

BEAUTIFY YOUR HOME WITH

Natural Stone



*Your guide to selection,
care and cleaning
of natural stone.*



NATURAL
STONE
INSTITUTE



This guide has been developed by the Natural Stone Institute (NSI) and Gordon Creek Granite to help you make an educated selection from among the many varieties of natural stone available. Gordon Creek Granite will guide you through selection, care and maintenance. We template and install your natural stone project.

Natural Stone: *Your Best Choice for Lasting Beauty*



Natural stone has been the premium building material of choice since the beginning of time. Quarried from rock beds formed over millions of years, natural stone used in residential and commercial settings comes from all parts of the world.

Natural stone is quarried in the form of huge blocks, some weighing up to 20 tons. These blocks are cut into slabs generally 3/4" or 1-1/4" thick and the desired finish is applied. The slabs are then carefully crated and shipped to fabricators worldwide who process them into the final product.

Whether you're building a new home or remodeling, natural stone offers you unparalleled beauty, permanence, and uniqueness – and adds true value to your home. Because stone is a natural, not manufactured product, no two pieces are exactly alike, which means each finished countertop, wall, mantle, or sill is distinctive. And, unlike synthetic imitations, natural stone can be three-dimensional and used as columns, statuary, balustrades, doorjambes, and even furniture pieces. When used in exterior applications, natural stone has also proven superior to manufactured or engineered products in withstanding the effects of nature.

The Benefits of *Natural Stone*



Classic Beauty • Durability • Sustainable
Easy Maintenance • Superior Quality
Affordability • Increased Home Value

How to Choose the Right Stone for Your Home

You have many options when it comes to beautiful, long-lasting natural stone for your home's interior and exterior: granite, limestone, marble, onyx, sandstone, serpentine, slate, soapstone, travertine & quartzite. Choosing a natural stone for your home is a very personal decision, much like selecting a piece of furniture or artwork. While there are scores of natural stones to consider, some are better suited than others to particular uses in and around the home. This guide, along with your design professional, can help you explore your options and offer guidance on the right stone for your home project.

Factors to Consider in Selection of a Natural Stone:

Color

Natural stones are available in a beautiful spectrum of colors. Colors in granite and marble, for instance, can range from soft beiges and pinks and classic black-and-whites to rich reds, greens, and multi-colors. Marble traditionally features swirls and "veins" of colors, while granite has a flecked or pebbled appearance. Unlike the repetitive uniformity of materials produced by machine or assembly line, natural stone's varied appearance has wonderful character and creates a one-of-a-kind effect everywhere it is used.

Finish

There are several finishes for natural stone and new finishes appear in the market regularly to keep pace with consumer demand. Some examples include: polished, honed, leathered, brushed, and antiqued. Ask your natural stone fabricator or designer about the pros and cons of the different finishes for your project.

Usage

The harder the stone, the more it resists abrasion. Granites are typically the hardest of all stone types. Using a softer stone simply requires the homeowner to use gentler cleaners and more frequent dusting to prevent scratching. Consult with your contractor about the stone you have selected and its intended use.

Marble



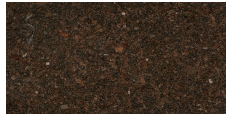
Ideal for foyers, bathrooms, and fireplaces



Marble adds a sophisticated element to your home. Its wonderful appearance, superior engineering characteristics, and ease of maintenance make it a popular choice for countertops, floors, foyers, fireplaces, furniture, showers, thresholds, tub decks, vanities, walls, and windowsills.

Marble should be cared for as you would a fine wood finish. Using coasters on table tops and cleaning up spills immediately will preserve marble's natural beauty and elegance.

Granite



*An excellent choice for kitchen countertops,
and other heavily used surfaces*



Granite, quarried from the mountains of Brazil, the U.S., India, and dozens of other countries, is one of the most popular natural stones on the market.

Available in a striking array of colors, granite's durability and longevity make it ideal for kitchen countertops and other heavily used surfaces, including table tops and floors.

