INSPIRED HEALING SOLUTIONS

GREELEY HOSPITAL

A Recent Glimpse Into Our Significant LifeStructures

uchealth

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ARCHITECTURE ENGINEERING PLANNING INTERIORS



WE CREATE INSPIRED SOLUTIONS THAT IMPROVE LIVES.

Since 1975, BSA LifeStructures has dedicated itself to bringing facilities to life, creating facilities that support and enhance the practices of healing, learning and discovery as well as the people dedicated to them. With a balanced blend of inspired creativity, evidence-based design and 45 years of experience, BSA LifeStructures has created facilities for some of the nation's top healthcare, higher education and research institutions.

The architects, engineers, planners and interior designers take a coordinated approach to deliver solutions that create effective and efficient facilities. Design solutions serve as a bridge between the built environment and successful outcomes in healthcare, education and research. The Team at BSA LifeStructures takes pride in its ability to unite the strengths of outcomes based design to provide a comprehensive interdisciplinary approach to designing life enhancing structures.

Market Type Expertise

- Academic & Medical Research
- Academic Science
- Administrative Offices
- Business Incubators
- Community College
- Community Hospitals
- Corporate Research
- Engineering / Technology
- Health Education
- Inpatient & Replacement Hospitals
- Oncology / Orthopedic / Cardiology
- Outpatient / Medical Office

Notable Clients

- Children's Mercy Kansas City
- Dow AgroSciences
- Duke University Health System
- Eli Lilly
- Indiana University
- Indiana University Health
- Indianapolis Airport Authority
- Polarity TE
- Purdue University
- UCHealth
- University of Notre Dame

The following pages showcase some of our more recent significant LifeStructures. The icons on each page denote a Healing, Learning, or Discovery project.







OFFICE LOCATIONS





Design has the power to change outcomes.

As the healthcare profession is challenged to deliver a better outcome at an equitable price, the value equation requires healing environments that are evidence-based, efficient, and innovative.

Building upon over 40 years of healthcare expertise, BSA LifeStructures works with top-tier organizations to deliver healing environments informed by research and metrics, optimized through lean operational planning, and created with an integrated design approach to problem solving. The result is a LifeStructure, a facility designed for both patient and caregiver, where communication is intuitive, diagnosis and treatment are accelerated, and patients feel better and heal faster.

Facility Type Expertise

- Community Hospitals
- Academic Medical Centers
- Critical Access Hospitals
- Ambulatory Care Centers
- Children's Hospitals
- Women's Hospitals
- Orthopedic/Neuro/Spine
- Heart Hospitals
- Cancer Centers
- Freestanding ED/Urgent Care
- Medical Office Buildings

Notable Clients

- Children's Mercy Hospital & Clinics
- Indiana University Health
- OSF HealthCare
- Saint Luke's Health System
- UCHealth
- UNC Rex HealthCare
- Children's Mercy Kansas City
- Duke University Health System
- Cheyenne Regional Medical Center
- CoxHealth
- Memorial Medical Center
- WakeMed Health System



CLINIC RENOVATIONS & MASTER PLANNING

CHEYENNE REGIONAL MEDICAL CENTER | CHEYENNE, WYOMING

Cheyenne Regional Medical Center (CRMC), established in 1897, is Wyoming's largest hospital that offers a full continuum of comprehensive health care services. As a community driven organization, the services provided range from primary care, behavioral health, mother baby, trauma care, outpatient rehabilitation, and more. It's parent organization, Cheyenne Regional Medical Group, operates an additional 20 clinic spaces in various medical office buildings throughout the Cheyenne area.

Since 2018, BSA has been involved with our fully integrated team. The first project was a renovation of over 90,000 SF of existing hospital space to provide top level care for mother baby/NICU, behavioral health, ICU, and support departments such as medical records (HIM), patient financial services (PFS), and more. The second effort is creating a master facility plan for its current 20 plus clinic spaces to optimize efficiencies, reduce waste, and consolidate where possible. The strong partnership built with CRMC has involved full services teams - operational planning, architectural, interiors, and MEP engineering. Lean principles have been the driving force to promote team collaboration early on in the projects involving stakeholders at all levels.

KEY FEATURES

- Behavioral Health
- Mother Baby/NICU
- ICU
- Administrative Department Space
- Training Areas
- Additional Master Facility Plan for over 20 separate clinic spaces

SIZE	90,000 SF / Over 100,000 SF of clinic space
COST	Confidential
DATE	August 2019



INTENSIVE CARE NURSERY

CHILDREN'S MERCY HOSPITALS & CLINICS | KANSAS CITY, MO

4

The new Children's Mercy Hospital Intensive Care Nursery offers patients and families a wide range of private and public environments to promote healing. Children's Mercy Hospital teamed with the BSA LifeStructures to design a 15,000 square foot expansion and renovation of the Intensive Care Nursery located on the 3rd floor of the hospital.

The design utilizes a variety of private, semi-private, and open bay concepts to create the optimal healing environment for each young patient. Additional space was provided for families with multiples in need of care. Special attention was given to the acoustics of the space to improve the experience for patients and their families. Creative floor patterns and decorative glass walls were used to assist with wayfinding, while establishing a therapeutic atmosphere.

