



**eurocobble<sup>®</sup>**

engineered modular paving

# eurocobble®

Our standard stone is called porphyry. A familiar name in Europe where it is quarried, porphyry is a both fine and coarse grained almost impervious rock. Its unique and subtly variegated colors are the result of the alternate flowing and cooling of magma, over two hundred seventy million years ago, during the pre-history of the Alps.

Porphyry is superior to other granites in terms of load resistance, bending, shock, compression and particularly, compression combined with extreme variations in temperature. Its resistance to break-age actually increases after repeated freezing.

As assembled in our modules, the top of each stone is its natural face. It is flat and has a roughened slip resistant texture. To preserve traditional presentation, the edges are split rather than sawn. The cobblestones are then combined by EUROCOBBLE with a rigid matrix to form modules of various shapes and sizes for obvious advantages during installation.

The completed modules are crated, loaded into ocean containers and shipped to jobsites worldwide on a closely controlled schedule.



Porphyry slabs (A) are brought from the quarries and selected by color and thickness to assure basic uniformity per project. The slabs are reduced to cobblestone sizes by means of guillotine cutting (B) to retain the natural look of the material. The stones are sorted by color and size for each module and amassed (C) for production. Skilled hands assemble the cobblestones face side down, into module form (D) and pour the joining matrix on what will be the underside of the module. The modules are cured (E), inspected during the quality control process (F), and finally crated (G) for container shipment and delivery to the jobsite.



front cover:

Financial District Streetscape+Security Project, Phase II, Wall Street view to west.  
Client: New York City Economic Development Corporation  
Quennell Rothschild & Partners LLP / Rogers Marvel Architects, LLP photo: Paul Warchol



The above photograph shows a custom fabrication of SYSTEM MILANO for this 2 1/4 mile flush median in Phoenix, Arizona. Gruen Associates, Architects and Planners specified a highly textured split face stone, in desert colors, for this civic project.

**eurocobble**<sup>®</sup> is authentic European cobblestone that has been preassembled into modular form to facilitate transport and installation. From a very particular area of the Italian Alps we extract stone from quarries that have supplied the streets of the Continent for centuries. Cobbles are guillotined to size from granite slabs exactly as they were in the past and then assembled as modules in various design formats, such as squares, fan shapes, and other geometrics. **eurocobble**<sup>®</sup> offers its modules in a variety of colors in our standard stone, porphyry, as well as custom species of granite. The module concept, which has greatly reduced cost of installation, has allowed **eurocobble**<sup>®</sup> to maintain the age-old tradition of masonry craftsmanship.



photo: John Hughel

▲ Nike North Campus Expansion, Beaverton, OR: MILANO GRANDE grey mix porphyry

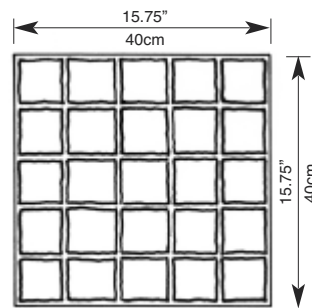
Thompson Vaivoda Architects

# SYSTEM MILANO SYSTEM MILANO GRANDE

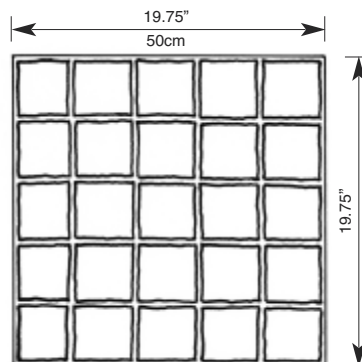
**SYSTEM MILANO** and the larger **SYSTEM MILANO GRANDE** of the same design are based on the concept of square modules, each containing 25 cobblestones in a five by five pattern. Each module is so designed as to provide a linear appearance when installed.

These modules are offered in our standard porphyry and in various custom species of granite.

**SYSTEM MILANO GRANDE** is coordinated by measurements to **SYSTEM FIRENZE** allowing for the square modules to be combined with the curved modules to form various serpentine configurations.



