

Edifying Edifices



Washington University Advances its Campus with Innovative Masonry Solutions

THE DESIGN OF KNIGHT AND BAUER HALLS RELATES WELL TO THE EXISTING BUILDINGS ON THE WASHINGTON UNIVERSITY CAMPUS.

Top colleges and universities build minds in academic halls constructed of the finest, longest lasting building material – masonry. Recent residential and academic building projects completed, both on and off campus, by **John J. Smith Masonry** demonstrate Washington University’s respect for and understanding of the multiple purposes that masonry serves at this top tier school.

Hillman Hall, in the Brown School of Social Work and Knight and Bauer Halls in the Olin Business School, are two of the newest academic halls on the Danforth Campus at Washington University. They advance the style of Collegiate Gothic architecture established over a century ago. Two new residential halls on and off campus also joined the university’s building inventory.

“We have a range of buildings from 115 years old to one year old, but they are all made from red Missouri granite, with limestone trim, that holds together the Danforth Campus,” said **James Kolker**, Vice-Chancellor and University Architect for **Washington University**.

All four structures have a few things in common. They all use combinations of masonry products to integrate with the existing campus or neighborhood, and all the masonry work was executed by John J. Smith Masonry.

INSIDEMASONRY

EDIFYING EDIFICES

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BACK TO BASICS

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BUILDING ON TRADITION

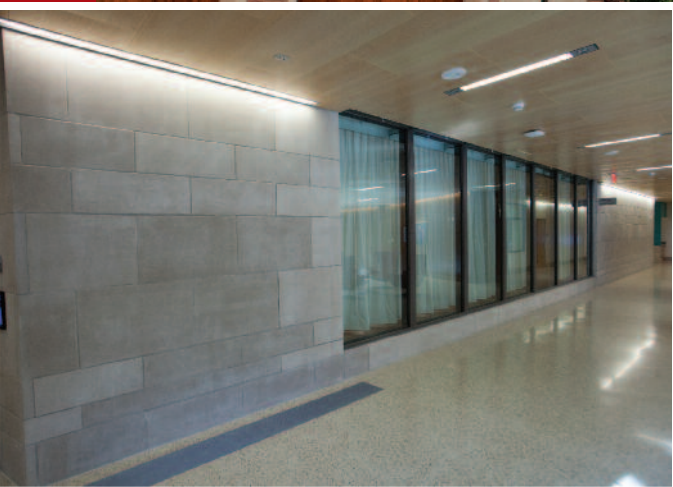
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A NO RISK SOLUTION WITH MASONRY

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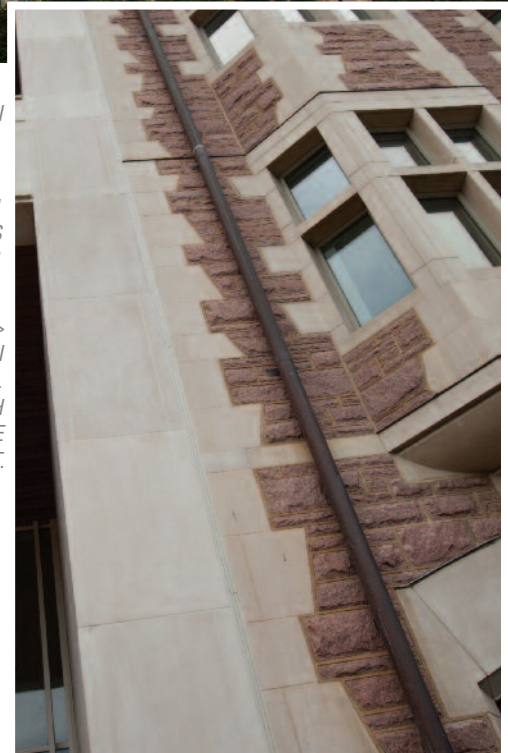
Knight & Bauer Halls at the Olin School of Business



KNIGHT AND BAUER HALLS SHARE A SINGLE BUILDING. THEY FORM THE NEWEST ADDITION TO THE OLIN SCHOOL OF BUSINESS ON THE WASHINGTON UNIVERSITY CAMPUS.

< THE USE OF INDIANA LIMESTONE PANELS ON THE FIRST FLOOR OF KNIGHT HALL CONTINUES THE PROGRESSION OF STONE ESTABLISHED IN THE BUILDING'S ENTRY FOYER.

THE INTERPLAY OF INDIANA LIMESTONE > AND MISSOURI RED GRANITE ARE SEEN IN THIS QUOIN LINKING THE NEW KNIGHT HALL ON THE LEFT OF THE DOWNSPOUT WITH THE EXISTING KNIGHT CENTER ON THE RIGHT OF THE DOWNSPOUT.



