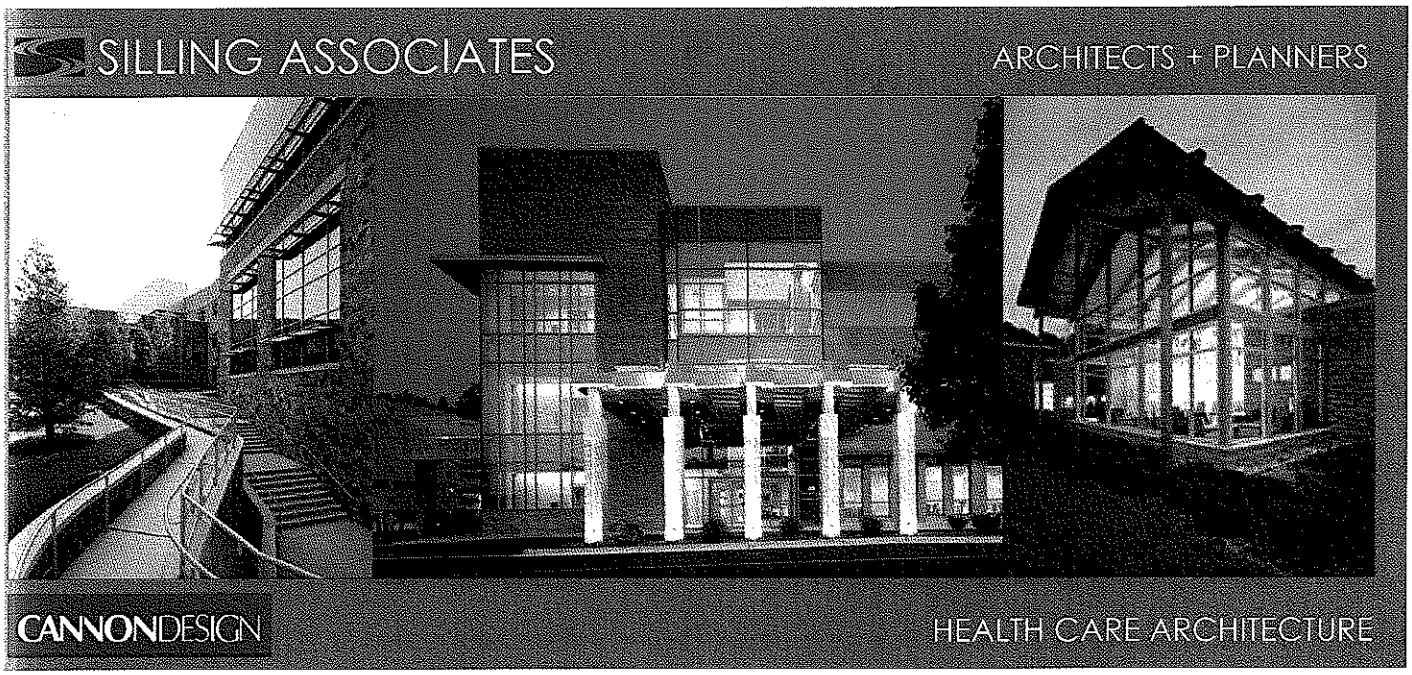
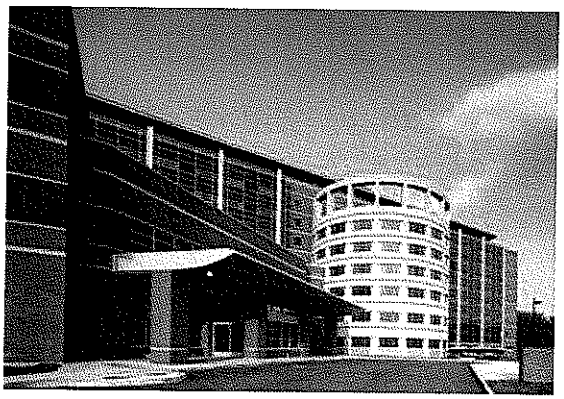


Expression of Interest
for Architectural/Engineering and Planning Services
William R. Sharpe, Jr. Hospital, RFQ#WSH90086

TABLE OF CONTENTS



www.silling.com
SILLING
ASSOCIATES • ARCHITECTS
405 Capitol Street, Upper Atrium
Charleston, WV 25301-1727
p 304.346.0565 f 304.346.1522
email: info@silling.com

December 1, 2008

Purchasing Division
2019 Washington Street, East
P.O. Box 50130
Charleston, WV 25305-0139

Re: RFQ#WSH90086, William R. Sharpe, Jr. Hospital

Dear Selection Committee Members:

We are very excited about the opportunity to provide professional architectural planning, programming, design, engineering, and construction administration services for the William R. Sharpe, Jr. Hospital project.

Silling Associates, Inc. (Charleston, WV) is one of the longest continuing architectural practices in the state of West Virginia with a history dating back to 1902. We have long been recognized as a leader within the state's architectural industry and have developed an unmatched reputation for delivering landmark projects throughout our great state. This body of work includes projects such as the West Virginia Science and Cultural Center, the West Virginia University Med Center, the WVU Coliseum, and the Charleston Civic Center. Today, we have continued this great legacy with such notable projects such as the West Virginia Lottery and Revenue Center, Mount Olive Correctional Complex, Bible Center Church, and Chesapeake Energy's Eastern Regional Headquarters, to name a few. When required by the project, Silling has formed highly-collaborative relationships with nationally-recognized design consultants, including CDH Partners (Marietta, GA), Polshek Partnership (New York, NY), DLR Group (Orlando, FL), Rosser International (Atlanta, GA), and Elliott + Associates (Oklahoma City, OK). All of these projects provided our clients with innovative design expertise, strong local project management, and unparalleled client service.

Cannon Design (Baltimore, MD) is the nation's 3rd largest health care planning and design firm and provides expert programming and design services in behavioral health facilities. Over the past decade, they have remained at the forefront of behavioral healthcare facility planning and design, opening more major behavioral healthcare facilities than any other firm. Their work has encompassed a spectrum of care modalities, ranging from community-based establishments to major tertiary-care behavioral complexes.

Both Silling and Cannon Design have joined together to present a well-balanced team offering strong project management, design expertise, and a fully staffed functioning office in the client's geographic area. The Design Team is further enhanced by some of the region's most talented, highly-skilled, and competent consulting engineers. Scheeser*Buckley*Mayfield (MEP Engineering), Shelley Metz Baumann Hawk (Structural), and GAI Consultants (Civil, Landscape Architecture) are proven leaders within their respective disciplines and have had a long and successful history of design collaboration with Silling Associates.

We look forward to the opportunity to discuss in further detail how we would approach this exciting project with your committee leadership and how our team will achieve a project which would be considered an absolute success by all concerned.

Sincerely,

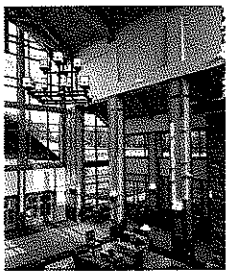
SILLING ASSOCIATES, INC.

Jody S. Driggs, AIA
Principal

Design Team

Roles and Responsibilities

SILLING ASSOCIATES *Charleston, WV*

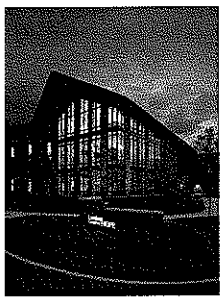


Brief Overview

Silling Associates is one of the leading architectural firms in the state of West Virginia, with a long and rich history dating back to 1902. Well-known for its architectural contributions to the state's built environment for the past 100+ years, Silling is well-respected within the design and construction industry for its creative and inspirational designs, exceptional project management, dedicated client service, and effective cost control. In addition, Silling has successfully collaborated with some of the nation's top design consultants on a variety of building types including health care, academic, recreational, correctional, religious, and institutional projects.

Silling Associates Incorporated will be the "Architect of Record," maintaining and facilitating effective communication and coordination with the West Virginia DHHR design committee, Cannon Design, and the team of consulting engineers. Silling Associates will maintain overall project development responsibility including approval of the general design concept, project budget, design schedule, and document production. **Mr. Jody Driggs**, Principal Architect with Silling Associates, will be the Project Executive with final design team authority. Ninety percent of programming, schematic design and design development effort will be the responsibility of Cannon Design. **Mr. Martin Klapproth** of Silling Associates, will serve as the architectural project manager, and will be actively involved with Cannon Design during these first three stages as a bridge to the production of contract documents. Silling Associates will complete detailing of the project, prepare and align specifications with drawings, perform interdisciplinary design coordination reviews to assure compatibility of all major building systems, as well as provide building code analysis and review. Silling Associates will be responsible for bidding and negotiating and **Mr. Sean Simon**, of Silling Associates, will be responsible for Construction Contract Administration.

CANNON DESIGN *Baltimore, MD*



Brief Overview

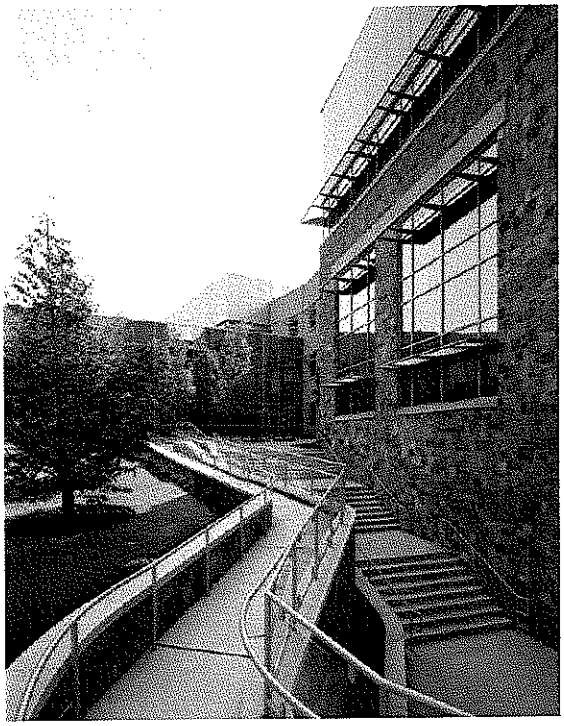
According to the World Health Organization and the National Institute of Mental Health, one in four people will suffer from mental illness at some point in their lives. However, despite the widespread nature of mental illness and the proven effectiveness of modern treatments, the majority of behavioral health facilities are outdated and inadequate to support today's care regimens. At Cannon Design, they believe that sensitively designed facilities positively impact patient outcomes. Over the past decade, they have remained at the forefront of behavioral healthcare facility planning and design, opening more major behavioral healthcare facilities than any other firm. Their work has encompassed a spectrum of care modalities, ranging from community-based establishments to major tertiary-care behavioral complexes. From community hospital to academic medical center; from ambulatory care to translational medicine; from sub-specialty centers of excellence to full-spectrum replacement facilities, every project reflects what is possible as a product of the synergy of expertise, discipline and imagination in the realization of the client's vision.

Cannon Design will be the "Design Architect" responsible for leading the programming, schematic design and design development effort. **Mr. David Treece**, Vice-President with vast experience in behavioral, clinical, and health care programming and design, will be the Design Principal. **Mr. Timothy Rommel**, Principal, and **Mr. John Rietz**, Principal, provide over 50 years' experience in health care design and will provide project support throughout all phases of project delivery.

Design Team

Roles and Responsibilities

History of Experience as a Team



Silling Associates and Cannon Design each has a very successful history of providing services in the manner we propose.

When required by the project, both Silling Associates and Cannon Design has formed associations with other architectural or architectural/engineering firms to present a well balanced team offering strong project management, design expertise, and a fully staffed functioning office in the client's geographic area.

Silling Associates invited Cannon Design to bring their expertise in the planning and design of behavioral and clinical centers to the William R. Sharpe, Jr. Hospital project located in Weston, West Virginia. Silling Associates has a long and successful history serving the State of West Virginia and maintains an extraordinary reputation for high-quality design, effective project management, cost control, and an astute attention to detail. Similar associations with other firms across the country have resulted in nationally recognized projects and long-term professional relationships.

Our Design Team offers the State of West Virginia and the William R. Sharpe, Jr. Hospital leadership the synergistic advantages of a strong, West Virginia-based design firm—one who will ensure unparalleled client service, consistent local presence and accountability, and responsiveness—coupled with a nationally-recognized leader in health care programming and design.

We thank you for the opportunity to submit this Expression of Interest and we look forward with great excitement and anticipation to being able to further discuss our approach to your project!