While some synthetic surfaces scratch easily and melt under hot cookware, granite resists heat. Granite offers an impenetrable surface from which bacteria can be easily cleaned and it is typically not affected by citric acid, coffee, tea, alcohol, or wine. It is also nearly impossible to scratch, and with proper cleaning, will not stain under normal use.

A leading consumer magazine recently compared granite with engineered stone, ceramic tile, laminate, butcher block, and other manufactured surfaces. Granite received the highest overall performance rating as a kitchen countertop material.

Because of its exceptional strength, granite is well suited for exterior applications such as cladding, paving, and curbing.

Questions and Answers



Q: *How does natural stone compare to solid surface or other engineered stone?*

A: Natural stone is elegant, durable and each piece has a distinct design that makes it ‘one-of-a-kind.’ That means the stone that you choose is distinctively yours. Manufactured stone products are made with stone fragments held together by an epoxy or resin and colored with pigments. These products can have the look and feel of stone, but they are mass-produced and not ‘one-of-a-kind.’

Q: *Should I seal my natural stone?*

A: Sealing is a common step taken on some stones as an extra precaution against staining. Sealing projects used in the stone industry are “impregnators” which act as a repellent rather than a sealer. Sealing does not make the stone stain proof: rather it makes the stone more stain resistant. The application of impregnating sealers is a common practice. However, when consulting with your stone supplier, you may find that many stones do not require sealing.



Know the Facts



Here are the facts about natural stone:

- Granite ranked #1 in cleanability when compared to six other countertop surfaces including stainless steel. (Based on a 1999 study by the Hospitality Institute of Technology and Management.)
- Natural stone is competitively priced with quartz surface products and often priced lower.
- Marble and Granite have the same level of cleanability as engineered stone. (Based on a 2006 study by the Hospitality Institute of Technology and Management.)
- Natural stone is low maintenance often only requiring warm water, mild dishwashing liquid and a soft cloth to maintain its beauty.
- Granite countertops have never been known to emit dangerous levels of radon gas. Environmental Health and engineering (EHE) recently conducted one of the largest studies of granite countertops, in which no stone was identified as a health risk when used as a countertop surface. EHE also conducted a global review of published studies, and these data show that radon emissions from granite countertops pose no health threat. • Many varieties of natural stone do not need to be sealed, although many are for customers' peace-of-mind.
- Stone is a product of nature and has its own unique qualities that distinguish it from quartz surface materials. The wonderful character that is offered by vein patterns, color variations, and other design characteristics of stone should be taken into consideration when selecting the perfect stone for your project. Discuss these characteristics with your natural stone supplier.

Get to Know Your Stone

The first step in proper stone care and maintenance is to understand your stone's geological classification and composition. This information will help you to identify what cleaning products to use and how best to care for your natural stone.

Natural stone is categorized into three basic geological classifications by their respective formation processes: sedimentary, metamorphic, and igneous. Additionally, stones in each category can be either calcareous or siliceous.

Calcareous stone is composed mainly of calcium carbonate, a chemical compound commonly found in natural stone, shells, and pearls. Calcium carbonate is sensitive to acidic solutions so mild, non-acidic cleaners are recommended.

Siliceous stone, as the term implies, is one compound primarily of silicates, such as quartz, feldspar, or mica. As such, a siliceous stone is generally resistant to most acids found in kitchen settings, although acidic cleaners are still not recommended, as these stones may contain trace levels of minerals that are acid sensitive.

The following chart will be a helpful guide:

	Sedimentary	Metamorphic	Igneous
Calcareous	Limestone Travertine Onyx	Marble Serpentine	
Siliceous	Sandstone	Slate Quartzite Soapstone	Granite

Stone Colors and Appearance

Natural stone is quarried throughout the world in a variety of colors with varying mineral compositions. If you have stone in your home and do not know the type, you may want to consult with a stone professional. In most cases, the type of natural stone can be identified by visible particles at the surface of the stone. The following trips may be helpful:

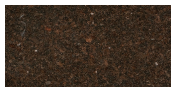


Marble



Onyx

Marbles are traditionally prized for their aesthetic appeal. Some are accentuated by pronounced veining trends and bold colors. Often included in the marble family are serpentines and onyxes.