“It was a wonderful experience using granite as a veneer on this project because of its density,” said **Nick Nager**, Project Manager, **Mackey Mitchell Architects**. “This building is a modern example of Collegiate Gothic architecture that blends into the campus environment while simultaneously charting a new course.”

Bauer and Knight Halls, the newest addition to the John Olin School of Business at Washington University, is a bold, modern building that fits the campus environment, largely in part to its choice of materials.

“When you compare Bauer and Knight Halls to other Collegiate Gothic buildings on campus, you see a trend of less – there are leaner stone elements that become lighter in nature,” said Nager.

While the combination of Missouri granite, Indiana and Valders limestone is visually stunning, it is the unseen that is quite remarkable.

The limestone finials made from routed lengths of stone are securely mounted on custom stainless steel trellises designed by John J. Smith Masonry.

“John J. Smith Masonry was critical in finding an efficient means of supporting the limestone that met all the lateral and gravity requirements,” said Nager.



INDIANA LIMESTONE DEFINES THE VARIOUS ENTRANCES TO THE NEW ACADEMIC HALL.

THE ATTENTION TO DETAIL IN THE SLIGHTEST OF MORTAR JOINTS ACCENTS THE TRADITIONS ESTABLISHED OVER A CENTURY OF CAMPUS GROWTH.



MISSOURI RED GRANITE AND INDIANA LIMESTONE AT PLAY IN A DETAIL FROM THE BAUER HALL SIDE OF THE NEWEST BUILDING IN THE OLIN SCHOOL OF BUSINESS. ACCORDING TO JOHN SMITH, PRESIDENT OF JOHN J. SMITH MASONRY, EACH PIECE OF RED MISSOURI GRANITE ON THIS BUILDING IS HAND CRAFTED IN THE MASON CONTRACTOR'S WORKSHOP.



At A Glance

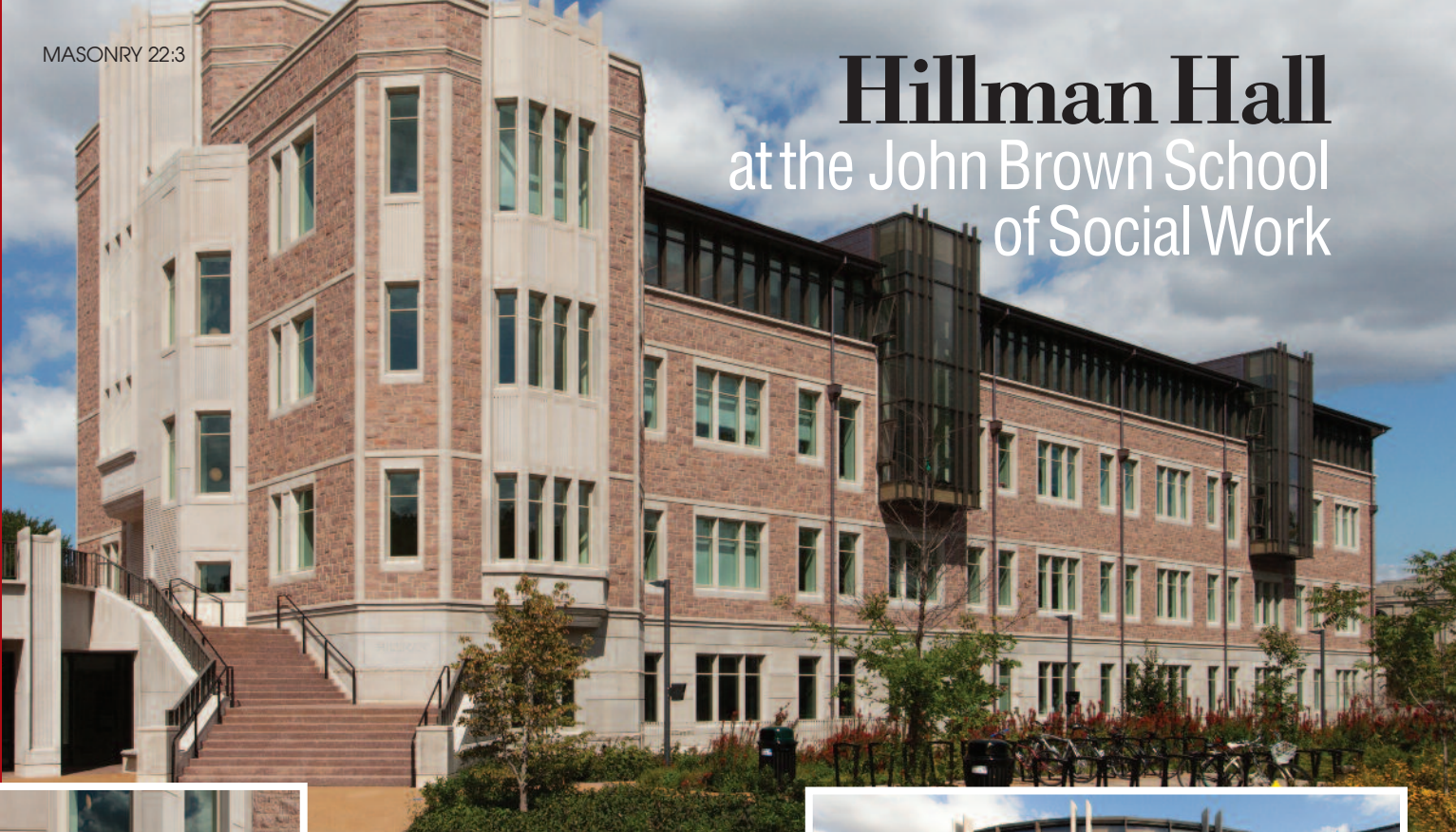
- Client** | Washington University
in St. Louis
- Architect** | Mackey Mitchell
- Architect & Planner** |
Moore, Yudell, Ruble
- General Contractor** |
Tarlton Corporation
- Consulting & Structural Engineers** |
KPF Consulting Engineers
- Engineers** | McGinnis & Associates
- Mason Contractor** |
John J. Smith Masonry
- Craft Workers** |
- Bricklayers' Union Local #1
of Missouri
- Eastern Missouri Laborers'
District Council
- Mortar, Grout** |
- Midwest Block & Brick
- Raineri Building Materials
- Block** | Lemay Concrete Block
- Insulation** | Irwin Products
- Valder** | Earthworks
- Flashing & Anchors** |
Hohmann & Barnard
- Exoair Termination, Caulking** |
Goedecke