KEY FEATURES

- 24 additional beds
- Wayfinding integrated design
- Privacy permitting acoustics

SIZE	15,000 SF
COST	\$8 M
DATE	September 2016



CHILDREN'S MERCY RESEARCH INSTITUTE

CHILDREN'S MERCY HOSPITAL | KANSAS CITY, MISSOURI

The new Children's Mercy Research Institute transforms the field of pediatric research, integrating a translational model within a learning health system. Clinicians and scientists will work side by side in the collaborative space to benefit the smallest of patients.

This research tower is a nine-story vertical expansion atop an existing parking garage on the north end of the Adele Hall Campus for Children's Mercy Hospital in Kansas City. The research institute includes a new auditorium to serve both hospital and public needs, a discovery portal for community engagement, a conference center to serve hospital and research departments, a café, and several floors of research for dry and wet lab space.

Current pillar programs include genomics, therapeutic innovation, health outcomes and bioinformatics. The new facility provides space for new research programs, such as metabolomics and metagenomics, in addition to supporting the growth of emerging programs in systems biology, epigenetics, and molecular biology.

KEY FEATURES

- "B" occupancy facility
- Nine-story vertical expansion atop existing parking garage
- Office and research space
- Conference rooms, classrooms, and lecture halls
- Programs include genomics, bioinformatics, metabolomics, metagenomics, and molecular biology
- 400+ person auditorium designed to accommodate a multitude of presentation platforms

SIZE	400,000 SF
COST	Withheld by owner
DATE	October 2020



SPORTS MEDICINE CENTER CHILDREN'S MERCY HOSPITAL AND CLINIC | KANSAS CITY, KANSAS



Children's Mercy Hospital and Sporting Kansas City teamed up to promote health and fitness and to provide specialized sports medicine to youth athletes in the Kansas City Metropolitan area.

This new clinic, located near Children's Mercy Park, in Wyandotte County, Kansas allows kids throughout the region to work side by side with their professional soccer heroes, as Sporting Kansas City shares the building and the gymnasium with CMH.

BSA created an open plan and modern design with the focused concept of 'Continuous Movement' which not only applies to the physical motions of the people utilizing the facility, but also the entire design of the facility itself. The correlation of shapes, layers and intersections of mass within the space assists with wayfinding and encourages movement.

The culmination of planning brought to fruition the progressive ideas of all involved in the project and will serve the community at large.

KEY FEATURES

- Hydro area with 2 pools
- Gait lab
- Sports medicine rehabilitation clinic
- Gymnasium
- Radiology

SIZE	25,000 SF
COST	\$12.0 M
DATE	March 2018



COMMUNITY CANCER CENTER NORTH

COMMUNITY HEALTH NETWORK | INDIANAPOLIS, INDIANA

The new cancer treatment facility is designed as a model for integrated healthcare to meet patients' personal needs and the growing demand for cancer care in central Indiana.

Working with Community Health Network and the design team, BSA's engineers enabled the design and functions within the infusion rooms to address the special needs of the patients. Patients are given complete control of their environment, including room temperature and lighting.

BSA also compared different HVAC technologies for the best airflow, energy savings, and maintenance costs. It was determined that aircooled VRF was the best system. VRF units work only at the needed rate allowing for substantial energy savings at partial-load conditions. Heat recovery VRF technology allows individual indoor units to heat or cool as required. Data is currently being tracked over the first year in operation and will be analyzed for exact numbers.

KEY FEATURES

- Aircooled VRF system
- Cartridge fan coil unit

- 85,000 btuh linac chiller
- 9,500 cfm make-up air unit

SIZE	104,000 SF
COST	\$60.0 M
DATE	July 2017

The country's first **LEED®** Silver campus



ESKENAZI HEALTH CAMPUS ESKENAZI HEALTH | INDIANAPOLIS, INDIANA

Eskenazi Health, formerly Wishard Health Services, is one of the nation's top five safety net hospitals serving residents of central Indiana. This teaching facility is a Level I trauma center and serves as the state's regional Burn Center. A complete replacement of all campus facilities was completed and has truly created a new medical campus and modern urban hub to support all of the needs to Eskenazi Health, IU School of Medicine and the community. The campus features approximately 1.3 million square feet of facilities and is one of the world's largest LEED Gold healthcare campuses.

The Sidney & Lois Eskenazi Replacement Hospital includes a 315-bed inpatient hospital, 19 operating rooms, four interventional labs, 12 labor and delivery rooms, a 100-bed emergency department with a 20-bed clinical decision unit.

The five-story Fifth Third Faculty Office Building relocates and consolidated 1200 staff and faculty members from Eskenazi and IU School of Medicine into one building adjacent to their new hospital. Additionally, it will be used as workspace for research and various academic support programs.

Eskenazi Health Campus

In 2002 BSA prepared a master plan with the focus on determining the most appropriate site for the replacement hospital. Once the location was determined operational and transition planning services began. Eskenazi Health had challenges to overcome, which included ensuring design principles were kept with the new work flows; especially around the patient experience, patient room turnover, admission processes and security practices and staffing.