ORGANIZATION CHART - KEY PERSONNEL

State of West Virginia
Department of Health & Human Resources

CANNONDESIGN
DESIGN ARCHITECT

David Treece, AIA
V.P., Programming & Design Leader

John Rietz AIA
Design Principal

Timothy Rommel, AIA
Design Principal

James Muirhead, AIA
Programming & Design

SILLING
Architects + Planners
Charleston, West Virginia
Jody Driggs, AIA, Project Executive

Silling Associates

PROJECT MANAGER

Jody Driggs, AIA
Principal-In-Charge

Ed Weber, AIA, LEED AP
Senior Associate

Sean Simon, AIA
Quality Control

Martin Klapproth,
Associate AIA
Production Manager

ScheeserBuckleyMayfield

MEP ENGINEER

Mike Wesner, PE
Principal, Mechanical

Marlon Hathaway, PE
V.P. Electrical Engineering

Joe Harless, PE
Telecommunications
Engineering

Shelley Metz Baumann Hawk

STRUCTURAL ENGINEER

Robert Baumann, PE
Principal
Structural Engineer

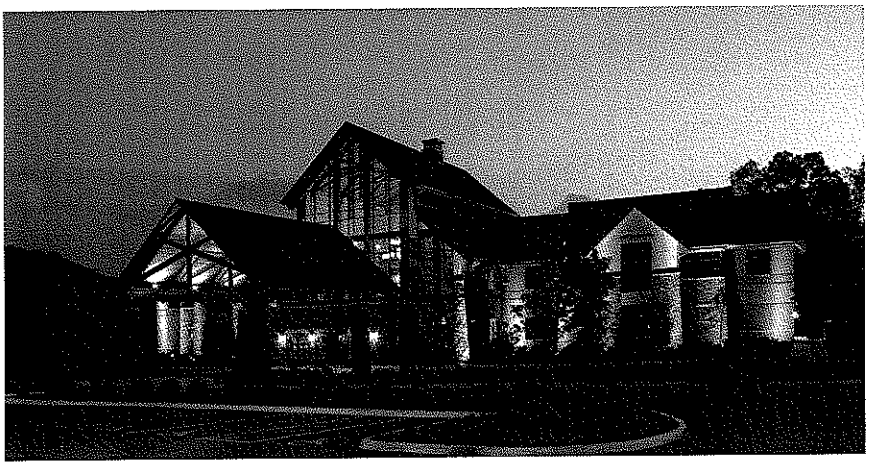
GAI Consultants

CIVIL/SITE ENGINEER
LANDSCAPE ARCHITECT

David Gilmore, ASLA
Landscape Architect

James Hemme, PE
Civil Engineer

Firm Overview



OUR HISTORY

Architectural success is measured by vision and an unwavering dedication to excellence. This axiom was the philosophical birth of SILLING ASSOCIATES, INC. by H. Rus Warne in 1902. Following the lead of partners like Warne and its namesake, Cy Silling, the firm today has the proud distinction of being the oldest continuing architectural firm in West Virginia and one of the oldest in the eastern United States. Throughout, Silling Associates, Inc. has woven itself into the very fabric of West Virginia, providing planning and architectural services that have touched the lives of virtually every citizen and delivering landmark projects collectively defining its built environment.

A past president of Silling used to say that every West Virginian has either banked, lived, worked, cheered, slept, served time, got well, learned arithmetic, borrowed a book, paid taxes, or parked in one of our buildings. Whether through its early century beaux arts and neo-classical collection, its mid-century modern and post-modern portfolio, or its current contextual vocabulary, Silling has always been renowned as one of the premier architectural firms in the state. Today, Silling Associates continues to have a powerful impact on the region's architectural landscape through fresh, yet solid design and responsible project management.

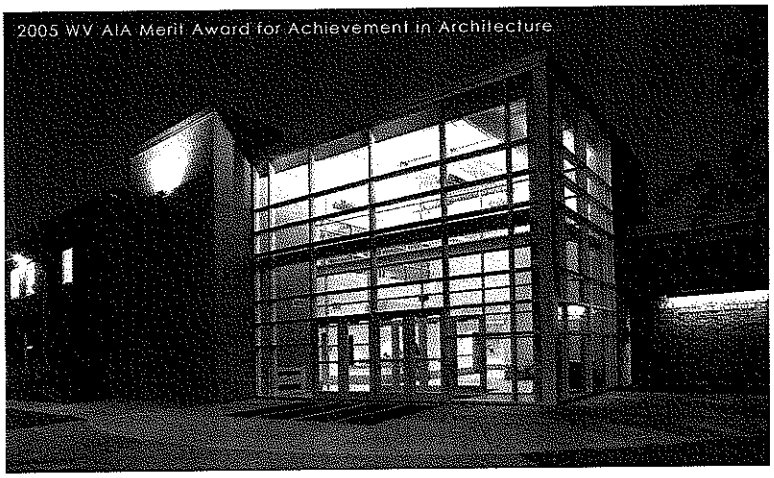
DESIGN PHILOSOPHY

At Silling, design drives everything that we do in architecture, planning and interiors. We believe that design fulfills and propels each client's goals and aspirations; that design articulates spaces to new levels of effectiveness; that design engages, inspires and fulfills; and that design elevates the human experience.

We begin each project by listening to our client. We listen to understand a client's vision, goals and objectives. We believe the concept of design in architecture applies not only to sketches, plans, specifications, and the building process, but to every aspect of the project. We design each project in a synthesis of everything that we heard from a client, and of our own professional design expertise—working collaboratively and uniting all professional disciplines in the process to create truly integrated design solutions. We deliver each project with responsive service and technical excellence to the complete satisfaction of our client, which is the ultimate measure of our success. This is why you can depend on Silling to walk you through every phase of the process.

From our firm's inception over 100 years ago, Silling has remained committed to four essential principles: listening to the needs of our clients, understanding the challenges they face, solving their problems, and producing high quality results. These guiding principles are contributing factors to the foundation and success of every project Silling undertakes. We are dedicated to providing outstanding analysis, planning, design, and construction for every one of our projects.

About Us



The People Driving Our Success Today

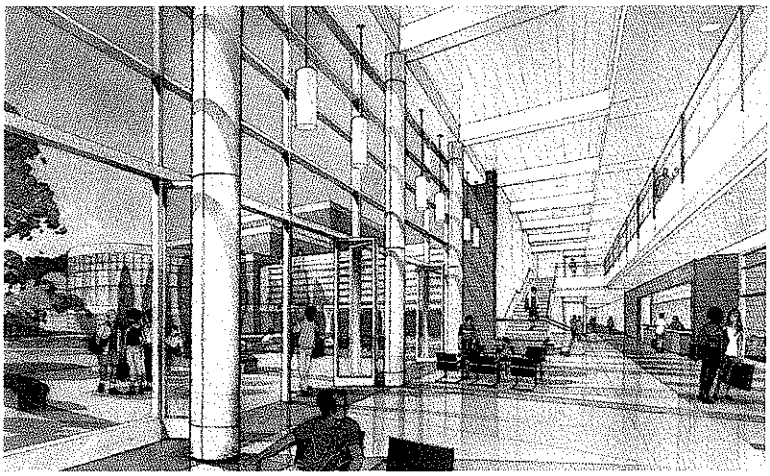
Today, Silling Associates is led by Principals Tom Potts and Jody Driggs, Senior Associate Ed Weber, and Business Development Director Mike Moore. The firm's leadership is supported by a highly-talented mix of experienced architects, project managers, creative designers, and CAD production staff.

Tom Potts, President of Silling Associates, is enjoying unprecedented success and growth within the architecture industry. "There has never been a more exciting period in my thirteen years with the firm. Both the volume and the sophistication of our projects have grown noticeably in the past five years. We are fortunate to be trusted with a number of significant design commissions throughout the region." The current success enjoyed by Silling is not by chance. "Our collective talent, creativity, and diversity allow us to respond with excellence and innovation throughout every facet of design. Even more, it is simply a given that client service, competence, and professionalism is the core of everything we do. What naturally follows is a degree of care we exercise in our client relationships that is as rewarding as the building the owner will occupy."

A *2007 Generation Next: 40 Under 40* award-winner, Mr. Driggs also attributes the success of the new generation at Silling to client service and design innovation. "Architecture is the one art form that requires the artist to love people – music, art, and sculpture can exist for its own sake – but architecture is a service. Our practice is rooted in the notion of truly pleasing the folks that we work for – it's about the posture of the heart." Jody also realizes that working hard to please his clients is not enough. "We have also been reshaping the way we approach design over the past decade in an attempt to be a more design-oriented firm. In studying projects in broader or in more microscopic contexts, through inner-office collaboration and open critique, and with creative three-dimensional modeling exploration, I believe that our work is as innovative and dynamic than ever." The work that Silling has done to sharpen its talents and become more proficient as artists, coupled with a more relational approach to client service has proven to be a sound business decision.

About Us

Project architect Ed Weber, a Chicago-native, joined Silling Associates in the fall of 2007. Prior to making Charleston his home, Weber was a partner at the award-winning architectural practice of Gibbons, Fortman, and Weber. According to Weber, choosing a career with Silling was an easy one. "I came to Charleston looking for the opportunity to bring my skills and energy to a team of like-minded design leaders who share an equal passion for the craft of architecture as both art and science." Weber researched many architectural firms in Charleston adding, "What I really liked about Silling was the sense of collaboration between the partners, their clients, the builders and engineers; where everyone involved is inspired to make each project as successful as possible." Attention to all of the details and challenges of a project, large or small, or what Weber calls "getting it right" pervades both their work and work ethic, and has made Silling a comfortable fit.



Your Search for the Right Architect Ends Here

Silling Associates, Inc. offers a broad portfolio of experience in courthouse, correctional, worship, financial, corporate, educational, and medical design. As a regional architectural firm based out of Charleston, West Virginia, Silling is licensed in West Virginia, Kentucky, Maryland, Virginia, and Ohio.

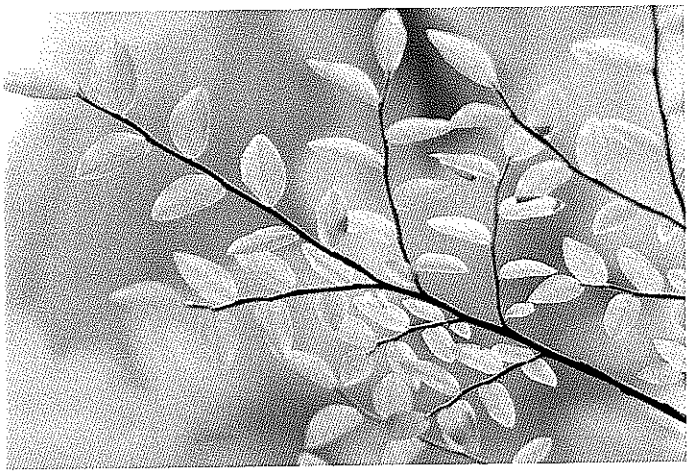
Whether you're planning a new corporate office building, worship center, bank branch location, a college campus, renovations to an existing facility, or have another challenging design issue, the new generation at Silling Associates encourages you to visit them. They can assist in turning your visions into reality. Innovation, competence, and excellent client service awaits you.

Our Services

Silling Associates, Inc. offers clients a comprehensive list of Architectural, Planning, and Interiors services. Working in concert with some of region's premier engineering design consultants, Silling provides exceptional leadership from the earliest stage of planning through to final documentation, construction, and building operation.

- Pre-design
- Feasibility Studies
- Master Planning
- Architectural Programming
- Architectural Design
- Construction Contract Document Production
- Bidding & Negotiating
- Design-Build & Negotiated Contract Delivery
- Construction Contract Administration
- Code Compliance & Review
- Site Design
- Sustainable Design & LEED Services
- Interior Design
- Interior Space Planning
- Interior Architectural Design, Detailing, & Documentation
- Furniture, Furnishings Selection, Documentation, & Specification

LEED & Sustainable Design



Silling Associates provides a staff with Professional Accreditation by the U.S.Green Building Council (USGBC) in coordination with the Green Building Certification Institution (GBCI) and LEED AP for New Construction and Major Renovations. The LEED (Leadership in Energy and Environmental Design) Green Building Rating System provides a set of performance standards for certifying the design and construction phases of commercial, institutional buildings and high-rise. The specific credits in the rating system provide guidelines for the design and construction of buildings of all sizes in both the public and private sectors. The intent of LEED for New Construction is to assist in the creation of high performance, healthful, durable, affordable and environmentally sound commercial and institutional buildings. As a LEED AP firm, Silling has distinguished itself as having the knowledge and skills necessary to participate in the design process, to support and encourage integrated design, and to streamline a buildings LEED application and certification process.