Granite

Granites typically exhibit small flecks or gains of minerals uniformly distributed throughout the stone. Some “exotic granites” will have veining patterns similar to marbles.



Sandstone

Sandstones vary widely in color due to different minerals and clays found in the stone. Sandstone is typically light gray to yellow or red. Bluestone and brownstone are well known variates of this quartz-based stone group.



Limestone



Travertine

Limestone and travertines are widely used building stones with colors typically light gray, tan, or buff. A distinguishing characteristic of many limestones is the presence of fossils that are frequently visible in the stone surface.



Slate

Slate is dark green, black, gray, dark red or multi-colored. It is most commonly used as a flooring material and for roof tiles and is often distinguished by its distinct cleft texture.



Soapstone

Soapstone may come in a wide range of colors and generally feels smooth to the touch. Due to its high resistance to chemicals and because of its ability to absorb and distribute heat, it is an ideal material for countertops and surrounds for fireplaces and wood stoves.



Quartzite

Quartzites are generally harder and denser than granites with patterns that can resemble veining found in many marbles. Quartzite is a naturally occurring stone that is highly resistant to chemicals and scratches. Quartzite should not be confused with manufactured quartz-based materials.

Stone Finishes

There are several finishes (for example: polished, honed, leathered, and antiques) available for natural stone and new finishes appear in the market regularly to keep pace with consumer demand. The type of finish will not impact the type of cleaning product used.





Consult your
stone supplier for
cleaning product
recommendations
best suited for
your natural stone.

Benefits of Natural Stone

Beautiful
Durable
Proven Sanitary
Affordable
Sustainable
Genuine
Unique
Long Life Cycle
Easy Care

What Others Are Saying



Natural stone is a key part of two of the top 10 elements of

design in the home that are resonating with today's buyers: the desire for low-maintenance/no-maintenance materials and the use of natural materials inside and outside the home.

*Builder Magazine,
National Association of Home Builders*

Homeowners who remodel recover the following percentages of their remodeling costs at resale (note: upscale projects include stone):

- Bathroom remodel-upscale: 92.6%
- Bathroom addition-upscale: 84.3%
- Kitchen remodel-upscale: 79.6%

*Cost vs. Value Report,
Remodeling Magazine*

What Consumers Want for Countertops for Dream Kitchens

- 28% want Granite**
- 20% want Natural Stone**
- 19% want More Counter Space**
- 9% want Other Material**
- 7% want Stainless Steel**
- 3% want Concrete**
- 3% want Solid Surface**

*September 2011 survey of online conversations by the
Research Institute for Cooking & Kitchen Intelligence
(RICKI)*

In a study of materials for kitchen countertops, granite had the highest number of "excellent" ratings of any surface.

Consumer Reports

"If, like us, you define value as 'performance over time', then natural stone should be your material choice and engineered products will never be 'just as good' as natural stone until they can pass the same test of time."

Ed Walsh, Sturgis Materials, Inc.

Consumers using natural stone rave about their selection:

"It's like jewelry for your home."

"We were awestruck by how many beautiful selections were available."

"When compared to other materials, price was comparable and didn't end up being a factor."

"It really is easy to care for."



About the Natural Stone Institute



Since 1944, the Natural Stone Institute (NSI) has served as the authoritative source of information on standards of natural stone workmanship and practice and the suitable application of natural stone products. NSI members include marble, granite, limestone, sandstone, and other natural stone producers and quarriers, fabricators, installers, distributors, and contractors around the world.