PROJECT DETAILS

SIZE	1,125,000 SF
COST	\$431.9 M
DATE	Sidney & Lois Eskenazi Replacement Hospital Design: December 2008 - December 2013
	Fifth Third Faculty Office Building June 2012

Post-occupancy Support: December 2014



NEURODIAGNOSTIC INSTITUTE FAMILY & SOCIAL SERVICES ADMINISTRATION | INDIANAPOLIS, INDIANA

The NeuroDiagnostic Institute and Advanced Treatment Center, Indiana's newest state psychiatric hospital, delivers advanced evaluation and treatment for patients with the most challenging and complex neuropsychiatric illnesses and move them more efficiently into the most appropriate treatment settings within the community or state mental health system.

The 7-story facility is equipped with 159 beds and serves up to 1,500 patients a annually. The facility is on the campus of Community East Hospital in Indianapolis and will serve a diverse patient population – with programs that include adolescent autism, adult acute psychiatric, adult psychiatric intensive care, neuro-cognitive disorders and psych-med for children and adolescents. Patients will be referred to the hospital from community mental health centers, state psychiatric hospitals and judicial partners. This facility offers diagnosis and treatment for a wide variety of brain related illnesses such as acute and chronic mental health illness, intellectual and developmental disabilities, traumatic brain injuries, chronic substance abuse addictions, and neurodegenerative illness.

KEY FEATURES

- Patient centered care with a focus on staff safety and high visibility
- Inpatient units designed for specific patient populations
- Social spaces that encourage human interaction and promote sense of community
- Private spaces that promote independence and healing
- Outdoor recreations / therapy spaces
- Multi-functional treatment mall
- Tunable Lighting
- Educational partnerships with local universities

SIZE	216,000 SF
COST	\$72 M
DATE	March 2019



GIBAULT MEMORIAL TOWER ADDITION

GOOD SAMARITAN HOSPITAL | VINCENNES, INDIANA

The five-story inpatient tower at Good Samaritan Hospital adds 120 beds and 200,000 square feet to the regional referral hospital. In addition to the inpatient tower, the existing facility is being renovated to accommodate physician office space.

The inpatient tower features the Cardiac Center of Excellence, a state-of-the-art cardiology unit, complete with a standard and a hybrid cath lab. The addition also incorporates private patient rooms with space to better accommodate visitors and families.

A new energy center will provide improved energy distribution to the hospital's expanded campus. The central plant energy center will reduce energy costs and decrease the facility's carbon footprint. The facility is designed to obtain LEED certification upon completion.

KEY FEATURES

- 120 beds
- Inpatient tower and physician office space
- Improved outdated and inefficient spaces and adjacencies
- Designed to obtain LEED certification
- Provided clear patient/ user access to Center of Excellence

SIZE	211,200 sf (new) 182,850 sf (renovated
COST	\$109 M
DATE	July 2015



WOMEN'S AND INFANTS' CENTER

GRADY MEMORIAL HOSPITAL | ATLANTA, GEORGIA

While Grady is proud of its long history of service to the tiniest patients and their families, the current Center must be revitalized into a modern and welcoming facility that reflects the health system's commitment to excellence and that delivers more for women, infants and the community.

The new Women's and Infants' Center will provide expectant mothers and their families a warmer, more comforting experience as they welcome their babies into the world. Grady Hospital's transformed Women's and Infants' Center will incorporate the latest technologies and industry best practices and will include a dedicated entrance, modern labor and delivery suites and one of the state's first single family room Neonatal Intensive Care Units.

The new Women's and Infants' Center can help to add even more healthcare options and services for women and babies that Grady already cares for as well as provide additional services for Atlanta community members.

KEY FEATURES

- 12 New LDR beds, six new GYN ICU beds, six new triage beds
- Complete renovation of the fourth floor South Building to include new patient rooms, nursing units, infrastructure.
- New finishes, Infrastructure updating of the second floor south building clinics
- New drop off, covered walkway entry and healing garden

SIZE	67,400 SF - Phase I 40,000 SF - Phase II
COST	\$13.0 M - Phase I Est. \$9.4 M - Phase II
DATE	2017 - Phase I Est. 2020 - Phase II



MEDICAL TOWERS AT SAWYER RANCH

HAT TRICK DEVELOPMENT | DRIPPING SPRINGS, TEXAS

The Medical Towers at Sawyer Ranch is designed as a freestanding Medical Office Building and equipped to support multiple tenants across many medical disciplines. The facility is a new 3-story building of approximately 36,750 sq. ft. (approx. 12,250 sf per level), constructed of metal framing with combination EIFS and stone masonry veneer. The building is equipped with an automatic sprinkler system throughout and has a building fire alarm system. The core areas consist of Common Corridors, Elevator Lobby, Single Elevator with Machine Room, Electrical/ Data Rooms, Janitor Closet and Common Toilets. The sitework includes parking, driveways, reinforced concrete sidewalks, ramps, landscaping and exterior lighting. The Mechanical/ Plumbing/ Electrical scope of work includes the various systems to support the Core Facilities and Future multi-tenant specialty medical spaces, plumbing (underslab waste & water lines), domestic water, storm sewer systems, Electrical Systems (Electrical Service/Panels, Fire Alarm, Lighting/Electrical device and Phone/Data systems).

