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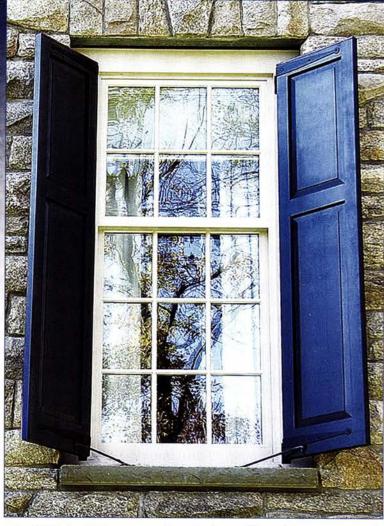
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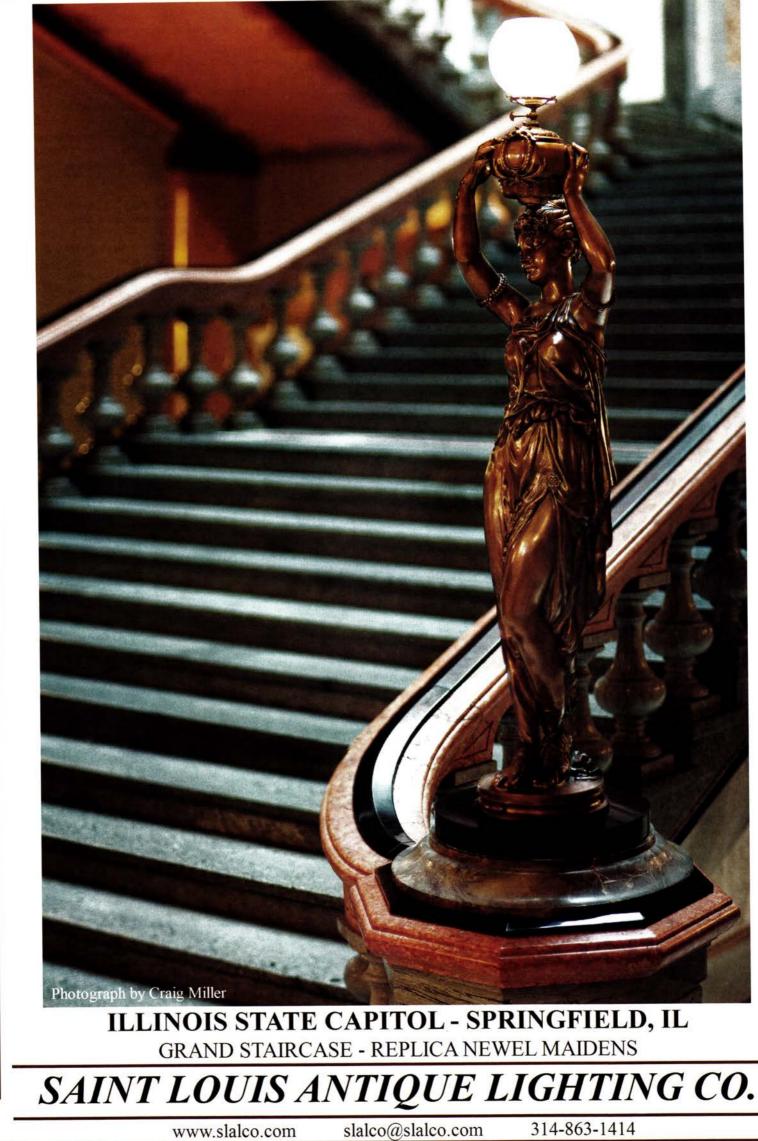
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For Excellence in Traditional Commercial, Institutional & Public Architecture

he 13th annual Palladio Awards competition has recognized 10 architecture firms for outstanding work in traditional design for commercial, institutional, public and residential projects. The goal of the program is to recognize the project teams whose work enhances the beauty and humane qualities of the built environment through creative interpretation and adaptation of design principles developed through thousands of years of architectural tradition.

The awards are named in honor of Andrea Palladio, the Renaissance architect who created modern architecture for his time while using models from the past for inspiration and guidance. The program applies the same criteria that Palladio used in his own work. Projects should meet all of the functional needs of contemporary usage while applying lessons learned from previous generations to create enduring beauty.

The Palladio Awards will be presented at a dinner ceremony during the Traditional Building Conference in July in Boston, MA.

Five awards were also made for residential projects.

The five winning commercial, institutional and public projects are presented on the following pages. The winners in residential design will be published in the July 2014 issue of *Period Homes* magazine. We congratulate all of the winners. For more information on how to enter the 14th annual Palladio Awards program in 2015, go to www.palladioawards.com.

THE JURY

A jury of distinguished design professionals was selected by the editors of *Traditional Building* and *Period Homes* magazines for the 2014 program. The jurors for the commercial, institutional and public architecture projects were:

Stephen T. Ayers, FAIA, LEED AP, Architect of the Capitol

Matthew S. Chalifoux, AIA, principal, Sr. Historic Preservation Expert, Einhorn Yaffee Prescott Architecture & Engineering

Carl Elefante, FAIA, LEED AP 0+M, principal, Quinn Evans Architects

Mary Katherine Lanzillotta, FAIA, LEED AP, partner, Hartman-Cox Architects

THE PALLADIUM

The Palladium is the cast-bronze trophy awarded each year to the winning firms in the Palladio Awards design competition. The trophy is based on a motif that has been in continual use as an architectural enrichment for more than 2,500 years: the Greek anthemion. The anthemion, a highly stylized version of the Greek honeysuckle or palmette plant, has been used through the centuries to decorate everything from the Parthenon to contemporary Classically influenced furniture.

The trophies for the Palladio Awards program are created by Historical Arts & Casting, Inc., of West Jordan, UT. The firm's design studio took the traditional anthemion form and adapted it to create a new ceremonial sculptural shape. The Palladium trophies were then cast from the model in architectural bronze using the traditional lost-wax method.

In creating the Palladium, the artisans at Historical Arts & Casting have exemplified the basic goals of the Palladio Awards program. They've given us a dramatic example of how historic forms can be adapted and used to create beauty in the modern world.



The winners for commercial, institutional and public work are:

RESTORATION & RENOVATION

ZGF Architects, Seattle, WA, for the restoration of the King Street Station, Seattle, WA

NEW DESIGN & CONSTRUCTION – MORE THAN 30,000 SQ.FT. Tsoi/Kobus & Associates, Cambridge, MA, for Stokes Hall at Boston College, Chestnut Hill, MA

NEW DESIGN & CONSTRUCTION

- LESS THAN 30,000 SQ.FT. Archer & Buchanan Architecture, Ltd., West Chester, PA, for Rathburn Hall, Grove City College, Grove City, PA

ADAPTIVE REUSE &/OR SYMPATHETIC ADDITION Voith & Mactavish Architects, LLP, Philadelphia, PA, for The Barn student center at Millbrook School, Millbrook, NY

SPECIAL AWARD

Duncan G. Stroik Architect, LLC, South Bend, IN, for The Cathedral of Saint Paul Organ Case, St. Paul, MN



PROJECT: Restoration of King Street Station, Seattle, WA

ARCHITECT: ZGF Architects, Seattle, WA; Tim Williams, associate partner, project manager; Dave Grant, landscape architect

HISTORIC CONSULTANT: Artifacts Architectural Consulting,

Inc., Tacoma, WA; Michael S. Sullivan, principal

GENERAL CONTRACTOR: Sellen Construction, Seattle, WA; Ron Lamarche, superintendent; Garrett Condel, project manager

LEED: Platinum; Green Building Services, Inc., Portland, OR; Ralph DiNola, principal in charge; Beth Shuck, planner

This story originally appeared in the August 2013 issue of Traditional Building magazine. We are proud to present it again as a 2014 Palladio winner.

Restoration & Renovation WINNER: ZGF ARCHITECTS

On the Right Track

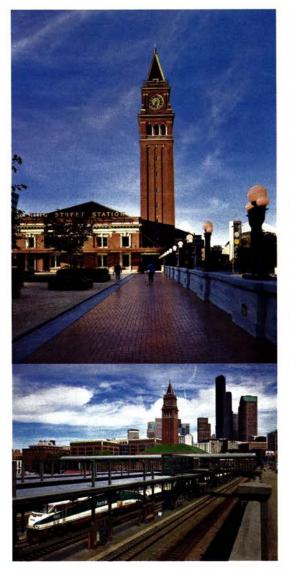
n March 5, 2008, Seattle, WA, made one of the most important investments in its history - and it only cost \$10. The city purchased King Street Station, a national, state and city landmark from Burlington Northern Railroad (now BNSF). Initially the price had been set at \$1, but the city found it couldn't write a check for that amount, so it offered \$10. In spite of the recession that hit the country in 2008, Seattle moved forward with plans to restore the historic station and was able to amass \$50 million for the project.

The 62,400-sq.ft., three-story building (plus another 6,400 sq.ft. for the 242-ft.-tall clock tower) holds a special place in the hearts of the citizens of Seattle. Completed in 1906 and built in a style sometimes called "Railroad Italianate," it was designed by Reed and Stem, the firm that worked with Warren and Wetmore on New York City's Grand Central Station. The brick building with a granite base features a tower modeled after the Campanile de San Marco in Venice.

Like many other historic buildings, King Street Station suffered a mid-century "modernization," starting in 1949 with the installation of an exterior escalator, and going through the mid 60s. All of the ornate vertical plaster was stripped from the waiting room walls up to the level of the new dropped ceiling that was 10 ft. lower than the original. This new ceiling hid the original balcony and second level arcade and punctured holes in the original plaster ceiling. This restoration also stripped the station of its historic lighting, reduced the grand staircase connecting the King Street and Jackson Street levels and added an escalator to the exterior.

"It is one of three transportation hubs in downtown Seattle," says Trevina Wang, King Street Station Program Manager, Seattle Department of Transportation. "It was challenging because it is on the National Register of Historic Landmarks and it is also a city and state landmark. So any alteration had to be reviewed at the federal and local levels. Our goal was to preserve as much of the historic elements as possible and incorporate sustainable features as appropriate without obscuring the historic features. Some of the sustainable elements were hidden by the historic façade."

One of the challenges was keeping the station open and operating

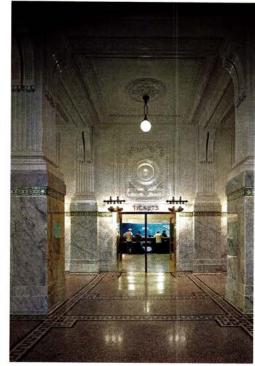




CLOCKWISE FROM LEFT: The King Street Station tower has once again taken its rightful place as an important marker in Seattle's skyline. Photo: Benjamin Benschneider. Restored to its original grandeur under the direction of ZGF Architects, Seattle's King Street Station, seen here from the Jackson Street plaza, serves as a center of the city's transportation hub. It received a LEED Platinum rating. Photo: Benjamin Benschneider. The historic main waiting room with its 34-ft. ceilings and ornate plaster has now been restored to its original beauty. All lighting fixtures in the main waiting room are historic replicas with energy-efficient LED lighting. Photo: Doug Scott The Jackson Street Plaza was formerly a parking lot. Photo: Doug Scott







LEFT: The plaster work on the ceiling and throughout was repaired and reproduced by EverGreene Architectural Arts. Photo: Benjamin Benschneider. ABOVE: The terrazzo flooring was in fairly good condition. It required only rebuffing. Photo: Benjamin Benschneider. BOTTOM ROW, FROM LEFT: The historic main waiting room offered travelers an elegant welcome to the city. Photo: courtesy of Green Building Services. A modernization in the 1960s lowered the ceiling in the main waiting room by 10 ft. and changed the character of the room. Photo: courtesy of Green Building Services. When restoration began, the architects found that holes had been punched in the original plaster ceiling to support the lowered ceiling that was added in the "modernization." Photo: Ralph DiNola, Green Building Services



ing, contributing significantly to the building's LEED Platinum certification. Also contributing to this certifi-

tion was restored to the waiting room. Wang points out that the 67 geowells connected to the ground-source heat pump (supplied and installed by Geo Loop Tec in Seattle) are hidden by the foundation slab of the building.

cation is the fact that natural ventila-

A glass canopy was installed on the north side to let in more light. "Originally the building had glass canopies on all four sides, but they had been replaced with metal. We went back to glass for the north side to maximize natural light," she explains. In addition, solar panels were installed on the canopy on the south side of the building. "They are not prominent and they contribute to the energy efficiency of the building because they get a lot of sunlight," Wang notes.

The building is on an 18-ft. grade with Amtrak located on the first floor at the King Street level while the second floor exits on to Jackson Street. The Jackson Street Plaza, formerly a parking lot, is the roof of the first floor. It is now a public gathering space.

"In addition to the new systems, our renovation removed all of the 1960s additions," explains Tim Williams, associate partner, project manager, ZGF Architects. "This included removing the exterior escalator and the dropped ceiling in the main waiting room, restoring windows, replacing historic light fixtures and re-creating the ornate plaster work in the main waiting room."

A huge portion of the project was adding steel to the structure to protect it from seismic events. "We are located in a zone 4 earthquake zone," Williams points out. "Working with the engineers, we designed a system that preserves the entire original building. People looking at the building today would have no idea so much steel was added." KPFF was the civil engineer for the project, ARUP and Coughlin Porter Lundeen (CPO)

during all of the work. "It is a working train station," says Wang. "It has been open since May, 1906 and we kept it open the whole time throughout construction."

The goal of a LEED Platinum rating was stated from the beginning. "The city was clearly interested in not just meeting city requirements," says Ralph DiNola, principal in charge, Green Building Services. "They knew this would be a real flagship property. We discussed the potential of LEED platinum, and then we held an ecocharrette to determine what sustainability measures would be possible for the project. From the beginning, all of the team members were in alignment in achieving the rating."

The first phase, completed in 2009, involved the roof and the clocks on the clock tower. New green-glazed terra-cotta tile roofing manufactured by the same company that had supplied the original tile, Ludowici Roof Tile, New Lexington, OH, was used for the roof. The four clocks on the tower were repaired by two gentlemen from the National Association of Clock & Watch Collectors, Paul Bellamy and Norm Nelson. "This was challenging because they are both in their 70s and they had to walk up and down all of those stairs every day," says Wang. "We replaced the roof because it was leaking," she adds, "then we hired the design team."

ZGF Architects and Sellen Construction were brought in after the first phase and tasked with upgrading all systems – seismic, electrical, mechanical, plumbing and fire protection – in the entire building and the tower, and with repairing and re-creating the elaborate finishes in the public spaces, especially the main waiting room. "Once the design was completed, we realized that we had to proceed in phases because of limited funding," says Wang.

Completed in 2011, phase 2 involved the installation of a new geothermal system that supplies all of the heating and cooling to the build-





LEFT: A spiral staircase leads up into the clock tower. Photo: Benjamin Benschneider. **ABOVE: Natural ventilation has been returned to the main** waiting room as part of the rehabilitation. This was a significant factor in obtaining the **LEED** platinum rating. Photo: Doug Scott

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For additional photos and other content, see the web version of this article by visiting "The Magazine" on Traditional Building's home page – www.traditional-building.com.

were the structural engineers.

In fact, 67 piles weighing 96 tons were installed inside and outside of the station. They were tied into rebar cages inside the new foundation slabs. And 1,345 tons of steel were installed on the interior, including new columns inserted into the perimeter walls on both sides of the brick-covered historic columns, new steel wall plating, box columns to reinforce the existing structural interior columns and new beams and diaphragm bracing. In addition, new shear walls were added in the main waiting room and steel floor plate were added on levels two and three. The entire clock tower was cross braced and new columns were added on all corners.

While people passing through the station probably won't notice all of the new steel, they are sure to notice the new ornate plasterwork in the grand 8,000-sq.ft. main waiting room with its 34-ft. ceilings. EverGreene Architectural Arts of NYC set up shop in the station and re-created and repaired all of the historic molding in the main waiting room. The work included re-creating all of the vertical plasterwork above the 8-ft. marble wainscoting and repairing and replacing the original ceiling. In many cases, new molds had to be created.

Williams notes that high-gloss paint was used on the plasterwork in the main waiting room. "Although it's not something we would commonly use today, historic black-and-white photographs of the space and research into the original color of the paint, led us to what you see in the main waiting room today, mirroring the original historic finish as precisely as possible," says Williams. To repair the marble wainscot in the main waiting room, ZGF found Carrara marble that was an acceptable match. The original was thought to have come from Alaska, but that was no longer available. A mosaic band within the marble wainscot was restored using glass tile found in Murano, Italy. Mixed-Up Mosaics of NYC prepared the mosaics to match the 1906 pattern.

The windows were repaired, or replaced in some cases, by Bear Wood Windows, of Tacoma, WA. "All of the sashes and frames were old-growth Douglas fir and they were in fairly good shape, but the windows had to be restored," Williams notes. "All of the original windows were restored," says Wang. "We only replaced the aluminum replacement windows. The new windows use thermal pane glass but they have the same look as the original windows."

The historic light fixtures, both interior and exterior, were re-created by Eleek, Inc., Portland, OR. "They are historic in appearance, but they use contemporary LED light sources," Williams points out. "The LED fixtures contribute to energy conservation," Wang adds.

One area that didn't require much restoration was the original terrazzo flooring. "It was largely intact," Williams notes, "requiring only a rebuffing."

On the exterior, the team was able to find salvaged materials for two areas. For one, the glass tile on the pyramid of the tower had originally been manufactured by the same company that provided the roof tile, Ludowici. "The original 100-year-old glass tile contains manganese, so it turns purple as it oxidizes," Williams explains. "An exact match to this 100-year-old glass couldn't be found, and that shape is no longer available. Just as the city was deciding what to do, someone called Ludowici, and said that they had a large quantity of old glass tile in storage and wanted to know if the company was interested in it. So the city of Seattle was able to acquire the tiles from the original manufacturer. They also happened to be 100 years old, so they had oxidized to the same color as the tile on the tower. The stars were aligned so that the station was able to get the tiles to match close to perfectly."

Another area where the stars aligned to provide salvaged material for the exterior was with the granite base. Portions of this granite had been lost when the escalator was added in the mid 60s. "We needed to replace the granite and the original quarry was no longer open," Williams says. "We were struggling to find a stone that would match. During the excavation, we discovered that the foundation stone was an exact match, so we were able to harvest it from the site. It was taken to the shop and cut to fit."

What's the next phase for the historic station? Wang says that the city is soliciting proposals to develop the upper two floors. "It is vacant space now," she notes. "It could be used as office, commercial or retail spaces. These areas don't have elaborate finishes."