NSI is also a leading promoter of stone usage in the commercial and residential marketplaces. NSI produces a number of consumer education materials on the use of natural stone and its proper care and maintenance, and hosts an informative website for consumers and design and construction professionals at www.naturalstoneinstitute.org

Natural Stone Institute Code of Ethics



The fabrication and installation of dimension-cut natural stone should meet NSI and other industry standards as articulated in the NSI *Dimension Stone Design Manual* and other technical publications, along with courteous and professional customer service. To achieve these goals, we pledge adherence to the following principles and policies:

- Our primary objective is a satisfied and happy customer, be it a homeowner, a building owner, or a design professional.
- We will maintain and conduct business in accordance with fair and honorable standards of competition.
- Honesty, integrity, quality, and professionalism guide our firm's business philosophy.
- High standards of health, safety, and product quality will be incorporated into every installation.
- We shall deal fairly with customers, as well as with our employees, our subcontractors, and our suppliers.
- We encourage research to develop new materials, methods of stone fabrication and installation.
- We pledge to assist in the education and product knowledge of our firm's clients and customers (builders, kitchen & bath dealers, architects, designers, and homeowners) before, during, and after installation.
- We shall strive to promote a spirit of cooperation within the industry.

Easy Care Tips

To get the longest life and preserve the beauty of your natural stone, follow these simple tips:

Coasters: Use coasters under all glasses, particularly those containing alcohol or citrus juices.

Trivets: While many stones can withstand heat, the use of trivets or silicone mats is recommended.

Spills: Do not wipe spills. Blot them immediately with a paper towel, then flush the area with water and mild soap and rinse several times. Dry the area thoroughly with a soft cloth. Repeat as necessary.

Cleaning:

- Clean stone surfaces with a neutral cleaner, stone soap, or a mild liquid dishwashing detergent and warm water.



- Similar to any item cleaned in your home, an excessive concentration of cleaner or soap may leave a film and cause streaks. Follow manufacturer recommendations.
- For best results, use a clean rag mop on floors and use a soft cloth for other surfaces.
- Rinse the surface thoroughly after washing with the soap solution and dry with a soft cloth.
- Change the rinse water frequently.
- In the bath or other wet areas, soap scum can be minimized by using a squeegee after each use. To remove soap scum, use a non-acidic soap scum remover or a solution of ammonia and water (about 1/2 cup ammonia to a gallon of water). Frequent or over-use of ammonia solution may eventually dull the surface of some stone types.
- In outdoor pool, patio, or hot tub areas, flush with clear water and use a mild bleach solution to remove algae or moss.

Cleaning Products:

- Many suppliers offer products used for stone cleaning.
- Products containing lemon, vinegar, or other acids may dull or etch calcareous stones.
- Scouring powders or creams often contain abrasives that may scratch certain stones.
- Many commercially available rust removers (laundry rust stain removers, toilet bowl cleaners) contain trace levels of hydrofluoric acid (HF). This acid attacks silicates in addition to other minerals. All stones, including granite and quartzite, will be attacked if exposed to HF.
- Do not mix ammonia and bleach. This combination creates a toxic and lethal gas.

Sealing

Sealing is a common step taken on stones as an extra precaution against staining. In fact, the sealing products used in a stone industry are “impregnators” which do not actually seal the stone, but more correctly act as a repellent rather than sealers. Sealing does not make the stone stain proof: rather, it makes the stone more stain resistant.

When consulting with your stone supplier, you may find that many stones do not require sealing. However, applying an impregnating sealer is a common practice.

When considering sealing, remember that sealing the stones does not make the stone stain proof. It makes it more resistant to staining.

If a sealer is applied in a food preparation area, be sure that it is non-toxic and safe for use.

Consult with your supplier or sealing manufacturer specific to the type of sealer and frequency of use recommended.

Stain Identification Tips

Identifying the type of stain on the stone surface is the key to removing it. Stains can be oil based, organic, metallic, biological, ink based, paint based, or acid based. If you don't know what caused the stain, consider likely staining agents that may have been present. Here are some questions to consider:

Where is the Stain Located?

