



REVITALIZE

Renovation of the School of Medicine at the
University of Missouri - Kansas City

bnim





SUMMARY

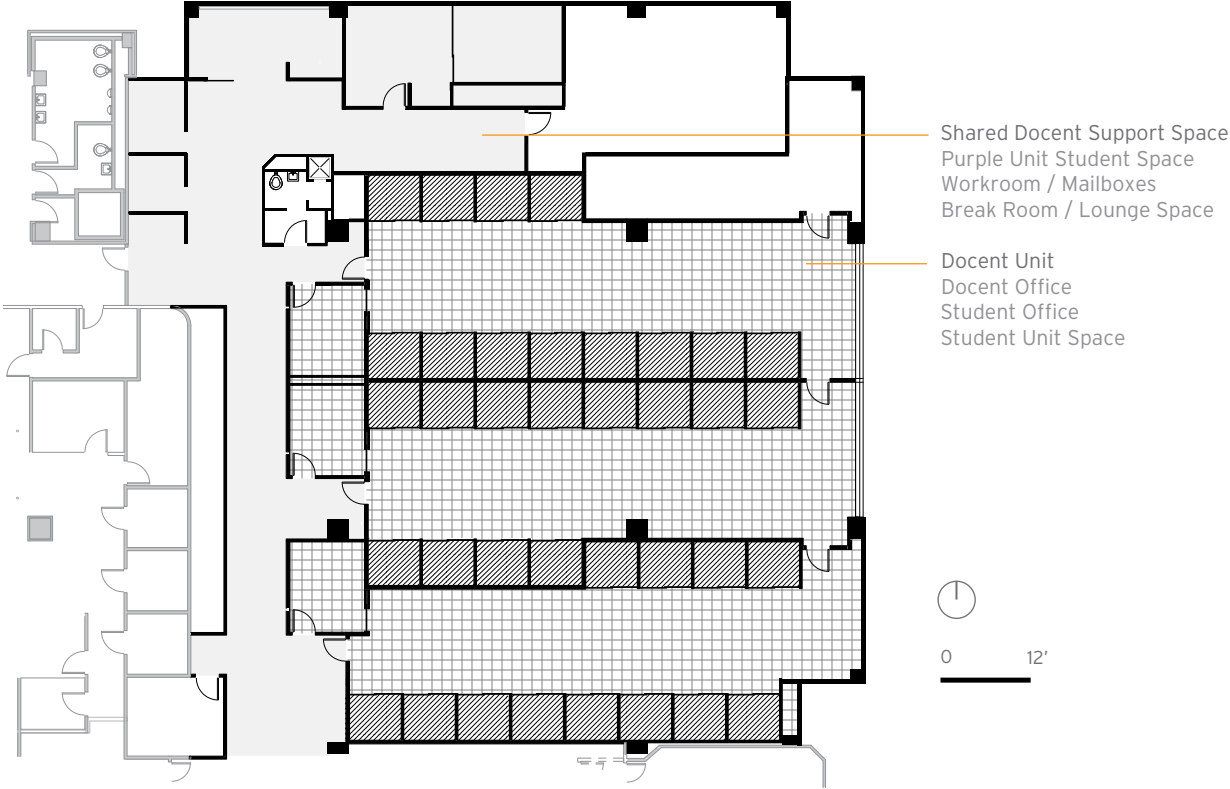
The new Docent units in the School of Medicine (SOM) building at the University of Missouri-Kansas City's (UMKC) Hospital Hill campus mark the beginning of a multi-phased renovation project scheduled to take place over the next several years. This first phase (Phase 0) includes an 11,000-square-foot renovation on the first and third floors to accommodate a new computer testing/training lab and a prototypical Docent unit design. This phase is intended to establish a prototype for the Docent Unit design, and essentially act as the catalyst for the comprehensive renovation of the SOM building spanning eight phases.

The work on the first floor included the computer testing and training lab and custodial office and support spaces. The test lab can accommodate 36 students to administer

testing, but will also be used for instruction and lectures. The lab is equipped with AV and IT equipment necessary for testing and instruction.