ACCORDING TO VICE-CHANCELLOR JAMES KOLKER, KNIGHT AND BAUER HALLS USE THE DETAILING AND MATERIALS OF ITS CAMPUS NEIGHBORS TO INTEGRATE WITH AND ADVANCE THE COLLEGIATE GOTHIC STYLE ARCHITECTURE AT WASHINGTON UNIVERSITY.

Hillman Hall

at the John Brown School of Social Work



ACCORDING TO VICE CHANCELLOR AND UNIVERSITY ARCHITECT JAMES KOLKER, A GOAL IN THE DESIGN OF HILLMAN HALL IS TO USE TEXTURE AND DETAIL IN THE GRANITE AND LIMESTONE TO BREAK DOWN THE MASS AND SCALE OF THE NEWEST ADDITION TO THE JOHN BROWN SCHOOL OF SOCIAL WORK ON THE WASHINGTON UNIVERSITY CAMPUS.

< THE CARVING IN THE LIMESTONE AROUND THE WEST ENTRANCE TO HILLMAN HALL BRINGS DOWN THE BUILDING'S SCALE, MAKING THE BUILDING MORE COMFORTABLE AND LESS FOREBODING.



THE GOAL IN HILLMAN HALL WAS TO DESIGN A BUILDING CONSISTENT WITH THE BUILDING TRADITIONS ON CAMPUS WHILE REFLECTING THE MISSION OF THE JOHN BROWN SCHOOL OF SOCIAL WORK. THE USE OF GLASS CURTAIN WALL FRAMED AND SUPPORTED BY ROUTED MASONRY FINIALS ACHIEVED THAT GOAL.

Hillman Hall combines the solidity of cut stone with the transparency of a glass curtain wall to create a transitional example of Collegiate Gothic architecture.

“Three sides of the building are traditional to Washington University, with a limestone base, granite, and a ribbon window above. But on the north side of the building is a big expanse of glass with stone fins acting as crenellations,” said **Dan Schneider**, Project Architect, **Mackey Mitchell**.

While limestone and granite comprise the majority of three walls, Schneider finds the delicate, twenty-five foot tall limestone finials adorning the building's north curtain wall as the most remarkable part of the project.

“We had an integrated design process where everyone involved in designing the stone finials had to work out the deflection of the elements,” said Schneider. “The stone is load bearing, serving as the cap to hold the curtain wall in place.”

The construction of Hillman Hall features a remarkable blend of new technology and traditional craftsmanship.

“The quality of construction on this project is second to none,” said **Demon Parker**, Senior Project Manager, **Alberici Constructors**. “The tradespeople really took pride in their workmanship, which created a stellar exterior façade.”