**MILANO™** design to be EUROCOBBLE paving **System Milano** (in specified stone species and color). Each module to be approx. 15.75" x 15.75" (40cm x 40cm) by approx. 2.25 x 2.50" (5.5cm x 6.5cm) thick. Each module to be comprised of 25 individual cobblestones each approx. 2.75" to 3.25" (6cm to 8cm) in size and bonded together in modular form with EUROCOBBLE 85007 mortar matrix and to cover and area of approx. 1.72 square ft (.16m<sup>2</sup>). Natural variegation in color, markings and shape of cobblestones to be expected and acceptable. All as supplied by **EUROCOBBLE**, a division of **MICHAEL VANDEVER ASSOCIATES, INC.**



**MILANO GRANDE™** design to be EUROCOBBLE paving **System Milano Grande** (in specified stone species and color). Each module to be approx. 19.75" x 19.75" (40cm x 40cm) by approx. 2.25 x 2.50" (5.5cm x 6.5cm) thick. Each module to be comprised of 25 individual cobblestones each approx. 3.25" to 3.87" (8cm to 10cm) in size and bonded together in modular form with EUROCOBBLE 85007 mortar matrix and to cover and area of approx. 2.69 square ft (.25m<sup>2</sup>). Natural variegation in color, markings and shape of cobblestones to be expected and acceptable. All as supplied by **EUROCOBBLE**, a division of **MICHAEL VANDEVER ASSOCIATES, INC.**

Additional information concerning custom capabilities are found on page 14.



▲ New York Stock Exchange Streetscape+Security Project, New York, NY:  
 MILANO GRANDE grey mix porphyry  
 Quennell Rothschild & Partners LLP / Rogers Marvel Architects, LLP



▲ Ferrari-Carano Winery, Santa Rosa, CA:  
 MILANO GRANDE red mix porphyry  
 Mitch Cohan, Architect



▲ Nike World Campus, Beaverton, OR:  
 MILANO grey mix porphyry  
 OTAK, Landscape Architects



▲ Peninsula Hotel, Beverly Hills, CA:  
 MILANO and MILANO GRANDE red mix porphyry  
 Hyatt, Raines and Vitek, Landscape Architects

▼ Prospect Park, Brooklyn, NY:  
 MILANO GRANDE grey mix porphyry  
 Quennell Rothschild & Partners LLP, Landscape Architects



▲ Residence, Washington, DC:  
 MILANO grey mix porphyry  
 Rhodeside and Harwell, Landscape Architects

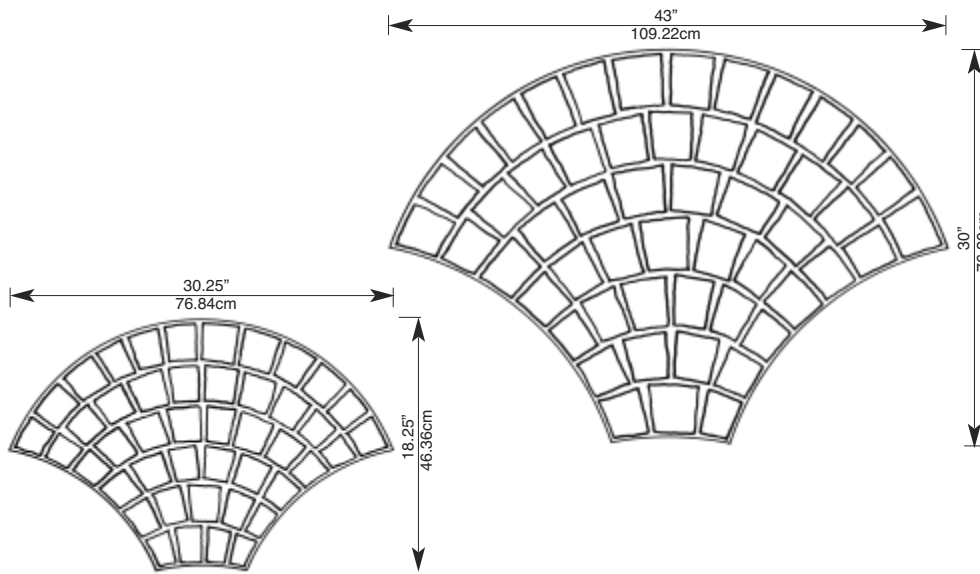




▲ Residence, Malibu, CA: ROMA GRANDE custom yellow Portuguese granite

Cummings, Curley & Associates, Landscape Architects

# SYSTEM ROMA SYSTEM ROMA GRANDE



ROMA™ design to be EUROCOBBLE paving SYSTEM ROMA (in specified stone species and color). Each module to be approx. 30.25" (76.84cm) wide (point to point) by approx. 18.25" (46.36cm) long (crown to base) by approx. 2.25 x 2.50" (5.5cm x 6.5cm) thick. Each module to be comprised of approx. 45 individual cobblestones each approx. 3.25" to 3.87" (8cm to 10cm) in size and bonded together in modular form with EUROCOBBLE 85007 mortar matrix and to cover and area of approx. 2.69 square ft (.25m2). Natural variegation in color, markings and shape of cobblestones to be expected and acceptable. All as supplied by EUROCOBBLE, a division of MICHAEL VANDEVER ASSOCIATES, INC.