Williams notes that what was once called the women's waiting room has not been renovated, and would be an opportunity for a restaurant in the future.

The restored King Street Station

is near the existing light rail and a new street car system is scheduled to be added. In addition, developers are planning to add 900 units of housing and mixed-use development nearby. "The restoration of the station has been somewhat of a catalyst for the neighborhood, giving developers confidence that this is a good area for investment," says Williams. The nearby development is being heralded as the largest transit-oriented development on the West Coast.

"This is a poster child for what often happens to historic buildings," says DiNola. "In the 60s and 70s, they destroyed the aesthetics and historic fabric. Our sensibility about those energy efficient alterations has changed a lot." He adds that historic buildings lend themselves to achieving high LEED ratings because they were designed to be inherently energy efficient, with daylighting and passive strategies. "If you look at the historic photo, you will notice that the lights are not on."

The King Street Station also received LEED points for its location in a dense urban area, and obviously, for being near public transportation, DiNola adds.

"Ten years ago, it was a rundown place." says Williams. "Now it is once again a place of tremendous pride," he states. "People arriving in Seattle can feel the same sense of arrival that they would have felt years ago. And the target of LEED Platinum certification contributes to the city's reputation as one of the country's greenest cities."

ZGF is now moving on to another historic train station restoration, this one in Sacramento, CA.

– Martha McDonald

New Design & Construction – more than 30,000 sq.ft. WINNER: TSOI/KOBUS & ASSOCIATES



PROJECT: Stokes Hall, Boston College, Chestnut Hill, MA

ARCHITECT: Tsoi/Kobus & Associates, Cambridge, MA; Richard L. Kobus, FAIA, FACHA; David Owens, AIA; Kate Wendt, IIDA; Dennis Vigliotte, AIA; John Vinton, AIA; Edward Barnett, IIDA; Yanmin Ji, AIA; Bob Pahl, AIA; Keisy Marquez; Liliana Martinez

LANDSCAPE ARCHITECT: Steven Stimson Associates, Falmouth, MA

CONSTRUCTION MANAGER: Walsh Brothers, Boston, MA

LEED: Silver

This article originally appeared in the October 2013 issue of Traditional Building magazine. We are proud to present it again, as a winner of the 2014 Palladio Award.

Two for One

hen Tsoi/Kobus & Associates of Cambridge, MA, was brought in to design a new humanities building for Boston College in nearby Chestnut Hill, the designers faced a number of significant challenges. The historic environment of the campus called for a sensitive addition, and the program called for a very large building.

The campus is divided into three parts: Upper, Middle and Lower. The historic middle section was originally designed by the Boston firm of Maginnis & Walsh at the turn of the century in the Collegiate Gothic style. David Owens, AIA, principal, is quick to point out that there are many variations of Collegiate Gothic and that Maginnis & Walsh had a significant impact on the style. "Their buildings are great," he says. "We studied all aspects of their work, on and off campus. Maginnis had his own take on Collegiate Gothic, fusing French and English Gothic. He took details from the English and applied them to the French version of freestanding, independent structures. And then he added the vertical element, so it looks more ecclesiastical."

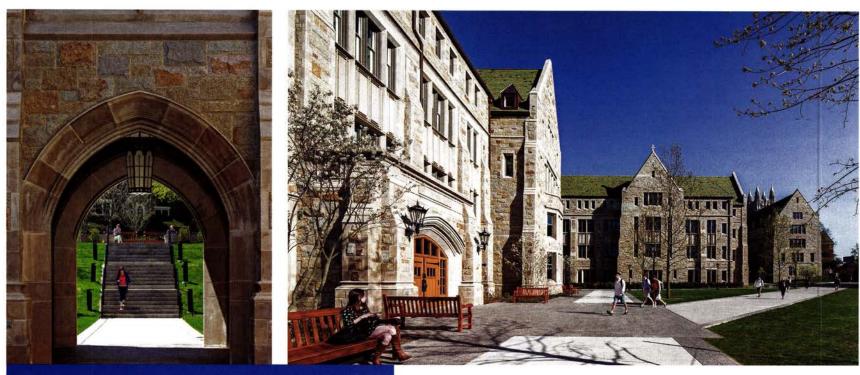
Ecclesiastical was suitable since the college was founded as a Jesuit institution with a "mission to give students the richest possible humanities-based education, to serve as a foundation for the development of generous, thoughtful and inquisitive community members," Owens explains.

The first decision was to follow the Collegiate Gothic style currently used on the campus, to be sensitive to the historic surroundings. "The original buildings are the signature of the campus. Many are on the National Register," Owens notes. "We chose to respect this context in the design of the new building."

The next challenge was the size of the building. The new humanities structure was to be 183,000 sq.ft., to house a variety of programs and a food service area. It would be the largest new building to be added to the campus since Gasson Hall in 1913.

"We spent a number of months working under a previous master plan and we recognized that it wasn't giving us the look that we wanted," says Owens. "We wanted to keep the massing of the original campus, so after about a year, we were able to work with the client to change the master plan."

"The idea was that if it is going to





CLOCKWISE FROM LEFT: The outdoor amphitheater on the west side of Stokes Hall has become a gathering place for students on warm afternoons. All photos: Robert Benson Photography

The walkway under the enclosed second-floor connecting bridge provides entry to both wings.

Stokes Hall at Boston College was designed by Tsoi/Kobus & Associates in the historic Collegiate Gothic style initiated by Maginnis & Walsh in the early 1900s. The 183,000-sq.ft. structure is broken down into two similar sized buildings that are connected by a second-story bridge. This view shows the entrance to the Commons in the South Wing.



Stokes hall is located on a southwest corner of the Middle Campus among the original historic buildings. Watercolor site plan: courtesy of Tsoi/Kobus & Associates

be that large, it has to be similar to the massing around it. So we came up with the idea of two connected buildings and a series of linked courtyards and a deliberate axis," he explains.

"The challenge was how to fuse the program covering all humanities of the school and to have communication within the two buildings," says Owens. "A second-story bridge ties the most important floors together." Breaking the building down into two structures not only allowed the massing to fit into the campus, it also created smaller cores, allowing more daylight into the interiors.

The two new four-story buildings, with North and South wings, are located on the southwest corner of the Middle Campus on what had been known as the dustbowl

because it was formerly a football field. The wings are positioned at 90-degrees and are approximately the same size. A two-story café, the Stokes Commons, is located at the center of the project, in the South Wing, just off the courtyard near the connecting bridge. Just off Stokes Commons is an 85-seat auditorium classroom available for lectures during the day and performances during evenings and weekends.

The North Wing houses the Philosophy and Theology departments as well as Boston College's combination of these two academic disciplines and a community service component called the Pulse Program. The South Wing houses the First Year Experience Program, the Academic Advising Center, the Arts & Sciences

ater. This is the less formal side of the structure. The east side faces in toward the campus and is more formal.

The series of courtyards speaks to the need for circulation from the Upper and Lower campuses through the Middle Campus. The Boston College Lower Campus contains more modern dining, dormitories and administration buildings while the Upper Campus is home to dormitories. Academic buildings are located in the historic Center Campus.

One of the most important aspects of the new Stokes Hall is the construction method: it is built in the traditional manner, with loadbearing granite walls. There is no steel in the exterior. "The idea is that if you are going to do a Gothic building, you have to do it right," says Owens. "You cannot separate the method of construction from the aesthetic. They inform each other. The language is rich. We feel very comfortable about it and we wanted to do it absolutely right."

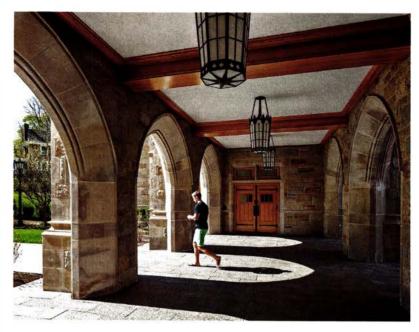
"We were very careful about how we put the building together," he adds. "There is no steel in the exterior wall. The designers at Tsoi/ Kobus worked with the college to create two interconnected buildings. rather than one large structure. The floor plan for level one shows classrooms and offices. The two-story Stokes Café is located in the South Wing near the connecting bridge. Floor plan: courtesy of Tsoi/Kobus & Associates

The weight is carried by the stone and windows are a suitable size. It is all load bearing. If you do a historic building in the modern style of construction, you lose something. The aesthetics and the quality of construction are interrelated; you have to use the same method of construction that was used 100 years ago."

Owens notes that steel-frame contemporary construction goes up much faster."With this building, because the stone walls are bearing, you have to build it floor by floor. This adds a lot of time and complexity to the construction, and contractors don't like it, but it makes it an authentic historic building."

The designers spent quite a bit of time making sure the granite stone for the building was correct. It was supplied by Old York Quarry in York, ME, now closed in a right-of-way disagreement, but hoping to open again. The stone mason was Fred Salvucci Corp., Burlington, MA. "An important ingredient is the hand of the laborer," says Owens. "These buildings feel right when you see the workmanship. The masons here were very happy because they could express their craft. They did an excellent job."

The use of granite for the structure contributed to the building's



LEFT: The walkway under the enclosed second-floor connecting bridge provides entry to both wings.

RIGHT: Lighting was custom designed to coordinate with the style of the building.

BELOW: The two-story Stokes Café is located in the heart of the building in the South Wing near the connecting bridge.



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LEED Silver rating. Granite was sourced within 500 miles of the site, and this natural stone is known to provide an abundant natural thermal barrier. Other factors contributing to the LEED rating include a passive storm-water management system in the outdoor green spaces, the use of natural daylighting, operable windows on the top two floors and efficient HVAC equipment that contributes to an energy consumption level that is 21.5% below the national average baseline. In addition, technology considerations used plugand-play systems that can be easily accessed and retrofitted in the future, as needed.

One of the goals in the construction was to create ashlar quoining similar to that found in the existing

historic buildings on campus."There are five stones in a pattern, all different dimensions. It took us and the mason a lot of time to figure that out," Owens explains, "so we could reproduce it."

Another consideration was the context of each side of the building. The west side faces the community, so Tsoi/Kobus broke the scale down to relate to the community. There are also two treatments for fenestration: They are more formal and vertical on the east side, similar to other buildings on campus. Windows for the building were supplied by Traco, and installed by The Cheviot Corp., Needham, MA.

The terra-cotta roof tile, supplied by New Lexington, OH-based Ludowici, the supplier of the tile for

the original historic buildings, was set in a deliberately random pattern. "It took quite a bit of work to make that happen," Owens points out.

In the interior, the look is subdued and stripped down. "The college wanted the interiors to coordinate with the rest of the campus," Owens notes. "It is exuberant on the outside, and we tried to push as much program as possible on the interior. We were still able to develop a number of important public spaces."

Specialty architectural lighting including the custom chandeliers in the Stokes Café and the honors library were supplied by Custom MetalCraft of Boston. Millwork and woodwork was completed by Legere Woodworking, Avon, CT.

Because of the various decisions

and construction methods, the new Stokes Hall took five years to complete, with 21/2 years in design and 21/2 years in construction. The two-wing, four-story, 183,000-sq.ft. structure came in at \$62 million (construction cost) and was completed in January, 2013, and dedicated to the Stokes family in June.

The new humanities building is designed to serve the college for a long time: it was planned for a 300year life cycle, a fact that contributed to its getting a LEED Silver certification. Now on the drawing boards are plans for 12 religious works of art to adorn panels on the exterior.

Owens notes, "What makes a great building is a great client. They understand the story behind it." Martha McDonald

New Design & Construction – less than 30,000 sq.ft. WINNER: ARCHER & BUCHANAN ARCHITECTURE, LTD.



PROJECT: Rathburn Hall, Grove City College, Grove City, PA

Architect: Archer & Buchanan Architecture, Ltd., West Chester, PA; Dan Russoniello, AIA, LEED AP, principal

General Contractor: Wallace Builders, Pulaski, PA

Complementing History

Since its founding in 1876, Grove City College, a liberal-arts institution with a Christian focus, has dedicated itself to providing "a well-rounded curriculum that helps students see the broad intellectual landscape of ideas, people and events that have shaped, and continue to shape, our world."

Through its nearly century and a half existence, the college has remained equally committed to the integrity of its physical landscape. The 180-acre campus, which rests comfortably in a bucolic setting some 60 miles north of Pittsburgh, was originally designed around traditional planning principles of campus quadrangles. Its design was later reinforced and formalized by the Olmsted Brothers, sons and successor firm to Frederick Law Olmsted, in the early 1900s. The historic master plan included academic, athletic and residential structures arranged around a central lawn and flanked by secondary outdoor quadrangles. As the college has expanded over the years, it continues to adhere to this campus plan.

Since its founding, a central focus of the 2,500-student campus has been to create a spiritually nourishing environment for its students, faculty and visitors. When the trustees decided to add a Christian activities center, they called upon Archer & Buchanan Architecture, Ltd. to design a building that would complement the storied history of the college while satisfying contemporary program demands.







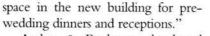
LEFT: The importance of Rathburn's Fellowship Hall, the center's largest space, is emphasized by its double gable form and its proximity to the historic Harbison Chapel. The gables and the two buildings share a centerline. ABOVE: Custom oak doors by Diamond Door of Fredericksburg, OH, feature finish hardware by Crown City Hardware of Pasadena, CA. BOTTOM ROW, FROM LEFT: The stair hall tower brings a strong vertical element to the long north facade and serves as an anchor to the west end of the building, where the grade drops to the lower level, the service entrance. The college originally wanted to build the hall on the steep slope, but Archer & Buchanan Architecture rotated the building 90 degrees and repositioned it on more level ground to stay within budget. The rooms in Rathburn Hall are



West Chester, PA-based Archer & Buchanan specializes in institutional architecture and has designed numerous buildings ranging from education centers and greenhouses to student commons and stadiums for colleges and universities, notably Immaculata University, Swarthmore College and Drexel University.

"The goal was to focus the spiritual life on campus by bringing the 23 student-run ministries that were scattered across campus into one place and to relocate the Office of the Dean of the Chapel and administrative offices from Harbison Chapel," says Archer & Buchanan principal Dan Russoniello, AIA, LEED AP. "They also wanted to provide meeting spaces for outreach, educational and spiritual programs."

The new center, which includes catering facilities, enhances the chapel as a venue for a variety of events and celebrations. "Alumni love to get married in the chapel because it is a very beautiful and meaningful setting," Russoniello says. "And there is



Archer & Buchanan developed a concept that would continue the historic campus planning principles by making Rathburn Hall, the new Christian Activities Center, an ensemble structure with the spired 1929 Harbison Chapel. "The chapel and new building are roughly the same footprint, so it was important that the scale of Rathburn Hall not compete with that of the chapel; it was designed to have its own presence yet be complementary, not upstaging the chapel," Russoniello said.

To create a strong relationship between the new building and chapel, the College had originally chosen a steep, sloping site northwest of the chapel that overlooked Wolf Creek, which is crossed by a traditional-style sandstone bridge that is a scenic campus landmark.

"That site, which was catty-corner to the chapel, was quite scenic and dramatic, but the realities of the budget required another approach," he says. "The extensive excavation, deep foundations and full basement would have added considerably to the \$7-million project. The college is very fiscally responsible; it raises all the funds for a project before committing to construction so sticking to the budget without compromising integrity was extremely important."

Opting to site the new two-story 16,500-sq.ft. building on flat ground to the north of the chapel greatly simplified the construction effort. The slope, now at the western end of the building, allowed for a discrete service entrance that was out of sight and below grade relative to the building's entrance and primary façades.

"There were additional advantages to moving the building from the hillside to more level ground," Russoniello says. "The quad concept is consistent with the campus plan, and the arrangement allows the chapel and Rathburn Hall to relate as an ensemble."

Rathburn Hall, which was named

and repositioned it on more level ground to sta within budget. The rooms in Rathburn Hall are appointed with traditional furnishings. after the Board of Trustees president, was originally conceived as a redbrick and limestone Gothic Revivalstyle building with red tile roof. Although this style is consistent with the majority of the campus' structures, the historic Harbison Chapel, along with the main administration building and library, are a proper Gothic

ing and library, are a proper Gothic style made of richly textured yellow buff Ohio sandstone trimmed with Indiana limestone and further distinguished by variegated slate roofs.

The Board of Trustees believed that the intimate pairing of the chapel and Rathburn Hall required they be made of the same materials although the choice was more costly. "They were correct in their judgment, as the matching stone finish gives the building the prominence they desired in the campus hierarchy," Russoniello says.

Archer & Buchanan worked together with general contractor Wallace Builders of Pulaski, PA, to create a new building that would harmonize stylistically with the historic





<image>

1) Window seats tucked into bays create "rooms within rooms" in Rathburn Hall. The oak archways and wainscoting echo the Gothic style of the exterior. 2) Light and airy yet very traditional, the second-floor seminar room is used for meetings and other programs. In addition to providing beautiful views of the campus, its bay also is used for breakout sessions from the larger group and for food service during luncheons. 3) A trinity of expansive windows that face the apse of the chapel illuminates Fellowship Hall, the largest space in the Christian activities center. 4) The interior of the hall was finished with the same high level of detail as the exterior. In the lobby, red-oak paneling, stained dark, sets the traditional tone.



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chapel. To get a perfect match in the sandstone between the chapel and Rathburn Hall, the Briar Hill Stone Co. of Glenmont, OH, provided the stone from the same quarry that was used for the other three sandstone buildings. Etzel Masonry of Butler, PA, executed the distinctive coursed ashler pattern, the same masonry coursing as that on the chapel. Because a true variegated graduated slate roof was prohibitively expensive, a clay tile fabricated by Ludowici Roof Tile of New Lexington, OH, to look like slate was incorporated into the design. To emulate the slim profile of the original steel windows found on most campus buildings, the architect specified an aluminum casement window with very thin sightlines. The windows are manufactured by Graham Architectural Products of York, PA.

Rathburn Hall and Harbison Chapel form a T that is interrupted by, yet connected with, the newly created quadrangle. Rathburn Hall's entrance and Fellowship Hall are on a common north/south centerline with the chapel's nave to visually and conceptually connect the social and spiritual activities of the two buildings.

"The apse of the chapel and Rathburn's Fellowship Hall face each other across the courtyard, indicating the relationship of worship and fellowship that takes place in these two buildings," Russoniello says.

Along the east/west axis, Rathburn Hall's first-floor student workroom, whose space is extended outdoors via a significant covered and stone columned porch, shares a common centerline with the entrance to the adjacent college residence hall, symbolically joining the work of the student ministries with the broader campus community.