At A Glance

Client | Washington University in St. Louis

Architect | Mackey Mitchell

General Contractor | Alberici Constructors

Structural Engineer | KPFF Consulting Engineers

Consulting Design Services | CDC

Mason Contractor | John J. Smith Masonry

Craft Workers |

- Bricklayers' Union Local #1 of Missouri

- Eastern Missouri Laborers' District Council

Mortar | Midwest Block and Brick

Block | Lemay Concrete Block

Caulking | Goedecke

Insulation | Carter Waters

Valder Buff Stone | Earthworks

Flashing & Anchors | Hohmann & Barnard

Forklift Rental | RG Rents

THIS EXTENSION OF UMRATH HOUSE IS AN ECLECTIC BLEND OF STYLES, ALL ACHIEVED THROUGH A VARIETY OF MASONRY VENEERS.

Umrath House

South 40 Campus

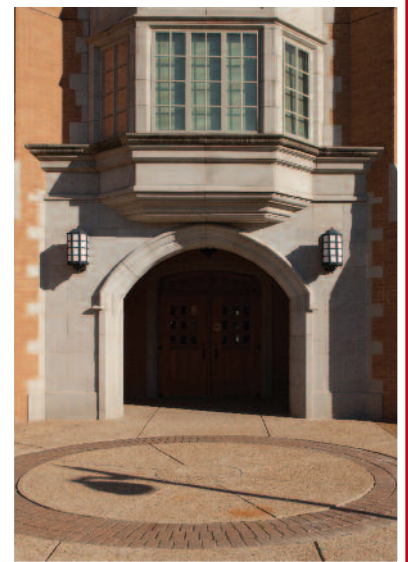


The latest phase of new construction on Washington University's South 40 residential campus features a five-story residence hall that completes a traditional retail streetscape flanking a pedestrian walkway. This pedestrian "spine" links the residential halls to the main campus.

"Masonry adds to the success of the Umrath House project in several ways," said **Bryan Zehnder**, Senior Project Manager, **Clayco**. "The face brick with cast stone accents provide an elegant but also durable exterior façade. Tall masonry gables with steep pitched roof angles give the building a majestic

appearance. The stone bay windows on the south elevation provide a welcoming entrance through the main pedestrian walkway from the university's freshman housing sector to the main campus. Limestone benches provide gathering spaces for students on the south project lawn enhancing the community atmosphere. In addition, site retaining walls with a masonry façade allow for grade changes around the building to occur with a pleasing aesthetic look and also create private patio areas for the residential administrators."

PAVERS SET IN A VARIETY OF > PATTERNS, CAST STONE ARCHWAYS, BAY WINDOWS AND CURVING BRICK AND CAST STONE WALLS COMBINE TO CREATE AN HISTORIC FEEL ON THE BUILDING'S WEST SIDE.



< PERMEABLE PAVERS IN THE PEDESTRIAN WALKWAY INSTALLED BY JOHN J. SMITH MASONRY WERE A SUSTAINABLE FEATURE ON THIS LEED CERTIFIED PROJECT.



THE SHOPS FRONTING THE "SPINE" IN THE COMMERCIAL CORRIDOR FORMED BY THE RESIDENCE HALLS ARE FRONTED WITH A MIX OF CAST STONE AND CORDOVA STONE AT STREET LEVEL.