Our Staff

Thomas Potts, AIA	Principal
Jody Driggs, AIA	Principal
Edward Weber, AIA, LEED AP	Senior Associate
Michael Moore, Associate AIA	Business Development
Sean Simon, AIA	Construction Contract Administration
Martin Klapproth, Associate AIA	Project Manager
Jeremy Jones, Associate AIA	Designer, Project Manager
Carmen Wong, Associate AIA	Designer, Project Manager
Jason Rutledge, Associate AIA	Senior CAD Technician
Kim Ellis, Associate AIA	Interior Designer, CAD Support
James Thompson, Associate AIA	CAD Technician
Uriah Burgess, Associate AIA	CAD Technician
Josiah Burgess, Associate AIA	CAD Technician
Tamerra Justice	Administrative Assistant, Interior Design
Karl Blake	Accounting
Rachel Garton	Administrative Assistant, Receptionist

Professional Resume

Jody S. Driggs, AIA, Principal

EXPERIENCE & SIGNIFICANT RESPONSIBILITIES

Mr. Driggs has twelve years' experience including all phases of architectural programming, design, and contract document production. As a designer, Mr. Driggs has contributed greatly to the development of design concepts and options on all projects within the firm. He is particularly talented in the creation of architectural images and form appropriate to a given design context. His experience at the Urban Design Institute in Chattanooga, Tennessee gives him a unique perspective of the urban character and dynamics of each design. He is skilled at the use of three-dimensional computer modeling as a valuable study tool for both the client and the design team in search of a fresh and creative design solution.

As a project architect he is responsible for working closely with the owner to establish clear programmatic needs and design criteria. He is responsible for developing responsive schematic site plans, floor plans, and elevations that blend the meaning and spirit of the owner's program with site and cultural forces. Mr. Driggs' recent experience as Project Architect/Manager includes the St. Timothy Lutheran Church, the award-winning James C. Wilson Student Union at West Virginia State University, West Virginia Lottery Headquarters, Martinsburg City Hall, McDowell County National Banks, 2006 West Virginia State University Campus Master Plan, West Virginia University Tech Student Center, and Bible Center Church.

EDUCATION:

Bachelor of Architecture
The University of Tennessee 1996

LICENSES & CERTIFICATIONS:

Licensed to practice architecture West Virginia (2001), Kentucky (2004), Ohio (2005), Maryland (2005), Pennsylvania (2005)

PROFESSIONAL AFFILIATIONS:

Treasurer, WV Chapter, American Institute of Architects

AWARDS & RECOGNITION:

2005 AIA WV Merit Award for Achievement in Architecture, James C. Wilson Student Union, West Virginia State University * Goodstein and Associates Technical Drafting Award for Achievement and Excellence in the Field of Architecture * Honorable Mention, Fourth Year Design Competition, Thesis Project Letter of Excellence, University of Tennessee * The State Journal "40 Under 40" Award Winner - 2006 * West Virginia Executive "Young Gun" Award-Winner, 2007

WEST VIRGINIA EXECUTIVE

Jody S. Driggs Young Guns 2008 Award Winner

"A great architect is not made by way of a brain nearly so much as he is made by way of a cultivated, enriched heart." -Frank Lloyd Wright

LIFE COULDN'T BE BETTER for Jody Driggs if he designed it himself, and although he had a hand in his success, he must give credit where credit is due. "I'm here through God's grace," says the principal project architect and designer for Silling Associates, a Charleston-based architecture firm. "I have been very blessed, and I don't think it's luck at all that things have fallen into place for me professionally."

At 36-years-old, Driggs says he didn't always want to be an architect, but he knew his early creative instincts would lead to his future profession. "I didn't decide I wanted to go into architecture until my senior year of high school," he explains. "I wanted to be a musician or artist. I was always on the creative side of things. From a very early age, I always had a pencil in my hand, doing a lot of free-hand drawing."

Leaving his childhood home in St. Albans, Driggs would pursue architecture at the University of Tennessee following some inspiration provided by his high school piano teacher. During a trip to Pennsylvania, Driggs and his classmates visited the famous architect Frank Lloyd Wright's Fallingwater house. "That kind of sealed the deal for me. I had never heard of it and when I saw the house it all kind of clicked in my head that that is what I wanted to be a part of," says Driggs.

During his time at UT, Driggs says he benefited from professor Stroud Watson, an "urban design guru," who he studied under his junior year at the Urban Design Consultancy Studio in Chattanooga. "He was a professor who embraced the idea of a city and the diversity and the beauty of living around a lot of different people and appreciating those differences. He turned me on to the possibility of architecture as a way to change things from a social standpoint," he says.

In 1996, after graduation, he started searching for jobs by simply knocking on the doors of various architecture firms in Charleston. "I looked in the phone book and picked the firms that had their names in the biggest font and the ones I knew I wrote up cover letters and addressed them directly to the president of the firm. I walked into five different offices over a lunch break," he jokes about his timing. "Dick Blankenship (then president of Silling Associates) was out to lunch, but Tom Potts, (then a fledgling principal), was in the conference room eating a sandwich. He took a peek at my resume with pictures of buildings I had worked on and they eventually called and offered me an internship."

The rest, as they say, is history, but it's nothing Driggs forgets. He continuously credits previous architects at Silling Associates for being mentors, and specifically remembers Howard Johe, a past president, who recently passed away. "I didn't work directly for him; he was a retired partner who would stop by on occasion. He was larger than life and embodied the spirit of architecture with a great love of people, and I was able to learn enough to respect him and hope to continue that same spirit."

Driggs' father, Phil, instilled in him both a work and personal ethic that he carries with him to this day. His wife, Rachel, and their three children are supportive and the reason for his own dedication to architecture and success. "My wife tells me that she's proud of me, and that's inspiration enough," he says.

Now Driggs is working on a part of the team responsible for creating Chesapeake Energy's 120,000-square-foot building at NorthGate Business Park in Charleston, among other projects. "For me it's like playing in the major leagues. I can't think of anything else I would rather be doing."

Driggs' life is encompassed by appreciating the diversity of people and making positive changes through his profession. "In the architectural business you try to design a snapshot of the people that use that building," he says. "You have to roll your sleeves up, listen to them and get to know them. Sometimes they are business owners, political leaders or just the people in the town square who really know that area's history and culture and their project should be a reflection of them."

Professional Resume

Edward E. Weber, AIA, LEED AP

Senior Associate

EXPERIENCE & SIGNIFICANT RESPONSIBILITIES

Mr. Weber has seventeen years' experience as a practicing architect with significant work in all phases of architectural programming, schematic design, design production and construction contract administration. After graduating from Notre Dame in 1992, Ed joined the Chicago office of Richard Gibbons and Associates. There he managed high-end custom residential projects of renovation and new construction work with construction budgets between $500,000 and $20,000,000. In 1999, Ed was offered partnership and the firm of Gibbons, Fortman & Weber was created in January of 2000. Under GFW, the office work expanded and projects became more diverse with commissions for hospitality design of restaurants and lounges, as well as residential and commercial developments throughout the city. Having joined Silling Associates in 2006, Ed brings his extensive project management experience and design talent to the firm's major commissions. His involvement is specifically appropriate in those projects pertaining to campuses and master plans, urban settings, historic contexts, and residential scale.

With Professional Accreditation by the U.S. Green Building Council (USGBC) in coordination with the Green Building Certification Institution (GBCI), Ed holds the title of LEED AP for New Construction and Major Renovations. As a LEED AP (Leadership in Energy and Environmental Design), Ed has distinguished himself as having the knowledge and skills necessary to participate in the design process, to support and encourage integrated design, and to streamline a building's LEED application and certification process.

EDUCATION:

Bachelor of Architecture
University of Illinois, Chicago 1986

Master of Architecture and Urban Design
University of Notre Dame 1992

LICENSES & CERTIFICATIONS:

Licensed Architect in West Virginia & Illinois

PROFESSIONAL AFFILIATIONS:

Self-Certified Architect, City of Chicago, DCAP; Registered Energy Professional, City of Chicago, DCAP; Former Board of Directors, Habitat for Humanity, Windy City Affiliate Former Construction Committee Chair, Habitat for Humanity, Windy City Affiliate

Professional Resume

Sean S. Simon, AIA

Construction Period Service Manager

EXPERIENCE & SIGNIFICANT RESPONSIBILITIES

Mr. Simon has sixteen years' experience involving all phases of architectural programming, design, construction document production, and construction contract administration. From 1998 through 2007, Mr. Simon operated his own architectural practice (Sean S. Simon, AIA Architects) providing comprehensive design and project management services for a variety of project types including banking, commercial, government, education, health care, religious, and residential.

Sean joined Silling Associates in 2008 as a Construction Period Service Manager, working closely with the firm's production staff throughout the construction document phase and providing construction contract administration services. He will facilitate pre-construction meetings providing clear definition of project goals and owner expectations, review all contractor submittals, product samples, and shop drawings for conformance to the contract drawings and specifications, attend weekly or bi-weekly progress meetings to maintain clear communication with builders, observe installation of materials and systems to verify their conformance with the design intent, and continually monitor the project schedule.

EDUCATION:

Bachelor of Architecture
The University of Tennessee, 1992

LICENSES & CERTIFICATIONS:

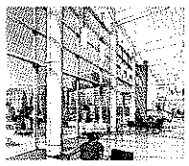
Licensed to practice architecture in West Virginia, Maryland, Ohio, Virginia, and Pennsylvania.

PROFESSIONAL AFFILIATIONS:

American Institute of Architects, West Virginia Chapter (AIAWV)

CIVIC INVOLVEMENT:

Cub Scoutmaster for Pack 434 and Pack 435



Professional Resume

Martin Klapproth, Associate AIA

Project Manager, Designer

EXPERIENCE & SIGNIFICANT RESPONSIBILITIES:

Martin is a graduate architect with 22 years' experience in the architectural industry, including all phases of project design. From 1986 through 1996, he served as an Architectural Designer providing schematic design, construction document, and I.T. support. Martin joined The HDMR Group in 1996 where spent the next ten years providing schematic and construction document production support, project management and supervision, as well as marketing, website, and I.T. support. During this period, he provided various design, production, and/or project management services for the Marshall University RCB Biotechnology/Science Center, Marshall University-South Charleston Campus, West Liberty State College Academic, Sports, & Recreation Facility, and the Petroleum Development Corporation Headquarters, among others.

Mr. Klapproth joined Silling Associates in 2008 as a Project Manager. His primary responsibilities include schematic design, contract document production and coordination, construction contract administration support, and overall project support.

EDUCATION:

Bachelor of Architecture
The University of Cincinnati, 2003

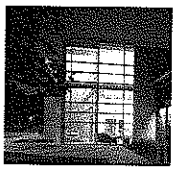
PREVIOUS EXPERIENCE:

ZMM, Inc.—Charleston, WV (1986-1996)
Architectural Designer

The HDMR Group, Inc.—Charleston, WV (1996-2006)
Architectural Designer

PROFESSIONAL AFFILIATIONS:

American Institute of Architects - WV Chapter (AIAWV)



Professional Resume

Jeremy Jones, Associate AIA

Project Designer

EXPERIENCE & SIGNIFICANT RESPONSIBILITIES:

Jeremy is a graduate architect with nine years' experience in the architectural industry, including all phases of project design, development, production, presentation, and coordination of contract documents. He has completed all IDP training requirements and is currently testing for licensure through the National Council of Architectural Registration Boards. Jeremy's educational experience included a study abroad of European Architecture at the Polytechnic Institute of Krakow, Poland, spring semester of 2002. Travel included Austria, Germany, the Netherlands, Italy, England, France, the Czech Republic, and Spain.

He possesses advanced skills using three-dimensional computer modeling programs and rendering techniques.

EDUCATION:

Bachelor of Architecture, Cum Laude
The University of Tennessee 2003

PROFESSIONAL AFFILIATIONS:

American Institute of Architects - WV Chapter
Historic Resources Committee

AWARDS & RECOGNITION:

Fourth Year Design of Excellence Award, top design fourth year level * 2002 West Virginia AIA Scholarship, state's top architectural student award * 2001 & 2002 Mark Freeman Scholarships, architecture program's top monetary award * 2001 U.T. Foreign Travel Scholarship, university's top abroad studies award * 2000 Tennessee Foundation Scholarship, middle Tennessee AIA award * Tau Sigma Delta Architecture Honor Society * Golden Key International Honor Society * National Collegiate Scholar * Phi Eta Sigma Honor Society, freshman honorary * Phi Kappa Phi Honor Society, senior honorary.