ROMA GRANDE™ design to be EUROCOBBLE paving SYSTEM ROMA GRANDE (in specified stone species and color). Each module to be approx. 43" (109.22cm) wide (point to point) by approx. 30" (76.20cm) long (crown to base) by approx. 2.25 x 2.50" (5.5cm x 6.5cm) thick. Each module to be comprised of approx. 51 individual cobblestones each approx. 3.75" to 3.875" (8cm to 10cm) in size and bonded together in modular form with EUROCOBBLE 85007 mortar matrix and to cover and area of approx. 5.38 square ft (.50m2). Natural variegation in color, markings and shape of cobblestones to be expected and acceptable. All as supplied by EUROCOBBLE, a division of MICHAEL VANDEVER ASSOCIATES, INC.

**SYSTEM ROMA** and the larger **SYSTEM ROMA GRANDE** of the same design are perhaps the most recognizable of cobblestone patterns in Europe.

These traditional fan or fishscale shapes are offered in our standard porphyry and in various species of granite.

Each fan module is so designed as to provide a consistent subtle pattern repeat of blending arcs resulting in a seamless appearance of the stone mason's craft.

## TEMPLATES

Templates for ROMA and ROMA GRANDE designs are available upon request on your letterhead in scales from 1/16" to 1/2".

Additional information concerning custom capabilities are found on page 14.



▲ Pactel Headquarters, San Ramon, CA:  
ROMA GRANDE red and grey porphyry, SOM Architects



▲ Residence, Malibu, CA:  
ROMA GRANDE custom yellow granite Cummings, Curley & Associates, Landscape Architects



▲ Keenan Motors, Doylestown, PA:  
ROMA GRANDE grey mix porphyry,

Mann, Hughes Architects



▲ Residence, Weston, MA:  
ROMA grey mix porphyry, Ron Boucher, Landscape Architect



▲ Miramar Sheraton Hotel, Santa Monica, CA:  
ROMA grey mix porphyry

owner specified



▲ Residence, Jackson, WY:  
ROMA grey mix porphyry

owner specified



▲ Palazzo Hotel Casino, Las Vegas NV: VERONA GRANDE quarry mix porphyry

Lifescapes International, Inc., Landscape Architects

# SYSTEM VERONA

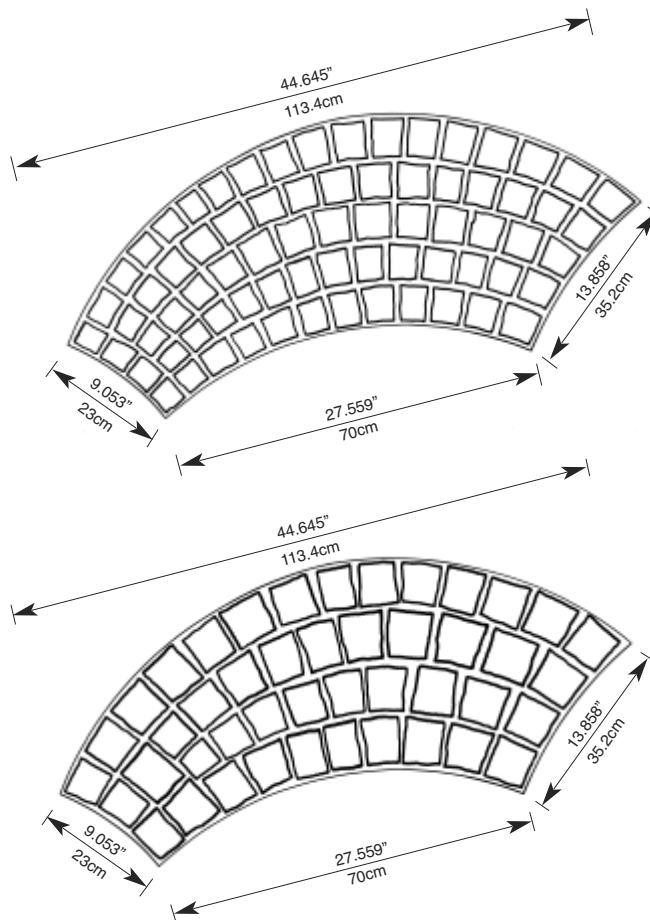
# SYSTEM VERONA GRANDE

**SYSTEMS VERONA** and **VERONA GRANDE** are unique among **eurocobble**® modular systems in that the modules are asymmetrical and interlock in such a manner that they replicate the historic pattern of cobblestones laid in progressive arches still found in streets and plazas throughout Europe.