Client | Washington University in St. Louis

Architect | Mackey Mitchell

Architect & Planner |

Moore, Yudell, Ruble

General Contractor | Clayco

Structural Engineers | ASDG

Mason Contractor |

John J. Smith Masonry

Craft Workers |

- Bricklayers' Union Local #1 of Missouri

- Eastern Missouri Laborers' District Council

Block | Lemay Concrete Block

Mortar & Grout | Spec Mix

Cordova, Century Series, Mortar | Midwest Block & Brick

Mortar Color | Raineri Building Materials

Insulation | Carter Waters

EW Gold Limestone | Earthworks

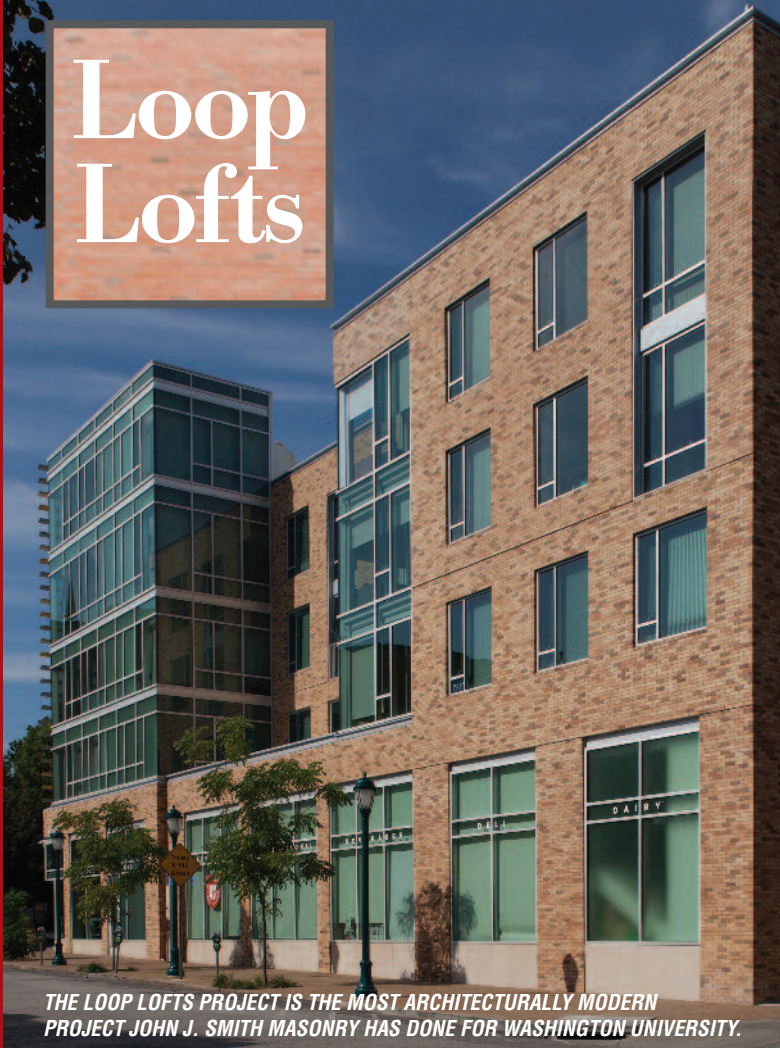
Flashing & Anchors |

Hohmann & Barnard

Lifts | RG Rents

At A Glance

Loop Lofts



THE LOOP LOFTS PROJECT IS THE MOST ARCHITECTURALLY MODERN PROJECT JOHN J. SMITH MASONRY HAS DONE FOR WASHINGTON UNIVERSITY.

A palette of multi-colored brick helps the Loop Lofts, an off-campus, mixed use development, blend in to the existing University City streets of Delmar and Enright Avenues. **William Rawn Associates** of Boston, MA, won a design competition based in part on their insightful use of masonry in a design combining retail space, residential units and parking.

“The brick plays an important role in this project,” said **Peter Tao**, Principal, **Tao + Lee Associates, Inc.** Tao + Lee served as the local architect on this project. In addition to reducing the scale of the new, larger residential buildings on Enright, a mixed palette of brick helped both fronts of the project assimilate into the existing streetscapes.

“Brick colors and textures were selected that would be compatible with the colors dominant in the area,” said Tao. “The buildings are intended to be contextual with the rest of the neighborhood, an area rich with various color bricks.”

The project planners and designers spent a lot of time thinking about how the different colors of brick would work with each other and with the surrounding neighborhood.

“St. Louis is such a masonry town, whether it is brick or stone,” said James Kolker, Vice-Chancellor and Architect, Washington University. “It is important to us to be a good neighbor. We want to be cutting edge where appropriate, but also respectful of the significant contexts.”



< A STREET LEVEL VIEW OF THE BRICKWORK ON DELMAR.



THE PEDESTRIAN MEWS LINKING ENRIGHT TO DELMAR IS FORMED BETWEEN TWO RESIDENTIAL BUILDINGS. THE CONSTRUCTION OF A RADIUS WALL ON THE BUILDINGS ON ENRIGHT WAS DONE USING A TEMPLATE. ONE COURSE OF BRICK WAS SET AT A TIME.

Client | Washington University in St. Louis

Architects |

- Tao + Lee Associates
- William Rawn Associates

General Contractor | Paric

Structural Engineers |

- KPFF Consulting Engineers
- LeMessurier Consultants

Mason Contractor |

John J. Smith Masonry

Block | Lemay Concrete Block

Mortar | Spec Mix

Brick | Richards Brick

Brick, Block, Mortar | Midwest Block & Brick

Cast Stone | Caliber Cast Stone

Mortar Weeps | Irwin Products

Insulation | Carter Waters

EW Gold Coping | Earthworks

Flashing & Anchors |

Hohmann & Barnard

Staging | Goedecke

Craft Workers |

- Bricklayers' Union Local #1 of Missouri
- Eastern Missouri Laborers' District Council

At A Glance

Back To Basics



SINGLE WYTHE CMU PROVIDES A VERSATILE, LOAD BEARING STRUCTURE FOR THE NEWEST ADDITION TO THE RETAIL LANDSCAPE IN KIRKWOOD, MO.