The fourth and fifth floors of the SOM building presently contain a total of 32 existing, outdated Docent units, with four units in each quadrant of the floor. This renovation work provides three new Docent units and temporary support spaces in the northeast quadrant of the 3rd Floor, which include a work/copy room, study/lounge space for the Purple Docent unit students, mechanical room, and storage. In subsequent phases of renovation, the temporary spaces will be removed, and the fourth Docent unit will be constructed. Eventually, the central areas of these two floors will contain administrative office and support spaces, serving the four Docent units in each quadrant.

PROGRAM





BNIM has a saying:
No one knows as much as everyone.

Our project team shared the belief that the best ideas are always the result of needs being identified and creative solutions being created. Our collective knowledge and experiences is cumulative and serves to shape the intuitive foundation for the creation of new ideas or new application of an idea to solve a need. This project is the product of many collaborators providing intuitive and scientific contributions that have shaped the architecture and infrastructure. The users and designers collaborated to define the pedagogical and facility needs. The designer's work continued to refine programmatic needs as the design collaboration evolved.





existing conditions

In 2010, funding became available for a renovation project at the University of Missouri-Kansas City School of Medicine with the goal to enhance the learning environment for students. This project directly followed a programming and planning study that resulted in a future plan for UMKC SOM's space on Hospital Hill, the university's medical campus located near downtown Kansas City, MO. A key element was to re-envision the SOM's Docent & Student Support Spaces, which account for approximately 90,000 GSF and support the school's unique approach and curriculum.

The Docent concept is core to UMKC's medical education program, which offers an alternative approach from that of a traditional four-year medical school. The UMKC program admits students directly from high school into a six-year program that provides early and continuous patient care experiences within a curriculum that integrates the teaching of liberal arts, basic sciences, and clinical medicine.

In their third year, students are assigned to a Docent team comprised of 12 students from the final four years of the program. Each team is led by a Docent instructor and has dedicated space that includes a Docent office, student offices, and shared space for collaborative activities. The Docent concept is reflected in the existing building layout, which accommodates four Docent units per quadrant, 16 units per floor, for a total of 32 Docent units on two floors of the SOM building.

The current Docent spaces, designed when the building was constructed in the early 1970s, no longer serve the needs of the students or the SOM. Student offices do not accommodate current needs and technology; embedded research labs are antiquated and underutilized; and the central classroom space is not conducive to

group learning. The new configuration was designed to enhance the learning experience for the individual student and facilitate collaboration among students and between Docents and students.

For the first phase of renovation, a quadrant of space on the 3rd floor was made available, and the design team developed a plan for the design of the Docent Unit of the Future. This design was envisioned as a prototype that could be adjusted moving forward through subsequent phases of renovation. A second program component, the Computer Testing Laboratory, became a separate renovation on the 1st floor.

The design process began with the exploration of the Docent unit's primary components with the SOM planning committee and student representatives. The student office was a key element, and multiple plan and section configurations were considered based on the following criteria:

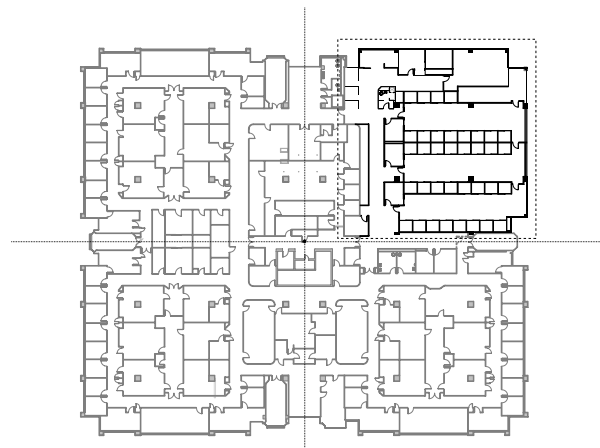
- facilitate private study
- offer a comfortable, accommodating space
- provide storage
- provide access to natural daylight
- provide acoustical privacy
- offer a visual connection to activities inside and outside the office, yet maintain a level of visual privacy

