Onyx & Black Absolute
(backsplash designed by Maher Nukta)*

Page 9

Project Name: Private residence
City: Scottsdale, AZ
General Contractor: Kitt Construction Inc.
Installer: Drosky Tile Company
Stone Supplier: Arizona Tile, LLC

Page 11

Project Name: Private residence
City: Austin, TX
Installer: Hill Country Granite
Fabricator: Rocky Mountain Stone
Stone Supplier: Rocky Mountain Stone
*Countertops: Delicatus Granite
Flooring: Jura Limestone*

Page 12

Project Name: Private residence
City: Austin, TX
Designer: Pam Hart
General Contractor: Heyl Homes
Installer: Architectural Tile & Stone
Fabricator: Architectural Tile & Stone
Stone Supplier: Architectural Tile & Stone

Page 13

Project Name: Limestone fireplace
City: Malibu, CA
Designer: Kathryn Designs, Inc.
General Contractor: Smith Bros., Inc.
Installer: Executive Stone, Inc.
Stone Supplier: Texas Quarries

Page 14

Project Name: Cabana
City: Nichols Holls, OK
Designer: Fanny Bolen Interiors
General Contractor: Bailey Contracting
Installer: Southwest Tile & Marble
Fabricator: Southwest Tile & Marble
Photo Credit: Amy McCollom
Countertop: Giallo Beach granite

Page 15

Project Name: Private residence
Designer: Newville Designs
General Contractor: Pacific Management Inc.
Installer: The Stone Company
Fabricator: The Stone Company
Stone Supplier: Marble & Terrazzo Supply
Countertops: Sedna granite

Page 16-17

Project Name: Private residence
City: Clinton, OK
Architect: Howell Associates
Designer: Linda Howell & Associates
General Contractor: Joe D. Hall
Installer: Young Brothers Inc.
Fabricator: Young Brothers Inc.
Stone Supplier: Southwest Tile & Marble
*Countertop: Maduri Gold Granite
Backsplash: Champagne Gold tumbled marble mosaic*

Page 18

Project Name: Private residence
City: North Oklahoma City, OK
Architect: gh2 Gralla Architects, LLC
Designer: Landolina Designs
General Contractor: Gumerson Bailey Associates
Installer: Young Brothers
Fabricator: Young Brothers
Stone Supplier: Southwest Tile & Marble
*Opus Anticato Byzantium Marble Mosaic Medallion
Negro Marquina Marble Mosaics
Dove Royal Marble Mosaics
Rosa Verona Marble Mosaics
Murgiano Marble Mosaics
Giallo Romano Antique Marble*

Page 19

Project Name: Private residence
City: Austin, TX
Installer: Hill Country Granite
Fabricator: Rocky Mountain Stone
Stone Supplier: Rocky Mountain Stone
*Bath top and feature wall: Azul Imperial Quartzite
Floors and shower: Calacatta Marble*

Page 20

Project Name: Private residence
Designer: Kristan Welch-Swanson
General Contractor:
Montelongo Homes and Remodeling
Installer: Alamo Tile and Stone
Stone Supplier: Alamo Tile and Stone

Page 21

Project Name: Private residence
Designer: Kristan Welch-Swanson
General Contractor:
Montelongo Homes and Remodeling
Installer: Alamo Tile and Stone
Stone Supplier: Alamo Tile and Stone

Page 22

Project Name: Private residence
City: New Braunfels, TX
Designer: Kristan Welch-Swanson
General Contractor:
Montelongo Homes and Remodeling
Installer: Alamo Tile and Stone
Stone Supplier: Alamo Tile and Stone

Page 23

Project Name: Private residence
City: Bergheim, TX
Designer: Kristan Welch-Swanson
General Contractor:
Montelongo Homes and Remodeling
Installer: Alamo Tile and Stone
Stone Supplier: Alamo Tile and Stone

Page 24-25

Project Name: Divinity School Addition,
Duke University
City: Durham, NC
Architect: Harman-Cox Architects
General Contractor: Skanska, USA
Installer/Stone Supplier: Rugo Stone, LLC
Fabricator/Stone Supplier: Bybee Stone Company

Page 26

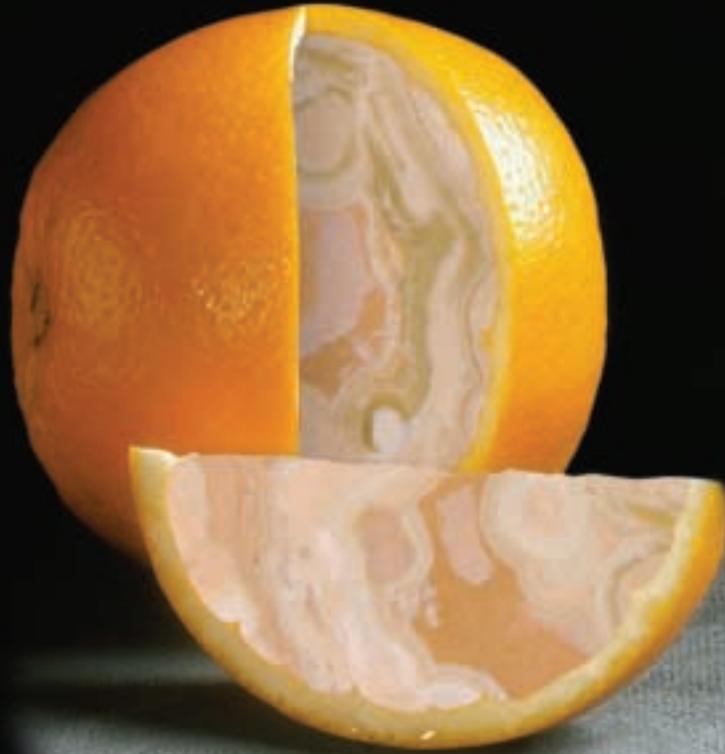
Project Name: Private residence
City: North Oklahoma City, OK
Architect: gh2 Gralla Architects, LLC
Designer: Landolina Designs
General Contractor: Gumerson Bailey Associates
Installer: Southwest Tile & Marble
Fabricator: Southwest Tile & Marble
Photo Credit: David Fitzgerald & Associates
*Tub deck, risers, look-through fireplace:
Peach Travertine mosaic tile.
Walls & fireplace surround: Princess Yellow Travertine
Floor: Princess Yellow Travertine*

Page 27

Project Name: Private residence
City: North Oklahoma City, OK
Architect: gh2 Gralla Architects, LLC
Designer: Landolina Designs
General Contractor: Gumerson Bailey Associates
Installer: Southwest Tile & Marble
Fabricator: Southwest Tile & Marble
Photo Credit: David Fitzgerald & Associates
*Countertop: Giallo Beach Granite
Backsplash: Rhomoid blend harlequin marble mosaic
with coordinating Waterjet Marble border*

Page 28

Project Name: Burna Yacht
City: New Orleans, LA
Designer: Mimi Fitz, Perfect Designs
General Contractor: Trinity Yachts, LLC
Installer: Stone Interiors, LLC
Fabricator: Stone Interiors, LLC
Stone Supplier: Stone Interiors, LLC
Backlit bar: Honey Onyx



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