- Is it near a plant, a food service area, or an area where cosmetics are used?
- What color is it?
- What is the shape or pattern?
- What occurs in the area around the stain?

What Type of Stain is it?

The following sections describe the types of stains you may have to deal with and the appropriate household chemicals to use and how to prepare and apply a poultice to remove the stain.

Oil-based

(grease, plumbers' putty, tar, cooking oil, milk, cosmetics)

An oil-based stain will darken the stone and normally must be chemically dissolved and removed using a poultice to lift out the oils. Pre-mixed poultices are commercially available and work well, but may require multiple applications for maximum effectiveness.

Organic

(coffee, tea, wine, fruit, tobacco, paper, food, urine, leaves, bark, bird droppings)

May cause a pinkish-brown stain and may disappear after the source of the stain has been removed. Outdoors, with the sources removed, sun and rain will generally bleach out the stains. Indoors, clean with 12% hydrogen peroxide (hair bleaching strength) and a few drops of ammonia.

Metal

(iron, rust, copper, bronze)

Iron or rust stains are orange to brown in color and follow the shape of the staining object such as nails, bolts, screws, cans, flower pots, or metal furniture. Copper and bronze stains appear as green or muddy-brown and result from the action of moisture on nearby or embedded bronze, copper, or brass items. Metal stains must be removed with a poultice. Consult a stone professional, or visit www.naturalstoneinstitute.org/consumers/poultices/. Deep-seated, rusty stains are extremely difficult to remove and the stone may be permanently stained.

Biological

(algae, mildew, lichens, moss, fungi)

Clean with diluted cleaning solution. Use a 1/2 cup of any of the following: ammonia, bleach, or hydrogen peroxide and a gallon of water. Reminder: do not mix bleach and ammonia.

Ink

(magic marker, pen, ink)

On light colored stones, clean with bleach or hydrogen peroxide. On dark colored stones, clean with lacquer thinner or acetone.

Paint

Small amounts can be removed with lacquer thinner or scraped off carefully with a razor blade. Heavy paint coverage should be removed only with a commercial "heavy liquid" paint stripper available from hardware stores and paint centers. These strippers normally contain caustic soda or lye. Do not use acids or flame tools to strip paint from stone. Paint strippers can etch the surface of the stones; repolishing may be necessary. Follow the manufacturer's directions for use of these products, and flush the area thoroughly with clean water. Protect yourself with rubber gloves and eye protection, and work in a well-ventilated area. Use only wood or plastic scrapers for removing the sludge and curdled paint. Normally, latex and acrylic paints will not cause staining. Oil-based paints, linseed oil, putty, caulks, and sealants may cause oily stains. Refer to the section on oil-based stains.

Water Spots and Rings

(surface accumulation of hard water)

Buff with dry 0000 steel wool.

Fire and Smoke Damage

Older stones and smoke or fire-stained fireplaces may require a thorough cleaning. When the smoke is removed, there may also be some etching (due to carbonic & other acids in smoke). Commercially available "smoke removers" may save time and effort.

Etch Marks

(caused by acids left on the surface of the stone)

Some materials will etch the finish but not leave a stain. Others will both etch and stain. Contact your stone dealer or call a professional stone restorer for refinishing or repolishing etched areas.

Efflorescence

(a white powder that may appear on the surface of the stone)

This is caused by the deposition of mineral salts carried by water from below the surface of the stone. When the water evaporates, it leaves the powdery substance. If the installation is new, dust mop or vacuum the powder.

You may have to do this several times as the stone dries out. Do not use water to remove the powder; it will only temporarily disappear. If the problem persists, contact your installer to help identify and remove the cause of the moisture.

Scratches and Nicks

Slight surface scratches may be buffed with dry 0000 steel wool. Deeper scratches and nicks in the surface of the stone should be repaired and repolished by a professional.

Easy to Clean and Maintain

Call a professional stone supplier, installer, or restoration specialist for problems that appear too difficult to handle.





www.usenaturalstone.org



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