KEY FEATURES

- Approx 12, 250 SF per Level
- Multiple Tenant Finish Outs

SIZE	36,750 SF
COST	\$4 M (Shell & Core) \$1.7 (Tenant Finish Out)
DATE	August 2016



BROWNSBURG HOSPITAL HENDRICKS REGIONAL HEALTH | BROWNSBURG, INDIANA



To provide for the growing medical needs of northern Hendricks County and beyond, Hendricks Regional Health expanded with a new facility in Brownsburg. The new hospital originally intended to offer surgical services but focus groups with community members revealed that they had other health priorities.

The 100,000 square-feet retail healthcare center houses an emergency room and immediate care center, lab and radiology services, a comprehensive women's center, physician offices, a retail pharmacy, specialty clinic and additional retail space.

One exciting feature of the new facility is the side-by-side urgent care and Emergency Room. When a patient arrives, staff determines if their condition is a fullcourt press emergency. If it's not, they will be sent down the hall and taken care of in the urgent care center.

KEY FEATURES

- Six inpatient beds with the opportunity to expand in the near future
- Side-by-side urgent care and Emergency Room
- 16 emergency department rooms, including four observation rooms

SIZE	100,000 SF
COST	\$31.0 M
DATE	January 2018



SPINE HOSPITAL ADDITION

INDIANA SPINE GROUP | CARMEL, INDIANA

The Indiana Spine Hospital is the newest addition to Indiana Spine Group's campus. Connected to an existing MOB, this 50,486-square foot, two-story, three state-ofthe-art operating rooms, 20-bed surgical hospital will allow surgeons to perform surgeries, which require inpatient stay, within in their own facility instead of having to outsource patients to surrounding hospitals in that area. The adjacency to the MOB will also allow staff and patients easy access to both facilities.

The goal was to design a top-quality spine hospital with an emphasis on providing cutting-edge spinal care, outstanding patient experience, and a desire to provide high-quality, lower cost options. The newest spine technologies and procedures were combined with a focus on the patient at every stage.

KEY FEATURES

- Connection to Indiana Spine Group MOB allowing easy access to both facilities
- Beautiful artwork, enticing colors, and a sense of uniqueness
- Nurse stations in each corner offering more personal care to patients
- Walk-in/open shower concept increasing patient, and staff, safety
- Food service prep/dining area
- Same-handed operating roomsPrivately-owned, free-standing
- spine facility
- Only one in Indianapolis and one of a handful in the Midwest

SIZE	50,486 SF
COST	\$18.5 M
DATE	August 2017



IU HEALTH WEST HOSPITAL EXPANSION

IU HEALTH | AVON, INDIANA

When IU Health West opened 14 years ago, it was the first suburban hospital for this healthcare system. However, in 2018 when IU Health decided to expand, due to the need for more space, the decision was made to go up rather than out.

Delivered in an Integrated Design Event (IDE) style, this hands on focused approach, utilized full size mock-ups, allowing for brainstorming of ideas and challenging of status quo. This approach empowered users to embrace the design, meaning they were a part of the decision making process as an active participant not just providing periodic feedback to design process outside of their control.

This Lean approach to design also allowed for the testing of the seven flows of healthcare. This challenged the existing facility solution, current operational approach to clinical services, and identified operational savings as well as potential patient and staff satisfaction opportunities.

KEY FEATURES

- Integrated Design Events (IDE) -Interactive and multi-disciplinary approach to design.
- Conducted space syntax studies to make the biggest impact on the design.
- Patient care spaces studied in greater detail, increasing the patient/visitor/staff experience.
- Vertical expansion by adding three floors to he diagnostic and treatment tower and two floors to the inpatient bed tower.

SIZE	105,200 SF (new) 28,150 SF (renovated)
COST	\$59 M
DATE	Est. January 2021



RILEY HOSPITAL FOR CHILDREN AT

IU HEALTH | INDIANAPOLIS, INDIANA

Maternity & Newborn Health at Riley Children's Hospital at IU Health, in partnership with the Indiana University School of Medicine, is home to the largest group of maternal-fetal medicine physicians in Indiana.

This hospital will become the first children's hospital in Indiana to establish an integrated, all-in-one program offering obstetric, delivery, newborn and comprehensive pediatric sub-specialty services—a new model of coordinated care that essentially treats mother and baby as one patient and surrounds them with the medical support they need.

BSA was engaged to help design a facility that gives patients quick and immediate access to coordinated, safe and high-quality medical care. An initial visioning session resulted in the basis of design and mock-ups were built to test out the spaces.

KEY FEATURES

- Labor & delivery unit: 10 triage rooms, 14 high risk / antepartum patient rooms, 12 LDR rooms, 4 OB ICU rooms, 3 caesarean birth OR's and 1 fetal surgery OR
- NICU: 45 private patient rooms, 5 pairs of rooms able to open to each other
- Post-partum floors: 39 rooms
- Outpatient Center: 1 outpatient obstetric clinics

SIZE	190,000 SF
COST	\$84.0 M
DATE	Est. March 2021



REPLACEMENT HOSPITAL MAJOR HOSPITAL | SHELBYVILLE, INDIANA

4

The replacement facility for Major Hospital focuses on the goals of flexibility, patient and family centered care, staff efficiencies and improved medical outcomes. This project is one of the first post Affordable Care Act facilities in the United States.

