

Building Stone

MAGAZINE

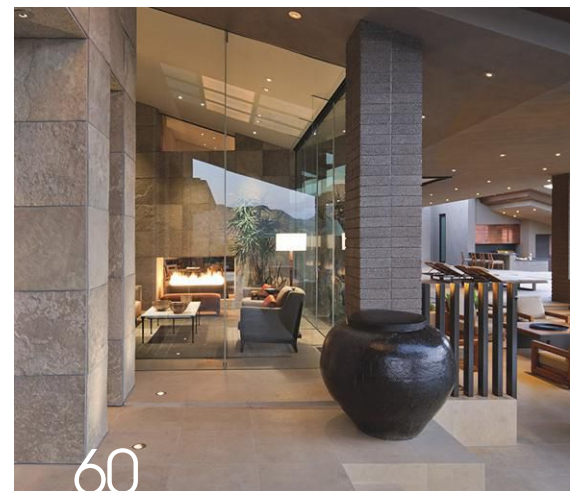
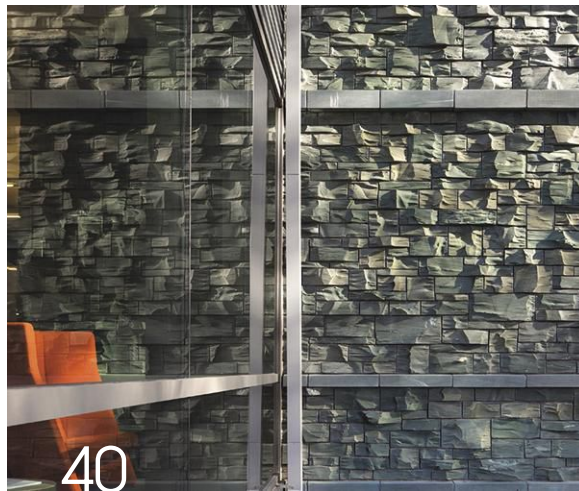
www.buildingstonemagazine.com Fall 2017

DESIGNING A CHURCH INSPIRED BY FAITH

**REPLICATING TURN-OF-THE-CENTURY
ARCHITECTURE**

**BENEFITS AND DESIGN OPTIONS OF
REPURPOSED NATURAL STONE**

IN THIS ISSUE



8 DESIGNING A CHURCH INSPIRED BY FAITH Italian architecture inspires the creation of a family chapel modeled after a church in Assisi

22 REPLICATING TURN-OF-THE-CENTURY ARCHITECTURE Indiana limestone played a crucial role in meeting the design requirements for a newly constructed residence in the heart of Chicago

40 HISTORIC STONE REIMAGINED FOR CAMPUS COURTYARD The new Sawyer Library at Williams College brings together century-old Georgian red brick and limestone with Vermont's textured green-gray slate, creating a cohesive, timeless design

52 SERENITY SET IN STONE The Church of Jesus Christ of Latter-day Saints incorporated local motifs to connect their temple to Indiana's identity

60 ROUNDTABLE: ARCHITECTS REFLECT ON NATURAL STONE In this discussion, several architects share their thoughts and experiences about the use of natural stone in design

78 THE HEALING POWER OF STONES IN GARDENS AND MEMORIALS Natural stone becomes a vehicle for healthy, transformative journeys

84 BUILDING THE FUTURE FROM A PIECE OF THE PAST The benefits and design options are endless when you choose to reuse, repurpose, or recycle historic natural stone into your project

90 TARGETING ARCHITECTS-IN-TRAINING TO FOSTER A LOVE OF NATURAL STONE Two stone companies use quarry and fabrication facility tours to educate and inspire architecture students

IN EVERY ISSUE

6 PRESIDENT'S MESSAGE

97 CALENDAR OF EVENTS/ADVERTISERS INDEX

98 CHRONICLES IN STONE

ON THE COVER

With a great appreciation for the heritage of traditional sacred architecture, a Mid-Atlantic couple was influenced by the Porziuncola of St. Francis near Assisi, Italy, to build their own family chapel. Teamwork and shared motivation for the 702-square-foot project by all involved resulted in the project taking just 19 months. To learn more about the inspiration and design, turn to page 8.