The internal spaces are arranged to encourage spiritual fellowship and student engagement with the campus community. Thus, the first floor houses the center's public and social spaces, while the second floor is reserved for the Office of the Dean of the Chapel, administrative staff and seminar and meeting rooms. The floor plan arrangement allows simultaneous activities to occur without interfering with one another. The largest space, the first-floor Fellowship Hall, seats up to 200 people. Served by an adjoining catering kitchen and designed for banquets, lectures and meetings, it is illuminated by a trinity of floor-toceiling windows that frame views of the beautiful stained-glass lancet window of the chapel's altar.

To facilitate circulation within the building and lessen elevator use, two rather grand stairs are conveniently located within the floor plan, each providing a unique experience. The one in the entry lobby is open and engaging, offering opportunity for social interaction on broad landings. The second stair is enclosed on the interior but visible through the large banks of windows on the hexagonal stair tower. When illuminated in the evening, it is one of the building's more dramatic features.

The interior of the building is designed to complement the exterior with the same level of quality and stylistic consistency. The scale and character of the interior are created through the use of dark-stained red oak paneling, door and window casings, chair rails and wood wainscot paneling and other traditional-profile standing and running trims. Doors are custom fabricated stile-and-rail oak manufactured by Diamond Door of Fredericksburg, OH.

Other unique details include builtin window seats and niches set in Gothic arched alcoves. The traditional detailing is further carried through the design with period-style light fixtures manufactured by Manning Lighting Co. and finish door hardware by Crown City Hardware of Pasadena, CA.

Furnishings and color palettes where chosen by Archer & Buchanan Architecture in collaboration with interior designer Marjorie Stein of Pittsburgh, PA. The furniture is contemporary in style yet quite traditional in line. Vibrant fabrics are used to introduce bold spots of accent color into what is otherwise a relatively quiet and conservative interior.

Rathburn Hall pays special tribute to donors in its design. Gray slate panels engraved with their names flank a custom millwork piece designed by the architect and highlighted by an original stained-glass art panel fabricated by Renaissance Glassworks of McMurray, PA. The deep colors of the panel are similar to those in the stained-glass windows of the chapel.

Rathburn Hall strives to meet the educational and spiritual needs of Grove City College's students and faculty while respecting the history of the institution through its design. Together with Harbison Chapel, Rathburn Hall helps further the mission of Grove City College by forming a new center of spiritual life on campus.

– Nancy A. Ruhling

Adaptive Reuse/Sympathetic Addition VOITH & MACTAVISH ARCHITECTS, LLP



PROJECT: The Barn Student Center, Millbrook School, Millbrook, NY

ARCHITECT: Voith & Mactavish Architects, LLP, Philadelphia, PA; Daniela Holt Voith, FAIA, LEED BD+C, IIDA, partner-in-charge

GENERAL CONTRACTOR: Kirchhoff Consigli Construction Management, Pleasant Valley, NY

LEED: Gold

Resuscitating an Iconic Barn

illbrook School, located on an 800-acre campus of scenic farmlands in Millbrook, NY, is a coeducational, college preparatory boarding school for 280 students in grades 9-12. Aptly nicknamed "The Boss," the school's founder Edward Pulling sought to establish an independent school in the midst of the country's Great Depression era. In 1931, Pulling and his wife Lucy purchased land that was previously a dairy farm and began building their school by repurposing existing structures to suit their needs: The original farmhouse still serves as the headmaster's home to this day.

Over the years, the campus has become a mix of academic buildings in the Georgian style and agrarian vernacular structures. A favorite was a deteriorating but iconic diary barn that has been through many incarnations since the school's inception. The first floor has been used as classrooms, a soda fountain named the Milk Bar and worship space. The hayloft above was a popular gathering space in the 1930s and has been converted into a gymnasium, theater and student lounge. Its rotting foundation, siding and cupolas had nearly convinced the school to demolish The Barn and start anew. However, emotional ties and costeffective benefits led to the decision to save the building instead. The school's designated architect Voith & Mactavish Architects, LLP, (VMA) of Philadelphia, PA, envisioned a rehabilitation that would preserve The Barn and transform it into a welcoming, vibrant and functional student center with goals to achieve LEED Gold certification.

"I've been working with the school for 17 years and The Barn has been part of an ongoing discussion for probably the last decade," says partnerin-charge Daniela Holt Voith, FAIA, LEED BD+C, IIDA. "One of my original proposals was to save it and do something very similar to this project



Voith & Mactavish Architects, LLP, of Philadelphia, PA, envisioned a rehabilitation that transformed Millbrook School's iconic diary barn into a vibrant and functional student center. The project's success has earned the firm its third Palladio Award. All photos: Jeffrey Totaro





FAR LEFT: Concerned for student safety, the existing entry was taken down and replaced with this covered porch and stair that offers a safer approach to the road.

LEFT: When the program called for an addition on the west façade, the design team took the opportunity to include a terrace on the rooftop for outdoor dining.

RIGHT: Traditional furniture in the student lounge was upholstered in bright, fun colors for a welcoming environment.

FAR RIGHT: A portion of the hayloft floor was removed to create a high-volume space in the café area, which is furnished to pay homage to a 1930s soda fountain that once occupied the space. Each of the red chairs at the center was fabricated of 1111 recycled Coca Cola bottles by Emeco of Hanover, PA.



but the head of school and a few others were hesitant. The Barn has always been such an important part of the school's life and it has always been used for something. When all was said and done, this was really a matter of preserving a piece of the school's history by keeping The Barn's character but giving it a new life on the inside."

The main goal for the exterior was to preserve the existing style and aesthetic. Working with agrarian idioms the major changes can be seen on the south façade. A chimney that had been installed in an ad hoc manner was removed for larger windows for more natural light. The windows were configured to accommodate structural timber beams and ties on the inside and were designed with smaller windowpanes more suited to the agrarian vernacular. The original single glazed wood windows were salvaged for reuse in the interior as partitions for the college advisory office.

The main entry is also on the south façade and Voith was concerned for student safety with the existing doorway. "The previous entry had been very abrupt so we made a new entry on the south façade, which faces onto a little road called West Road," says Voith. "A turn of the stair and a covered porch gave students a nice landing place. There is a lot of transition that can happen rather than having students in a rush running out onto the street. That was the design impetus behind the elaborate yet country entry piece."

Constructed of FSC-certified cedar, the porch complements the Western red cedar board-and-batten siding, which was replaced where needed. The new galvalume standingseam metal roof, supplied by Perth Amboy, NJ-based Englert, Inc., was installed along with two cupolas that were painstakingly restored to working order. While the building is equipped with a new geothermal system, the combination of ceiling fans and the cupolas will reduce the need to rely on mechanical means for heating and cooling. The new program needed more space for a kitchen and mechanical storage so an addition was built on the west façade. The team took advantage of this opportunity and included a new terrace for outdoor dining on the addition roof.

"There was what I term the big 'uh-oh' on this project," says Voith. "Though we had had the building tested for environmental hazard, asbestos was discovered during the demolition phase below the floor boards in the crawl space. The remediation required the removal of the entire floor, which then exposed more rotted foundation than anticipated. The result was that the building was shored and a new foundation and floor were poured of concrete. The heavy timber columns supporting the second floor had to be replaced as well. The good news is that these are not problems that will pop up 10 years from now, which it might've otherwise."

To create a welcoming interior, a vibrant color palette was introduced. The entry hall is painted bright yellow with blue accents via the doors, lamps and window sashes. Bead board wainscoting was used to tie all the interior spaces together. "One of the themes I've developed on campus, because we've done so many



ABOVE: The original single-glazed wood windows were salvaged and reinstalled inside as partitions for the college advisory office.



ABOVE: As part of a campus theme introduced by the firm, the main entry was given a vibrant color scheme.

buildings, is to try and give each entry a splash of color and unique character so that as one enters the building one can say, 'Ah, I know I'm here,''' says Voith.

Located off the main entry hall, the café is a high-volume space created by removing a portion of the hayloft floor. It is day-lit by the new southfacing windows. In homage to the 1930s Milk Bar, the space is furnished with seating booths, gooseneck light fixtures and, at the center, tables are accompanied by the Navy 111 Chair, a modern take on Hanover, PA-based Emeco's 1940s Navy Chair. "The chair has a really great sustainable story," says Voith. "It was introduced by Emeco three years ago and is made out of 111 recycled Coca-Cola bottles. Since one of the school's missions is sustainable living practice, we thought this was an appropriate chair. Stylistically, the school might've been able to purchase this chair during that time period.

"A lot of attention was paid to the lighting," continues Voith. "We have a great combination of indirect, direct and accent lighting to allow the rooms to be set up for different moods. The school hosts dinners and dances so we have what I call the 'work mode' and the 'party mode.' We hid a lot of the light sources so they're not obtrusive. For decorative lighting, we went to a company called Baselite [of Chino, CA,] that makes these old-fashioned RLMs. We had them enameled blue because the school colors are blue, gray and white."

Just beyond the café is the college advisory office and right across the hall there is the kitchen and servery as well as a student store. "There was a moment in Millbrook's history when the student lounge was a place that neither students nor faculty wanted to enter for fear of what might be found there," says Voith. "It was an issue of creating a healthy environment for both students and adults, and part of the design solution was to have areas open to each other with different types of activities so that there would be frequent and unpredictable adult presence. For instance, the college advisory office is surrounded by the salvaged windows and looks out onto the snack bar, café and student store."

The same concept is also applied to the second level. The student lounge overlooks the café on one end and on the other there is a club/conference room and offices for the student activities director and the chaplain. Across the hall is an open TV room, bathroom facilities and access to the outdoor terrace. Traditional furniture forms, such as large overstuffed couches, ottomans and round footstools that double as seating, were upholstered in wild and fun colors so that the lounge areas feel inviting. "It straddles the line between traditional and something the students feel that they can kick back in," says Voith.

In keeping with Millbrook's sustainability practice, materials were salvaged and reused where possible. The initial intent was to salvage the narrow maple strip flooring that had been installed in the hayloft when converted to a gym, but as it was being dismantled the team found it difficult to pull up whole pieces. Fortunately, the subfloor underneath, most likely an old heart pine favorable to the maple strip, was in good condition so it was reinstalled and refinished in some of the offices and conference rooms.

Additional sustainable features include LED lighting installed throughout the building and antique reclaimed oak floor in the main lounge, the latter of which was supplied by Ethos Sustainable Finishes of Buckingham, PA. Doorframes. counter tops and ceiling treatments were constructed of the heavy timber that was removed during the foundation repairs. Existing barn doors were moved inside to close off certain spaces and additional ones were made to match by Allentown, PA-based Norwood Windows; the same company also manufactured the energyefficient windows. As a result, the project accrued a total of 63 LEED points and has achieved Gold certification.

"I have a theory about what is fundamental to designing spaces that are welcoming and inclusive for students of this age," says Voith. "The idea centers around the concept that students like to claim small areas as their own: a table, a couple of chairs, a ping pong table, etc. and that they like 'owning' that space while being part of a larger whole. Students can come into The Barn now and see who's eating, who's playing ping pong, because the spaces flow very naturally. It's a place to see and be seen without being threatening and everyone has a reason to be there."

In addition to preserving a piece of Millbrook's history and providing students with a place to call their own, the success of The Barn student center has earned VMA its third Palladio award, one of which was for another Millbrook School project (see the June 2009 issue of *Traditional Building* magazine). The firm is currently designing a new dining hall for the school and redesigning Prum Hall, the original dining hall, to host formal events.

– Annabel Hsin



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Special Award WINNER: DUNCAN G. STROIK ARCHITECT, LLC



PROJECT: Cathedral of Saint Paul Organ Case, St. Paul, MN

Architect: Duncan G. Stroik Architect, LLC, South Bend, IN; Duncan Stroik, principal; Forest Walton, project manager

BELOW: The Cathedral of Saint Paul, the third largest in the United States, opened its doors in 1915. Designed by the French émigré architect Emmanuel Louis Masqueray, it is on the National Register of Historic Places. The domes on the organ case towers are based on those on the cathedral's exterior. Photo: Tim Schindler

Architectural Organ Case

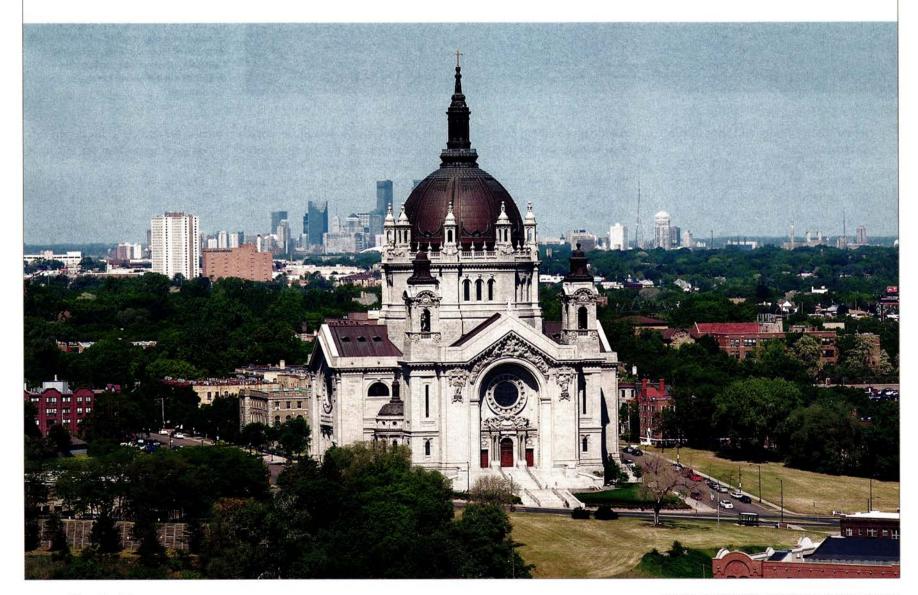
or a century, The Cathedral of Saint Paul has risen majestically heavenward in the Minnesota capital named for it. The colossal Beaux-Arts monument that celebrated its first mass on East Sunday 1915 and the 1905 Cass Gilbert Renaissance Revival Capitol it lords over are the prime architectural jewels of the Mississippi River city everyone knew as Pig's Eye Landing until 1841, when Roman Catholic missionary Lucien Galtier built the log chapel that ultimately became the cathedral. Their double domes define and dominate the downtown skyline, standing as paeans to an ever-present past.

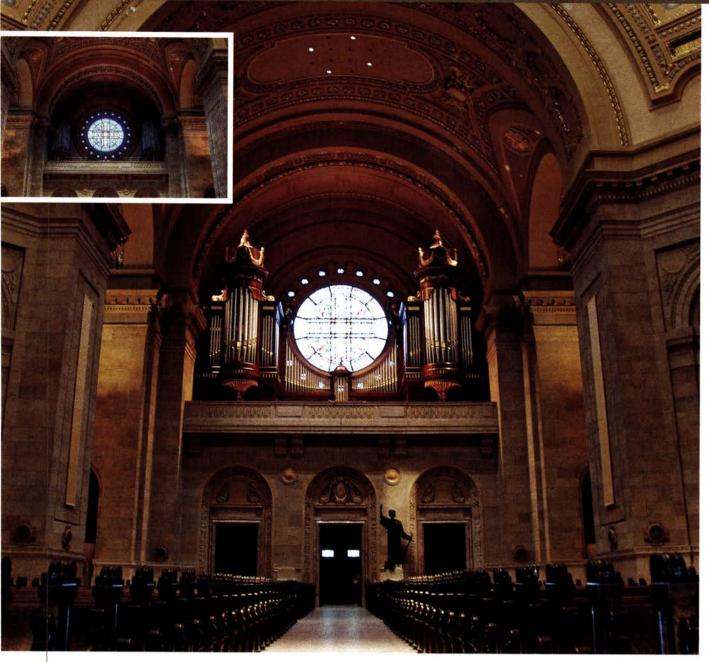
Designed by the internationally acclaimed French émigré architect Emmanuel Louis Masqueray, who served as chief of design for the 1904 St. Louis World's Fair and designed several of its iconic buildings, the Roman Catholic cathedral is on the National Register of Historic Places and was designated The National Shrine of the Apostle Paul in 2009 by the U.S. Conference of Catholic Bishops and the Vatican.

The 2,200-seat cathedral, the third largest in the country, plays a significant role in the cultural life of the community. Not only does it attract 200,000 visitors from around the world each year, but its musical programs also have a wide following and often feature famous musicians like Olivier Latry, one of the three organists at the Cathedral of Notre Dame in Paris.

To commemorate the cathedral's 2015 centennial, the congregation decided to augment its grand pipe organ and commission a new case for the noted instrument that would reflect the sophisticated modern French classicism of Masqueray's architecture. Although the cathedral had a small organ near the altar by 1927, it did not get one for its choir loft until 1963. And that one, an Aeolian-Skinner, was all 3,917 pipes and no presentation. Tucked into the side corners of the loft, it stood in stark contrast to the rich detailing of the magnificent round stained-glass window it framed.

Today, in most cases when church organs require elaborate organ cases, clients turn to the instrument makers. But because of the cathedral's prominence, The Rev. Joseph Johnson decided to hire an architect for the project to create a case that





LEFT (INSET): Although the original architect included a pipe organ in the choir loft, the cathedral didn't get one until 1963, and it was merely utilitarian in stark contrast to the classic opulence of the rest of the interior. Photo: Tim Schindler. LEFT: The new case designed by architect Duncan G. Stroik of South Bend, IN, accommodates the split organ while preserving the view of the magnificent Resurrection Window. Photo: Liam Flahive. ABOVE: Saint Cecilia. the patroness of music, tops the central dome below the window that connects the two sides of the organ. The statue was modeled as a clay maquette by artist Cody Swanson of Florence, Italy, and shipped to California, where it was executed in wood by British master carver lan Agrell. Photo: Tim Schindler.

suited the solemnity and style of the sacred structure.

He called upon Duncan G. Stroik, AIA, whose eponymous five-architect firm in South Bend, IN, has a twodecade history of designing not only ecclesiastical but also civic, residential and collegiate buildings in the Classical style.

"We've designed five organ cases, but this is the first time we have ever done one for a historic church," Stroik says. "The others were all for new buildings. Organ cases are very architectural, and when The Cathedral of Saint Paul was built, they were significant pieces of architecture designed by architects, and we'd like to see a revival of this practice."

The Saint Paul organ case, the biggest and most elaborate in Stroik's portfolio, presented unique challenges. Because the cathedral touches people of all faiths, Stroik worked with constituencies inside and outside the congregation. The Cathedral Heritage Foundation, a non-profit, non-sectarian, historic preservation, cultural and arts organization, led the fundraising effort.