The hospital focuses on outpatient services with a small percentage of inpatient services. An Emergency Department, Imaging, Ambulatory Care Center, Surgery, Birthing Center, ICU, Medical / Surgical Unit and Post Surgical Unit are included in the new facility. The entire second floor is designated to physician offices and exam space.

The hospital design eliminates patient room showers – increasing safety, efficiency and cost savings. This enables more room for patient toilet facilities and decreases potential for germ and disease spread.

KEY FEATURES

- Bed capacity: 48 and 4 LDRs
- 38 ambulatory care rooms with toilets
- First post Affordable Care Act facilities in the United States
- 100% emergency power
- Flexibility for the future
- Energy Efficiency 90 or higher

"Energy Star" rating

- 14,000 SF Emergency Department
- New Emergency Department with 20 exam rooms and 2 trauma rooms

SIZE	300,000 SF
COST	Est. \$66 M
DATE	January 2017



PATIENT CARE TOWER MEMORIAL MEDICAL CENTER | SPRINGFIELD, ILLINOIS



The patient care tower adds beds to the existing hospital and redefines the exterior aesthetics of the midwestern facility. The new space provides a collaborative environment for physicians, nurses and students who have the opportunity to learn with healthcare professionals.

Patient comfort and satisfaction are critical components to the design of the new tower. Patient rooms are enlarged to give more space to family and visitors, while also providing ample room for the caregiver to treat the patient. There are additional spaces included for classrooms, physicians and student collaboration.

The tower sits atop the existing structure, presenting structural issues that the design team solved through locating alternative routes for plumbing and mechanical services serving the additional levels.

KEY FEATURES

- Dedicated space for families and visitors
- 114 single occupancy patient rooms
- Standardized headwalls
- New outpatient waiting area
- Separate floors for surgical patients, ortho patients and med surge patients
- Patient controls for shades and climate from pillow speaker

SIZE	220,000 SF
COST	\$61.0 M
DATE	November 2015



DELBERT DAY CANCER INSTITUTE

PHELPS COUNTY REGIONAL MEDICAL CENTER | ROLLA, MISSOURI

The Delbert Day Cancer Institute is a 43,000-square-foot comprehensive cancer care facility designed to provide the latest technologies in cancer treatment and conveniences for patients and families. The center is connected to the main hospital and the adjacent medical office building.

The dynamic curved glass exterior offers a glimpse of the technology and modern cancer care offered within the facility. Included in the institute are radiation therapies, PET C/T, nuclear medicine, infusion therapy, medical oncology and supporting lab and pharmacy ancillary services. In addition to the lobby and registration, the first floor includes retail space, a health café, community center and a healing garden.

KEY FEATURES

- Dynamic curved glass exterior
- Spaces designed for radiation therapies, PET C/T, nuclear medicine, infusion therapy and medical oncology
- Patient views of the green roof and garden
- Connected medical office building improves patient and staff work flow

SIZE	100,000 SF
COST	\$31.1 M
DATE	January 2017



REGIONAL CANCER CENTER

SARAH BUSH LINCOLN | MATTOON, ILLINOIS

The Sarah Bush Lincoln Regional Cancer Center creates a comfortable and healing environment for all patients, visitors and staff. The new freestanding cancer center, located on the southwest corner of the hospital campus, provides the central Illinois region a facility capable to provide patients and families a "one day stop" with the latest treatment technology available.

The design reduces the stress and discomfort as well as enhances current function of the center. The landscape includes a healing garden that acts as retreat. Semiprivate infusion stations, private lounge and sound insulation reduce noise to better accommodate the comfort for the patient and guests.

The cancer center consists of a linear accelerator vault, infusion area, PET/CT room, exam rooms, offices and support spaces. The interiors successfully incorporate the aesthetics of the Sarah Bush Lincoln standard while incorporating some variations that define the cancer center as a separate entity. All spaces will focus on the design concepts of privacy, education, family, comfort and image.

KEY FEATURES

- Increase space capacity to enhance and expand current functions of the Cancer Center
- Enhance patient throughput and flow
- Provide a comfortable environment for both the patients and their families with increased privacy
- Visual calming healing garden
- Configured patient care spaces to allow visual contact with staff members at all times
- Private gathering areas
- Custom designed nurse server stations

SIZE	21,500 SF
COST	\$10.3 M
DATE	October 2016



CARDIOLOGY & BED EXPANSION SARAH BUSH LINCOLN HEALTH SYSTEM | MATTOON, ILLINOIS



Sarah Bush Lincoln Health Center is a 129-bed, regional hospital located in East Central Illinois. BSA designed a new building addition that provides expanded services for cardiology and inpatient care.

The hospital expansion, along the southeastern portion of the main building, transitions seamlessly to the existing facility. The exterior design provides a modern and updated aesthetic while incorporating materials from the existing campus. The hospital's design standards and color palettes were introduced in the new space through light wood casework, green and blue tile, and exposure to natural light.