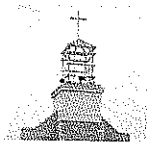
Our Markets

JUSTICE ARCHITECTURE

Courts, Governmental Administration, Jails & prisons

CORPORATE ARCHITECTURE

Corporate and Professional Offices



WORSHIP ARCHITECTURE

Churches, Places of Worship, Religious Education

WELLNESS ARCHITECTURE

Hospitals, Health Care Centers, Medical Offices

EDUCATIONAL ARCHITECTURE

Colleges and Universities

RESIDENTIAL ARCHITECTURE

Private Residences and Urban living

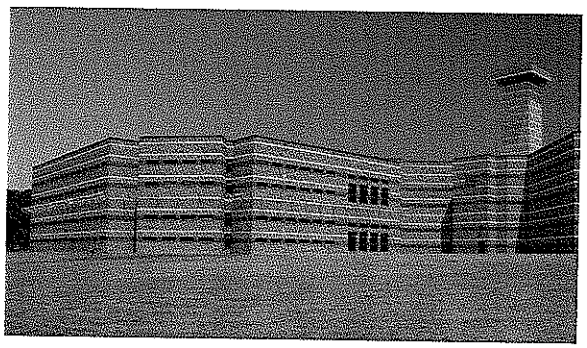
Mount Olive Correctional Complex, Special Needs Unit

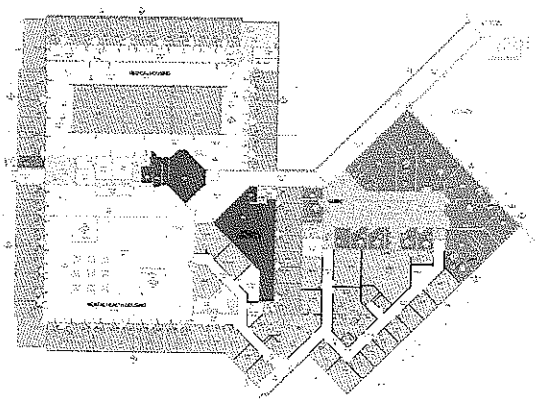
New Medical, Mental Health, and Dental Facility Addition

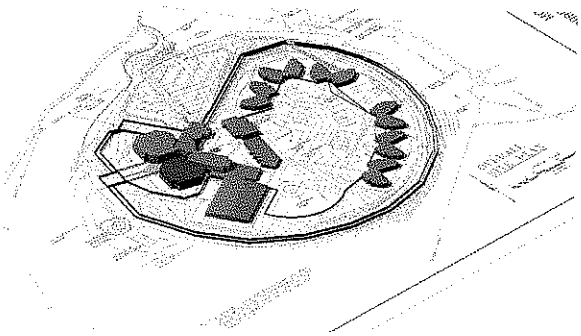
Current trends in corrections in the US has seen an increased demand for special inmate housing that includes mental health, drug treatment, sexual offenders, and depression/suicide observation. An aging and characteristically increasingly ill population is also placing greater demand on health care services in correctional facilities. This fundamental change in inmate population dramatically impacts the cost of operations and greatly increases staff to inmate ratios.

A new special needs facility is needed to address this change at the MOCC. The original 1994 planning projected a mirror image of a maximum security housing pod at a strategic facility location connecting to primary circulation at master control. As needs changed this area will be utilized for the special housing unit. The special needs unit is a 41,000 SF single story building and includes a comprehensive medical clinic, trauma center, pharmacy, and medical offices.

Primary goals and concepts include: Facilitating inmate movement through treatment and returning inmates to the general population within a minimum period resulting in less operating costs, and an efficient arrangement of program to minimize staff and operational costs. The floor plan is thus arranged to combine a complex mix of populations with an efficient amount of correctional, program and medical staff. Natural light is introduced into dayroom and medical areas with a series of clerestory windows at raised building sections.







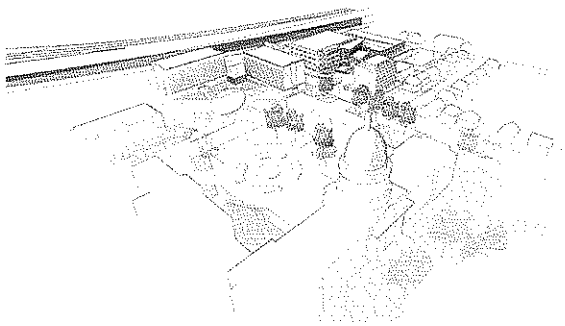
West Virginia Lottery & Revenue Center

New State Governmental Office Complex

Silling Associates was selected to program and design a new facility that will eventually serve as the headquarters for the West Virginia Lottery, Racing Commission, Tax Department, State Auditor, and the Insurance Commission.

Silling has worked closely with the West Virginia Lottery leadership and developed numerous site, building, and floor plan studies for the proposed new facility. The images on this page reflect one of the aforementioned concept studies involving the potential location of a 4-story facility and parking garage at the corner of California Avenue and Washington Street at the State Capitol Complex.

The proposed 250,000 - 300,000 square foot governmental center is the first major design and construction project to take place at the State Capitol Complex in over 25 years.



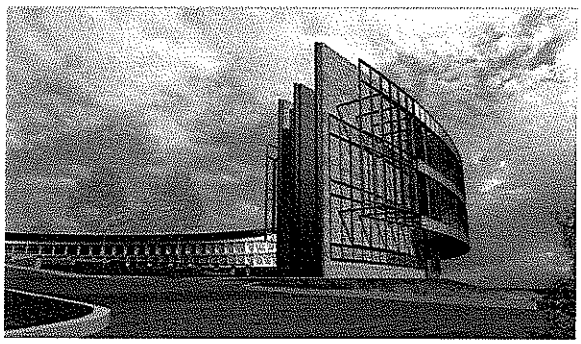
Chesapeake Energy Eastern Regional Headquarters

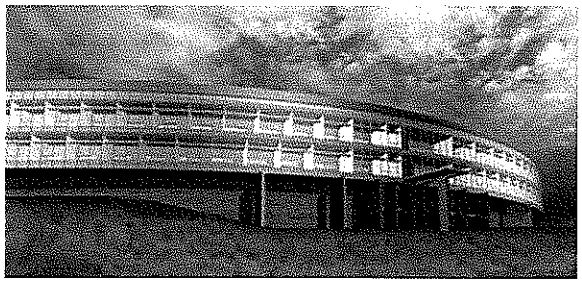
New Corporate Office Center

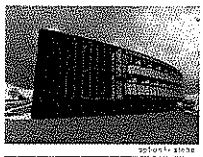
In 2007, Chesapeake Energy, an Oklahoma-based leader in the natural gas exploration field, planned to locate a new 121,400 square foot regional headquarters in the Northgate Business Park of Charleston, West Virginia. They hired Oklahoma City's Elliott + Associates Architects to team with Silling to produce a truly state-of-the-art facility.

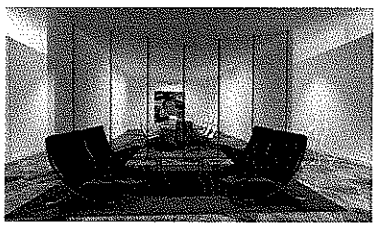
The center of the 20-acre site is a hilltop that will be punctuated with a monumental, spiraling sculpture to represent a spinning drill. A series of concentric circles will radiate outward from the round sculptural base and culminate in the 850-foot semi-circular arc of the building. The radiating circles contain terraced parking and landscaped elements including a large semi-circular green space giving the campus a park-like setting. The campus is bisected with an elevated walkway leading to the center of the buildings elegant lobby. Rotation is emphasized in the façade of the building where office walls shift from floor to floor creating a dynamic visual effect. The upper two stories are office spaces, lifted above ground to float in space creating a light and airy feeling. Elevating the office floors also gives people a birds' nest view of the surrounding tree canopy and a panoramic view of the hillside.

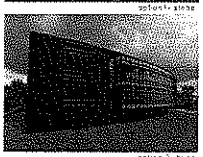
The first two floors or base of the building will contain a restaurant and fitness facility and will service other functional needs such as mechanical equipment, storage, filing and computer server rooms. This allows the base to have a solid appearance with fewer windows and can be made with concrete or masonry materials to compliment nearby sandstone cliffs. At the terminus of each end of the curving building, concrete and steel fin walls extend out, acting as a visual "blur" from the motion caused by the spinning drill bit as it penetrates the earth's surface. The notion of "blurring" gives the ends of the building the appearance of cutting into the earth at high speed and the concept of rotation becomes architectural form. This is a fitting image for Chesapeake, which continues to use the pin point precision of its drilling operations to search for new energy reserves. The new facility is planned to receive a Silver LEED Certification.