JDS Masonry erects load bearing masonry structure for Fresh Thyme in record time

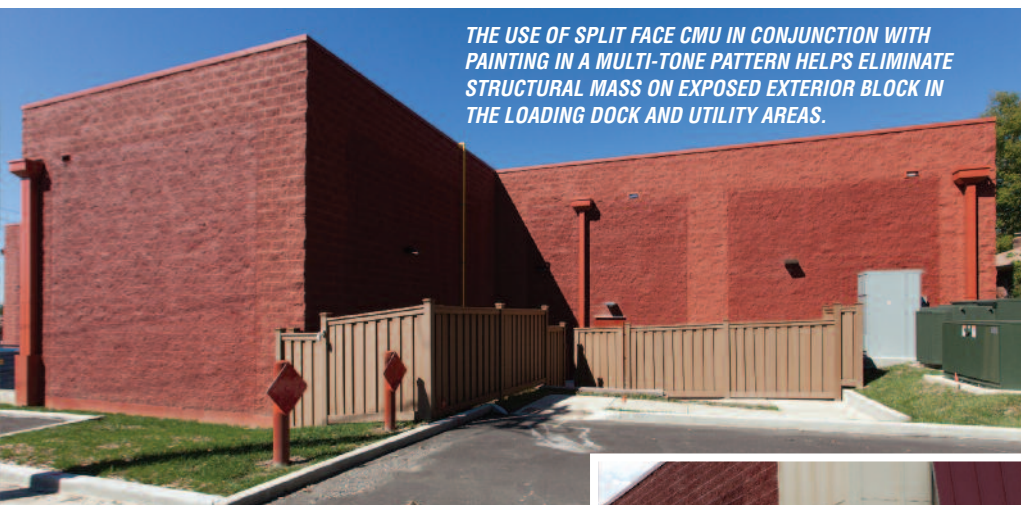
The new Fresh Thyme Farmer's Market at Lindbergh Boulevard and Manchester Road in Kirkwood achieves the look and feel of a rural grocer through the use of faux stone trim and wood finishes on the building's north and west walls.

Schmidt's crew built the entire building except for the two walls on the loading dock to allow the iron workers access to set the steel. The two final dock walls were then added.

The walls are insulated with pressurized foam insulation

injected into the block cell. This insulates the wall without the need for furring on the interior face. Every inch of block in the store's interior is covered with shelves and trim. Outside, varying shades of red paint are used in a banding pattern to break of the mass of the exposed south wall.

As with this project and most, judicious up-front planning and masonry construction are a schedule-efficient and cost-effective combination. **M**



THE USE OF SPLIT FACE CMU IN CONJUNCTION WITH PAINTING IN A MULTI-TONE PATTERN HELPS ELIMINATE STRUCTURAL MASS ON EXPOSED EXTERIOR BLOCK IN THE LOADING DOCK AND UTILITY AREAS.

Behind these trappings stand four sturdy walls of load bearing concrete masonry. Only visible on the building's south and east faces, these walls were erected in record time by the craftsmen at JDS Masonry.

"This project is like going back to basics for us," remarked **Jeff Schmidt**, owner of **JDS Masonry**. "Customers are rediscovering how economical free standing block walls can be. They supply the load bearing, insulation and aesthetics all in one."

The tight site on a busy corner proved a perfect fit for masonry construction.

"This is a situation where masonry shines," said Schmidt. "We put up our walls quickly. A tilt-up wall system would have had difficulty working in this confined area."



THE CHOICE OF LOAD BEARING MASONRY WALLS WORKED WELL IN THE TIGHT CONSTRUCTION SITE ON A CORNER LOT AT A BUSY INTERSECTION.