The first floor features a new double cath lab suite, lab/procedure rooms, cardiology outpatient suite, rehabilitation gym, nuclear medicine labs, stress rooms, Echo rooms, and a large family lounge. On the second floor, 21 new patient rooms include two with ceiling-mounted bariatric lifts and two negative pressure isolation rooms. Additional support staff rooms and family lounges are located throughout the new facility.

Major infrastructure equipment to support this expansion, including a new air handling unit, is in the lower level next to relocated hospital facilities and service areas.

KEY FEATURES

- 21 new patient rooms
- Ceiling mounted bariatric lift rooms
- Support staff areas

- Family lounges
- 30-station rehabilitation gym
- Connected to existing hospital

SIZE	65,631 SF
COST	\$24.5 M
DATE	June 2018



ICU RENOVATION ST. DAVID'S GEORGETOWN HOSPITAL | GEORGETOWN, TEXAS



St. David's Georgetown Hospital added to their ICU capability by renovating a second floor of the admin building and added architecture to the adjacent roof. The renovation now provides 14 new ICU beds, including 2 isolation rooms.

Special attention was placed on was the Staff, Patient and Family experience and desire to make this ICU a unique environment that would foster healing, encourage family interaction and increase staff efficiency/satisfaction. Special consideration was given to room re-design - for room layout to provide designated family area, flexible headwall system using ceiling mounted booms, access to support facilities, personalization of room, incorporation of bariatric lifts, visibility from the Nurse Station, headwall/wardrobe layout and room handing. Other considerations included access to natural light, durability/compatibility of materials, ease of access and wayfinding mechanisms to support navigation of the unit. Evidence based strategies and design concepts were incorporated along with best practices for items including placement of hand wash sinks, introduction of natural light, headwall flexibility and decentralized staff touch-down and centralized staff huddle areas.

KEY FEATURES

- 14 new ICU beds
- 2 isolation rooms

- Designated Family Area
- Additional 4 rooms for expansion

SIZE	13,000 SF
COST	\$6.8 M
DATE	January 2016



ST. DAVID'S AUSTIN AREA SURGERY CENTER 🔀

ST. DAVID'S HEALTHCARE PARTNERSHIP/HCA | AUSTIN, TEXAS

St. David's Austin Area Surgery Center (located within the North Austin Medical Center) is an ambulatory surgery center, providing exclusively Women's Services, including general surgery as well as other specialty/gynecological surgical procedures.

The new surgery center occupies the ground floor tenant space in an existing 3-story building, transforming a vacant "Cold-Dark" shell into a warm, comforting environment. The completed center is approximately 14,720 square feet, containing 3 Class "A" Operating Rooms and 2 Treatment Rooms. Operating Room 3 and Treatment Room 2 will be finished out completely but may not be equipped with medical equipment as part of this project (may be equipped at later date). The operating room portion is sterile, while the treatment suite is non-sterile and located adjacent to Pre-Op and Recovery spaces, as well as all code required and operationally necessary spaces. Most patients will not require an overnight stay. In the event a longer recovery is warranted (23 hours or less), it can be accommodated by the surgery center in the private recovery room.

KEY FEATURES

- Specialty/Gynecological Surgery
- General Surgery

SIZE	14,720 SF
COST	\$4.2 M
DATE	May 2018



WOMEN'S CENTER ST. VINCENT HEALTH | CARMEL, INDIANA



The Women's Center at St. Vincent Carmel Hospital features four stories of dedicated space to address women's health issues. The clinical space serves a growing demand for women-specific care in the bustling suburban community of Carmel, Indiana.

The building is connected to St. Vincent Carmel Hospital which gives physicians direct access to their offices. The convenient location limits travel distances and promotes efficient throughput.

The women's center also features a women's boutique, café and pharmacy on the first floor that creates a comfortable and relaxing setting for patients as they enter the building or wait for treatment. The addition positions the St. Vincent brand for continued growth and development in the Carmel area.

KEY FEATURES

- Convenient location for physicians
- Women's boutique, café and pharmacy for patient convenience
- Direct access between women's center and hospital
- Community center with indoor and outdoor classroom space including kitchen
- Comprehensive breast center
- Patient services for all age ranges including geriatric care

SIZE	98,297 SF (new)
COST	\$19.6 M
DATE	March 2015



GREELEY HOSPITAL & HEALTH CENTER MOB 🕀

UCHEALTH | GREELEY, COLORADO

The Greeley Campus consists of a new, 4-story hospital connected to an adjacent 3-story Health Center on a 23-acre greenfield site. The campus focuses on three primary goals: *create a community connection; maintain a cohesive brand; and promote a healthy lifestyle.* The design uses form and materiality to reference the surrounding landscape and landmarks nestled up to the Rocky Mountains. The layout and features connect patients to nature to benefit from its physical and spiritual healing properties resulting in a holistic healing experience.

The Health Center is a 3-story, 113,000 SF Ambulatory Care Center (ACC). The program includes: outpatient oncology, rehabilitation, pre-admission testing, women's imaging and multi-specialty clinics. The clinics feature a "center stage" modular design composed of 10-12 exam rooms centered on a multidisciplinary care team station. The Hospital will be connected to the Health Center and offer a dining area that includes an outdoor plaza. The Hospital is a 4-story, 200,000 SF facility that will feature 53-beds designed with the capability of expanding to 150 beds. The Hospital will provide the following services: intensive care, emergency, surgery, radiology, advanced cardiology, a birth center, as well as an in-house pharmacy.