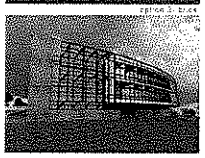


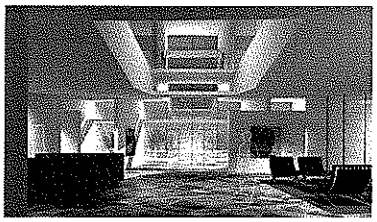


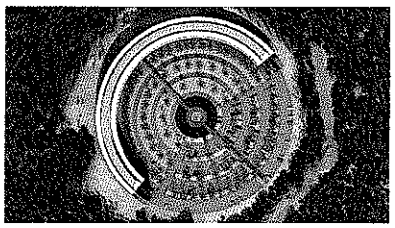








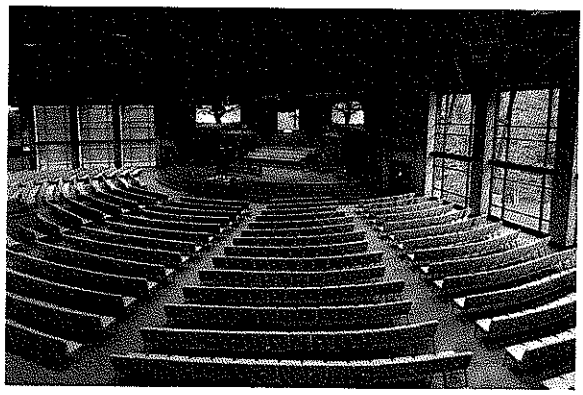


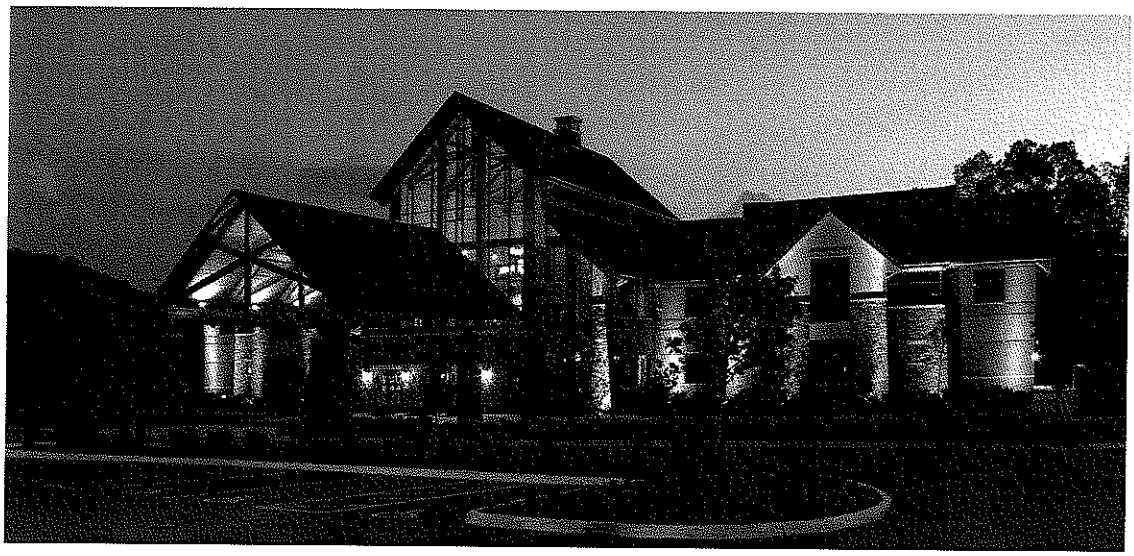


Bible Center Church—Phase 1 of 3

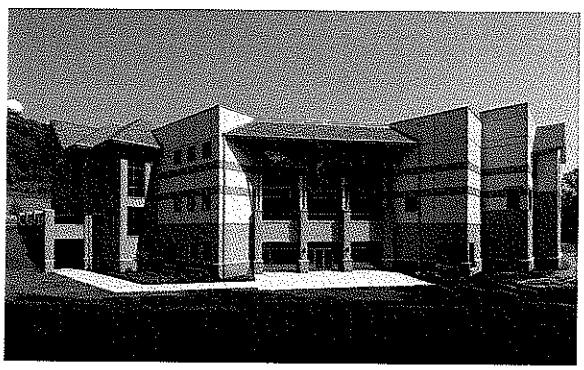
New Worship Center

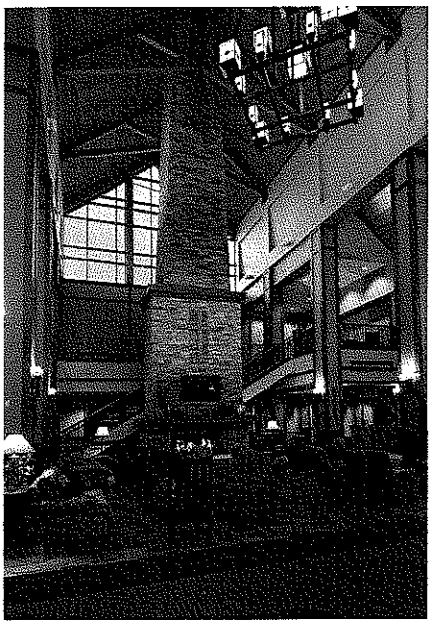
Silling Associates, in collaboration with CDH Partners (Marietta, GA) has completed a multi-phased development plan to relocate the Bible Center Church family from their current location. In total, the proposed church campus includes the sensitive placement of more than 250,000 square feet of worship, fellowship, education, and administrative space on a picturesque 90+ acres. The first phase of this development includes approximately 60,000 square feet of worship, Christian education; administrative support space; 500 surface parking spaces; a new access drive; plazas and landscaping; and site infrastructure for future development.

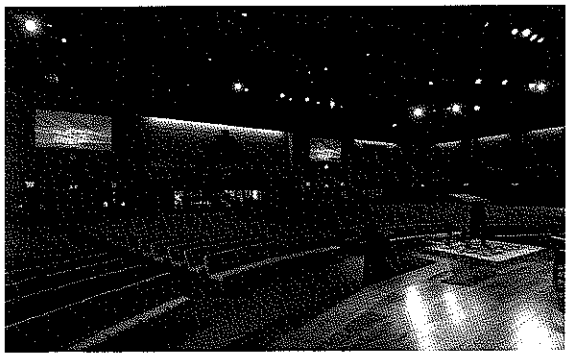


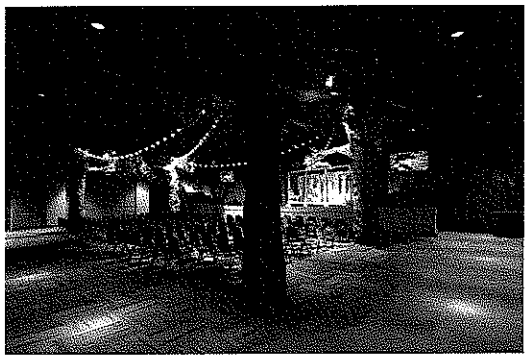


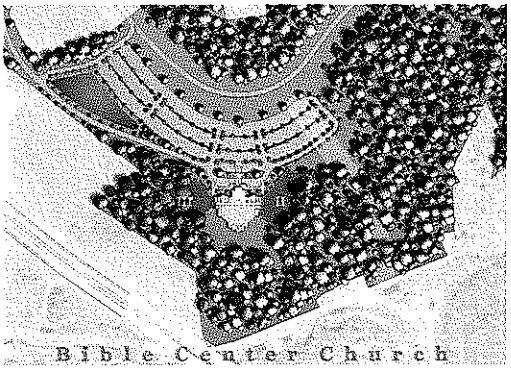
The central component of phase one includes a 1200-seat multipurpose sanctuary that serves the needs of the initial relocation. The grand lobby space offers a window to the outdoors with its large fenestration and clerestory features. A large fireplace in the lobby welcomes you in for a cup of coffee and fellowship. The worship space is designed to continue the elegant lodge-like atmosphere with its richly textured fabrics, stone, and warm natural millwork. The phase two strategic plan expands the educational and gymnasium space. A portion of this phase provides for administrative needs. Phase three includes a 2200-seat worship center, a small chapel, and additional room for the education ministry.

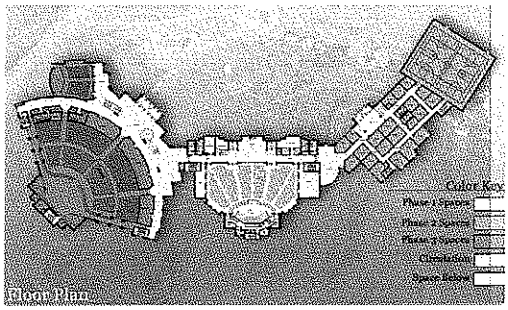


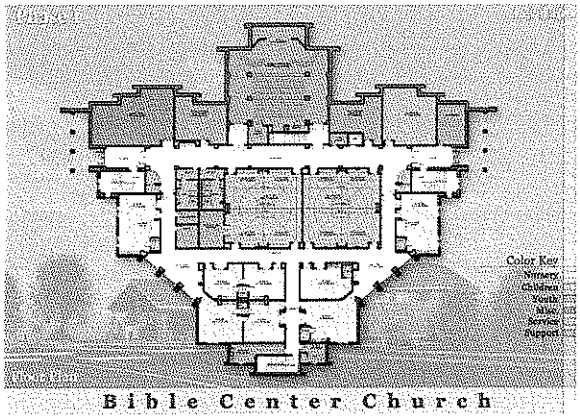


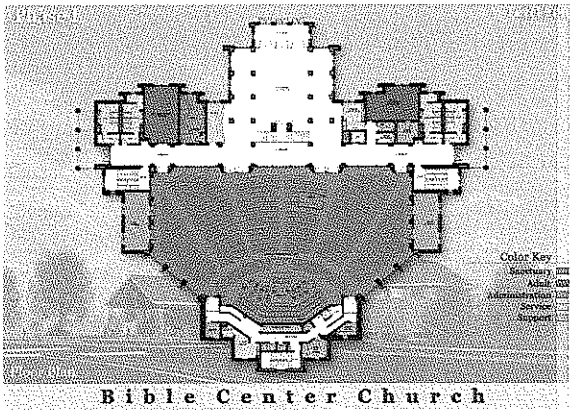


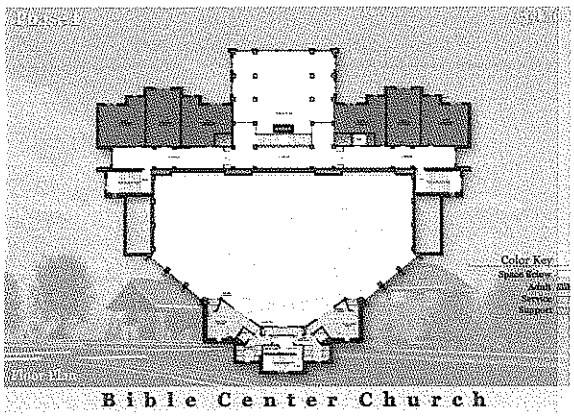



Bible Center Church


Color Key
Floor Plan

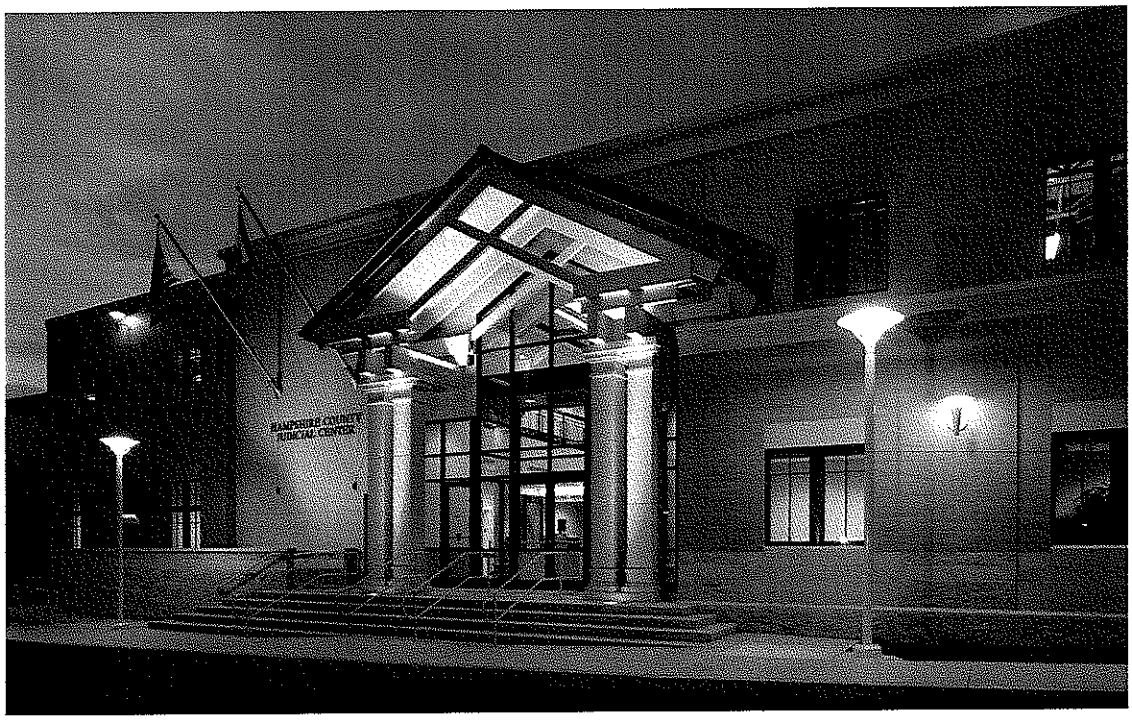

Color Key
Nursery
Children
Youth
Misc.
Service
Support
Bible Center Church


Color Key
Bible Center Church


Color Key
Bible Center Church

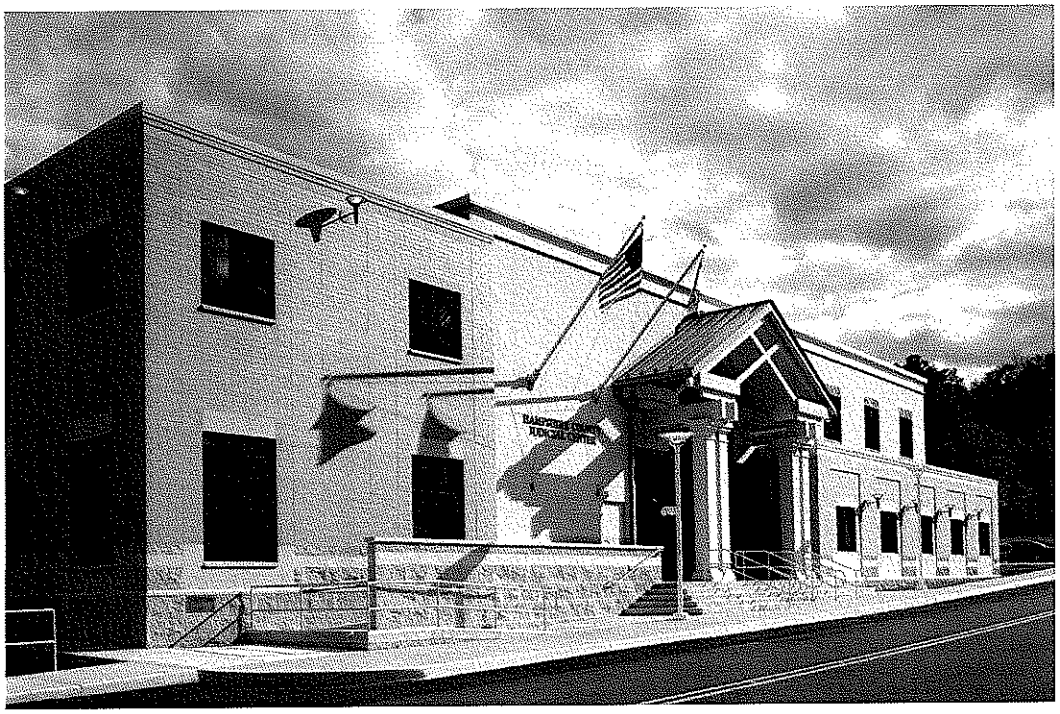
Hampshire County Judicial Center

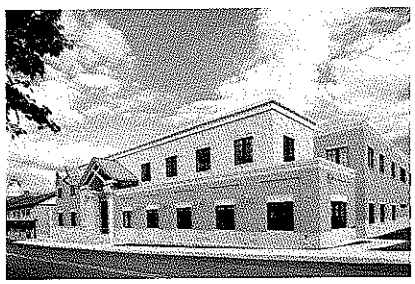
New Justice/Courts Center



Silling Associates was commissioned by the Hampshire County Building Commission to design a new courts facility in the heart of downtown Romney. The new 34,000 square foot, two-story judicial center will include the County's Circuit Court and Clerk, Family Court, Magistrate Court and Clerk, and the Prosecuting Attorney. The design creates a modern and secure courts center that efficiently separates public, staff, and detainee circulation throughout the building. The project involved a close collaboration with the County, the WV Supreme Court, the State Historic Preservation Office, the Building Commission, and the city of Romney.