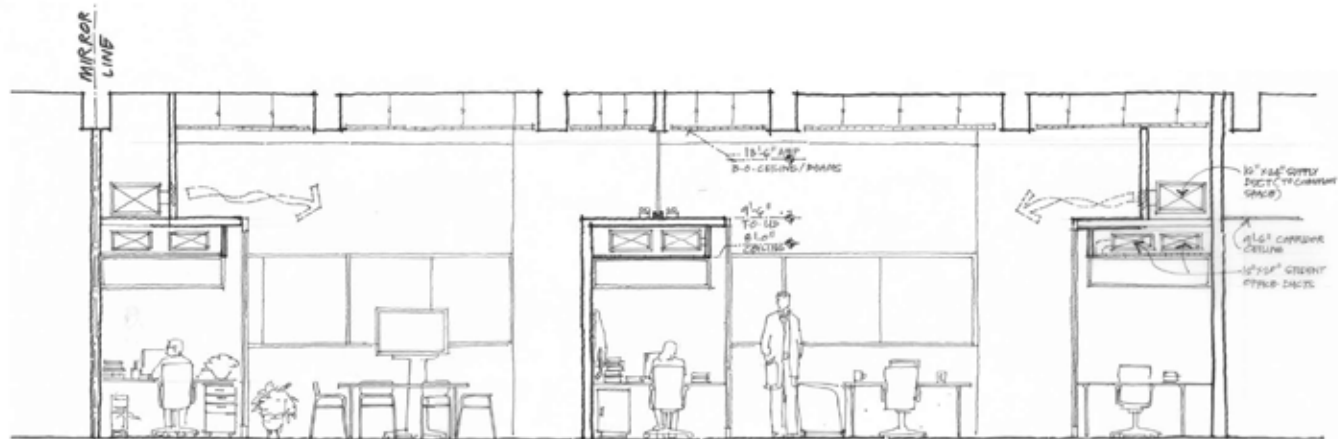
The student offices are, by necessity, compact. Existing offices included clerestory windows between offices, and this feature was identified by the SOM as an important element to carry forward in the new design.

The Docent office was to be adjacent to the student offices with two points of access—one directly from the Docent unit and a second entry off the building corridor outside the unit for student privacy. The student unit space was to be planned to accommodate various activities including small group study and more formal teaching and dialogue.

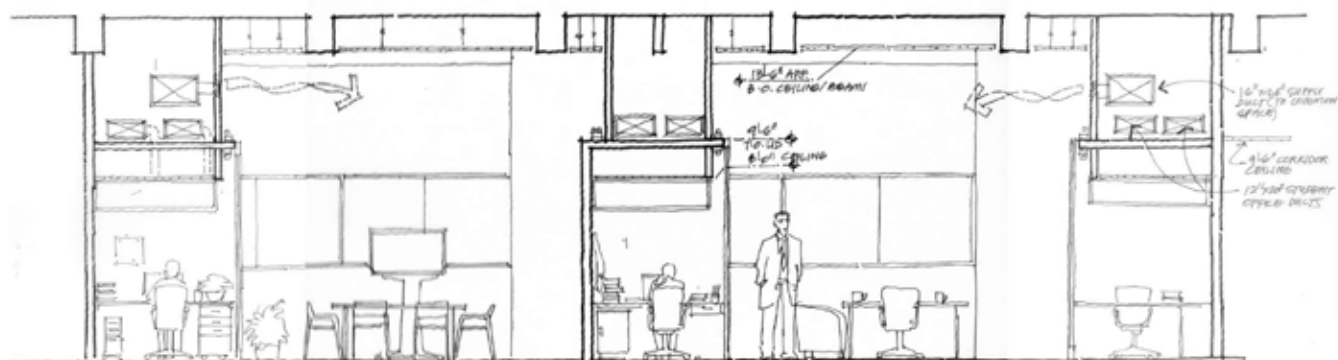
To arrive at the recommended Docent unit plan, a floor plan concept was developed for the entire 3rd floor. The future floor includes a break room serving each quadrant and shared support spaces (seminar rooms, Student Affairs offices, etc.) within the center, north, and south of the building core.

The Computer Testing & Training Laboratory was planned as a multi-purpose space designed first and foremost for exam testing to facilitate a growing need within the SOM.





DOCENT UNITS - CONCEPT - A



DOCENT UNITS - CONCEPT - B

**DESIGN
CONCEPT**

The new Docent units are linear in plan with student offices arranged along the perimeter and a central space for collaboration oriented toward the east facing windows. Student offices are a hybrid construction—gypsum board side and back walls, with a modular wall system, primarily of glass, for the office front. A sliding glass door provides entry into these offices.