At A Glance

Client | Fresh Thyme Farmer's Market

Architect | TR,i Architects

General Contractor |

Blanton Construction

Mason Contractor | JDS Masonry

Craft Workers |

- Bricklayers' Union Local #1 of Missouri

- Eastern Missouri Laborers' District Council

Block, Mortar, Grout |

Raineri Building Materials

Block | Lemay Concrete Block

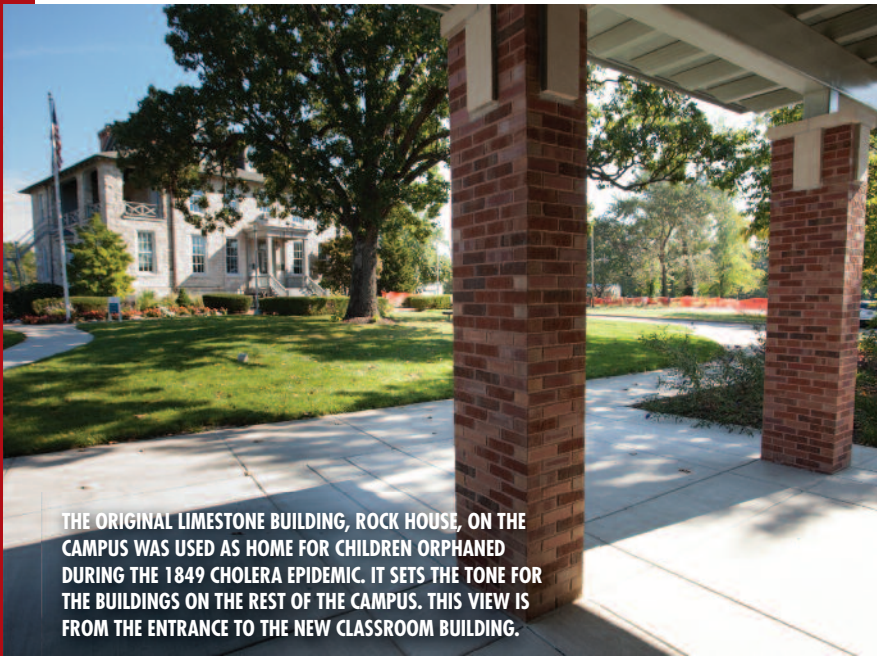
Insulation | B&B Masonry Insulation

Rebar, Wire, Flashing | Irwin Products

Building on Tradition



THE 14,000 SQUARE-FOOT BUILDING TIES INTO THE ORIGINAL SCHOOL BUILDING, CONSTRUCTED MID-20TH CENTURY. THE BUILDING'S CEILING IS HIGHER THAN A SINGLE STORY IN ORDER TO ACCOMMODATE THE SPECIAL PHYSICAL THERAPY AND CLASSROOM SMART BOARDS.



THE ORIGINAL LIMESTONE BUILDING, ROCK HOUSE, ON THE CAMPUS WAS USED AS HOME FOR CHILDREN ORPHANED DURING THE 1849 CHOLERA EPIDEMIC. IT SETS THE TONE FOR THE BUILDINGS ON THE REST OF THE CAMPUS. THIS VIEW IS FROM THE ENTRANCE TO THE NEW CLASSROOM BUILDING.



GREAT CIRCLE'S MISSION INVOLVES TEACHING CHILDREN WITH AUTISM. IT IS VERY IMPORTANT THAT THE OUTDOOR SPACE IS WELL DEFINED AND CLEAR. THE NEW CLASSROOM BUILDING USES A VENEER OF BRICK AND CAST STONE AS WELL AS A LIMESTONE WALL TO EVOKE THE ROCK HOUSE.

A Historic Stone Structure Provides the Foundation for Campus Expansion

Great Circle, a behavioral healthcare organization with multiple sites statewide, is in the second phase of campus renovation and expansion. There was never any question - masonry would play a prominent role in the various building additions.

The original structure on the campus is the Rock House. Erected in the 1850's as a college for boys, it survived a fire in 1910 that destroyed everything but the sturdy limestone walls.

Today, this building serves as the centerpiece of a campus that assists daytime and residential students with autism.

"We try to accent a little bit of the look of the Rock House and existing brick buildings when we plan new structures," said **John Money**, Vice President and Chief Facilities Officer, **Great Circle**. "We want the aesthetics of the environment to be pleasing and inviting, but not look institutional. Masonry has a real solid look and feel to it."



BRICK AND LIMESTONE VENEERS COVER THE STEEL PIERS SUPPORTING THE SHADE COVER OUTSIDE THE ATRIUM OF THE NEW CLASSROOM ADDITION AT GREAT CIRCLE. THE ARCHITECT USES PIERS AND CANOPIES TO DEFINE ENTRANCES ON THE BUILDING.

While the Rock House serves as campus icon, the construction of brick buildings in the 1950s for residences, classrooms and administration provide the guideposts for subsequent projects.

“The goal in designing any campus is to find continuity. That usually involves a continuity of materials. This gives you a sense of place and unity,” said **Brian Sechrist**, Architect, **Christner, Inc.** A common thread on campus is brick.

This project involved rehab work on residential buildings, plus a 14,000 square-foot addition on the classrooms. The majority of masonry is brick and cast stone veneer over metal studs, along with limestone to relate to the Rock House. The

project features brick in five different colors and rough and smooth faces.

“There is a certain warmth to brick,” said Sechrist. “The students and residents need to feel they are in a place as close to home as they can get. The brick also provides a nice earthy backdrop to the outdoor spaces.”

Vince Patrico and his crew from **Patrico Masonry** distinguished themselves on the first phase of this project. They have already begun work on the first part of Phase II, which will continue through 2017 with the construction of a new field house. **M**



THIS FRONT ADDITION TO MABEE HALL ADDED A NURSING STATION AND AN OFFICE BULLPEN TO THE BUILDING. THE ADDITION OF THE BRICK PIERS AND VESTIBULE WAS DESIGNED TO PROVIDE THE RESIDENTS WITH A WELCOMING FRONT PORCH.