Replicating turn-of-the- century architecture

Indiana limestone played a crucial role in meeting the design requirements for a newly constructed residence in the heart of Chicago

BY JENNIFER RICHINELLI

Photos © Tony Soluri Photography

Working with a young couple, with a growing family, to build their dream home in downtown Chicago, the design team at Liederbach & Graham, Architects LLP had several factors to consider. The couple desired a new house that would give the impression it had stood there since the turn of the last century. It was imperative the

chosen building materials could endure Chicago's harsh winter conditions, as well as the durability required for pets and young children. Additionally, they wanted the character of the home to reflect the husband's love of sailing. With those criteria in mind, the design team selected a palette of Standard Buff Indiana limestone, granite and slate.



A palatial residence in Chicago, IL, features an Standard Buff Indiana limestone exterior, including many carved details such as columns and balustrades.



A planer was used to plane the circular shape of the column and the flutes.

"The husband's childhood spent in Europe and an abiding interest in sailing influenced the character and decorative program of the details," explained

Michael Graham, principal of Liederbach & Graham Architects LLP in Chicago, IL. "We were asked to design a house built to last, with practical durable interior finishes

which would hold up to the demands of four active children. Dimensional stone was selected throughout for its beauty and durability in a cold climate."





A serene setting was created in a glass-covered garden area with a fire pit made from Indiana limestone.

The residence, which encompasses 16,600 square feet of living space, plus a six-car garage, features an exterior dressed with cut Indiana limestone.

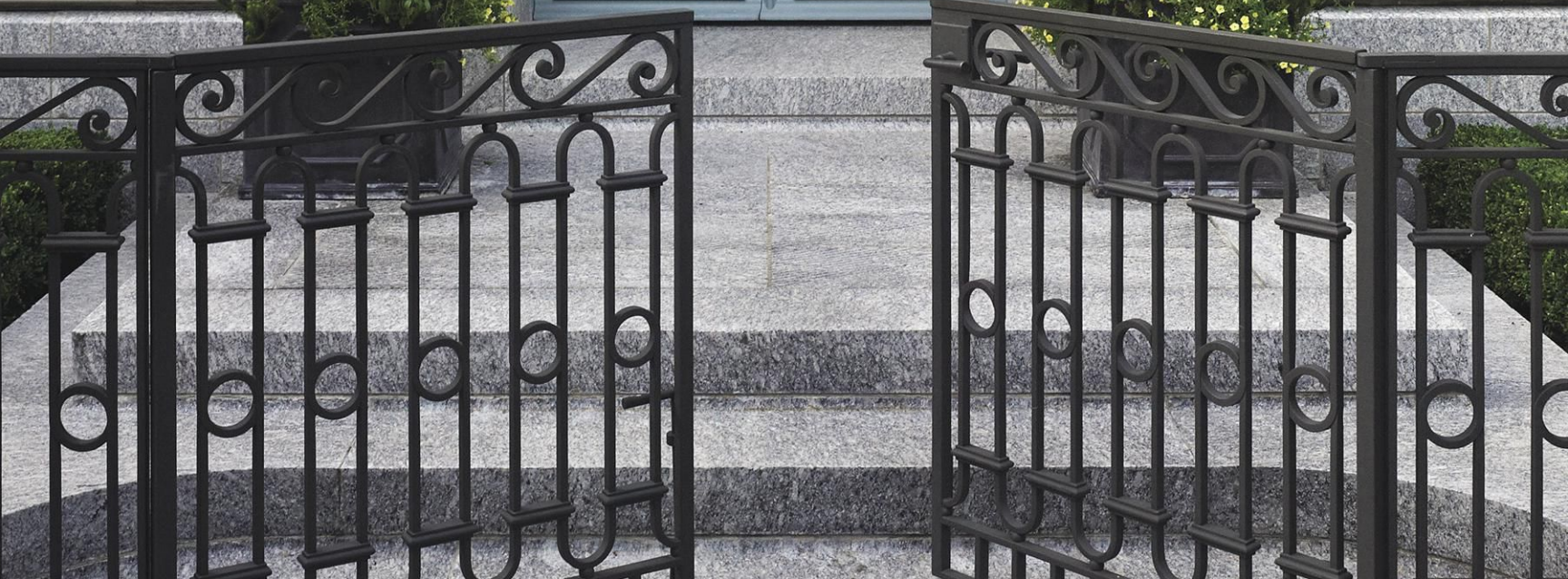
Thicknesses of the material, which was supplied by Independent Limestone Company of Bloomington, IN, range from 5 to 27 inches, and the limestone

was complemented by Buff Norman Hebron brick on a base of Greene County Carolina granite, supplied by The North Carolina Granite Corporation of

The Indiana limestone palette carries to the home's wine cellar, which features a rough-cut accent wall complemented by surrounding brick walls, as well as limestone flooring.