"We had to satisfy three main groups with different yet dovetailing interests," he says. "There were the organ aficionados who wanted to 'pull out all the stops' for the best organ, and they had a significant voice because the Twin Cities are known for their great organs. There were the people who cared for the cathedral as an architectural work of art, and there were the people who went to mass there." In addition, the work, which took two years, had to be completed with minimal interruption of mass, public programs and events that included weddings and funerals.

The Stroik team started where it always does: with the building's history. It was while architect Forest Walton, the project manager, was poring over documents in the cathedral archives that he came across a loose sketch Masqueray had made of the organ case. As soon as he saw it, he realized that it would be impossible to replicate the design even if that had been the desire of the interested parties. It didn't provide much detail, but there was a larger difficulty: Masqueray designed a case that covered up a significant portion of the East Rose Window the congregation had specifically asked to be showcased.

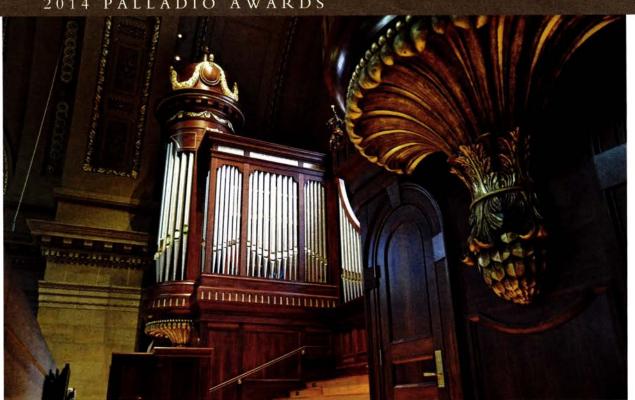
The glorious 26-ft.-dia. window, one of a trinity, was designed by Charles J. Connick, a Boston-based stained-glass artist whose work was widely influenced by the Gothic style of the Middle Ages. Popularly known as the Resurrection Window, it depicts the Lamb of God on the cross surrounded by the 12 apostles and twining vines and branches representing Christ and his followers.

"As a student of the Beaux-Arts, Masqueray was simply following the design principles of the day by giving prominence to the instrument not the window," Stroik says. "But this is the 21st century, and we are focused on preservation of all elements. Nevertheless, his design provided great inspiration for our interpolation."

During his career, Masqueray designed other cathedrals besides Saint Paul's, notably The Cathedral of the Immaculate Conception in Wichita, KS, and The Cathedral of St. Joseph in Sioux Falls, SD. He also designed some two dozen parish churches for Catholic and Protestant congregations in the Midwest. The Stroik team turned to this body of work, focusing on St. Joseph's as well as Masqueray's Basilica of Saint Mary in Minneapolis, while conceiving the distinctive design for the organ case.

In Stroik's design, a pair of 40-ft.tall cantilevered cylindrical towers frames the Rose Window and houses the largest of the organ's 123 façade pipes. The bell-shaped domes of the towers are a subtle reference to the cathedral's domes. Where the organ case returns to the East Rose Window stand two human-sized angels, one









ABOVE: The seating for the choir, which is on built-in risers, is situated between the two halves of the organ case. BOTTOM ROW. FROM LEFT: The towers are decorated with hand-carved corbels, rosettes, swags, crests, festoons and spires drawn from the cathedral's architectural motifs and features of Minnesota geography. Photo: Tim Schindler. To match the gilding in the cathedral, the details of the organ case such as this pinecone corbel were given an antique patina on top of a gilding process called "tipping." Photo: Tim Schindler.



For additional photos and other content, see the web version of this article by visiting "The Magazine" on Traditional Building's home page www.traditional-building.com.

playing heavenly music on a trumpet, the other on a lyre.

The remainder of the pipes follows the concave curve of the window, obscuring only half of the stainedglass roundels surrounding it. They are anchored in the center by a statue of Saint Cecilia, patroness of music, that, like the angels, was modeled as a clay maquette by artist Cody Swanson of Florence, Italy. The plaster statues were shipped to California, where they were carved in wood by British master carver Ian Agrell of San Rafael, CA-based Agrell Architectural Carving.

Although the cathedral features several types of wood, Stroik chose to match the American black walnut of the sanctuary. The details of the decorative swagged carvings, rosettes and cornucopias of fruits were drawn from exterior motifs and the geography of The North Star State and executed by Agrell. "He took our designs and made many improvements in them as the carving progressed," Stroik says.

To give the new case an antique look, a gilding process called "tipping," and a patina were applied to the detailing. "This gives the appearance that the case was always part of the cathedral," Stroik says.

The case set the tone for the refurbishment of the 3,917-pipe organ, which was done by Quimby Pipe Organs of Warrensburg, MO, whose clients include the Cathedral Church of St. John the Divine in New York City.

Although the scale and structure of the case are grand, the space wasn't. The whole had to be housed within the 1,250 sq.ft. of the gallery, and there had to be enough space left over for the vocalists and musicians. Although movable risers were considered, ultimately the architects chose built-in risers that can accommodate 48 people.

"The case is a screen wall to hold the pipes and block the view of the main pipes behind," Stroik says. "The majority of the organ case is only

6¹/₂-in. deep, and 95% of the space behind the organ case is occupied by the instrument itself. The split organ had to be connected with wind tubes and air lines of varying diameters that are creatively hidden beneath the choir risers."

To minimize the footprint of the towers, a unique vertical box truss made of wood was designed and installed. And concealed horizontal tie bars that connect the towers to the rear of the cathedral add stability. Repairs and maintenance also were major concerns, so Stroik's team included four doors in the case and panels in the lower section on the three sides of the choir risers to provide easy access to the pipes.

The redesign of the case allowed for the addition of modern amenities. The choir loft had never been heated or air conditioned, an unthinkable situation during Minnesota's brutal winters and sultry summers. The Stroik firm utilized a radiant floor system in the choir loft and risers

using engineered wood that resists buckling and cupping when subjected to drastic changes in temperatures. "Fin tube radiators create a wall of heat behind the sweeping curve of the East Rose Window to moderate the temperature," Stroik says. Installation, carefully choreographed, took only a week because the case was fabricated and assembled in sections in the shop.

Stroik sees the organ case as a way to celebrate the cathedral as well as Masqueray's work. "He's not as well known as some other architects of the time because his work is mainly in the Midwest," he says. "In addition to designing several buildings for the St. Louis fair, he made significant contributions while working for William Morris Hunt and Warren & Wetmore."

All in all, the organ and its new case have been a resounding success. The pipes sounded their vibrant voices for the first time at a noon mass on the solemnity of the Assumption. - Nancy A. Ruhling

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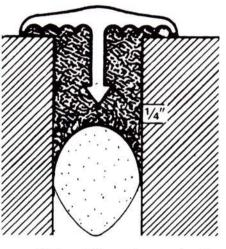
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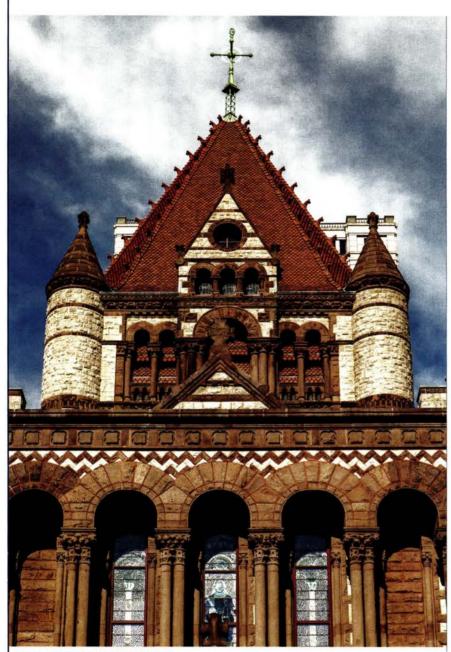


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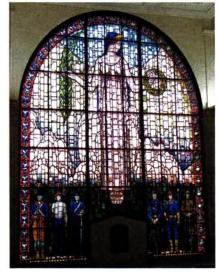
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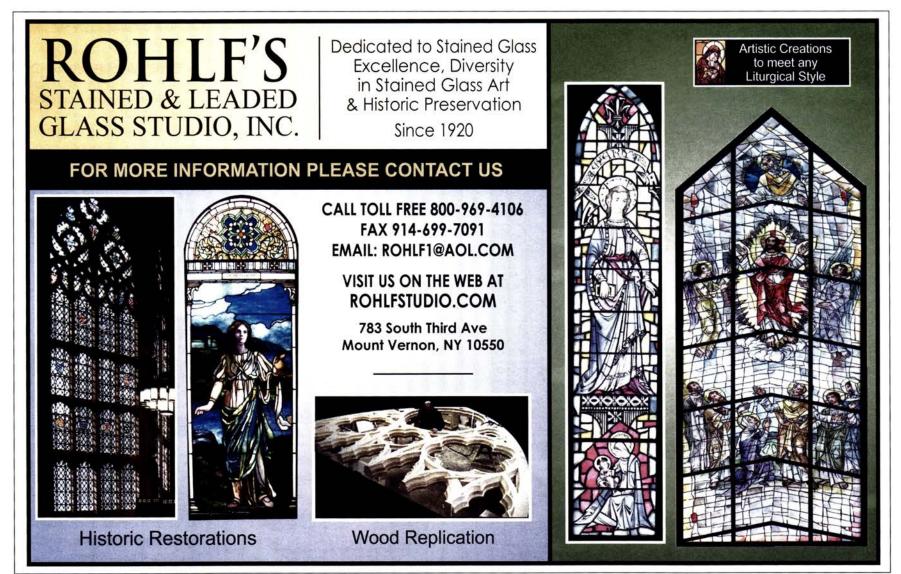
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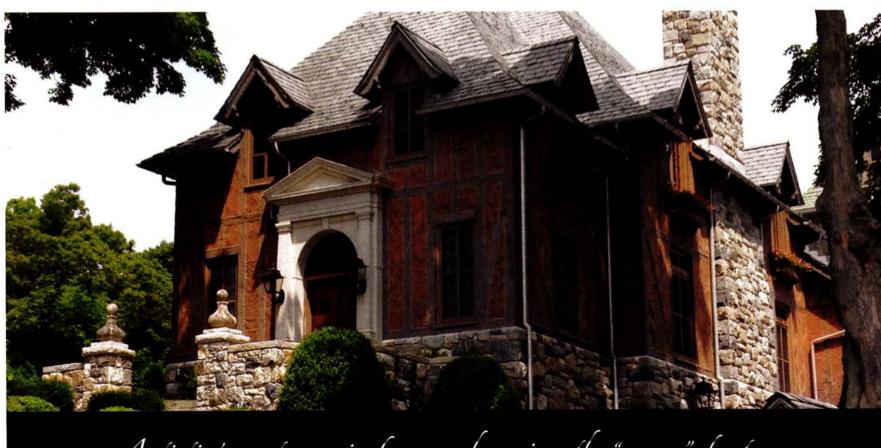
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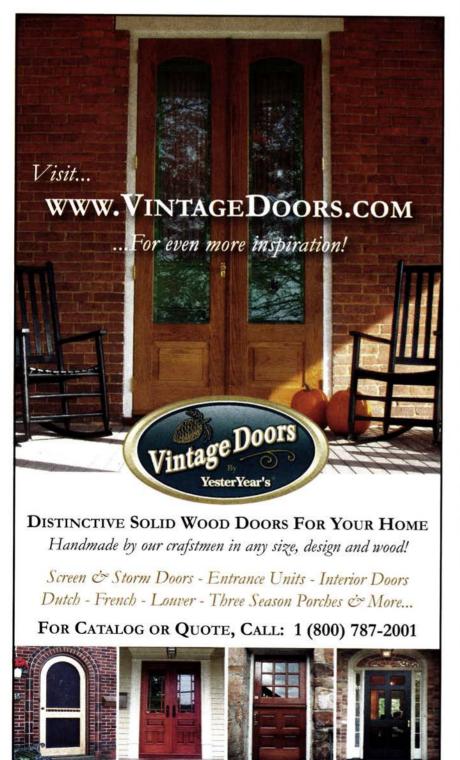
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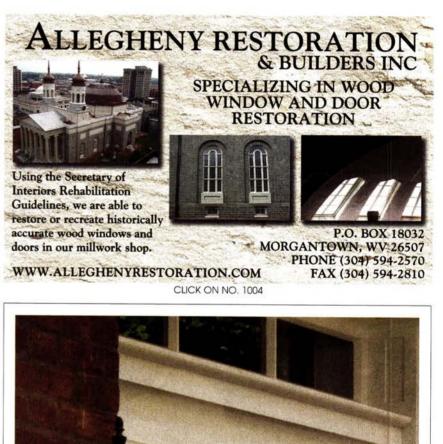
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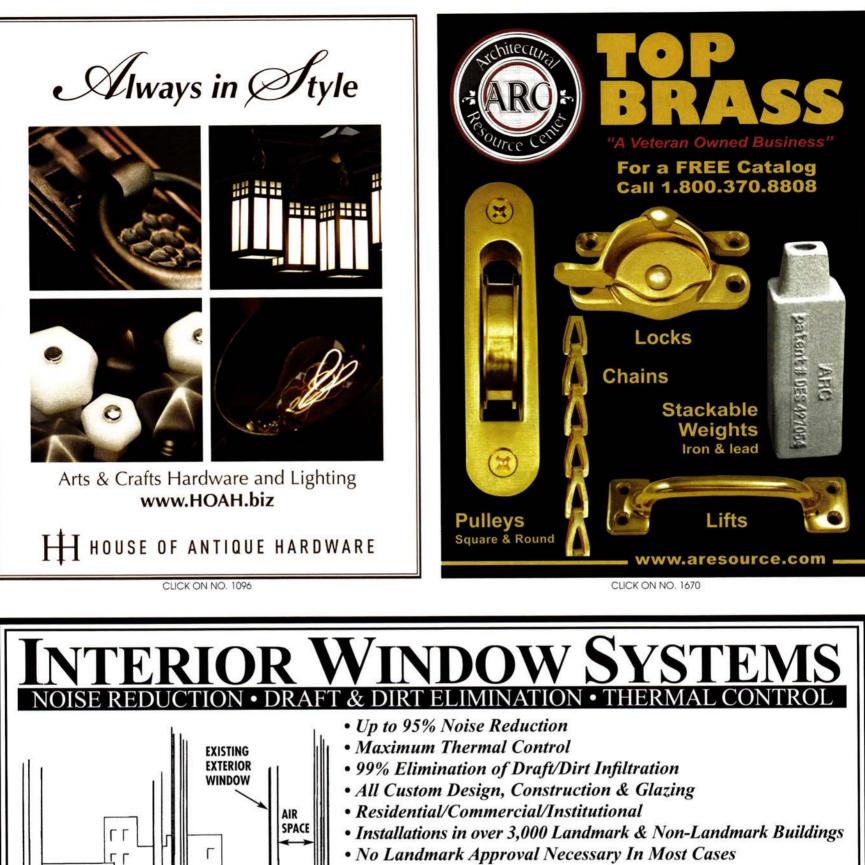


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Gotham Metalworks created this coppercovered oriel window, taking into account the complex angular geometry and the integrity of the building's original architecture.

Historic Doors designs and fabricates custom doors and entryways for historic restoration and new construction projects.

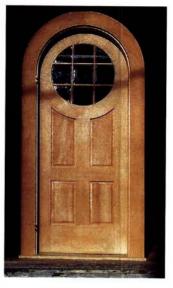
Historic Doors

610-756-6187; Fax: 610-756-6171 www.historicdoors.com Kempton, PA 19529 Custom fabricator of wood windows & doors: casing; circular & crown moldings; complete entryways; wood storefronts; restoration & periodstyle construction. **Click on no. 3570**



Illingworth Millwork >

315-232-3433; Fax: 315-232-3645 www.jimillingworthmillwork.com Adams, NY 13605 Manufacturer of custom wood windows, doors & moldings: for homes & historic buildings; matches any existing wood windows, doors, moldings; custom millwork. Click on no. 1696



Illingworth Millwork manufactured this entryway with insulated glass and simulated mullions.



House of Antique Hardware > 888-223-2545; Fax: 503-233-1312 www.hoah.us Portland, OR 97232 Manufacturer & supplier of vintage reproduction door, window, shutter, cabinet & furniture hardware & accessories: Federal, Victorian, Colonial Revival, Craftsman & Deco styles; lighting fixtures, pushbutton switches & plates; bathroom accessories; registers & grilles. Click on no. 1096



House of Antique Hardware offers a wide selection of antique reproduction entry hardware, as well as hardware for interior doors, cabinets, furniture and windows.

E.R. BUTLER & CO.

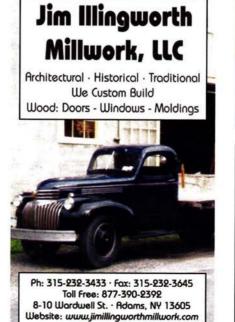
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 Cast Brass & Bronze
 Custom Hinges & Thumblatches
 Fireplace Tools & Accessories

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www.illingworthmillwork.com



Innerglass Window Systems supplied interior glass storm windows for this historic building.

∧ Innerglass Window Systems

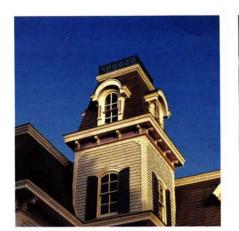
800-743-6207; Fax: 860-651-4789 www.stormwindows.com Simsbury, CT 06070 Manufacturer of custom glass interior storm windows for energy conservation & soundproofing: out performs almost any replacement; automatically conforms to the opening, compensating for out-ofsquare conditions; no sub-frame needed; all glazing options available; easy do-it-yourself installation. **Click on no. 909**



Kayne & Son fabricated the historically styled hardware for this custom door.

∧ Kayne & Son Custom Hardware

828-667-8868; Fax: 828-665-8303 www.customforgedhardware.com Candler, NC 28715 Manufacturer of forged- & castmetal hardware: strap, H, HL, butterfly & butt hinges; thumblatch locksets, gate hardware, shutter dogs & more; fireplace tools; grilles; bathroom accessories & kitchen equipment; restoration; catalog \$5. Call for more information.



Ultimate Double Hung wood windows are available from Marvin Windows and Doors.

▲ Marvin Windows and Doors

888-537-7828; Fax: 651-452-3074 www.marvin.com Warroad, MN 56763 Manufacturer of wood windows & doors: clad & clad-wood; special shapes; custom sizes & more than 11,000 standard sizes; historical replicas; interior & exterior storm windows.