In the central collaboration space, the team took great care in designing the ceiling and floor planes to de-emphasize the linear space. Student offices are nested between adjacent units to maximize available space and provide a presentation wall in each unit that incorporates smart board technology and a large white board. Student offices maintain the side-wall

clerestory from the original design (the change was to raise the sill height to 6' AFF). Flexible furnishings vary from unit to unit to test what works best.

The SOM has a tradition of referring to the Docent groups by color—Red, Blue, Green, and Gold. The existing Docent spaces utilize these colors on vertical soffits that surround their space. In the new Docent unit, the color is utilized and applied as an accent in the furnishings and vertical signage along the building corridor.

The mechanical area at the north end of the space will eventually become the fourth Docent unit in a future phase.





INTERIOR FINISHES



BNIM's design team worked closely with the dean of the SOM, UMKC Facilities team and students to create a fresh new finish palette for the project. Taking special care to select finishes that embrace the history of the school and curriculum, the team designed the interior spaces to support and accommodate future needs and growth as medical education evolves.

The overall finish palette is simple and sophisticated, with bright white walls, which bring a sense of longevity and brilliance to the space and also help bring daylight further into the interior spaces. Within the docent units, neutral carpet flooring with high recycled content provides comfort and acoustical absorption. Quartered Walnut for select millwork and interior doors introduces a warm contrast to the white walls.



top row - docent units, middle row - break room, bottom row - purple unit, computer lab, corridor

The furnishings provide elements of color, energy, and team identification to the docent unit. Brightly colored, comfortable furnishings, along with extensive back-painted glass marker board surfaces, foster collaboration and communication. Students are encouraged to move furnishings within their docent units to maximize comfort, support on-the-fly collaborative and private study preferences, and support their needs based on the curriculum.

In common spaces and corridors, decorative back-painted glass with bright colors emphasize the team colors utilized by each Docent unit. For common spaces, PVC-free, resilient flooring minimizes acoustical disruption to the spaces while providing a durable and easy-to-maintain material for UMKC. The break room provides natural daylight and comfortable furnishings in a space designed to encourage students to socialize outside of their school work.

TECHNOLOGY

Early in the design process, technology emerged as an important consideration for the Docent unit renovation. As the SOM Docent units had not been updated in three decades, integrated technology within the new units would be a giant leap into the future.

The design team worked closely with UMKC to identify the best technology needed to support the students' and docents' day-to-day work. Each student unit space is equipped with a large Smart Board interactive flat-screen display with an integrated PC, which allows students to screen-share and collaborate with ease. The students and docents are able to annotate directly on the screen and can share their notes with others through the screen. Also, within the student unit space, additional screens are provided to support smaller study group sessions.

The unit is compatible for both wireless and wired access, and student offices and common spaces have access to power at multiple convenient locations to give the occupants flexibility. Break rooms are equipped with flat screen displays to help provide a way for students to catch up with the latest news and sports events while they take a break from their busy schedule.



PHASING

In collaboration with The Clark Enersen Partners, BNIM worked with the SOM to devise a phasing plan to address the programmatic needs of the SOM's distinct departments and also to acknowledge the funding (cash flow) constraints to create a plausible timeline over which the renovation could take place.

For the initial prototyping phase, Phase 0, it was necessary to maintain a mechanical equipment room within the quadrant, which will eventually be replaced with a new mechanical penthouse at the roof. In Phases 1 and 2, a new mechanical penthouse will be constructed, but the major mechanical equipment will be installed only when the areas it is intended to serve are constructed in subsequent phases. For example, Phase 1 provides a portion of the new mechanical equipment to serve the Docent units on the third floor; the temporary mechanical equipment installed during Phase 0 will be removed, and the fourth Docent unit will be constructed along with four additional Docent units in the southeast corner.