**SYSTEMS VERONA** and **VERONA GRANDE** modules share the same perimeter dimensions and installation requirements - differing only in scale and quantity of cobblestones within the module.

These modules are offered in our standard porphyry and in various custom species of granite.

Additional information concerning custom capabilities are found on page 14.



VERONA™ design to be EUROCOBBLE paving SYSTEM VERONA (in specified stone species and color). Each module to be approx. 44.75" (113.4cm) wide (point to point) by approx. 13.75" (35.2cm) and 9" (23cm) at the respective ends by approx. 2.25" to 2.5" (5.5cm to 6.5cm) thick. Each module to be comprised of approx. 73 individual cobblestones that are bonded together in modular form with EUROCOBBLE 85007 mortar matrix and to cover and area of approx. 3.77 square ft (.35m<sup>2</sup>). Natural variegation in color, markings and shape of cobblestones to be expected and acceptable. All as supplied by EUROCOBBLE, a division of MICHAEL VANDEVER ASSOCIATES, INC.

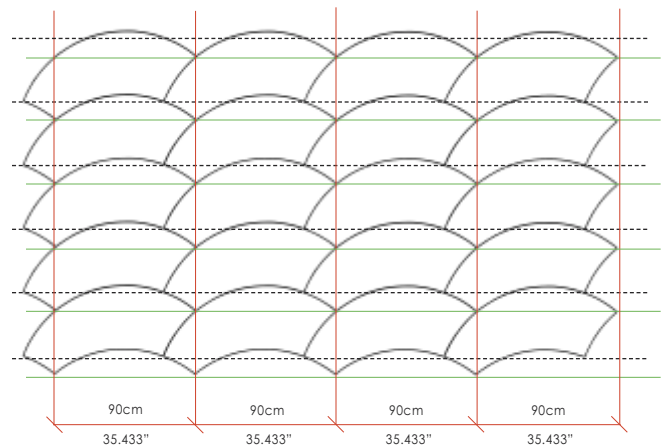
VERONA GRANDE™ design to be EUROCOBBLE paving SYSTEM VERONA GRANDE (in specified stone species and color). Each module to be approx. 44.75" (113.4cm) wide (point to point) by approx. 13.75" (35.2cm) and 9" (23cm) at the respective ends by approx. 2.25" to 2.5" (5.5cm to 6.5cm) thick. Each module to be comprised of approx. 43 individual cobblestones that are bonded together in modular form with EUROCOBBLE 85007 mortar matrix and to cover and area of approx. 3.77 square ft (.35m<sup>2</sup>). Natural variegation in color, markings and shape of cobblestones to be expected and acceptable. All as supplied by EUROCOBBLE, a division of MICHAEL VANDEVER ASSOCIATES, INC.



▲ Residence, Wellsley MA:  
 VERONA GRANDE red mix porphyry  
 Thomas Wirth Associates, Inc., Landscape Architects



▲ Palazzo Hotel Casino, Las Vegas NV:  
 VERONA GRANDE quarry mix porphyry  
 Lifescapes International, Inc., Landscape Architects



VERONA / VERONA GRANDE module installation pattern



▲ A VERONA GRANDE module is moved into place



▲ University of California Irvine, Irvine CA:  
 VERONA quarry mix porphyry  
 Ann Christoph, Landscape Architect