Click on no. 1907 for doors; 1263 for windows



Parrett Windows & Doors built this large, multiunit window set to customer specifications.

➤ Parrett Windows & Doors 800-541-9527; Fax: 877-238-2452 www.parrettwindows.com Dorchester, WI 54425 Manufacturer of custom wood & aluminum-clad windows: any geometric shape, numerous wood species & complete finishing capabilities; historical replications; custom wood doors in numerous species, finishing options; screen doors, casings & moldings.
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WOOD SCREEN DOORS & WOOD STORM DOORS

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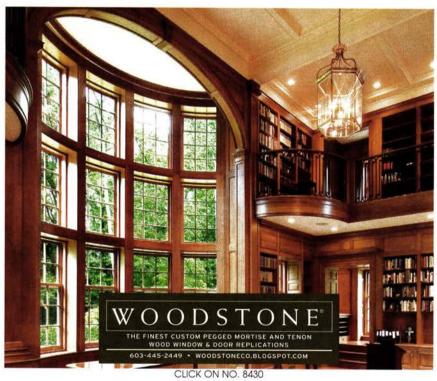






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839 Broad St., Utica, NY 13501 woodwindowworkshop.com 1-800-724-3081

Robinson Iron Corp.

800-824-2157; Fax: 256-329-8960 www.robinsoniron.com Alexander City, AL 35010 Designer & installer of custom metalwork: fountains, columns, fences, doors, railings, sculpture, benches, grilles, cresting, street lighting & gazebos; wrought iron/steel, aluminum, bronze & cast iron; historical restoration. **Click on no. 3240**



This custom door set was designed and fabricated by Rocky Mountain Hardware.

∧ Rocky Mountain Hardware

888-788-2013; Fax: 208-788-2577 www.rockymountainhardware.com Hailey, ID 83333

Manufacturer of handcrafted solid-bronze architectural hardware: door, window, bath, sink & cabinet hardware & kitchen accessories; 7 different finishes; traditional, contemporary & other styles. Click on no. 7720

Schiff Architectural Detail

617-887-0202; Fax: 617-887-0127 www.schiffarchitecturaldetail.com Chelsea, MA 02150 Custom fabricator of metalwork: exterior lamps, lampposts, plaques, fences, fountains, sculpture, gazebos, planters, interior & exterior railings & grilles, domes, finials; non-ferrous forged work; machine-shop service; rubber molding & pattern work; capitals; windows, doors & door hardware; mantels, fans, fireplace tools; historical restoration. **Click on no. 7730**

Seekircher Steel Window Corp.

914-734-8004; Fax: 914-734-8009 www.seekirchersteelwindow.com Peekskill, NY 10566 Repair & restoration of steel casement windows & doors: work done in place and off site; large selection of vintage steel windows & doors for sale; restored windows & doors at Fallingwater & countless other landmarks.



Shuttercraft offers fixed-louver shutters in a variety of sizes.

∧ Shuttercraft, Inc.

203-245-2608; Fax: 203-245-5969 www.shuttercraft.com Madison, CT 06443 Manufacturer of authentic mortise-&-tenon wood shutters: cedar & mahogany, exterior movable & fixed louver, board & batten & raised panel; cutouts, capping, arches & more; hinges & holdbacks; interior louvers, Colonial panels & open frame; painting services; made in USA; family-owned company since 1986; ships nationwide. Click on no. 1321

✓ Timberlane, Inc.

215-616-0600; Fax: 215-616-0749 www.timberlane.com Montgomeryville, PA 18936 Custom fabricator of exterior shutters: more than 25 historically accurate styles & designs; available in traditional woods or maintenancefree Endurian; large selection of period shutter hardware.

Click on no. 1056; 1925 for Endurian



This paneled shutter with period-style hardware was crafted by Timberlane.



This historically styled wood door with sidelites was fabricated by Vintage Doors.

∧ Vintage Doors

800-787-2001; Fax: 315-324-6531 www.vintagedoors.com Hammond, NY 13646 Manufacturer of custom exterior & interior wood doors: door hardware, screen doors & storm doors; traditional, Craftsman & Victorian Styles; solid wood & glass panels available.

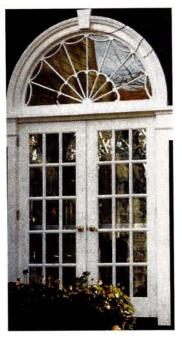
Click on no. 2034



This traditional out-swing casement-window assembly was custom fabricated by Wood Window Workshop with leaded-glass lites.

~ Wood Window Workshop

800-724-3081; Fax: 315-733-0933 www.woodwindowworkshop.com Utica, NY 13501 Custom fabricator of wood windows, doors, storms & screens: any size, shape & species; full mortise-&-tenon construction, true-divided lite, hard-to-find hardware & restoration & insulated glass; factory finishes; millwork; reproductions; for storefronts. **Click on no. 9640**



Custom wood doors are one of Woodstone Co.'s specialties.

➤ Woodstone Co., The 800-682-8223; Fax: 603-445-0174 www.woodstone.com North Walpole, NH 03609 Custom fabricator, distributor & supplier of doors, windows & shutters: paneled doors & complete entryways; storm & screen doors; screen windows; most wood species;

coped mortise-&-tenon joinery;

Click on no. 8430

historical & landmark specifications.



Zepsa Industries designed and built these historically styled wood doors.

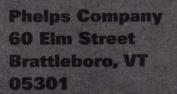
∧ Zepsa Industries, Inc.

704-583-9220; Fax: 704-583-9674 www.zepsa.com Charlotte, NC 28273 Supplier of architectural woodwork: stairs, mantels, paneling, wine cellars, furniture, doors & more. **Click on no. 1996**

Sash locks

www.phelpscompany.com





Tel. 802-257-4314 Fax 802-258-2270

CLICK ON NO. 6001

Exterior Elements, Ornament & Finishes

Agrell Architectural Carving Ltd.

BUYING

GUIDE

415-457-4422; No fax www.agrellcarving.com San Rafael, CA 94901 Architectural wood carver & designer: 30 skilled woodcarvers for fast delivery of large custom projects; hand-carved molding, panels, capitals, mantels, appliqués & religious furnishings; complex wood construction & custom furniture. **Click on no. 90**

Canning Studios

203-272-9868; Fax: 203-272-9879 www.canning-studios.com Cheshire, CT 06410 Painting, plastering, conservation studio: murals, conservation, stone & metal cleaning & wood restoration; work includes U.S. Capitol Building, The White House, Radio City Music Hall, Grand Central Terminal, numerous state capitol buildings, theaters, sacred & public spaces; family owned. Click on no. 5100

Conrad Schmitt Studios, Inc.

800-969-3033; Fax: 262-786-9036 www.conradschmitt.com New Berlin, WI 53151 Creator, conservator & restorer of decorative painting: stained & art glass; ornamental plaster work & ceilings; gilding; crystalline etched-glass designs; murals, mosaics & statuary; for public & religious buildings; since 1889. **Click on no. 8040**

EverGreene Architectural Arts

212-244-2800; Fax: 212-244-6204 www.evergreene.com New York, NY 10001

Decorative-arts studio: murals, decorative painting, gilding, plaster, wood, metal, stone & mosaics; new design, conservation & restoration; ecclesiastical, institutional, public & commercial projects; offices in NYC & Chicago.

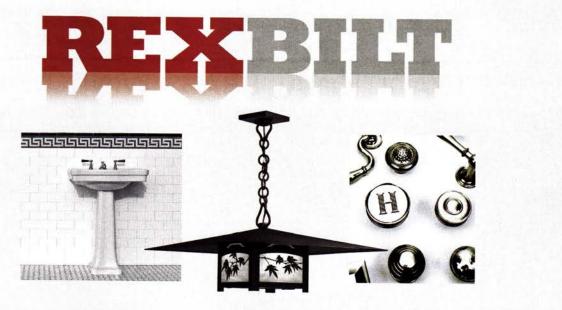
Click on no. 2460 for decorative painting; 743 for ecclesiastical specialties; 2678 for plasterwork



This ornate cornice was fabricated by Gotham Metalworks for an historic building.

Cotham Metalworks

718-786-1774; Fax: 718-786-7214 www.gothammetals.com Long Island City, NY 11101 Fabricator of sheet-metal products: cornices, cupolas, skylights, railings, capitals, gutters, domes, dormers & custom ornamental stamping; for replications, renovations & new construction projects. Click on no. 2042



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rexbilt.com

Heather & Little Limited

800-450-0659; Fax: 905-475-9764 www.heatherandlittle.com Markham, ON, Canada L3R OH1 Fabricator & supplier of historical sheetmetal roofing & specialty architectural sheet metal: finials, cornices, leader heads, cresting, metal shingles, pressed-metal siding, cupolas, steeples, domes, reproductions; capitals & balustrades; Kalemein & lot-line metal windows & doors.

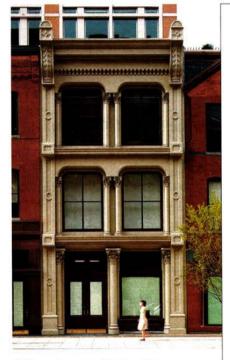
Click on no. 2470

Ludowici Roof Tile, Inc.

800-945-8453; Fax: 740-342-0025 www.ludowici.com New Lexington, OH 43764 Manufacturer of clay tile roofing: many patterns, finishes & colors; Imperial ceramic slate tile; good freeze/thaw properties; low moisture absorption; 75-year limited warranty; reclaimed tiles; restoration & new construction; flooring. **Click on no. 2760**

NIKO Contracting Co., Inc.

412-687-1517; Fax: 412-687-7969 www.nikocontracting.com Pittsburgh, PA 15213 Custom fabricator & contractor of sheet metal & roofing: slate, tile & other roofing; storefronts, cornices, cupolas, domes, steeples, snow guards & leader heads; copper, lead-coated copper, zinc & stainless steel; metal ceilings. **Click on no. 8300**



Robinson Iron cast and fabricated this new storefront façade in aluminum to match the surrounding historic neighborhood in Washington, DC.

∧ Robinson Iron Corp.

800-824-2157; Fax: 256-329-8960 www.robinsoniron.com Alexander City, AL 35010 Designer & installer of custom metalwork: fountains, columns, fences, doors, railings, sculpture, benches, grilles, cresting, street lighting & gazebos; wrought iron/ steel, aluminum, bronze & cast iron; historical restoration. **Click on no. 3240**

Schiff Architectural Detail

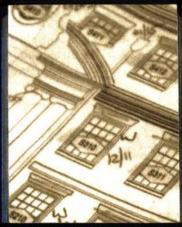
617-887-0202; Fax: 617-887-0127 www.schiffarchitecturaldetail.com Chelsea, MA 02150 Custom fabricator of metalwork: exterior lamps, lampposts, plaques, fences, fountains, sculpture, gazebos, planters, interior & exterior railings & grilles, domes, finials; non-ferrous forged work; machine-shop service; rubber molding & pattern work; capitals; windows, doors & door hardware; mantels, fans, fireplace tools; historical restoration. **Click on no. 7730** "Our windows and doors are such high value items, that to use anything but the finest primer and paint system available would not do justice to our clients' expectations."

~Rolf Hirschmann Hirschmann Windows and Doors West Rutland, Vermont info@hhirschmannltd.com

Window and Door Manufacturers For a complimentary product sample of our primer or finish paint contact: finepaintsofeurope.com/tbad



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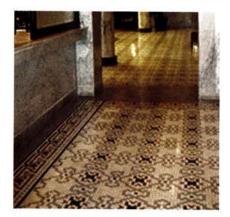
800.332.1556 finepaintsofeurope.com

CLEM LABINE'S TRADITIONAL BUILDING 37

BUYING GUIDE

To order product information from a company in this Buying Guide, go to www.traditional-building.com/rs and click on the appropriate reader service number.

Flooring



American Restoration Tile manufactured this 1-in. hexagonal, unglazed porcelain flooring tile.

American Restoration Tile

501-455-1000; Fax: 501-455-1004 www.restorationtile.com Mabelvale, AR 72103 Custom manufacturer of historical tile: for fireplaces, flooring, kitchens, baths & custom mosaics; restoration & new construction; custom matching of glazed & unglazed tile. **Click on no. 8032**



Random-width wide-plank oak from Chestnut Specialists can be used to create custom flooring.

Chestnut Specialists, Inc. 860-283-4209; No fax www.chestnutspec.com Plymouth, CT 06782 Manufacturer of antique wood for flooring: chestnut, oak, pine & hemlock; hewn barn beams, weathered siding & sheathing planks. Call for more information.



Endless Mountain Stone created this mosaic for the Pennsylvania Welcome Center in Great Bend, PA.

Content Stone Content Stone Content Stone

570-465-7200; Fax: 570-465-3524 www.endlessmountainstone.com Susquehanna, PA 18847 Quarrier & fabricator of dimensional & natural bluestone: architecturally detailed fabrication, pavers, natural cleft flagging, cobblestones, curbing, medallions, hearths, mantels, treads, coping, veneers, fieldstone & wall stone.

Expanko Cork Co.

800-345-6202; Fax: 610-380-0302 www.expanko.com Exton, PA 19341 Manufacturer of solid-cork & cork-veneer tile: 12- & 24-in. square tile; ³/₆- & ⁵/₆-in. thicknesses; 17 patterns; polyurethane, wax or unfinished.

Foster Wood Products 800-682-9418; Fax: 706-846-3487

800-682-9418; Fax: 706-846-3487 www.fosterwood.com Shiloh, GA 31826 Supplier of antique reclaimed flooring & paneling; selected new heart pine flooring; hand-hewn antique timbers; railroad type coffee tables & wine carts; handcrafted farm tables.

Hochstetler Milling, Ltd.

419-368-0008; Fax: 419-368-6080 552 State Route 95 Loudonville, OH 44842 Supplier of new timbers in oak up to 40 ft. long: planed & rough sawn; 2x6 & 1x6 tongue-in-groove knotty pine. Click on no. 1954

Ludowici Roof Tile, Inc.

800-945-8453; Fax: 740-342-0025 www.ludowici.com New Lexington, OH 43764 Manufacturer of clay tile roofing: many patterns, finishes & colors; Imperial ceramic slate tile; good freeze/thaw properties; low moisture absorption; 75-year limited warranty; reclaimed tiles; restoration & new construction; flooring. **Click on no. 2760**





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www.traditional-building.com

Monarch Stone International

949-498-0971; Fax: 949-498-0941 www.historiceuropeancobblestone.com San Clemente, CA 92673

Supplier & importer of Historic European Cobblestone: genuine antique 100- to 400-year-old reclaimed granite or sandstone cobblestone & salvaged antique curb from Europe; wide selection of sizes, including a thin paver; large quantities; nationwide shipping. **Click on no. 2047**

Subway Ceramics offers a collection of reproduction subway tile, trim, moldings, floor mosaics and ceramic accessories

Subway Ceramics
 888-387-3280; No fax
 www.subwaytile.com
 Verona, WI 553593
 Supplier of historically authentic ceramic tile: field tile, moldings & trim pieces; flooring; mosaics; Victorian style.
 Click on no. 1794

Tile Source, Inc.

843-681-4034; Fax: 843-681-4429 www.tile-source.com Hilton Head Island, SC 29926 Supplier of genuine encaustic tile, simulated reproductions & Victorian-style wall & fireplace tile: advice on economical restoration of 19th-century ceramic floors for public buildings, courthouses & private homes.



Winckelmans (fomerly Herbeau) offers a variety of ceramic and vitrified tile for commercial and residential use.

Winckelmans Tiles 800-547-1608; Fax: 800-547-0084 www.herbeau.com/WinckelmansTiles Naples, FL 34104

Manufacturer of ceramic & vitrified tile: more than 600 standard styles including historically authentic encaustic,Victorian, mosaic & custom; commercial & residential applications; formerly Herbeau; established in 1867 in northern France.

Interior Elements, Ornament & Finishes



This hand-carved detail of a stair decoration by Agrell Architectural Carving is based on an original by Grinling Gibbons (1648-1721).

Agrell Architectural Carving Ltd.

415-457-4422; No fax www.agrellcarving.com San Rafael, CA 94901 Architectural wood carver & designer: 30 skilled woodcarvers for fast delivery of large custom projects; hand-carved molding, panels, capitals, mantels, appliqués & religious furnishings; complex wood construction & custom furniture.

Click on no. 90

American Restoration Tile, Inc.

501-455-1000; Fax: 501-455-1004 www.restorationtile.com Mabelvale, AR 72103 Custom manufacturer of historical tile: for fireplaces, flooring, kitchens, baths & custom mosaics; restoration & new construction; custom matching of glazed & unglazed tile.

Click on no. 8032



Venetian Plaster by Buon Fresco is designed to be durable, so it's suitable for hightraffic areas such as restaurants, lobbies, kitchens and baths.

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 888-637-3726; No fax
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 Alexandria, VA 22312
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 gilding services.
 Click on no. 1687



John Canning Studios restored and conserved the ornamental plaster and elaborate murals throughout the Cosmos Club Warne Ballroom in Washington, DC.

Canning Studios

203-272-9868; Fax: 203-272-9879 www.canning-studios.com Cheshire, CT 06410 Painting, plastering, conservation studio: murals, conservation, stone & metal cleaning & wood restoration; work includes U.S. Capitol Building, The White House, Radio City Music Hall, Grand Central Terminal, numerous state capitol buildings, theaters, sacred & public spaces; family owned.





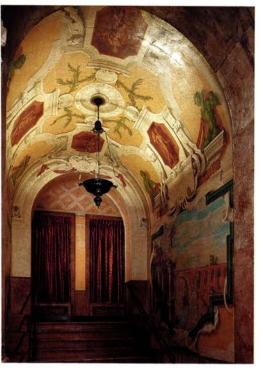
Conrad Schnitt Studios' restoration of the historic Bass Mansion at the University of Saint Francis, Fort Wayne, IN, included period conservation and replication of the ornate decorative painting, stencil work and new murals.

Conrad Schmitt Studios

800-969-3033; Fax: 262-786-9036 www.conradschmitt.com New Berlin, WI 53151

Creator, conservator & restorer of decorative painting: stained & art glass; ornamental plaster work & ceilings; gilding; crystalline etchedglass designs; murals, mosaics & statuary; for public & religious buildings; since 1889. **Click on no. 8040**

Interior Elements, Ornament & Finishes [continued]



EverGreene Architectural Arts conserved the trompe l'oeil and decorative painting throughout this historic mansion, Dumbarton Oaks, now used by Harvard University.