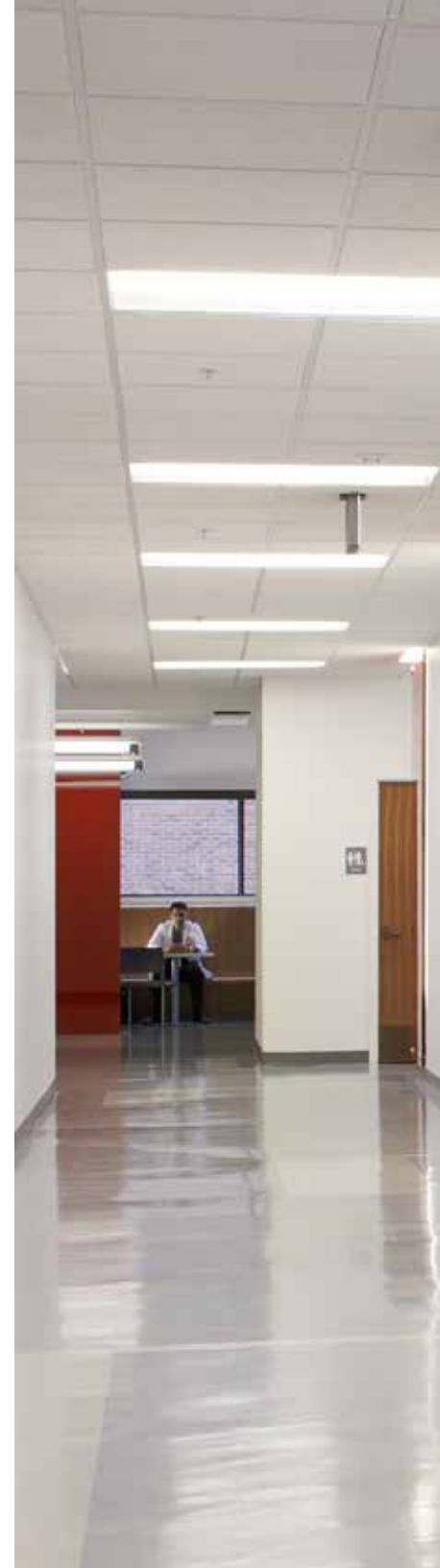
From there, the remainder of the new mechanical equipment is installed in Phase 2, along with eight new Docent units on the west half of the third floor and research labs on the fifth floor. With the new mechanical system and utility infrastructure firmly in place, the remaining office, support, core facilities, research, labs, meeting, and doctoral spaces will be subsequently constructed and brought on line during Phases 3 through 8. In order to comply with current building code and life safety requirements, each phase will involve upgrades and improvements to infrastructure particular to the phase, eventually transforming the entire SOM building into a fully-modernized facility.



CONTINUED OPERATION

During all phases of renovation, the SOM needed to occupy the building and remain as fully functional and free of disruption as possible. In order to minimize interferences for students and faculty, the phasing plan incorporated strategies to maintain the utilities and infrastructure serving occupied spaces while the improvements were implemented.

Executing construction within the occupied building presented challenges that included sound control, dust control, delivery of construction materials and removal of debris, and interruptions to building infrastructure such as electrical, mechanical, and data systems. BNIM carefully coordinated between the School of Medicine and general contractor to plan for disruptions and avoid scenarios that would disrupt the day-to-day operations of the medical school.