photo: Richard Felber

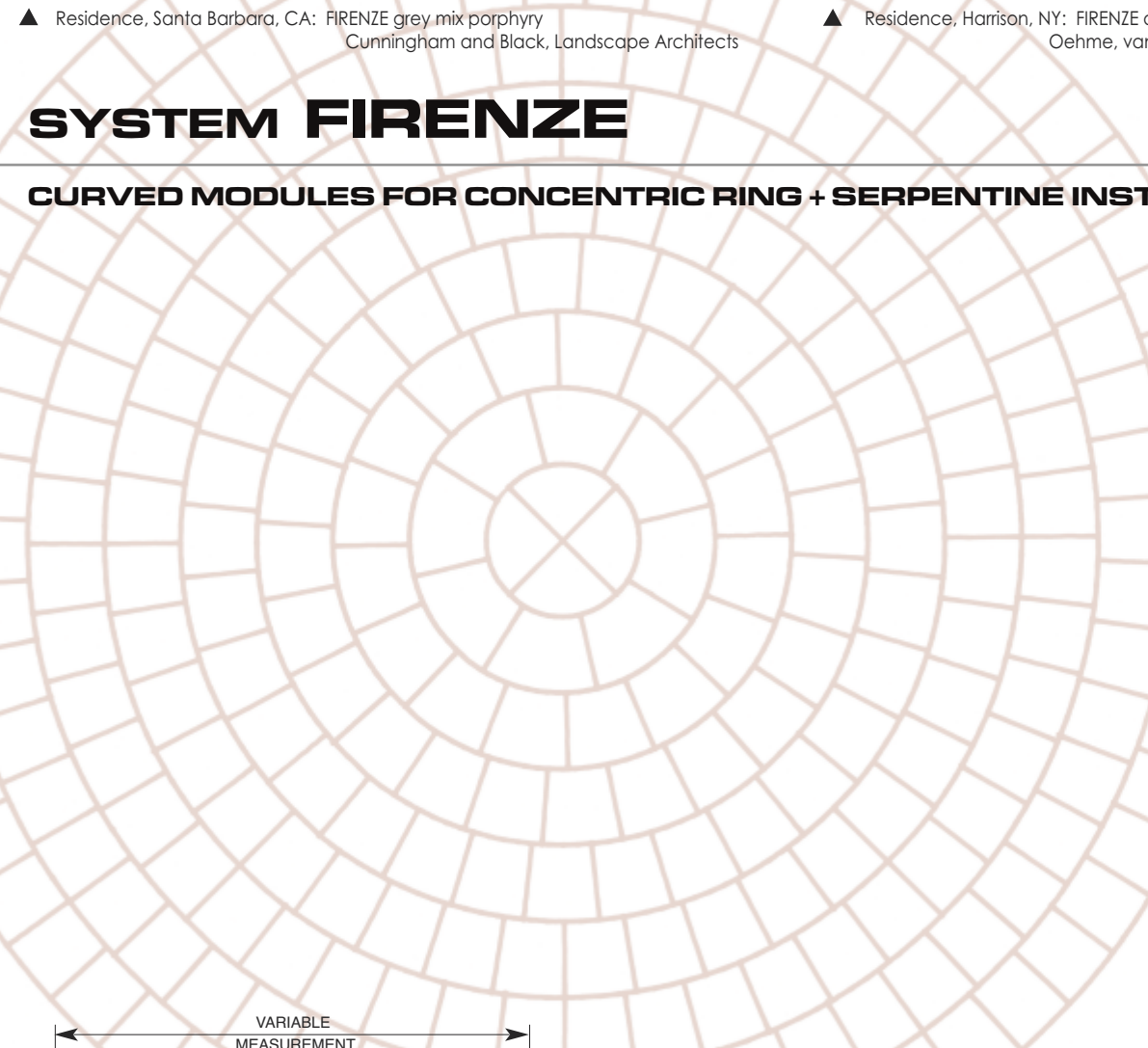


▲ Residence, Santa Barbara, CA: FIRENZE grey mix porphyry  
Cunningham and Black, Landscape Architects

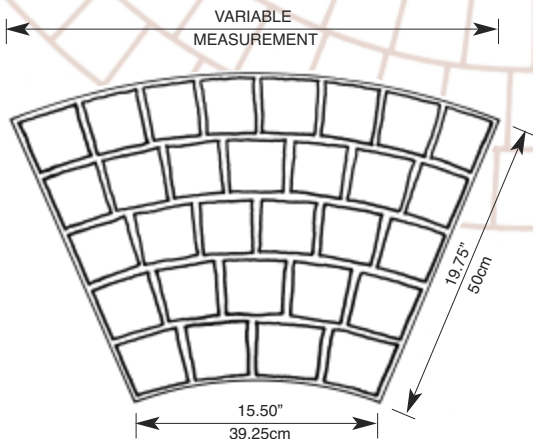
▲ Residence, Harrison, NY: FIRENZE quarry mix porphyry  
Oehme, van Sweden & Associates, Landscape Architects

# SYSTEM FIRENZE

## CURVED MODULES FOR CONCENTRIC RING + SERPENTINE INSTALLATIONS



Most FIRENZE installations involve a circular center feature such as a fountain or planting area. The FIRENZE installation shown below in progress (photos A,B,C) is a driveway having an outside radius of 28 feet and an inside radius (around planting) of 8 feet. The paved area of 2,260 sf, representing 1,008 FIRENZE Modules was installed by a crew of 5 (2 mechanics, 3 helpers) in just three work days.