Kergreene Architectural Arts

212-244-2800; Fax: 212-244-6204 www.evergreene.com New York, NY 10001

Decorative-arts studio: murals, decorative painting, gilding, plaster, wood, metal, stone & mosaics; new design, conservation & restoration; ecclesiastical, institutional, public & commercial projects; offices in NYC & Chicago.

Click on no. 2460 for decorative painting; 2678 for plasterwork; 743 for ecclesiastical specialties.

Gotham Metalworks

718-786-1774; Fax: 718-786-7214 www.gothammetals.com Long Island City, NY 11101 Fabricator of sheet-metal products: cornices, cupolas, skylights, railings, capitals, gutters, domes, dormers & custom ornamental stamping; for replications, renovations & new construction projects. Click on no. 2042

> Hope R. Angier

207-586-5692; No fax www.hopeangier.com Camden, ME 04843 Custom fabricator of handpainted fireboards, murals & wall hangings: traditional styles; stair-riser murals.

MetalCeilingExpress

941-723-2288; Fax: 941-729-1470 www.metalceilingexpress.com Palmetto, FL 34221 Manufacturer of ceilings: ornamental; decorative painting & faux finishes; architectural, standard & custom sheet metal.



Glazed walls complement this trompe l'oeil design by Hope R.Angier





This hand-painted faux-finish metal ceiling was fabricated and installed by MetalCeilingExpress.



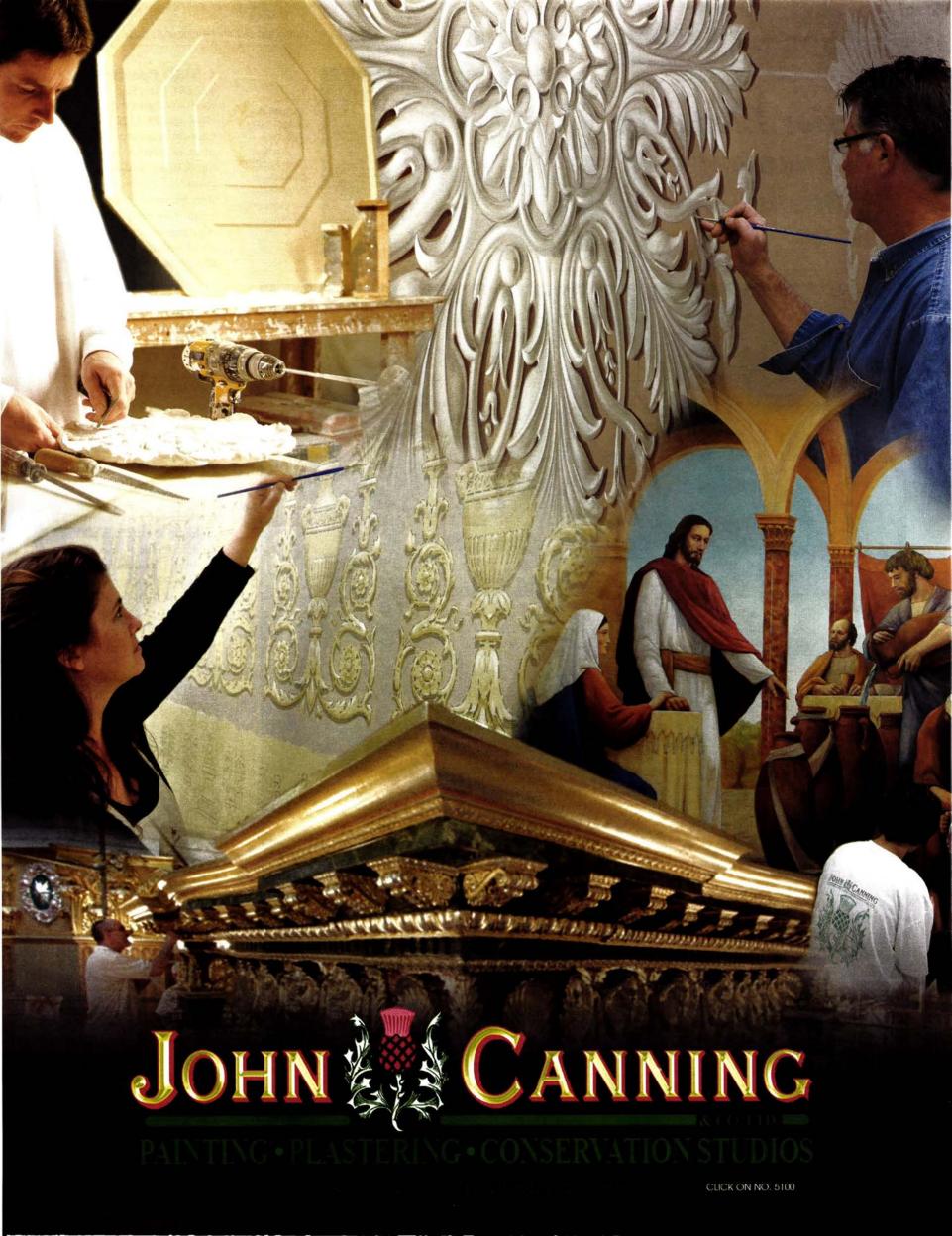
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CLICK ON NO. 1687





Interior Elements, **Ornament** & Finishes [continued]



The restoration of the lobby ceiling of the South Carolina State House by NIKO Contracting included new bronze medallions, cornice and trim.

< NIKO Contracting Co.

412-687-1517; Fax: 412-687-7969 www.nikocontracting.com Pittsburgh, PA 15213 Custom fabricator & contractor of sheet metal & roofing: slate, tile & other roofing; storefronts, cornices, cupolas, domes, steeples, snow guards & leader heads; copper, lead-coated copper, zinc & stainless steel; metal ceilings. Click on no. 8300

Schiff Architectural Detail, LLC

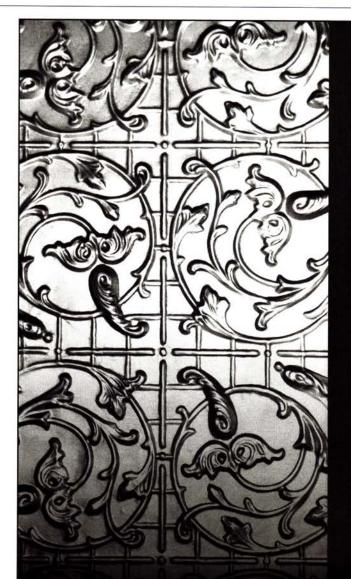
617-887-0202; Fax: 617-887-0127 www.schiffarchitecturaldetail.com Chelsea, MA 02150 Custom fabricator of metalwork: exterior lamps, lampposts, plaques, fences, fountains, sculpture, gazebos, planters, interior & exterior railings & grilles, domes, finials; non-ferrous forged work; machine-shop service; rubber molding & pattern work; capitals; windows, doors & door hardware; mantels, fans, fireplace tools; historical restoration. Click on no. 7730



This Oriental-style ceiling was created using pressed-tin panels from W.F. Norman Corp.

~ W.F. Norman Corp.

800-641-4038; Fax: 417-667-2708 www.wfnorman.com Nevada, MO 64772 Manufacturer of sheet-metal ornament: hundreds of stock designs; cornices, moldings, brackets, pressed-metal ceilings, roofing, siding, finials & more; zinc, copper & lead-coated copper; duplication from samples or drawings. Click on no. 520



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terns. Our original 1898 product line features 140 ceiling patterns and over 1,300 ornaments including rosettes, brackets, finials & more! We offer custom stamping and architectural sheet metal fabrication.

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Allegheny Restoration & Builders, Inc.

304-594-2570; Fax: 304-594-2810 www.alleghenyrestoration.com Morgantown, WV 26507 Manufacturer of reproduction & custom wood doors & windows: window replication, restoration & repair; hardware replacement; storefronts & ecclesiastical projects. **Click on no. 1004**

Bill's Custom Metal Fabrications

516-333-3562; Fax: Same as phone www.ironcrafters.com Westbury, NY 11590 Manufacturer of ornamental metalwork: railings, furniture, fireplace doors, mantels, hardware & candelabras; handcrafted & hand forged.

✓ Compass Ironworks

717-442-4544; Fax: 717-442-1948 www.ironworkclassics.com Gap, PA 17527 Fabricator of wrought-iron metalwork: gates, fences, railings, décor; family owned; hand crafted; historical styles; recycled content. **Click on no. 2048**



Hand-crafted wrought-iron fences are one of the specialties of Compass Ironworks.

Custom Home Accessories >

800-265-0041; Fax: 916-635-0228 www.mailboxes.info Rancho Cordova, CA 95742 Manufacturer of metalwork accessories: weathervanes, cupolas, finials, roof caps, mailboxes, lighted address plaques, signs & lampposts; cast aluminum, bronze, brass & copper; custom sizes.



Fifthroom.com

888-293-2339; Fax: 724-444-5301 www.fifthroom.com Gibsonia, PA 15044 Supplier of garden furnishings: furniture, garden houses, gazebos, greenhouses, pavilions, arbors, benches & bridges; ceiling fans. **Click on no. 2037**

Forerunner Creations

718-209-7030; Fax: 718-513-3737 www.forerunnercreations.com Brooklyn, NY 11236 Custom foundry shop: specializes in historic landmark metalwork; railing, fencing, cornices, handrails & more; stainless steel, brass, bronze, copper, aluminum, cast iron; restoration, replication & new designs. Click on no. 2057

Gotham Metalworks

718-786-1774; Fax: 718-786-7214 www.gothammetals.com Long Island City, NY 11101 Fabricator of sheet-metal products: cornices, cupolas, skylights, railings, capitals, gutters, domes, dormers & custom ornamental stamping; for replications, renovations & new construction projects. Click on no. 2042



The Builder-Series mailbox from Custom Home Accessories is made of cast aluminum; custom logos are available.

The 17x9-ft. Rough Cut Oasis pergola is available from Fifthroom.com.

✓ Haddonstone (USA)

719-948-4554; Fax: 719-948-4285 www.haddonstone.com Pueblo, CO 81001 Manufacturer of classical & contemporary cast limestone: columns, balustrades, benches, planters, pavers, fountains, gazebos, interior ornament, mantels, statuary & more; 500+ designs; custom designs. **Click on no. 4020**



Haddonstone supplied this Triple Lotus bowl fountain for the Excelsior and Grand Hotel in St. Louis, MN; each bowl is supported by fluted pedestals featuring stylized Ionic capitals.

Herwig Lighting > 800-643-9523;

Fax: 479-968-6422 www.herwig.com Russellville, AR 72811 Designer & manufacturer of handcrafted cast metalwork: period-design lanterns, street lighting, posts, custom outdoor lighting, street clocks, benches, bollards, custom plaques, signs & more; aluminum & bronze; since 1908.

Click on no. 9130





Street clocks in historical styles are a specialty of Herwig Lighting.

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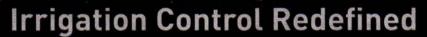
The most advanced wireless sensor system requires the most advanced analytical software package – UgMO Knows. Capable of organizing and analyzing the massive amount of data provided by hundreds of sensors, UgMO's advanced software turns raw data into useful operating metrics.



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CLICK ON NO. 2027

Landscape, Streetscape & Garden Specialties [continued]



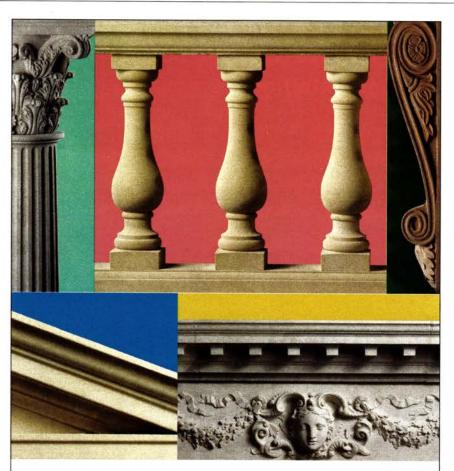
Kernel Alignment Alignm

610-756-6187; Fax: 610-756-6171 www.historicdoors.com Kempton, PA 19529 Custom fabricator of wood windows & doors: casing; circular & crown moldings; complete entryways; wood storefronts; restoration & period-style construction. Click on no. 3570



Monarch Stone International's Historic European Cobblestone, reclaimed antique sandstone cobblestone (6x6-in, squares), was used for this drive.

This custom garden gate was designed by Charles Hess Landscape Architects and fabricated by Historic Doors.



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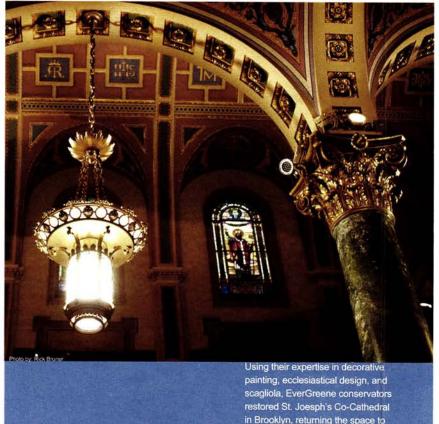
CLICK ON NO. 4020

46 CLEM LABINE'S TRADITIONAL BUILDING

Monarch Stone International 949-498-0971; Fax: 949-498-0941 www.historiceuropeancobblestone.com San Clemente, CA 92673

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Architect Beyer Blinder Belle Architects and Planners Lighting Design Domingo Gonzalez Associates

91 | www.crenshawlighting.com | 540.745.3900 | f 540.745.391

CLICK ON NO 313

Landscape, Streetscape & Garden Specialties [continued]



This custom cast-iron stanchion was fabricated by O.K. Foundry.

^ O.K. Foundry Co., Inc. 804-233-9674; Fax: 804-233-6240 www.okfoundrycompany.com Richmond, VA 23224

Supplier of cast-iron elements: sculpture, columns & capitals, fencing, bollards, stanchions, mantels, fireplaces, chimneys & accessories.

Click on no. 1894



Robinson Iron replicated a carved limestone detail from the Jefferson Hotel's façade in a custom cast aluminum entrance canopy; the design is by Oehrlein & Associates, Architects, Washington, DC.

∧ Robinson Iron Corp.

800-824-2157; Fax: 256-329-8960 www.robinsoniron.com

Alexander City, AL 35010

Designer & installer of custom metalwork: fountains, columns, fences, doors, railings, sculpture, benches, grilles, cresting, street lighting & gazebos; wrought iron/ steel, aluminum, bronze & cast iron; historical restoration. **Click on no. 3240**



Schiff Architectural Detail fabricates fences and gates in traditional styles.

Schiff Architectural Detail, LLC 617-887-0202; Fax: 617-887-0127

www.schiffarchitecturaldetail.com Chelsea, MA 02150

Custom fabricator of metalwork: exterior lamps, lampposts, plaques, fences, fountains, sculpture, gazebos, planters, interior & exterior railings & grilles, domes, finials; non-ferrous forged work; machine-shop service; rubber molding & pattern work; capitals; windows, doors & door hardware; mantels, fans, fireplace tools; historical restoration. **Click on no. 7730** Lighting & Electrical



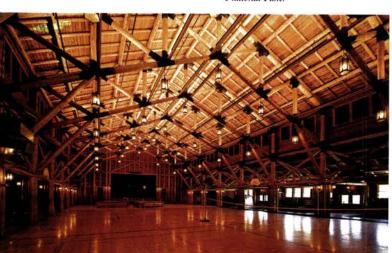
This historically styled chandelier is one of many styles available from Authentic Designs.

Authentic Designs

800-844-9416; Fax: 802-394-2422 www.authenticdesigns.com West Rupert, VT 05776 Manufacturer of historical lighting fixtures & specialty metal products: chandeliers, lanterns, sconces & table lamps crafted in brass, copper, terne metal & Vermont maple; Early American & Colonial; CUL/UL listed for wet & damp locations; library binder \$30. Click on no. 60

Deep Landing Workshop

877-778-4042; Fax: 410-778-4070 www.deeplandingworkshop.com Chestertown, MD 21620 Manufacturer of custom lighting fixtures: chandeliers, sconces, pendants & lanterns; new designs, historic reproductions & custom work; handcrafted in wood, tin, brass or copper; glass, mica or alabaster shades. **Click on no. 809**



This custom historic brass bowl chandelier was created for the Virginia State Capitol by Crenshaw Lighting in solid cast brass; the lighting design was by Gary Steffy Lighting Design.

Crenshaw Lighting

540-745-3900; Fax: 540-745-3911 www.crenshawlighting.com Floyd, VA 24091 Manufacturer of decorative lighting fixtures: period & custom designs; historical restoration & reproduction; lighting for worship. **Click on no. 313**

✓ Grand Light

800-922-1469; Fax: 203-785-1184 www.lightrestoration.com Seymour, CT 06483 Restorer of historic lighting fixtures & manufacturer of custom lighting fixtures: metal fabrication, glass fabrication, metal finishing, polishing, painting, welding, abrasive blasting; replication.

Click on no. 2006

Grand Light restored the historic lighting fixtures for Geyser Hall at Yellowstone National Park.



Derek Marshall Lighting restored this museum-quality, historic fixture for Castle in the Clouds, The Lucknow Estate, in Moultonboro, NH; it was originally made by Edward Calder of New York.

Derek Marshall Lighting

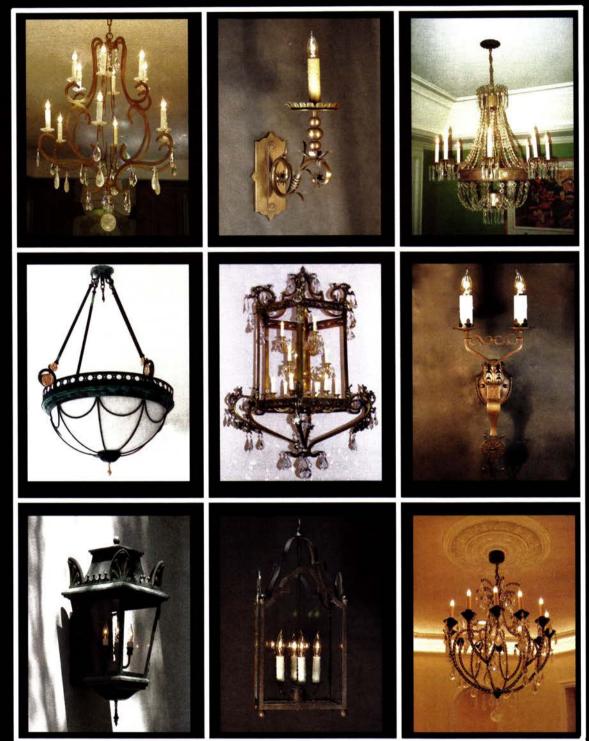
800-497-3891; Fax: 603-685-2855 www.derekmarshall.com Sandwich, NH 03227 Manufacturer of lighting: Art Nouveau, Art Deco, Arts & Crafts, traditional, transitional & contemporary; sculptural sconces, table lamps & pendants; new designs & custom lighting & finishes.