CONTEXT

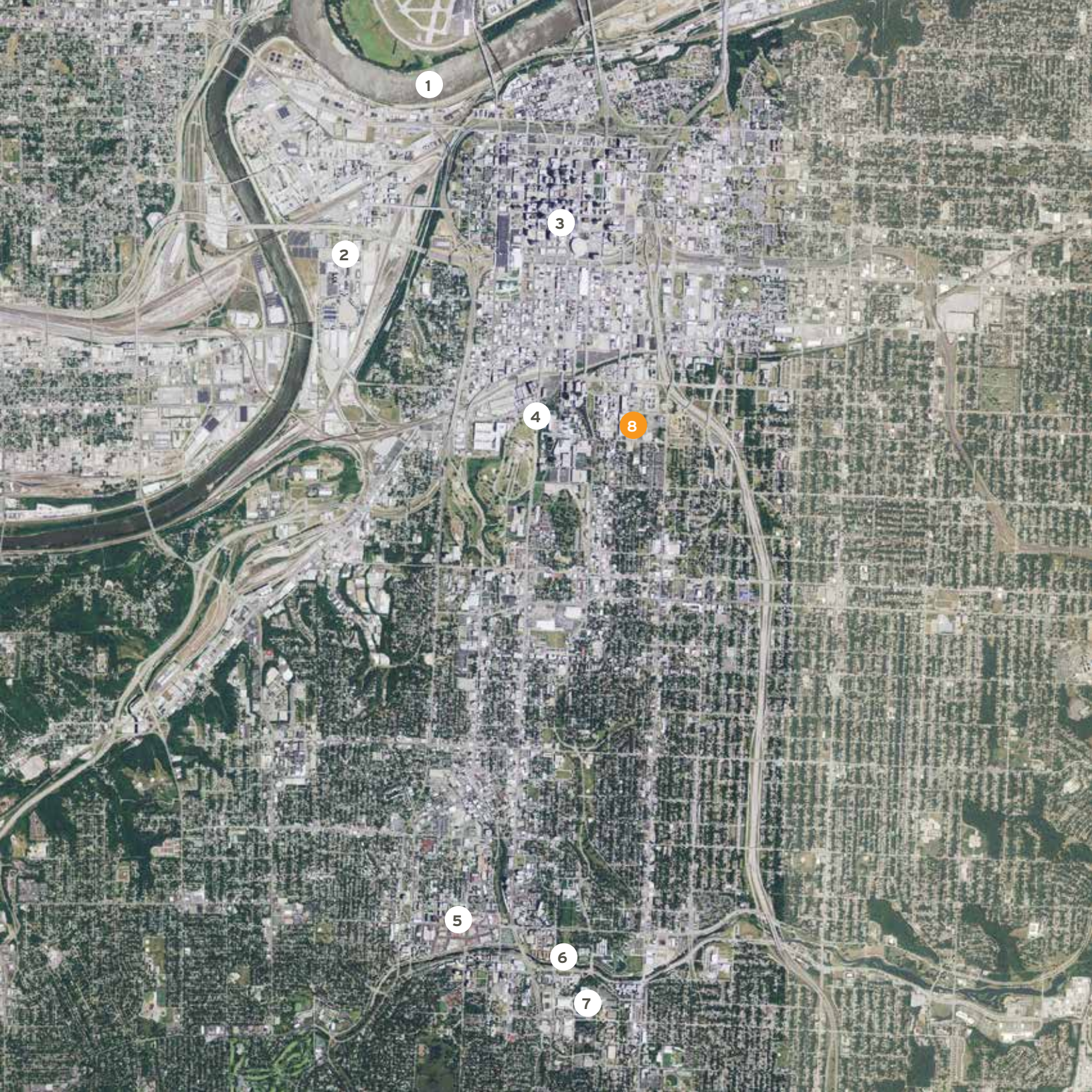


< UMKC Hospital Hill Campus

- 1 UMKC School of Medicine
- 2 Truman Medical Center
- 3 UMKC Health Sciences Building
- 4 UMKC School of Dentistry
- 5 Children's Mercy Hospital
- 6 Ronald McDonald House

Kansas City Map >

- 1 Missouri River
- 2 West Bottoms
- 3 Downtown
- 4 Midtown
- 5 Country Club Plaza
- 6 Brush Creek
- 7 UMKC Volker Campus
- 8 UMKC Hospital Hill Campus



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ABOUT BNIM

We deliver beautiful, integrated, living environments that inspire change and enhance the human condition.

BNIM is one of the most important design firms working to redefine practice in the realm of green architecture today. As early pioneers in the arena of sustainable design, BNIM continues to shape the national and global agenda for responsible architecture and design excellence. Established in 1970, the firm has emerged nationally as a leading resource for established methodologies, innovative technologies and cutting-edge research in architecture, planning, landscape, workplace and institutional design. BNIM's process is deeply rooted in the concept of integration, where clients and collaborators work together to create buildings and spaces that embrace the Triple Bottom Line—a balance of people, planet and prosperity. BNIM's body of work maps the evolution of sustainable design process and thinking: from early pilot projects that defined the USGBC's LEED rating system, to the first LEED Platinum state office building, to current work that goes beyond LEED's highest standards to achieve Living Building and regenerative status.

BNIM people. innovation. design.

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