FIRENZE™ design to be EUROCOBBLE paving SYSTEM FIRENZE (in specified stone species and color). Each module to be approx. 19.75" on the radial axis and to have an inner arc measuring approx. 15.5" (39.25cm) with the measure of the outer arc determined by its distance from the radius point and to have a thickness of approx 2.25" to 2.50"(5.5cm to 6.5cm). Each module to be comprised of from 20 to 30 individual cobblestones each approx. 3.25" to 3.875" (8cm to 10cm) in size and bonded together in modular form with EUROCOBBLE 85007 mortar matrix and to cover an area of approx. 2.13 square ft (.19m<sup>2</sup>). Natural variegation in color, markings and shape of cobblestones to be expected and acceptable. All as supplied by EUROCOBBLE, a division of MICHAEL VANDEVER ASSOCIATES, INC.



**SYSTEM FIRENZE** is a radial modular system using ring sector shaped modules to create concentric rings of cobblestone around fountains or parking areas, or to form full\* circles of any diameter. Each concentric ring measures 20" (50cm) on the radial axis between its inner arc and outer arc.

**SYSTEM FIRENZE** module measurements are consistent with those of our **SYSTEM MILANO GRANDE** allowing the curved modules to be combined with the square modules to form various serpentine configurations.

Please inquire further for details and specifications as determined by your design requirements.

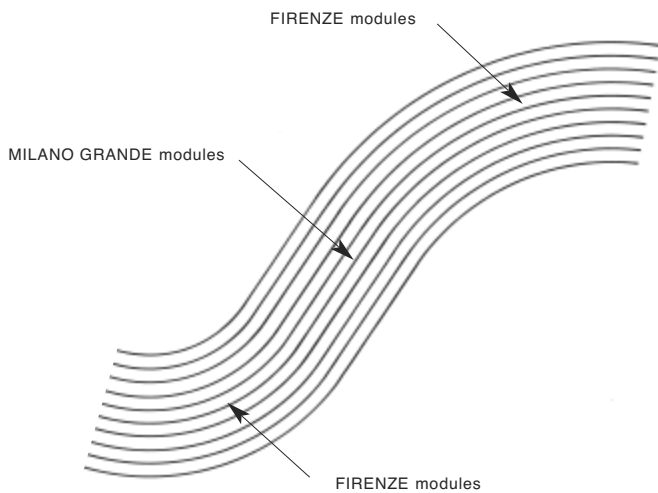
\* The center of full circles would be formed with four quarter-round modules.

Additional information concerning custom capabilities are found on page 14.

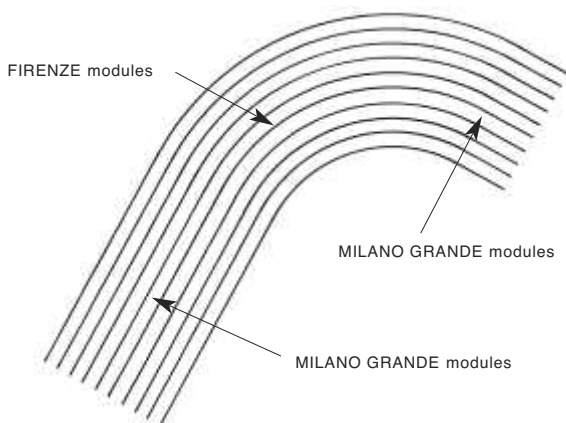


▲ Residence, Reading, PA: Serpentine Drive  
FIRENZE + MILANO GRANDE grey mix porphyry

Kallman, McKinnell & Wood, Landscape Architects



▲ The illustration above shows where rows of FIRENZE and MILANO GRANDE modules meet to form serpentine configurations. Some single stones may be handset at transitions where required.



▲ Corner installations, as in the illustration above, are accomplished by combining FIRENZE and MILANO GRANDE modules. At the transitions, single stones may be handset where required.



▲ Residence, Beverly Hills, CA: Serpentine Drive  
FIRENZE + MILANO GRANDE red mix porphyry

SWA Group, Landscape Architects

# INSTALLATION

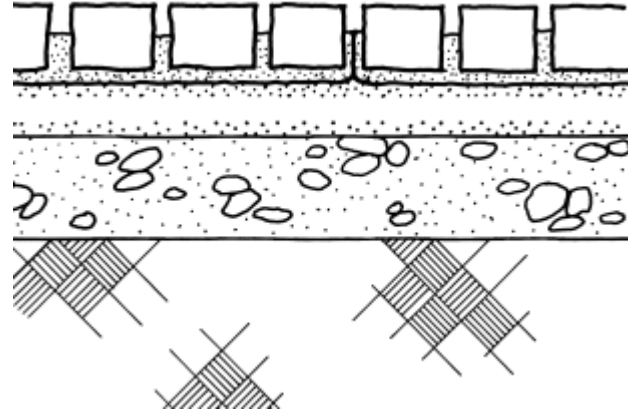
Eurocobble modules are installed by traditional masonry techniques, the most popular being in wet mortar atop a concrete slab. This method is detailed in the cross section to the right and in photos A and C below.