KEY FEATURES

- Ambulatory Care Center
- Research-informed design
- Site Master Plan
- Prototypical design featuring standard exam room, care team, and clinical modules

SIZE	313,000 SF 3-Floor ACC
COST	Confidential
STATUS	Health Center: May 2019 Hospital: July 2019



STEADMAN HAWKINS CLINIC DENVER & CU SPORTS MEDICINE

UCHEALTH | ENGLEWOOD, COLORADO

A holistic perspective on human movement transforms the care of athletes at the UCHealth Steadman Hawkins Clinic Denver and CU Sports Medicine facility. This facility boasts a consortium of orthopedic surgeons, physical therapists, sports performance coaches, and researchers. Athletes at all levels are provided with the highest level of care and attention by this diverse and complementary team. Human-centered sports medicine fosters empathy for both the athlete and clinician alike by promoting vitality through access to nature, physical movement, nutrition, and respite. Exceptional research and expertise intersect to discover ideal treatment strategies and optimize athletes to their peak performance.

This new state-of-the-art health center supports the sports performance medicine and orthopedic program. Continuing existing momentum with groundbreaking procedures by UCHealth and CU surgeons will keep athletes healthy and at optimal performance levels. With site space located on 8.26-acres, this new clinic will offer ambulatory surgery, sports performance services, physical therapy, radiology and orthopedic clinics.

KEY FEATURES

- Ambulatory Surgery Center
- 6 operating rooms
- Sports Medicine Rehabilitation Clinic with 24 rooms
- 30 | BSA

- Outdoor sports turf area
- Daylighting played a large role in the design
- 300 car parking deck
- Shelled space for growth

SIZE	148,846 SF
COST	Confidential
DATE	June 2019



STERLING RANCH CLINIC

The Project encompasses the design of 6,950 SF Clinic within a soon to be built retail pad building on a new development site in Littleton, CO. The site is within a dedicated wellness village known as Sterling Ranch. It is a new residential community, nestled at the gateway to the Front Ranch and just south of the Chatfield State Park. Medical care, active, healthy lifestyles and a positive outlook work together as part of the heart and soul that supports the wellness of the Sterling Ranch Community. This facility will help provide the community with much

BSA is providing Architecture, Mechanical, Electrical and Plumbing Engineering, Interior Design, and Construction Administration.

needed urgent care and primary care services. It is set to open late 2018.

KEY FEATURES

- Urgent carePrimary care
- 1113
- Occupational medicine
- Physical therapy
- Imaging (Radiology)

PROJECT DETAILS

SIZE	6,950 SF
COST	\$1.39 M
DATE	September 2018

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UNC HILLSBOROUGH BED TOWER ADDITION

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UNC HEALTH CARE | HILLSBOROUGH, NORTH CAROLINA

UNC Health Care Hillsborough Campus provides integrated, convenient and patientcentered care for patients in Hillsborough, NC and surrounding areas. The existing campus includes an emergency department, outpatient surgery, inpatient services, and a medical office building, combining a community hospital culture with the innovative procedures and care for which the UNC Medical Center is known.

A new patient bed tower addition aims to create a system-wide destination for inpatient rehabilitation services for UNC Health Care. The project consists of implementing the next step in campus expansion outlined in the Master Plan, a new 102,000 SF patient bed tower that adds 80 beds to the campus. The current design assigns 30 beds as rehab and the remaining 50 as medical surgical beds. The facility is being designed to allow for future conversion for all of the patient rooms from medical-surgical to rehabilitation.

The design team performed a Functional Post-Occupancy Evaluation (FPOE) on the existing bed tower to identify opportunities for improvement for this project. The team documented their findings and presented them to the client. As a result, the team was able to increase the patient room size while consolidating support spaces to fit their needs. The patient rooms increased from 250 SF to 280 SF. Also, 100% of the patient bathrooms are ADA compliant, allowing a smooth conversion from medical-surgical focused patient rooms to rehabilitation patient rooms in the future.

SIZE	102,000 SF
COST	Est. \$57 M
DATE	Est. Late 2020



HOLLY SPRINGS MOB II UNC REX HEALTHCARE | HOLLY SPRINGS, NORTH CAROLINA

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This 3-story expansion to an existing 2-story medical office building meets the needs of a growing community located within the Research Triangle metropolitan area. Sited on the corner of a prominent intersection in Holly Springs, NC, a two story glass atrium marks the building's entry and provides easy access to the diverse range of medical offices housed in this facility.

The L-Shaped overall plan provides ample daylight and views to all tenants. The addition of the 3-story piece enriches the site and adds to the buildings presence among the major intersection. With urgent care facilities housed within the building, it is open for operation 7 days a week. Services include: REX Sleep Disorders Center; North Carolina Surgery; REX Vascular Specialists UNC Family Medicine & Pediatrics; and Raleigh Orthopaedic Clinic.