Architecturally, the building responds to both the historic character of downtown Romney and the historic Courthouse with its own blend of materials, scale, and detail. A second phase of the project includes the renovation of the historic courthouse and adjacent county buildings to improve and expand the county's administrative departments. Design issues addressed in Phase 2 include interior renovations, MEP systems upgrades, data/telecommunications improvements, ADA compliance, and the modernization of records storage capabilities.





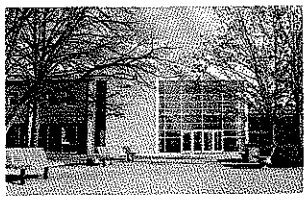
W.V.S.U. James C. Wilson Student Union

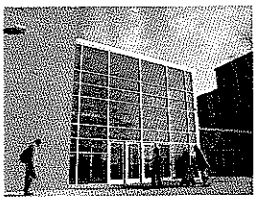
Creative Additions & Renovations

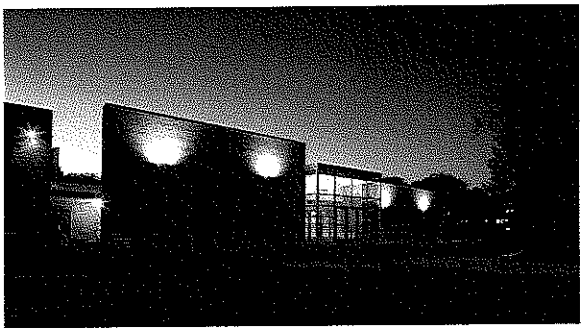
2005 AIA WV MERIT AWARD for Achievement in Architecture

Critical goals of the James C. Wilson Student Union Additions and Alterations project were to present an appropriate front porch to the dominant commuter segment of the student body, enhance the connection to the formal campus center from the parking zones, and create many opportunities for student activities and services within the facility, yielding a truly diverse yet cooperative organization of functional spaces and improving the ability of the University to serve the modern student. In providing a broader spectrum of spaces and services, the Student Union aspired to again become the center for social activity and anchor West Virginia State's provision for a rich college experience.

The design solution includes three key additions to the structure: a two-story entrance element that addresses the formal campus lawn and pedestrian plaza, a one-story entrance element that addresses the commuter parking area and reorients service deliveries at the loading dock, and a two-story circulation element that provides accessible vertical connection between the basement and main floor levels. Additionally, extensive interior demolition and renovations carve a dynamic streetspace through the facility, connecting the commuter students to the campus center, facilitating multiple events of activity and services, and creating an informed path.

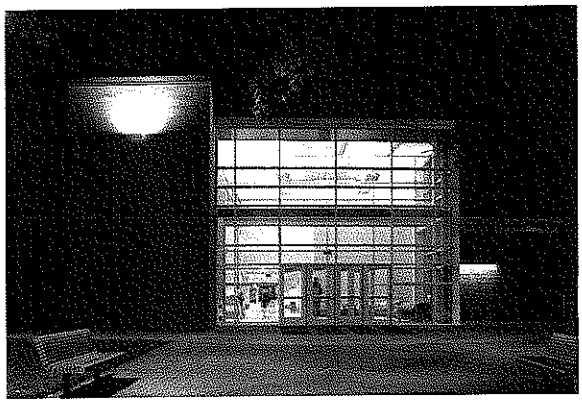


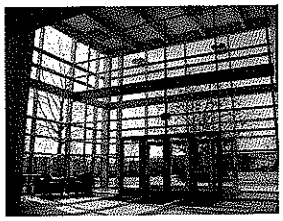


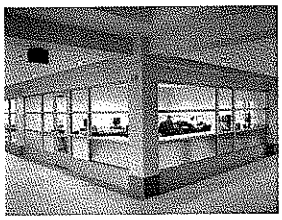


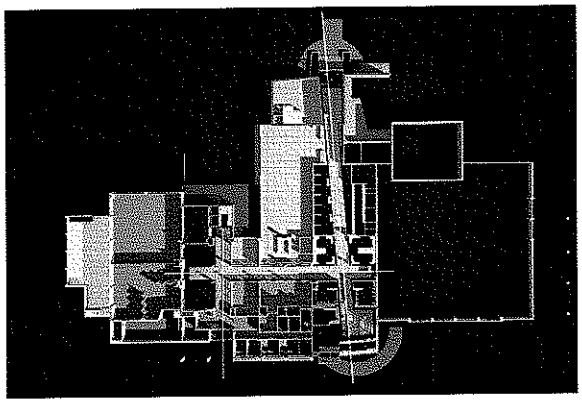
The new additions emphasize and draw users into the axial streetspace system and work, in their construction and use of glazing, to bring the exterior public spaces into the facility and stretch the interior public space out into the larger campus network. The palette of materials, while closely relating to those of the existing structure, are assembled in a slightly different way and attempt to speak to the young person of the twenty-first century.

The project included complete renovation of 38,543 square feet on three floors as well as three additions totaling 7,835 square feet. In addition to complete reconfiguration of the interior spaces of all levels, the project required replacement of all mechanical equipment, including air handlers, cooling tower, hydronic piping, and ductwork. Electrical requirements included replacement of main switchgear and distribution panels, installation of new light fixtures and devices, introduction of a complete data network system, and the addition of an emergency generator. All existing exterior glazing and window framing was replaced, the entire facility was fitted with a new modified built-up roofing system, and all existing hazardous materials were abated.





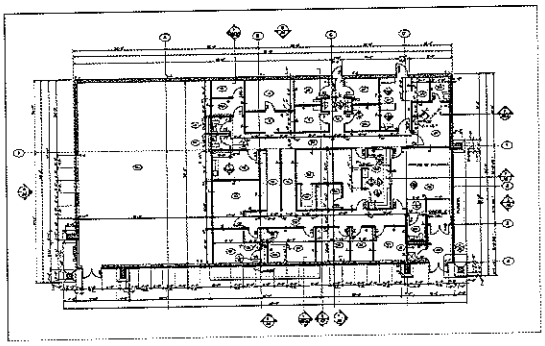


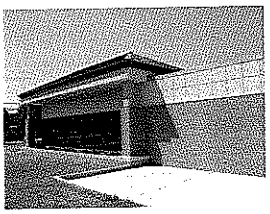


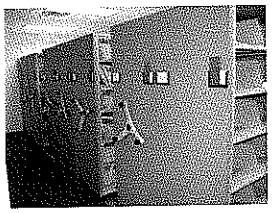
Soulsby Medical Office Center

New Medical Clinic

Completed in 2005, this 7,500 square foot Medical office building was designed and constructed in partnership with Design/Build contractor Pray Construction, Inc. The facility includes a large, welcoming lobby/waiting area for incoming patients and visitors, medical exam rooms, high-density medical file storage, and administrative offices. In addition, the design includes tenant space that could eventually serve as an expansion opportunity for the owner in the future.



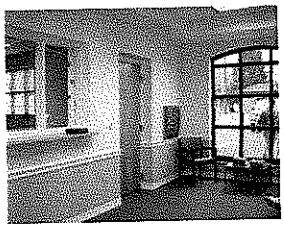


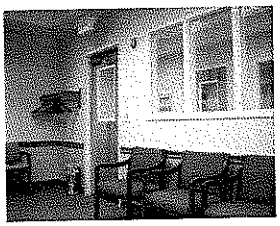


Skaff Medical Office Building

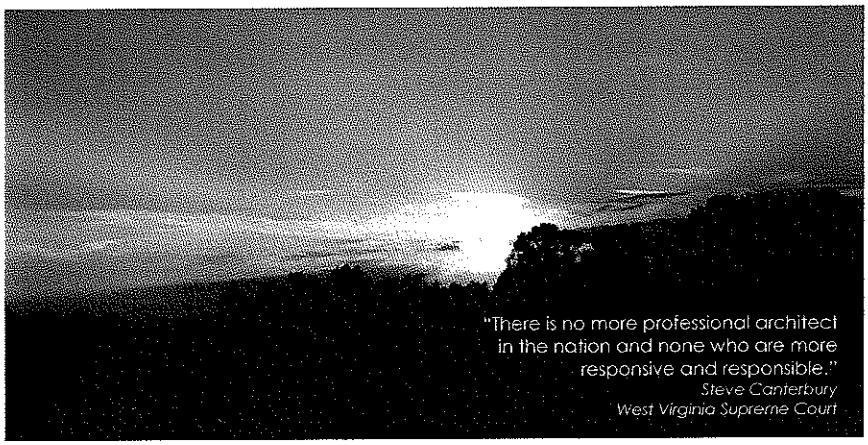
New Medical Clinic

Silling Associates teamed with Pray Construction in the delivery of this new 7,500 square foot medical office building located along MacCorkle Avenue in Kanawha City. The project was developed to accommodate a pediatric dentistry practice and a dermatology practice. In addition to these businesses, there is an additional 2200 square feet of additional office space available for lease. The facility was completed in April 2005 with a construction cost of $895,000.





References



Mr. Steve Canterbury, Admin. Director
WV Supreme Court Capitol Complex
Building 1, Room E-100
Charleston, WV 25305-0830
304.558.0145

Mr. Jim Rubenstein, Commissioner
WV Division of Corrections
112 California Avenue, Room 300
Charleston, WV 25305
304.558.2036

Mr. Bill Wimer
Construction Manager
WV Division of Corrections
617 Leon Sullivan Way
Charleston, WV 25301
304.558.3026

Mr. Walt Davis, Chairman
Hampshire County Building Commission
405 West Main Street
Romney, WV 26757
304.496.7451
540.539.1909

Mr. Glen R. Stotler, Commissioner
Morgan County Commission
P.O. Box 28
Berkeley Springs, WV 25411
304.258.8540

Bid Result History

Project: Morgan County Courthouse (Budget: $11 million) **August 2008**

Contractor	Base Bid	Alternate No. 1	Alternate No. 2 Geothermal System	Total
Belt Group	$10,590,000	$1,420,000	$160,000	$12,010,000
Brechbill & Helman Construction	$10,014,700	$1,626,500	$52,500	$11,641,200
Harley Miller & Sons	$10,590,000	$1,400,000	$120,000	$11,990,000
John Deklewa	$10,124,000	$1,200,000	$142,000	$11,324,000
Lantz Construction Company	$11,788,700	$1,575,700	$345,000	$13,364,400
Milestone Construction	$9,288,000	$1,000,000	$160,000	$10,288,000
Palmer	$10,640,000	$1,400,000	$96,000	$12,040,000
Waynesboro	$9,216,000	$1,359,239	$140,000	$10,575,239

Project: Hampshire County Judicial Center (Budget: $5.6 million) **December 2006**

Contractor	Base Bid	Alternate No. 1	Total
Harbel, Inc.	$4,390,000	$990,000	$5,380,000
W. Harley Miller Contractors, Inc.	$4,410,000	$1,000,000	$5,410,000
Palmer Construction Company	$4,465,000	$1,110,000	$5,575,000
Massaro Corporation	$4,696,000	$1,012,000	$5,708,000
Brechbill & Helman Construction Co., Inc.	$4,586,300	$1,153,400	$5,739,700
Somerset Steel Erection Co., Inc.	$4,680,000	$1,110,000	$5,790,000
Lantz Construction Company	$5,259,000	$1,449,000	$6,708,000

Project: Mineral County 911 Center (Budget: $1 million) **2007**

Contractor	Base Bid	Alternate No. 1	Total
Harbel, Inc.	$1,433,000.00	$5,000.00	$1,438,000.00
Palmer Construction Co.	$1,437,000.00	$16,800.00	$1,453,800.00
Excel Construction Co.	$1,503,000.00	-$3,000.00	$1,500,000.00
Mineral Fabrication and Machine Co.	$1,500,000.00	$12,000.00	$1,512,000.00
Callas Contractors, Inc.	$1,500,000.00	$13,000.00	$1,513,000.00

Note: A spike in material (steel & concrete) pricing adversely affected project cost. Silling quickly and efficiently worked with the contractor and provided effective value-engineering modifications, which resulted in approximately $1 million in construction cost savings.