Other methods include the dry pack technique as shown in photo B below.

Successive modules are butted tightly against each other to minimize the spaces between them, resulting in the perception that the area has been hand set without modular definition.

Specific installation instructions are available on request.

TYPICAL INSTALLATION CROSS SECTION



**COBBLESTONE  
MODULES**  
2.25" - 2.50"

**MORTAR**  
1" - 1.50"

**CONCRETE  
SLAB**  
variable

**SUB-STRATE**  
variable



## DETAILING BORDERS AND EDGES

At borders, run ends, or where space exists between the last full module set and adjacent material, loose stones or cut modules are used to complete the established pattern. Individual cobblestones, ordered separately or taken from modules in work at the site can be set by hand in these spaces (photo A) or modules and/or individual stones can be sawn to fit (photo B) using a diamond blade.



## GROUTING

There are recesses surrounding the stones within each module and in the spaces formed between modules; these recesses are intended to be grouted at the site according to your specific requirements...practical and aesthetic.

They can be grouted flush where consideration for high heels or handicap access might be a factor, while in areas where this is not a concern, the grout joints can be depressed to emphasize the character and texture of the cobblestone.

One method is to brush a wet grout into the joints and recesses using a stiff push broom or squeegee (photo C). As the grout begins to harden, old blankets soaked in water, partially wrung out, are dragged across the face of the stones until clean (photo D).

Another method (not shown) calls for a hose held at a shallow angle to clean the face of the stone. This procedure can also be used to deepen the joints. After the grout has completely set up, the area should be washed with ample water. Any remaining grout film on the face of the stone may be removed with a diluted muriatic acid (photo E). Complete grouting techniques are available upon request.



# COLOR SPECIFICATIONS



**GREY MIX I**



**RED MIX II**



**QUARRY MIX III**

## THE COLORS

During the tens of millions of years of its formation, porphyry was enhanced by many natural geological events at the time of the cooling of the Earth's structure.

**eurocobble** porphyry is offered in three standard color mixes, as shown in the typical photo examples above. They are GREY MIX I, RED MIX II, and QUARRY MIX III.

The photos indicate the natural variegation that may appear within modules of any given job order. The three color mixes represent the overall basis of our division of general background colors. Each division has its recognizable identification, a main color direction.

GREY MIX I is primarily warm grey with stones of other colors as part of the mix.

RED MIX II starts with a selection of brownish violet stones, and is combined with various complementary colors.

QUARRY MIX III consists of a collection of stones of many different colors from ochre to rust to violet to brown and mustard. The variations are the cause of the overall effect.

The face of the quarries exhibit color signatures due to the infusion of traces of metals and minerals. Prevalent iron produces stones showing rust colors from oxidation in hydrothermal veins.

Miniscule amounts of other colors such as burgundy, turquoise and ivory often occur from the presence of certain minerals.

These expressions of shading and tints add depth and additional interest to porphyry.

As the stone is quarried, the quarry face is everchanging, exposing new variations of color for extraction.

## THE STONE

Our standard stone, porphyry, is a flat faced igneous rock characterized by conspicuous mineral grains embedded in a fine grained groundmass. Custom stone can be specified for fabrication in our modules with price determined by availability and workability.

## THE MATRIX

The rigid backing of our modules is a special cement matrix designed to hold the assembly together during transport and installation.

When specifying any of the standard color mixes, be aware that there will be a consistency of color range but variance in the selection of stones within a module.

When ordering, colors should be denoted by color choices and Roman numerical designation.

## CUSTOM CAPABILITIES

Information shown on this page deals almost entirely with our standard material, porphyry; however, there are custom considerations which are noteworthy;

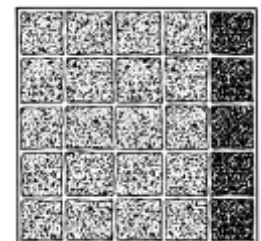
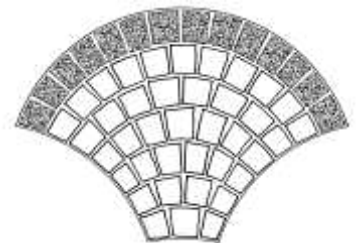
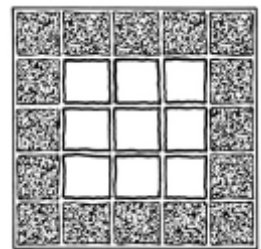
**MATERIAL:** there are other granite species available that can fit out modular systems. To receive particular information, please advise us of the species, color and proposed end usage for the material and we will supply data regarding the feasibility of meeting your requirements.