KEY FEATURES

- LEED certified (core and shell)
- Building displays a 2 story glass atrium to create an inviting atmosphere as well as provide a modern update.
- The MOB will allow flexible tenant spaces to accomodate future needs for the community.
- There will be an expanded parking lot to allow easy access for tenants, visitors, and patients.
- Traditional architectutral features to fit within context.

SIZE	48,000 SF (new) 30,000 SF (existing)
COST	\$7.1M
DATE	December 2017



OUTPATIENT CANCER CENTER UNC REX HEALTHCARE | RALEIGH, NORTH CAROLINA

The project consists of the design and construction of a new free-standing comprehensive outpatient cancer center, and potential parking deck, both facilities across from the existing main Rex Healthcare campus in Raleigh. The site is located at the intersection of Macon Pond Road and Blue Ridge Road.

To kick-off the project, our team led the UNC Rex user group and design team through a visioning session to brainstorm, prioritize and validate the project guiding principles. The final six guiding principles revolve around providing a highly efficient facility that is patient and community centered. Through user group meetings and design charrettes, the team is working through finalizing the building footprint on site, departmental adjacencies, and an on-site parking solution.

The facility will include: medical oncology (48-56 infusion bays and 30 exam rooms), oncology pharmacy, laboratory (10 phlebotomy draw stations), radiation oncology (3 linear accelerators & vaults with potential for 2 in the future, 1 HDR, CT simulator, and 6 exam rooms), and support functions (administration, research, patient education, patient care navigation, conference space, healing garden, parking).

KEY FEATURES

- Outpatient Clinics
- Quality of Life Center to focus on patient wellness
- Holistic healing approach
- Patient and Caregiver Center

SIZE	125,000 SF total (110,000 SF up-fit) (114,000 SF shelled)
COST	Withheld
DATE	Est. 2021



MISSOURI ORTHOPAEDIC INSTITUTE

UNIVERSITY OF MISSOURI - COLUMBIA | COLUMBIA, MISSOURI

The Missouri Orthopedic Institute expansion project is a 68,000-square-foot addition to the existing orthopaedic facility. The addition houses new operating rooms, a lobby, outpatient surgery space, clinic modules and inpatient beds.

Renovations throughout the building strengthen patient and staff flows. A lack of space and circulation problems prompted the need for the expansion and renovations. The new addition reverses the entry point of the building, giving direct access to the clinic for patients. The design team was challenged to correct some of the facility's circulation issues without remodeling the entire structure. The exterior architecture complements the existing facility, but radically alters how the building is used and accessed by patients.

PROJECT DETAILS

SIZE	85,000 SF (New) 20,300 SF (Renovated)
COST	\$29.2 M
DATE	November 2017

KEY FEATURES

- Mixed-use facility with "I2" and "B" occupancy
- Five additional operating rooms
- 22 additional private inpatient rooms
- Three additional digital X-ray rooms
- 19 additional outpatient examination rooms
- One floor dedicated to orthopaedic research



STUDENT HEALTH CENTER RENOVATION

WASHINGTON UNIVERSITY | ST. LOUIS, MISSOURI

Washington University, a renowned academic institution, sought to improve the environment of its student health center. Key goals for the Habif Health and Wellness Center renovation project were improved patient flow, increased privacy and comfortable seating.

Operational improvements for Habif resulted in a simplified layout and improved flow. Patient privacy is intact with one unified entry for streamlined operational flow. Flow issues were also resolved for the laboratory service area. The design provides a specified laboratory waiting room, allowing patients to wait in a designated area for tests and results.

The new registration desk is a circular design with ADA accessible counters and ample storage underneath. The arrangement and style of seating have been upgraded with the patient's comfort and privacy in mind. A library in the back corner provides additional study space for waiting students.

KEY FEATURES

- Improved patient flow
- Variety of waiting areas to promote privacy
- Modern design that appeals to students
- Increased patient privacy

SIZE	4,492 SF
COST	\$302,500
DATE	December 2017







CARY HOSPITAL PATIENT TOWER VERTICAL EXPANSION

WAKEMED HEALTH & HOSPITALS | CARY, NORTH CAROLINA

Due to continued demand for healthcare services in Wake County, WakeMed will add 40 licensed acute-care beds, shelled space for additional services, and a helistop to the WakeMed Cary Hospital Campus. The two-story addition will be constructed over the existing inpatient west wing creating a fourth and fifth floor and a mechanical penthouse. The new beds will be housed on the fifth floor while the fourth floor will be used for future growth.

BSA designed the initial vertical expansion which created the second and third floors of this facility in 2005. This original vertical expansion includes ICU and Medical Surgical service. The addition of the fourth and fifth floors creates a cohesive exterior that matches WakeMed's brand while meeting the Town of Cary's stringent standards, improves work-flows and efficiencies, and connects family-centered spaces with a connection to daylight.

KEY FEATURES

- Two floor vertical expansion
- Add 41 total beds
- Nursing Neighborhoods: 10 beds/ neighborhood
- Create family-centered spaces over looking a green roof
- Maintain client branding and eliminate age branding on facility
- Currently in SD phase
- CON process

SIZE	94,000 SF
COST	Confidential
DATE	Est. 2020

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