550



Aside from their aesthetic value, Indiana limestone and Greene County Carolina granite were chosen for the home's exterior facade for their ability to withstand the harsh winter climate of Chicago.

Mount Airy, NC. The roof is constructed of Semi-weathering Grey Vermont slate — provided by Evergreen Slate Company in Granville, NY. The slate, which had thickness from $\frac{3}{4}$ of an inch at the eaves to $\frac{3}{8}$ of an inch at the ridge, was selected for the gentle variation it possesses as it oxidizes over time.

"We chose limestone elements on the exterior facade for durability and because they take carving beautifully," said Project Architect Erica Weeder. "Indiana limestone was oriented with natural bed

horizontal. The building meets the ground with granite selected for its salt resistance and impermeability to moisture to better weather our hard Chicago winters.

"Our clients followed our lead in the stone selection," Weeder went on to say. "They appreciated the regional character of the Indiana limestone, which is frequently used in downtown Chicago."

CARVING THE LIMESTONE

At the front of the residence, six fluted Indiana limestone columns are

supported on 27-inch-deep solid stone. The column capitals are a variation on Ionic with a ship's anchor motif at the center. "We took the liberty of reversing the arrows on the egg and dart echinus to reflect the desire that the arrows of the owner's fortunes always point up," explained Weeder.

The rusticated Indiana limestone base is 26 inches deep and the fluted columns measure 26 inches in diameter and 25 feet tall. "Galloy & Van Etten, family owned for more than a century, fabricated the



FABRICATORS OF INDIANA LIMESTONE


Tex·a·Con
Cut Stone

TexaCon Cut Stone

P.O. Box 850, Bloomington, IN 47403
4790 Fluck Mill Road
P: 812.824.3211 • F: 812.824.2989
www.texaconcutstone.com
tnorman@texaconcutstone.com



Poiseul Jaune French limestone with Petit granite flows throughout the formal areas of the residence's ground floor.

cut stone for us," said Weeder, adding the design team provided full-scale drawings of the carved elements.

"We fabricated all the limestone for the entire project," said Tom Van Etten, president of Galloy & Van Etten, Inc. "This includes sills, jambs, headers, arches, belt courses, balustrades, columns, cornice, coping, panels, quoins and piers. All of the stone was cut on its natural bed (horizontal grain), so the stone sits on the building just as it was in the quarry. Thus, you can see the natural grain of the stone. Also, all the

stone on the first floor is load bearing."

According to Van Etten, each column shaft took 80 hours to carve and each cap was completed in 120 hours. In total, Galloy & Van Etten's shop devoted 1,200 total labor hours for the columns.

To fabricate the columns, the limestone block was first cut on a block saw and then the stone was sawn into long bars for the planer to work with, explained Van Etten. The planer was able to shape the circular columns and their flutes. A saw was then used to cut the column to its final height. Finishing touches included

using an air hammer and chisel to cut the entasis and finish the flutes.

Fabrication of the cornice posed an exceptional challenge due to its scale and the complexity of the pieces. "Each piece needed to be 13 feet in length to span from column to column, and they were 5 feet in depth x 1 foot, 4 inches in height," explained Van Etten. "Each piece weighed 14,000 pounds. After slabbing on the block saw, each piece went to the CNC machine, then to a planer, then to the saw and finally to a cutter for the dentils and carvings."



SILOAM STONE, Inc.

Water Features,
Retaining Walls,
Stairways,
Walkways &
Patios, Thin or
Thick Veneer,
Rip-Rap,
Signs, Bridges,
Accent Boulders

NATURAL SANDSTONE
Elegant, Dramatic, Sustainable, Affordable

Courtesy of Wenk & Associates

SILOAM STONE Inc. - Ph: (719) 275-4275
www.siloamstone.com - info@siloamstone.com



To reflect the homeowner's love of the sea, a compass was waterjet cut on the master bath stone floor and a port hole was placed in the wall.