Project: James C. Wilson Union (Budget: $4.3 million) **Fall 2002**

Contractor	Bid Results
Plott & Holbrook	$3,499,000
Multiplex	$3,517,600
Hayslett Construction	$3,543,000
Neighborgal Construction	$3,797,000
MCS Construction	$3,798,000
E.P. Leach & Sons	$3,905,000
Wiseman Construction	$4,111,000

Bid Result History

Project: Huttonsville Correctional Center (Budget: $15 million) **Fall 2005**

Contractor	Base Bid	Alternate No. 1	Alternate No. 2	Alternate No. 3	Alternate No. 4	Alternate No. 5
Massaro Corp.	$12,586,000	$1,196,000	$190,000	$122,000	$296,000	$916,000
Jendoco Construction	$12,739,000	$1,435,000	$161,000	$131,000	$290,000	$940,800
G & G Builders	$13,100,000	$149,000	$165,000	$125,000	$190,000	$880,000

Note: With a budget of $15 million, Silling was able to provide a cost effective design that allowed the WV Division of Corrections to accept all five Alternates and provide additional facility improvement goals.

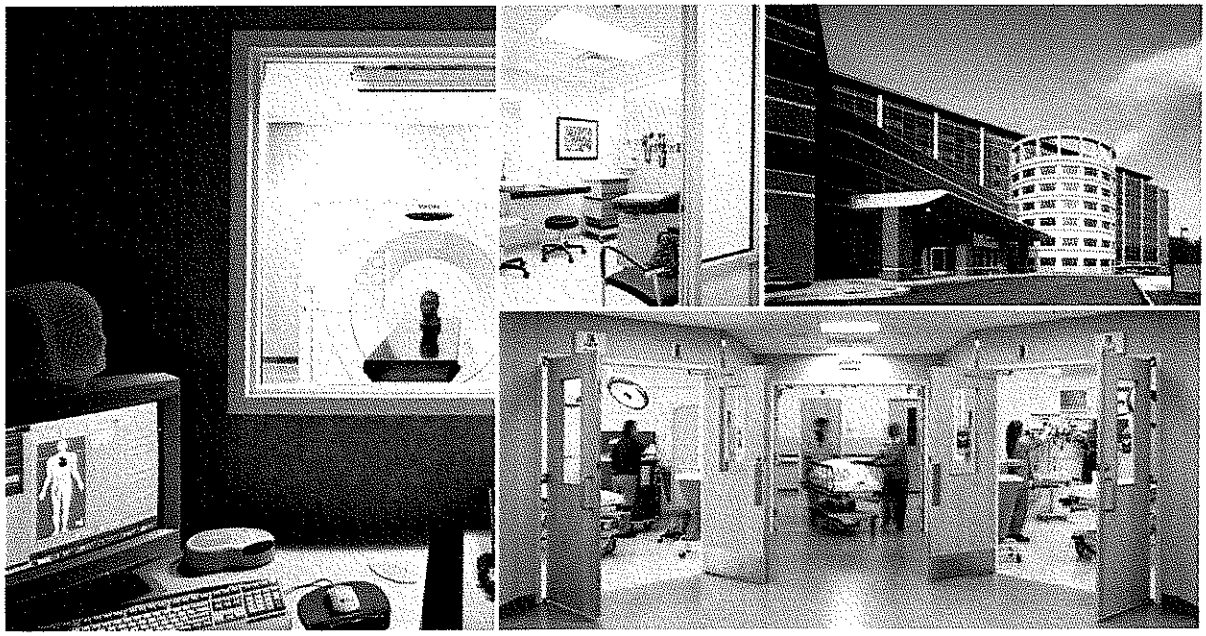
Project: St. Timothy Lutheran Church (Budget: $5.6 million) **2003**

Contractor	Base Bid	Alternate No. 1	Alternate No. 2	Alternate No. 3	Total Base Bid & Alternates
Contractor "A"	$4,739,000	$2,800	$8,200	$18,300	$4,768,300
Contractor "B"	$4,691,611	$15,000	$8,000	$7,160	$4,721,771
Contractor "C"	$4,569,000	$3,000	$4,000	$24,000	$4,600,000
Contractor "D"	$4,535,000	$6,500	$3,800	$38,000	$4,583,300

Project: Charleston Civic Center—Renovations (Budget: $3 million) **2002**

Contractor	Base Bid	Alternate #1	Alternate #2	Total
Hayslett Construction Co.	$2,909,000	$40,000	$20,000	$2,969,000
Agsten Construction Co.	$2,969,000	$39,000	$13,000	$3,021,000
Plott & Holbrook, Inc.	$2,969,000	$40,000	$16,500	$3,025,500
Wiseman Construction Co., Inc.	$2,973,300	$36,450	$16,050	$3,025,800
TAB Construction	$3,722,767	$38,000	$25,000	$3,785,767

FIRM PROFILE



Founded over sixty years ago, Cannon Design is today an international architectural, engineering, and planning firm with a staff of over 800, ranked by volume in World Architecture's 2007 global survey, as the 15th largest practice in the world. Recognized by over 250 awards for design excellence, technological innovation, and imaginative thought leadership, Cannon Design is known for performance and dedication to client service.

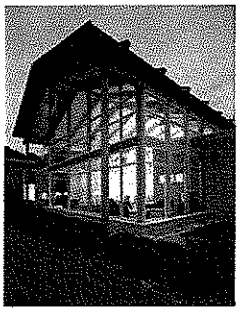
As the nation's 3rd largest healthcare planning and design firm, Cannon Design's health planning and design practice is the backbone of our organization and is the origin of our firm. Community based hospital design and implementation has been a strong element of our past and current work; comprising a large segment of our health practice. We understand the unique needs of your organization and how tightly you fit within the West Virginia community.

The firm operates under a unique methodology, fully integrating the activities of offices Boston, New York, Baltimore, Washington DC, Buffalo, Toronto, Chicago, St. Louis, Vancouver, Victoria, San Francisco, Los Angeles, Phoenix, Mumbai, and Shanghai, into a single unified firm without walls. This single-firm-multi-office philosophy, or SFMO™, enables clients worldwide consistent access to the full resources of the organization, irrespective of location. As such, the practice serves clients across North America, as well as Europe, the Middle East, India, and the Far East.

Cannon Design is a large international design firm with the following number of staff:

Architects	354	Interior Designers	38
Electrical Engineers	23	Specification Writers	4
Mechanical Engineers	35	Graphic Designers	9
Structural Engineers	15	Cost Engineer/Estimator	3
Construction Engineers	28	Landscape Architect	1
Draftsmen	44	Administrative	156

Of this group, 183 Cannon Design employees are dedicated to Healthcare Practice.



Our Mission

Our mission is to plan and design buildings and their interiors that promote productivity, enhance the quality of life of users and visitors and contribute value to the environment. We believe good design is the physical expression of sound ideas, imagination and creativity. Rather than work from a predetermined approach, we strive to create environments that are a thoughtful response to their program mission, physical setting and functional purpose. A guiding principle of Cannon Design is that each project reflect the spirit and personality of its owner.

Our Philosophy

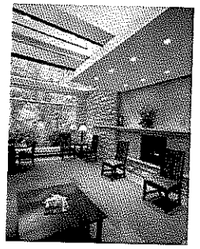
Cannon Design's practice is based upon the philosophy of comprehensive service, providing our clients with a single point of responsibility. By bringing architecture, interior design and engineering together in a single organization, we ensure efficient and effective service. Conceptually, we believe the building sciences of architecture and engineering cannot be separated. Engineering is an integral part of building design, providing the technological framework that transforms architectural concept into a safe, comfortable and functional place, efficient to operate and easy to maintain.

Our People

Our reputation for excellence is built on a foundation of superior resources and capabilities – our people – and on their ability to apply the best skills to the realization of client goals. We are committed to the principle of multi-disciplinary teamwork and the achievement of added value for our clients. At Cannon Design, we strive to add value by aligning ourselves with our clients' goals and objectives, to aid and contribute to our clients' success by enhancing their productivity, process, product quality or cycle time. This kind of partnership fosters an environment that leads to the achievement of clients' goals in all assignments we undertake. Our performance can best be measured by our long-standing client relationships and the professional recognition of more than seventy-five awards granted by our peers.

Our Commitment

We at Cannon Design have defined our mission clearly with a focus on quality – ever mindful that the ultimate measure of quality is always client satisfaction. As a quality leader, we seek to serve other quality leaders, working continuously to advance the state of the art, contributing to the built environment and quality of life of the people for whom we create living and working spaces. In every case, our goal is to build a long-term relationship based on client confidence and trust in our performance.



Purpose

To be one of the finest design and project delivery firms in the world, contributing to a built environment that enhances human culture, improving the quality of life wherever we work. To endure over successive generations of leadership and management.

Core Values

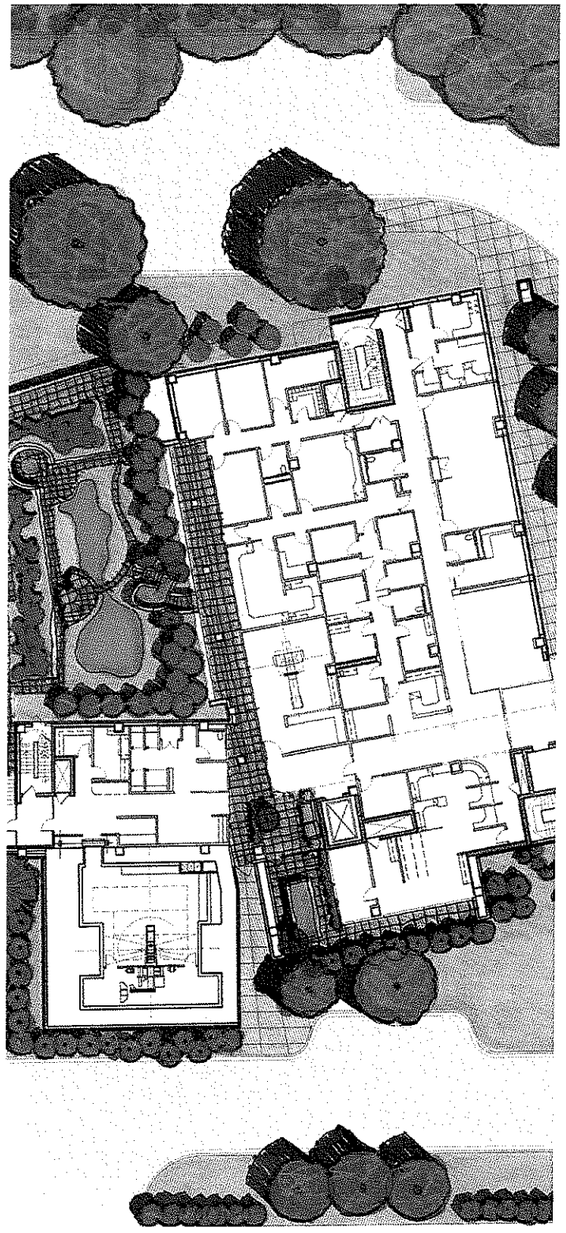
- Honesty, integrity, fairness and courage.
- Clients are our most important partners.
- Experimentation, creativity and innovation.
- Collaboration, mutual support, caring and respect for people.
- Personal productivity and accountability.
- Work within the culture and business practices of the firm.
- Promote an "elite spirit" in everything we are and do.

Goals

- To be recognized by our clients and peers as the most admired firm in our profession.
- To be lauded as a firm led by acknowledged experts in our target markets.
- To create a unified, stimulating and rewarding environment that makes outstanding people fight to join and love to stay.
- To achieve consistently high levels of financial performance and profitability.

Guiding Principles

- We are a firm without walls. Our regional centers are linked in a common union with common purposes as if all our people were based in a single location.
- We seek to work with clients who share our commitment to quality, and foster the development of long-term relationships based on the trust we earn through our performance.
- We seek to align ourselves with our clients' goals, delivering services that consistently meet their quality, schedule and cost objectives.
- We commit ourselves to a process of continuous quality improvement, using the power of our imagination, knowledge, and experience to contribute to our clients' success.
- We commit ourselves to the conservation of resources, protection of the environment, and leadership in sustainable design.