**FABRICATION:** we can usually adapt our modular system to almost any installation within the parameters of our standards; however, limitations are imposed on modules that do not conform to fabrication sizes and weight restrictions. We will be pleased to see blueprints for analysis.

**DELIVERY;** custom product generally adds to our standard delivery schedule. Inquire at the time of specifying your requirements.

**OTHER PRODUCTS;** items such as matching curbstones, rustic or sawn tiles, stair treads and other configurations can be quoted on request.

The illustrations below indicates how any row of cobblestones can be of contrasting color or species for a variation of pattern.



# GENERAL INFORMATION

## TECHNICAL DATA

### AREA PER MODULE (approx.):

VERONA	3.77 sf (.35m <sup>2</sup> )
VERONA GRANDE	3.77 sf (.35m <sup>2</sup> )
ROMA	2.69 sf (.25m <sup>2</sup> )
ROMA GRANDE	5.38 sf (.50m <sup>2</sup> )
MILANO	1.72 sf (.16m <sup>2</sup> )
MILANO GRANDE	2.69 sf (.25m <sup>2</sup> )
FIRENZE	will vary as circle increases

### TEST DATA FOR PORPHYRY

WEIGHT		25 lbs psf
COMPRESSION	ASTM C 170-50	32,500psi
MODULUS OF RUPTURE	ASTM C 99-52	3,265psi
ABRASIAN RESISTANCE	ASTM C 241-51	80.40
SURFACE FRICTION	ASTM E 303-74	66BNP
WATER ABSORPTION	ASTM C 97-47	1.6pct

## TRANSPORT and DELIVERY

Rather than stock at and ship from a U.S. location, from which surface freight rates could be prohibitive to most parts of the country, we have opted successfully to bring the material from Europe on a per job basis to the nearest ocean port of entry appropriate to a given jobsite. West Coast, East Coast and Gulf ports are thus available.

Preassembled modules are crated at the source and loaded into 20' or 40' ocean containers. These are taken by truck or rail to the appropriate port of departure for ocean transport to the U.S. Our communications network allows us to know the status and location of all orders at any given time. Upon arrival at the closest U.S. port, we arrange for Customs clearance and for transport to the jobsite.

## PACKING

The modules are well cradled in crates on pallets and are normally packed as follows:

VERONA	16 modules per crate each module approx. 3.77 sf (.35m <sup>2</sup> ) = 60.32 sf (5.61m <sup>2</sup> ) per crate
VERONA GRANDE	16 modules per crate each module approx. 3.77 sf (.35m <sup>2</sup> ) = 60.32 sf (5.61m <sup>2</sup> ) per crate
ROMA	18 modules per crate each module approx. 2.69 sf (.25m <sup>2</sup> ) = 48.42 sf (4.50m <sup>2</sup> ) per crate
ROMA GRANDE	16 modules per crate each module approx. 5.38 sf (.50m <sup>2</sup> ) = 86.08 sf (8.00m <sup>2</sup> ) per crate
MILANO	36 modules per crate each module approx. 1.72 sf (.16m <sup>2</sup> ) = 61.92 sf (5.76m <sup>2</sup> ) per crate
MILANO GRANDE	32 modules per crate each module approx. 2.69 sf (.25m <sup>2</sup> ) = 86.08 sf (8.00m <sup>2</sup> ) per crate
FIRENZE	packing and coverage vary with each installation's requirements

EUROCOBBLE is sold by the full crate only and total square footage required should be carried out to the nearest full crate. Weights should be calculated at approx. 25 pounds psf.

## SAMPLES

Small presentation modules are available in standard porphyry colors. These mini-modules are comprised of nine actual size stones, in either small or large scale, bonded with the same mortar matrix as the full size modules. Samples are intended to suggest the character and general coloration of the stone only. The overall variegation of color to be expected is impossible to demonstrate in a few stones and for this reason a visit to a completed installation is urged where practical. These samples are available at a prepaid charge (refundable upon order) to cover the cost of packing and shipping.

4265 Lemp Avenue  
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**eurocobble**  
authentic Italian cobblestone

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