At A Glance

Client | Great Circle
Architect | Christner, Inc.
General Contractor | BSI Constructors
Mason Contractor | Patrico Masonry
Craft Workers |
 - Bricklayers' Union Local #1 of Missouri
 - Eastern Missouri Laborers' District Council
Brick | Midwest Block & Brick
Mortar | Raineri Building Materials
Cast Stone | Caliber Cast Stone
Stone | Earthworks
Veneer Ties & Flashing | Irwin Products

A No-Risk Solution with Masonry

Reinsurance Group of America Uses Masonry Products to Support Their Brand



THE LIMESTONE RAIN SCREEN FORMS A BASE THAT CONNECTS THE TWO GLASS TOWERS. THE INTENT IS TO PROVIDE PEDESTRIANS A FEELING OF WALKING ALONG A NATURAL STONE FORMATION.

The popular insurance slogan “Own a piece of the rock” speaks to the traditional branding of risk management companies as solid, grounded, reliable corporations. Reinsurance is the business of insuring the insurance companies. They must be bedrock solid in order to support the weight of balance-sheet top-line numbers measured in the trillions of dollars.

Reinsurance Group of America (RGA) selected an integrated combination of masonry for the building and grounds of its new headquarters. RGA built its global brand on a solid Missouri base. This concept – local talent, global reach – is reinforced by the interplay of masonry and glass.

Two five-story glass towers representing RGA’s global growth thrust off a two-story stone base. The intent was to evoke a base so solid that it is rooted to the seam of a native stone quarry. The use of limestone in the exterior commons and granite curbs and limestone trim in the parking landscaping extends the theme of solid, native stone to the edges of the corporate campus.

A rainscreen of coral-colored Moketa limestone panels, precisely mounted and anchored by the craftsmen of Heitkamp Masonry, wraps around the first two stories of the building. The stone appears to support and unite the modern towers to each other and the very land from which it originates.

“The team of the general contractor, **Clayco** and **Gensler**, the architect of record, for the core and shell, was pivotal

for the use of the limestone panel rainscreen,” said **Bob Dunn**, Principal of **Fox Architects**, who also collaborated on the project.

The rainscreen panels range in size up to 4x6 feet. This gives the impression of large block construction without the challenges of handling cyclopean stones.

“Everything on the rainscreen has to be self-supporting. The stones below do not support the stone above them. They hang individually from a system of engineered hangars,” said **Luke Siebert**, Project Manager, **Heitkamp Masonry**.

Originally it was anticipated that a manufacturer based in Germany would provide the anchoring system. However, Heitkamp Masonry worked with **Irwin Products** to find a domestic fabricator capable of providing a system with equal performance characteristics.

“This was a very successful project, it was very collaborative and Heitkamp, the mason contractor, worked well,” said **Dunn**, Fox Architects.





HEITKAMP MASONRY ALSO INSTALLED GRANITE CURBS ON ALL THE EXTERIOR WALKWAYS



THE USE OF STONE ON THE EXTERIOR'S HARDSCAPE AND STEPS TO THE COMMONS TIES THE BUILDING TO THE SITE, WHICH IS LANDSCAPED TO EVOKE A NATURAL MISSOURI RIVER BLUFF ENVIRONMENT.

At A Glance

Client | Reinsurance Group of America
Architects | Fox Architects; Gensler
General Contractor | Clayco
Structural Engineer | Uzun and Case
Mason Contractor | Heitkamp Masonry
Craft Workers |
 - Bricklayers' Union Local #1 of Missouri
 - Eastern Missouri Laborers' District Council
Block, Mortar & Grout | Midwest Block & Brick
Anchoring System, Flashing, Accessories |
 Irwin Products



MOKETA LIMESTONE IS HARDER THAN NATIVE MISSOURI LIMESTONE, MAKING IT PERFECT FOR THE APPLICATION IN THIS RAIN SCREEN.



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Grant Named Top Student



Former Masonry Institute Intern **Jason Grant** was one of fifty Western Michigan University students to be recognized as a Presidential Scholar during the 36th annual Presidential Scholars Convocation. The Presidential Scholar is the highest academic honor Western Michigan University can bestow on its undergraduates.

Grant was named top student in the Department of Civil and Construction Engineering. A top soccer player during his college career, Grant was also named a Distinguished Scholar by the Mid-American Conference during his senior year and received Academic All-MAC honors in his final two seasons.

Tom McDonnell Receives Outstanding Subcontractor Award

The American Subcontractors Association (ASA) Midwest Council named **Tom McDonnell** of **George McDonnell & Sons, Inc.**, as their 2016 Outstanding Specialty Subcontractor at the ASA Boots and Bling Awards Gala in April, 2016.

Here, McDonnell receives the award from **Kevin Douglas**, ASA- Midwest Council President.



Photo by Bueltmann Photography

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