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CLICK ON NO. 1239



CLEM LABINE'S TRADITIONAL BUILDING 49

BUYING GUIDES

Lighting & Electrical [continued]

This ceiling lantern, model #173 from Henvig Lighting is made of cast aluminum alloy and crystal moss glass sealed in silicone.



House of Antique Hardware manufactured this English Victorian chandelier with etched-glass shades.

A House of Antique Hardware

888-223-2545; Fax: 503-233-1312 www.hoah.us Portland, OR 97232

Manufacturer & supplier of vintage reproduction door, window, shutter, cabinet & furniture hardware & accessories: Federal, Victorian, Colonial Revival, Craftsman & Deco styles; lighting fixtures, pushbutton switches & plates; bathroom accessories; registers & grilles. Click on no. 1096

Kerwig Lighting

800-643-9523; Fax: 479-968-6422 www.herwig.com Russellville, AR 72811 Designer & manufacturer of handcrafted cast metalwork: perioddesign lanterns, street lighting, posts, custom outdoor lighting, street clocks, benches, bollards, custom plaques, signs & more; aluminum & bronze; since 1908. **Click on no. 9130**



Lantern Masters fabricated this Spanish Revival-style wallmounted fixture.

^ Lantern Masters, Inc.

818-706-1990; Fax: 818-706-1988 www.lanternmasters.com Westlake Village, CA 91362 Custom designer & manufacturer of lighting: interior chandeliers, pendants, ceiling flushes & sconces & exterior lanterns including wall, flush wall, pendant, post & pilaster; many architectural periods; historical reproductions. Click on no. 1239



Robinson Iron fabricated this exact replica of the historic cast iron lampposts surrounding Hawaii's famed Iolani Palace; it is available with or without a copper fixture in a variety of light sources.

^ Robinson Iron Corp.

800-824-2157; Fax: 256-329-8960 www.robinsoniron.com Alexander City, AL 35010 Designer & installer of custom metalwork: fountains, columns, fences, doors, railings, sculpture, benches, grilles, cresting, street lighting & gazebos; wrought iron/ steel, aluminum, bronze & cast iron; historical restoration. **Click on no. 3240**





These ca. 1920-1930 exterior bronze sconces were refurbished by Schiff Architectural Detail; they are 60-in. tall x 24-in. deep.

↑ Schiff Architectural Detail

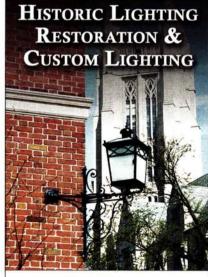
617-887-0202; Fax: 617-887-0127 www.schiffarchitecturaldetail.com Chelsea, MA 02150

Custom fabricator of metalwork: exterior lamps, lampposts, plaques, fences, fountains, sculpture, gazebos, planters, interior & exterior railings & grilles, domes, finials; non-ferrous forged work; machine-shop service; rubber molding & pattern work; capitals; windows, doors & door hardware; mantels, fans, fireplace tools; historical restoration. **Click on no. 7730**

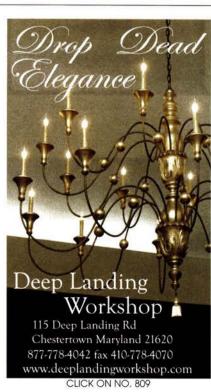
St. Louis Antique Lighting Co. 314-863-1414; Fax: 314-863-6702 www.slalco.com

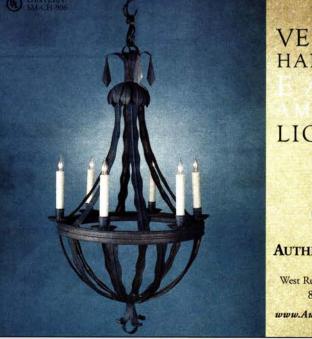
Saint Louis, MO 63130 Manufacturer & supplier of architectural lighting: all styles; historical reproductions & custom lighting; restoration services; commercial & ecclesiastical projects. Click on no. 6190

St. Louis Antique Lighting Co. supplied several of the crystal chandeliers for the Drury Inn & Suites in New Orleans, LA.



GRAND LIGHT American Artisans at Work Preserving History LightRestoration.com 1-800-922-1469 104 Day Street, Seymour, CT CLICK ON NO. 2006





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Historic photograph of original corner post finial at Prospect Park
 Corner post housing
 Railing connector housing
 Railing connector housing
 Pattern detail of rope molding







Metalwork

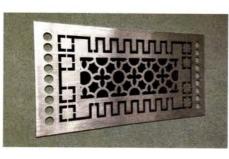


Architectural Grille custom made these bronze grilles for a restoration project.

∧ Architectural Grille

800-387-6267; Fax: 718-832-1390 www.archgrille.com Brooklyn, NY 11215 Manufacturer of custom grilles: perforated & linear bar grilles; radiator covers; aluminum, brass, steel & stainless steel; variety of finishes; stock sizes; water-jet & laser cutting.

Click on no. 2220



Artistry in Architectural Grilles fabricated this custom laser-cut brushed-aluminum Majestic pattern grille, model #AAG719, with a decorative border.

Artistry in Architectural Grilles

516-488-0628; Fax: 516-488-0728 www.aagrilles.com New Hyde Park, NY 11040 Custom designer & manufacturer of extensive line of linear bar & perforated grilles: more than 70 years' experience supporting the architectural, interior design, building, construction, engineering & HVAC industries; affiliate members of the American Institute of Architects NY & Chicago chapters & member of the U.S. Green Building Council (USGBC). Call for more information.

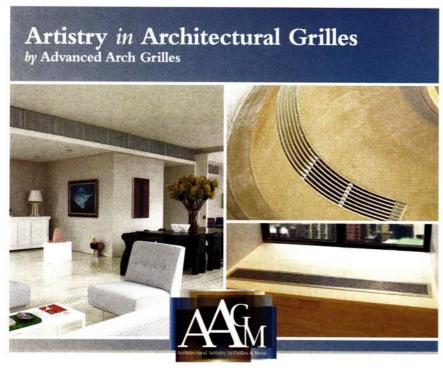
▲ Bill's Custom Metal Fabrications 516-333-3562; Fax: Same as phone www.ironcrafters.com

Westbury, NY 11590 Manufacturer of ornamental metalwork: railings, furniture, fireplace doors, mantels, hardware & candelabras; handcrafted & hand forged.

This custom railing with

a leaf motif is the work

of Bill's Custom Metal.



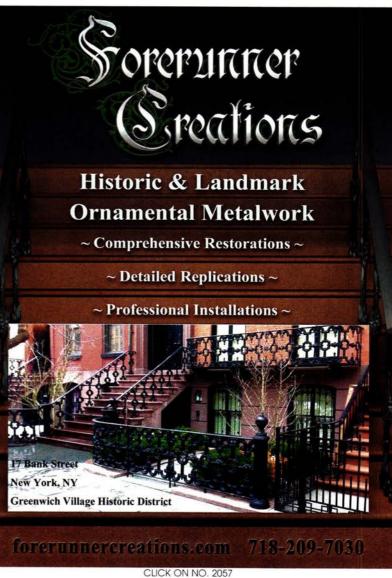
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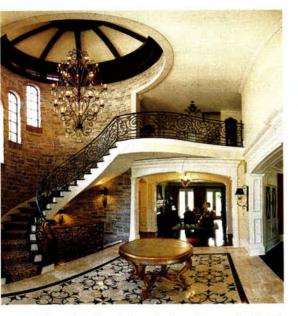
516-488-0628 (t) aagrilles.com (w) sales@aagrilles.com (e)



SK ON NO. 2057

✓ Compass Ironworks

717-442-4544; Fax: 717-442-1948 www.ironworkclassics.com Gap, PA 17527 Fabricator of wrought-iron metalwork: gates, fences, railings, décor; family owned; hand crafted; historical styles; recycled content. Click on no. 2048



This traditionally styled wrought-iron staircase was handcrafted by Compass Ironworks.



Forerunner Creations produced and installed this historically styled railing with ornate newel post.

∧ Forerunner Creations

718-209-7030; Fax: 718-513-3737 www.forerunnercreations.com Brooklyn, NY 11236 Custom foundry shop: specializes in historic landmark metalwork; railing, fencing, cornices, handrails & more; stainless steel, brass, bronze, copper, aluminum, cast iron; restoration, replication & new designs. Click on no. 2057

Gotham Metalworks

718-786-1774; Fax: 718-786-7214 www.gothammetals.com Long Island City, NY 11101 Fabricator of sheet-metal products: cornices, cupolas, skylights, railings, capitals, gutters, domes, dormers & custom ornamental stamping; for replications, renovations & new construction projects. **Click on no. 2042**

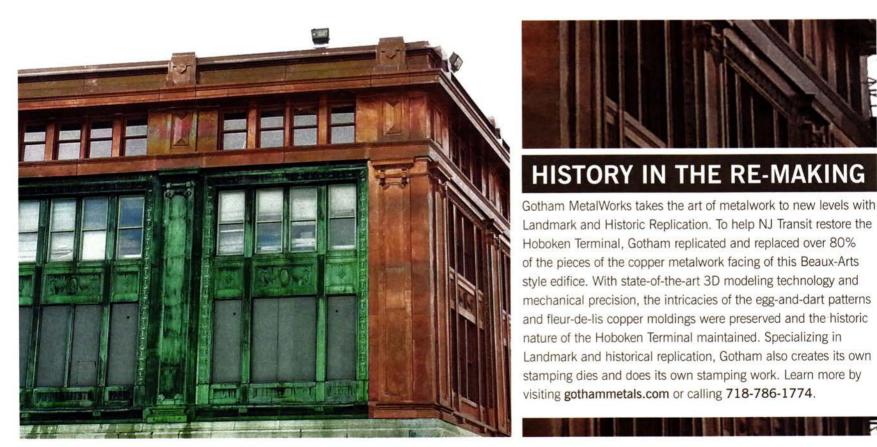
Heather & Little Limited >

800-450-0659; Fax: 905-475-9764 www.heatherandlittle.com Markham, ON, Canada L3R OH1 Fabricator & supplier of historical sheet-metal roofing & specialty architectural sheet metal: finials, cornices, leader heads, cresting, metal shingles, pressed-metal siding, cupolas, steeples, domes, reproductions; capitals & balustrades; Kalemein & lot-line metal windows & doors.





This balustrade was fabricated by Heather & Little.



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Metalwork [continued]

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800-225-1414: Fax: 801-280-2493 info@historicalarts.com West Jordan, UT 84081 Designer & custom fabricator of ornamental metalwork: doors, windows, hardware, stairs, balustrades, registers, fences, lighting, gutters, columns, weathervanes, snow guards, cupolas, planters, fireplace tools & more; iron, bronze, aluminum & steel; restoration services.

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888-223-2545; Fax: 503-233-1312 www.hoah.us Portland, OR 97232

Manufacturer & supplier of vintage reproduction door, window, shutter, cabinet & furniture hardware & accessories: Federal, Victorian, Colonial Revival, Craftsman & Deco styles; lighting fixtures, pushbutton switches & plates; bathroom accessories; registers & grilles. Click on no. 1096

This turkey finial was forged by Kayne & Son Custom Hardware.

A Kayne & Son **Custom Hardware**

828-667-8868; Fax: 828-665-8303 www.customforgedhardware.com Candler, NC 28715 Manufacturer of forged- & castmetal hardware: strap, H, HL, butterfly & butt hinges; thumblatch locksets, gate hardware, shutter dogs & more; fireplace tools; grilles; bathroom accessories & kitchen equipment; restoration; catalog \$5. Call for more information.

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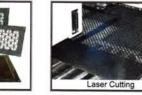
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This pressed-metal ceiling was manufactured by MetalCeilingExpress.



54 CLEM LABINE'S TRADITIONAL BUILDING



NIKO fabricated this custom zinc spandrel panel.

NIKO Contracting Co. 412-687-1517; Fax: 412-687-7969

412-687-1517; Fax: 412-687-7969 www.nikocontracting.com Pittsburgh, PA 15213 Custom fabricator & contractor of sheet metal & roofing: slate, tile & other roofing; storefronts, cornices, cupolas, domes, steeples, snow guards & leader heads; copper, lead-coated copper, zinc & stainless steel; metal ceilings. **Click on no. 8300**



O.K.Foundry fabricated this custom cast-iron stairway for the restoration of the Virginia State Capitol.

▲ O.K. Foundry Co., Inc. 804-233-9674; Fax: 804-233-6240 www.okfoundrycompany.com Richmond, VA 23224 Supplier of cast-iron elements: sculpture, columns & capitals, fencing, bollards, stanchions, mantels, fireplaces, chimneys & accessories.

Click on no. 1894



This ornate grille from Reggio Register is inspired by traditional Victorian designs.

Reggio Register Co., The 800-880-3090; Fax: 978-870-1030

www.reggioregister.com Leominster, MA 01453 Manufacturer of grilles & registers: for forced-air & high-velocity systems; cast iron, brass, aluminum, steel & wood; handcrafted to last for generations. **Click on no. 5810**

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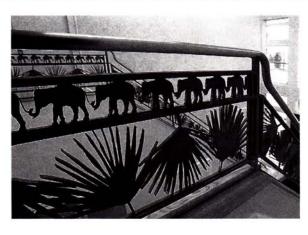




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www.robinsoniron.com Alexander City, AL 35010 Designer & installer of custom metalwork: fountains, columns, fences, doors, railings, sculpture, benches, grilles, cresting, street lighting & gazebos; wrought iron/steel, aluminum, bronze & cast iron; historical restoration. Click on no. 3240

This elephant motif railing was created by Robinson Iron using water-jet-cutting technology.



To order product information from a company in these Buying Guides, go to www.traditional-building.com/rs and click on the appropriate reader service number.



Schiff Architectural Detail restored this nine-story, 100-year-old cast-iron spiral fire escape for a building in Boston.



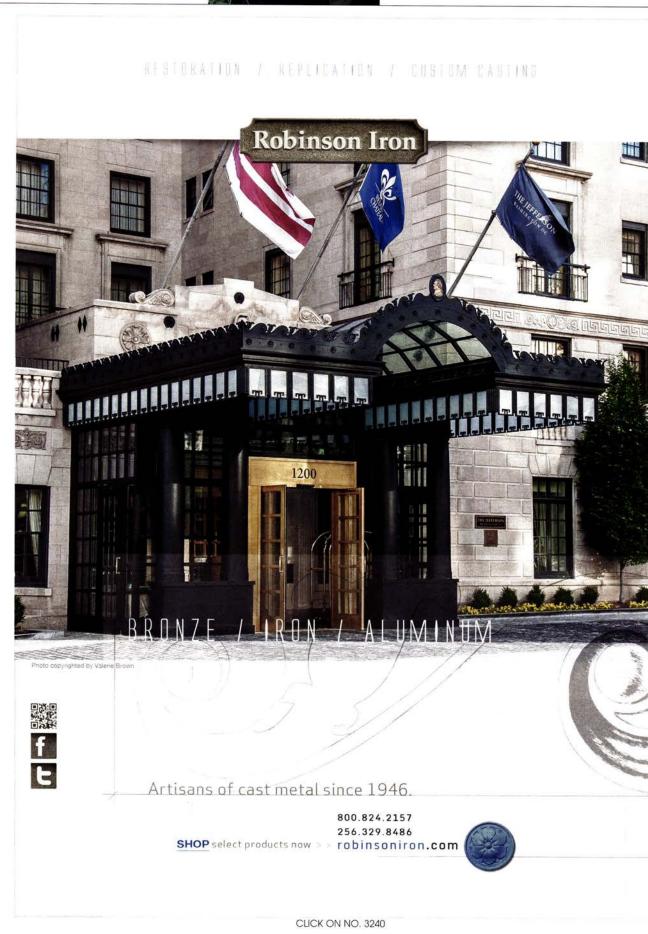
Chiff Architectural Detail, LLC 617-887-0202; Fax: 617-887-0127 www.schiffarchitecturaldetail.com

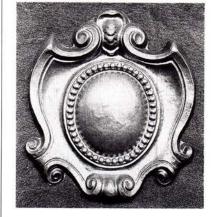
www.schiffarchitecturaldetail.com Chelsea, MA 02150 Custom fabricator of metalwork: exterior lamps,

lampposts, plaques, fences, fountains, sculpture, gazebos, planters, interior & exterior railings & grilles, domes, finials; non-ferrous forged work; machine-shop service; rubber molding & pattern work; capitals; windows, doors & door hardware; mantels, fans, fireplace tools; historical restoration. **Click on no. 7730**

Steptoe & Wife Antiques Ltd.

416-780-1707; Fax: 416-780-1814 www.steptoewife.com Toronto, ON, Canada M6B 1V9 Fabricator of architectural metalwork: spiral & straight staircases, railings, gates & grilles; copper, iron, aluminum, steel, brass & bronze fabrication for renovation & restoration projects; gazebos; ornamental ceilings.



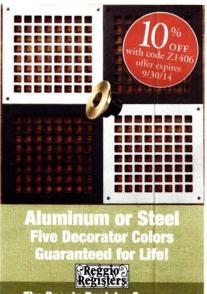


The stock line of ornamental sheetmetal shields from W.F. Norman includes model #2920, which measures 20x24 in.

~ W.F. Norman Corp.

800-641-4038; Fax: 417-667-2708 www.wfnorman.com Nevada, MO 64772 Manufacturer of sheet-metal ornament: hundreds of stock designs; cornices, moldings, brackets, pressed-metal ceilings, roofing, siding, finials & more; zinc, copper & lead-coated copper; duplication from samples or drawings.

Click on no. 520



The Reggio Register Company

Dept Z1406, 31 Jytek Road, Leominster, MA 01453 1.800.880.3090 www.reggioregister.com

CLICK ON NO. 5810

www.traditional-building.com

Roofing & Roofing Specialties



The model #117 snowguard from Alpine is available in two- or three-pipe versions; it is offered with a brass or stainless steel base plate.

∧ Alpine SnowGuards

888-766-4273; Fax: 888-766-9994 www.alpinesnowguards.com Morrisville, VT 05661

Manufacturer of snow-retention devices for every roof type: pad & pipe styles; copper, aluminum, brass & zinc; custom; easy to install; free advice & recommended layout patterns for delivering snowretention solutions.

Gotham Metalworks

718-786-1774; Fax: 718-786-7214 www.gothammetals.com Long Island City, NY 11101 Fabricator of sheet-metal products: cornices, cupolas, skylights, railings, capitals, gutters, domes, dormers & custom ornamental stamping; for replications, renovations & new construction projects. **Click on no. 2042**

✓ Heather & Little Limited

800-450-0659; Fax: 905-475-9764 www.heatherandlittle.com Markham, ON, Canada L3R OH1 Fabricator & supplier of historical sheet-metal roofing & specialty architectural sheet metal: finials, cornices, leader heads, cresting, metal shingles, pressed-metal siding, cupolas, steeples, domes, reproductions;

capitals & balustrades; Kalemein & lot-line metal windows & doors. Click on no. 2470

> Heather & Little restored the lead-coated-copper dome and cupola for Our Lady of Lourdes Roman Catholic Church in Toronto, Canada.



Ludowici supplied the clay-tile roofing for this historic building.

▲ Ludowici Roof Tile, Inc. 800-945-8453; Fax: 740-342-0025 www.ludowici.com New Lexington, OH 43764

Manufacturer of clay tile roofing: many patterns, finishes & colors; Imperial ceramic slate tile; good freeze/thaw properties; low moisture absorption; 75-year limited warranty; reclaimed tiles; restoration & new construction; flooring. **Click on no. 2760**



NIKO installed this batten-seam and flat-lock copper roof for an historic building.

NIKO Contracting Co.

412-687-1517; Fax: 412-687-7969 www.nikocontracting.com Pittsburgh, PA 15213

Custom fabricator & contractor of sheet metal & roofing: slate, tile & other roofing; storefronts, cornices, cupolas, domes, steeples, snow guards & leader heads; copper, leadcoated copper, zinc & stainless steel; metal ceilings. **Click on no. 8300**

Schiff Architectural Detail

617-887-0202; Fax: 617-887-0127 www.schiffarchitecturaldetail.com Chelsea, MA 02150

Custom fabricator of metalwork: exterior lamps, lampposts, plaques, fences, fountains, sculpture, gazebos, planters, interior & exterior railings & grilles, domes, finials; non-ferrous forged work; machine-shop service; rubber molding & pattern work; capitals; windows, doors & door hardware; mantels, fans, fireplace tools; historical restoration. **Click on no. 7730**

W.F. Norman Corp.

800-641-4038; Fax: 417-667-2708 www.wfnorman.com Nevada, M0 64772

Manufacturer of sheet-metal ornament: hundreds of stock designs; cornices, moldings, brackets, pressed-metal ceilings, roofing, siding, finials & more; zinc, copper & lead-coated copper; duplication from samples or drawings. **Click on no. 520**



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Heather & Little Limited has been a premier custom ornamental sheet metal fabricator for historic restoration since 1925 involved in projects throughout North America. With our proven expertise in the fabrication of complex sheet metal work, we are often called upon to participate in the most challenging ornamental sheet metal projects. Whether sheet metal roofing tiles, intricate cornice, decorative sheet metal, there is virtually no sheet metal element which our master metalsmiths can not be called upon to reproduce. Call TOLL FREE 1-800-450-0659 Fax 905-475-9764 Local 905-475-9763

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quartzitic sandstone & limestone; for fireplaces, building veneer, wall stone, flagging, paving, step slabs, benches & retaining walls.



Antique salt-and-pepper pavers from Gavin Historical Bricks were used to create this walkway.

∧ Gavin Historical Bricks Inc.

319-354-5251; Fax: 319-688-3086 www.historicalbricks.com lowa City, IA 52245 Supplier of antique paving & building materials: specialists in new construction with an Old World look as well as historic restoration projects; pavers, cobblestones, clinker brick & more.

Click on no. 8079



Architectural components from Haddonstone, including window surrounds, quoins and cladding, were used on this façade.



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K Haddonstone (USA), Ltd.

719-948-4554; Fax: 719-948-4285 www.haddonstone.com Pueblo, CO 81001 Manufacturer of classical & contemporary cast limestone: columns, balustrades, benches, planters, pavers, fountains, gazebos, interior ornament, mantels, statuary & more; 500+ designs; custom designs. Click on no. 4020

New World Stoneworks

508-278-7060; Fax: 508-278-7014 www.newworldstoneworks.com King of Prussia, PA 19406

Supplier of natural stone: matches historic stone; mantels; photographs of existing stonework, extracts pattern & delivers complete hand-chiseled job. **Click on no. 2026**

Monarch Stone International

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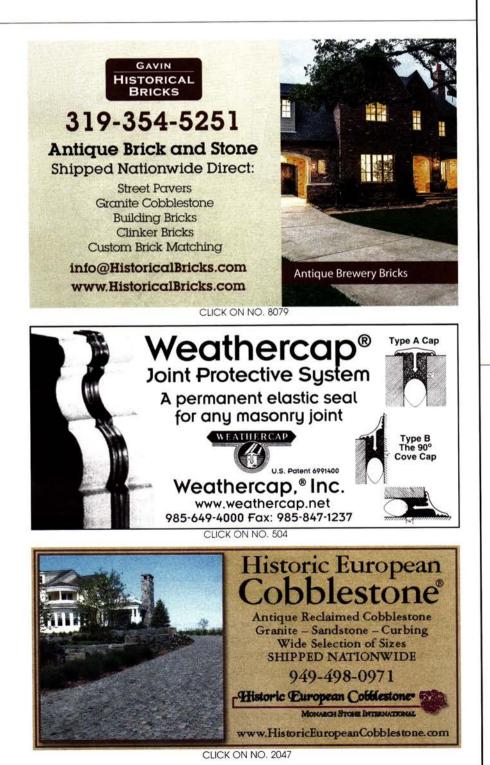
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419-368-0008; Fax: 419-368-6080 552 State Route 95 Loudonville, OH 44842 Supplier of new timbers in oak up to 40 ft. long: planed & rough sawn; 2x6 & 1x6 tongue-in-groove knotty pine. Click on no. 1954

Hugh Lofting Timber Framing, Inc.

610-444-5382; Fax: 610-444-2371 www.hughloftingtimberframe.com West Grove, PA 19390 Designer, fabricator & installer of custom timber-frame structures: residential, commercial & outbuildings; insulated panel systems; throughout the mid-Atlantic region; eco-friendly construction & materials.

Liberty Head Post & Beam

802-434-2120; Fax: 802-434-5666 www.libertyheadpostandbeam.com Huntington, VT 05462 Custom designer of timber-frame houses, barns & outbuildings: authentically joined in the Vermont tradition; historic renovation & new structures, since 1977.



Woodwork



This Gothic panel was hand carved by Agrell.

∧ Agrell Architectural Carving Ltd.

415-457-4422; No fax www.agrellcarving.com San Rafael, CA 94901 Architectural wood carver & designer: 30 skilled woodcarvers for fast delivery of large custom projects; hand-carved molding, panels, capitals, mantels, appliqués & religious furnishings; complex wood construction & custom furniture.

Click on no. 90

Allegheny Restoration & Builders, Inc.

304-594-2570; Fax: 304-594-2810 www.alleghenyrestoration.com Morgantown, WV 26507 Manufacturer of reproduction & custom wood doors & windows: window replication, restoration & repair; hardware replacement; storefronts & ecclesiastical projects. **Click on no. 1004**

Canning Studios

203-272-9868; Fax: 203-272-9879 www.canning-studios.com Cheshire, CT 06410 Painting, plastering, conservation studio: murals, conservation, stone & metal cleaning & wood restoration; work includes U.S. Capitol Building, The White House, Radio City Music Hall, Grand Central Terminal, numerous state capitol buildings, theaters, sacred & public spaces; family owned. **Click on no. 5100**



Historic Doors offers circular crown moldings in a variety of styles and woods.

∧ Historic Doors

610-756-6187; Fax: 610-756-6171 www.historicdoors.com Kempton, PA 19529 Custom fabricator of wood windows & doors: casing; circular & crown moldings; complete entryways; wood storefronts; restoration & period-style construction. **Click on no. 3570**

MWT Custom Wood Working, LLC >

828-322-4061; Fax: 828-322-4364 www.mwtwoodturning.com Hickory, NC 28603 Supplier of custom wood turnings: roped, twisted, flutes & spiral

stairs & stair parts; balusters & columns; newel posts, spiral molding, lamps & tables; Classical & contemporary styles; exterior & interior.

Reggio Register Co., The

800-880-3090; Fax: 978-870-1030 www.reggioregister.com Leominster, MA 01453 Manufacturer of grilles & registers: for forcedair & high-velocity systems; cast iron, brass, aluminum, steel & wood; handcrafted to last for generations. **Click on no. 5810**

Illingworth Millwork, LLC

315-232-3433; Fax: 315-232-3645 www.jimillingworthmillwork.com Adams, NY 13605 Manufacturer of custom wood windows, doors & moldings: for homes & historic buildings; matches any existing wood windows, doors, moldings; custom millwork.

Click on no. 1696



This spiral wound column was fabricated by MWT Custom Wood Working.

Shuttercraft, Inc.

203-245-2608; Fax: 203-245-5969 www.shuttercraft.com Madison, CT 06443 Manufacturer of authentic mortise-&-tenon wood shutters: cedar & mahogany, exterior movable & fixed louver, board & batten & raised panel; cutouts, capping, arches & more; hinges & holdbacks; interior louvers, Colonial panels & open frame; painting services; made in USA; family-owned company since 1986; ships nationwide.

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Woodwork [continued]

Timberlane, Inc. > 215-616-0600; Fax: 215-616-0749 www.timberlane.com Montgomeryville, PA 18936 Custom fabricator of exterior shutters: more than 25 historically accurate styles & designs; available in traditional woods or maintenancefree Endurian; large selection of period shutter hardware.

Click on no. 1056; 1925 for Endurian

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This artisan from Timberlane is putting together a solid kiln-dried western red cedar shutter using mortise-and-tenon joinery.

Wood Window Workshop

800-724-3081; Fax: 315-733-0933 www.woodwindowworkshop.com Utica, NY 13501 Custom fabricator of wood windows, doors, storms & screens: any size, shape & species; full mortise-&-tenon construction, true-divided lite, hard-to-find hardware & restoration & insulated glass; factory finishes; millwork; reproductions; for storefronts. **Click on no. 9640**

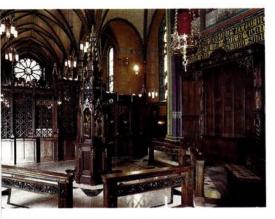


Custom interiors are the specialty of Zepsa Industries.

∧ Zepsa Industries, Inc.

704-583-9220; Fax: 704-583-9674 www.zepsa.com Charlotte, NC 28273 Supplier of architectural woodwork: stairs, mantels, paneling, wine cellars, furniture, doors & more. **Click on no. 1996**

Religious Specialties



Agrell Architectural carved these pieces in oak for the Cathedral of the Madeleine in Salt Lake City, UT.

∧ Agrell Architectural Carving

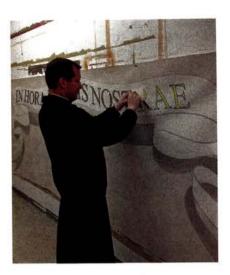
415-457-4422; Fax: No fax www.agrellcarving.com San Rafael, CA 94901

Architectural wood carver & designer: 30 skilled woodcarvers for fast delivery of large custom projects; hand-carved molding, panels, capitals, mantels, appliqués & religious furnishings; complex wood construction & custom furniture.



Buon Fresco's reproduction of Andre Russo's "The Assumption" began as a chalk illustration on the canvas.

Buon Fresco
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 www.bfresco.com
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 Creator of interior murals & decorative paintings: faux finishing, graining & marbleizing; Venetian plaster; gilding services.
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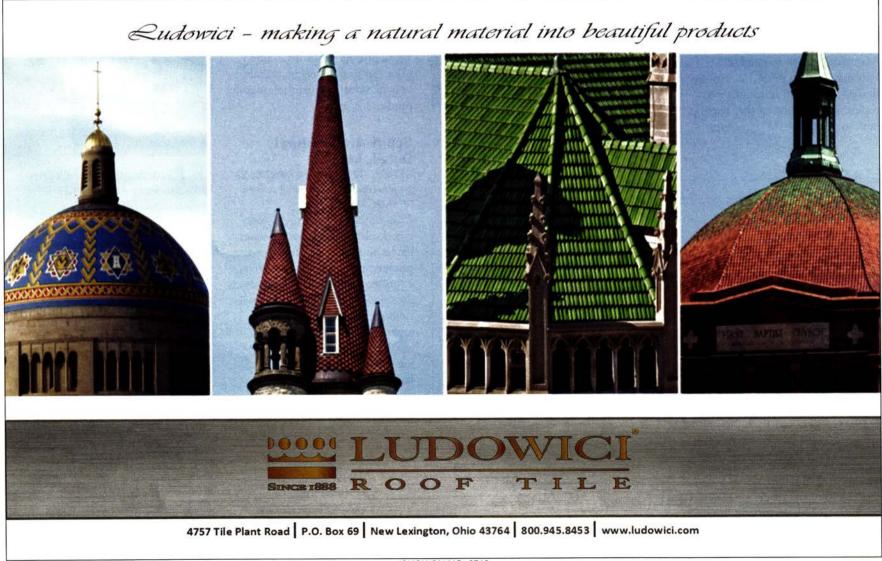


John Canning Studios shared a few trade secrets during the design phase with Reverend Markey from St. Mary Roman Catholic Church in Nonvalk, CT.

∧ Canning Studios

203-272-9868; Fax: 203-272-9879 www.canning-studios.com Cheshire, CT 06410 Painting, plastering, conservation studio: murals, conservation, stone & metal cleaning & wood restoration; work includes U.S. Capitol Building, The White House, Radio City Music Hall, Grand Central Terminal, numerous state capitol buildings, theaters, sacred & public spaces; family owned.

Click on no. 5100



Religious Specialties [continued]



Conrad Schmitt Studios restored the tornado damaged St. Mary Basilica, Natchez, MI; the project involved investigating original finishes and then painting and decorating with 23k gold leaf, glazes, multi-color stencils, tromp l'oeil and free-hand artistry.

▲ Conrad Schmitt Studios 800-969-3033; Fax: 262-786-9036 www.conradschmitt.com New Berlin, WI 53151

Creator, conservator & restorer of decorative painting: stained & art glass; ornamental plaster work & ceilings; gilding; crystalline etchedglass designs; murals, mosaics & statuary; for public & religious buildings; since 1889.

Crenshaw Lighting

540-745-3900; Fax: 540-745-3911 www.crenshawlighting.com Floyd, VA 24091 Manufacturer of decorative lighting fixtures: period & custom designs; historical restoration & reproduction; lighting for worship. **Click on no. 313**



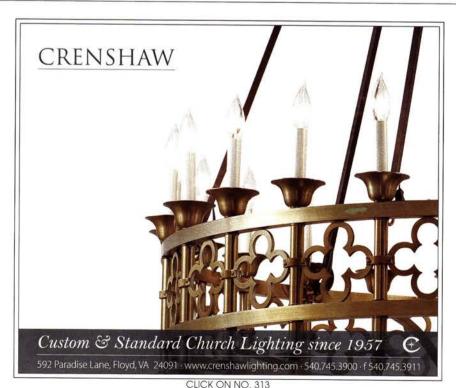
New stencils and a celestial pattern on the ceiling were part of EverGreene's full restoration of the Chapel of the Immaculate Conception at Seton Hall in South Orange, NJ.

∧ EverGreene Architectural Arts, Inc.

212-244-2800; Fax: 212-244-6204 www.evergreene.com New York, NY 10001 Decorative-arts studio: murals, decorative painting, gilding, plaster, wood, metal, stone & mosaics; new design, conservation & restoration; ecclesiastical, institutional, public & commercial projects; offices in NYC & Chicago. **Click on no. 743**



A workman from King Richard's removes antique windows at a church in Wisconsin to re-use them in a cathedral in Sacramento. CA.





Glass Heritage LLC restored these historic 1860s windows located above the entrance to Saint Irenaeus Church in Clinton, IA.

Ludowici Roof Tile, Inc. >

800-945-8453; Fax: 740-342-0025 www.ludowici.com New Lexington, OH 43764 Manufacturer of clay tile roofing: many patterns, finishes & colors; Imperial ceramic slate tile; good freeze/thaw properties; low moisture absorption; 75-year limited warranty; reclaimed tiles; restoration & new construction; flooring. **Click on no. 2760**

King Richard's Liturgical Design & Contracting

678-393-6500; Fax: 678-393-6417 www.kingrichards.com Alpharretta, GA 30004 Supplier of religious artifacts: altars, pulpits, podiums, stained glass, lighting, painting, murals, crosses, statuary, furniture, marble products & more.

Schiff Architectural Detail, LLC

617-887-0202; Fax: 617-887-0127 www.schiffarchitecturaldetail.com Chelsea, MA 02150

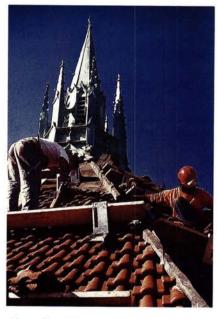
Custom fabricator of metalwork: exterior lamps, lampposts, plaques, fences, fountains, sculpture, gazebos, planters, interior & exterior railings & grilles, domes, finials; non-ferrous forged work; machine-shop service; rubber molding & pattern work; capitals; windows, doors & door hardware; mantels, fans, fireplace tools; historical restoration. **Click on no. 7730**

St. Louis Antique Lighting Co. > 314-863-1414; Fax: 314-863-6702 www.slalco.com

Saint Louis, MO 63130 Manufacturer & supplier of architectural lighting: all styles; historical reproductions & custom lighting; restoration services; commercial & ecclesiastical projects. Click on no. 6190

〈 Glass Heritage, LLC

563-324-4300; Fax: 563-324-4321 www.glassheritage.com Davenport, IA 52806 Art-glass studio: fabricator & restorer of stained glass & leaded glass; custom blown glass; sand blast etching; glass painting. **Click on no. 1986**



Clay roofing tile from Ludowici was used to re-roof this historic building.



Rambusch restored the historical lanterns for Christ Church in Short Hills, NJ.

A Rambusch Decorating

201-333-2525; Fax: 201-433-3355 www.rambusch.com Jersey City, NJ 07304 Designer & fabricator of public & ecclesiastical art & stained glass: altars, ambos, arks, crosses & more; decorative painting; murals & mosaics; lighting; commercial environments; since 1898.



The lighting fixtures at Old Christ Memorial Church in Pensacola, FL, were supplied by St. Louis Antique Lighting Co.

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