Planning

Master Planning
Urban Planning
Strategic Planning
Feasibility Studies

Architecture

Building Design
Rehabilitation and Renovation
Restoration and Preservation
Facilities Survey and Evaluation

Interior Architecture

Programming and Space Planning
Interior Design
Furniture and Furnishings
Graphic, Signage, and Art Programs

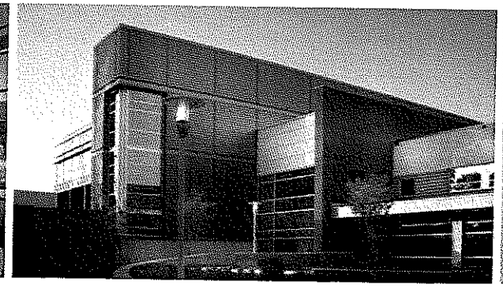
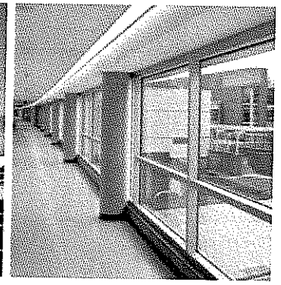
Engineering

Structural
Mechanical
Electrical
Telecommunications
Plumbing
Fire Protection

Specialty Services

Program Management
Construction Management
Cost Estimating
Critical Path Scheduling
Value Engineering

Overview of Psychiatric Services

Designing facilities to support the needs of psychiatric care is a complex matter and requires an understanding of the issues that face this area of health care. Cannon's success with facilities of this type is, in large part, due to our commitment to understanding these issues, some of which are discussed in the following pages.

De-emphasizing Institutional Character
Replacing the institutional model's eight-foot wide, double-loaded, windowless corridors is critical for long-term care environments that seek to produce better outcomes through incorporating a supportive environment. Considerations include:

The use of natural light for creating a sense of natural timing
The facility must be a "microcosm of the real world" requiring facilities for normalization, skills development and a residential character. Users have a need for blending of spaces. For example, outdoors as an extension of the indoor living space. Creation of a variety of spaces that clients might interact with each other and staff both formally as well as informally.

Creating a Sense of "Home"
Patient care units should function as the "home base" for clients who are receiving treatment in other areas of the facility. A sense of home can be reinforced by attention to some of these considerations:

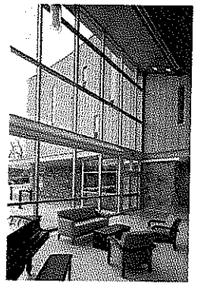
Individual identities for specific patient care units and areas
Establishment of a building hierarchy of detail and finishes to progressively move from public to most private. Difference in scale and design elements between patient care units (nursing units) and treatment spaces.

Orientation and Wayfinding
Cognitive impairment is a reality for many patients and reducing anxiety and frustration levels induced by confusion is vital. Physical building organization can address this with layouts that promote mental mapping and wayfinding. Clear orientation for clients that represents good organization that is not confusing or threatening. Atrium or courtyard-based plans provide better mental mapping, minimize unwanted stimulation, and achieve a less institutional atmosphere.

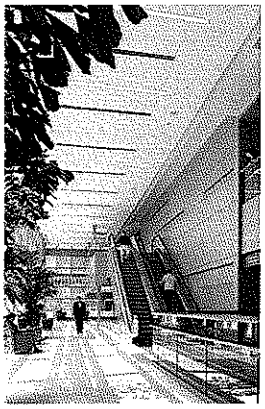
Control and Personal Identity
The need for personal space and environmental control is important if residents are to maintain high levels of self esteem and motivation, critical elements of a fulfilling life. The ability to provide as much autonomy for patients as they can handle at different stages during their treatment program is crucial.

Ensuring Safety and Security
Control and observation of patients and clients at all times is crucial in the psychiatric environment, but it must be done in such a way as to be non-threatening and as unobtrusive as possible.

Among Our Clients
Behavioral Health



Acadia Hospital
Arizona State Hospital
Bristol Hospital
Baker Victory Services
Baltimore Washington Medical Center
Bermuda Hospitals Board
Brattleboro Retreat
Broadlawn Manor Nursing Home
Brooklyn Children's Psychiatric Center
Brooksville Hospital
Buffalo Psychiatric Center
California Dept. of Corrections
Camp Hill Medical Center
Centre for Addiction & Mental Health
Charles River Hospital
Cheshire Medical Center
Columbia Memorial Hospital
Connecticut Valley Institute
DePaul Community Health Center
Dorothea Dix Hospital
Encino Tarzana Medical Center
Erie County Medical Center
Essex County Hospital Center
Greystone Park Psychiatric Hospital
Gulf Shores Institute
Jackson Brook Institute
Jacobi Medical Center
John T. Mather Memorial Hospital
Kaiser Permanente
Kalispell Regional Medical Center
Lindner Center of HOPE
Medfield State Hospital
Memorial Medical Center
Mental Health Centre Penetanguishene
New York Presbyterian Hospital
Niagara Health System
North Carolina Department of Health
North Shore Medical Center
Norwood Hospital
OSF / St. Anthony Medical Center
Pima County Community Hospital
Prairie North Health Region
Raritan Bay Medical Center
Royal Ottawa Hospital
St. Catherine Hospital
St. Edward's Mercy Medical Center
St. Joseph's Hospital Health Center
St. Mary's Hospital Medical Center
Salerno Hospital
Saskatchewan Health
Saskatoon Health System
South Nassau Communities Hospital
Trumbull Memorial Hospital
University of Alabama, Birmingham
University of Maryland Medical Center
Vancouver Island Health Authority
The Washington Hospital
Whitby Mental Health Centre



One advantage of offering architectural and engineering services under one roof is that these disciplines learn to develop collaborative and innovative approaches to design, each considering the unique needs and possibilities present in the other. As a result, our design teams have learned effective strategies for incorporating alternate energy systems such as photovoltaic arrays and wind collection.

Site and Landscape

A well-sited building, where attention has been paid to exposure, will be a better candidate for solar or wind-generated energy systems than a haphazardly designed one. In addition, landscaping can minimize environmental impacts on the site. Using indigenous plant materials and surface vegetation, irrigating selected areas with wastewater, balancing large-scale development with refuge areas, and screening sun exposure and shading pedestrian areas with landscape elements are all strategies that can easily be incorporated in design.

Recycled Resource Technology

The ability to reuse building or system resources is necessary for responsible sustainable design practices. Recycled and environmentally friendly building materials, water supplies, and heating and cooling systems all are critical components for constructing green buildings and facilities in the 21st century. High-durability materials reduce maintenance costs and spread environmental impacts of construction over an extended period. Building products from recycled materials reduce the impacts of solid waste disposal, cut energy consumption in manufacturing, and save natural resources. On the job site, identifying waste receptacles for different materials may optimize energy and waste management.

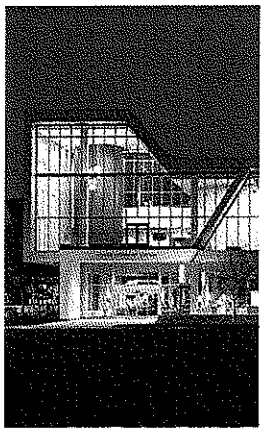
The LEED® Green Building Rating System™

The U.S. Green Building Council's *Leadership in Energy and Environmental Design (LEED®) Green Building Rating System™* is the nationally accepted benchmark for the design, construction, and operation of sustainable communities and high-performance green buildings. It provides a strategic and detailed roadmap for implementing, measuring and documenting sustainable features for every building type and phase of a building lifecycle. Its "whole building" perspective on environmental performance provides the definitive standard for what constitutes a green building.

Cannon Design employs more than 100 LEED-accredited professionals firmwide. As a member of the U.S. Green Building Council, Cannon Design embraces innovation in sustainable design, striving to create environments that respond thoughtfully to their program mission, physical setting, and functional purpose with the optimal balance of cost, environmental, and societal benefits. Our success stems directly from our commitment to client partnering, to design excellence, and to the creation of environments that enhance human culture and improve the quality of life.

From the outset of a project, we establish close client relationships to ensure a continuing dialogue focused on design quality, cost parameters, operational considerations, and schedule requirements. More than 50 of our projects have been LEED registered, and more than 20 are now seeking LEED certification. The following are recent LEED® projects either certified or registered for a LEED® rating:

- Saint Louis University, Edward A. Doisy Research Center (Silver)
- Solae Company, Corporate Headquarters and R&D Center (Certified)
- Centocor, Biologics Building II (Silver)
- University of Missouri - St. Louis, KWMU Radio Station (Silver)
- University Technology Park at IIT, Technology Business Center (Silver)
- Kean University, Center for Science, Technology & Mathematics Education of New Jersey (Gold)
- Yale University, Graduate Chemistry Research Building (Silver)
- Albany Park Multicultural Academy (Silver)
- University of Maryland, Shady Grove Educational Center III (Silver)
- Allegheny College, North Quad Housing Phase I (Silver)
- Plymouth State University, Langdon Woods Residence Hall (Gold)



- Brigham & Women's Hospital, Carl J. and Ruth Shapiro Cardiovascular Center (Silver)
- Adelphi University, Centers for Sports & Performing Arts (Silver)
- Simmons College, School of Management, Campus Quad, Parking Garage (Silver)
- University of Maine, Student Recreation Center (Silver)
- Worcester Polytechnic Institute, New Residence Hall (Silver)
- City of Santa Monica, Public Safety Building (Silver)
- Los Angeles Mission College, Health, Physical Education & Fitness Center (Certified)
- City of Calgary, Cardel Place (Gold)
- Canadian Forces Base, Single Quarters Accommodations (Silver)
- Camosun College, Pacific Sport Institute (Gold)

Case Studies

Listed below are relevant project examples reflecting Cannon Design's commitment to sustainable design.

Occidental Chemical Center

Designed and constructed in the midst of the oil crisis of the late 1970s, this landmark structure continues to maintain its place as one of the most energy efficient commercial buildings in the world. One of the original "intelligent buildings," it serves as a testament to Cannon Design's reputation for the seamless integration of innovative engineering strategies and award-winning design.

An all-glass exterior opposed conventional wisdom, which then held that energy economies could only be achieved by reducing the proportion of glazed surface. Between two glass walls forming the building skin, automatically controlled louvers transform the building shell from fully transparent during occupied hours to a fully opaque, insulated condition during unoccupied periods. The louvers allow extensive use of daylight through excellent diffusion of sunlight. At the same time they provide outstanding heat shielding of the interior through near-perfect solar shading.

In addition, the four-foot space between the glass is vented at all floors, creating a continuous thermal chimney around the building perimeter. By controlling air movement within the vented space, heat is collected or purged, depending on building demand.

In recognition of the building's unique energy conserving properties, Cannon was awarded the Owens-Corning Fiberglas Energy Conservation Award, the first of two won by the firm, as well as the U.S. EPA Energy Star Award.

Center for Environmental Sciences and Technology Management

Located at a primary crossroads - a 6.8-acre wooded site near the main campus of the University at Albany - the $12.7 million landmark has been designated as a photovoltaic demonstration project. This advanced technology is showcased both through both landscape and architectural design elements, and is believed to be one of the largest building-integrated PV assemblies in the U.S.

Oriented to face south and east, the structure's glass and aluminum curtainwall incorporates a uniform network of louvered brackets to monitor and improve photovoltaic cell performance. The PV array is integrated into the site by its semi-circular placement on the ridge of a retention basin.

By incorporating these assemblies along the full extent of the building's glazed southern facade, the PV arrays also perform as solar shading devices, substantially reducing building cooling loads.

In addition, separate from the building itself, an array of freestanding PV pylons has been strategically integrated into the site design to define the building's entry court in a gesture of technological embrace.

The Center for Environmental Science and Technology Management has received Metal Architecture magazine's 1st Place Award for Design Excellence and the Honor Award for Excellence in Design from the American Institute of Architects.

Ecology & Environment World Headquarters and Analytical Services Center

E&E put its philosophy of environmental preservation through sustainable development and design into practice at its own headquarters and Analytical Services Center (ASC) buildings. Both were designed to blend with their natural surroundings; the 85 acres of land surrounding the headquarters building and the 35 acres surrounding the ASC have been designated as wildlife refuges and nature conservation areas with nature trails for employee use.

Site Selection - Several sites were evaluated by assessing the heritage and ecological balance at each and the environmental impacts that would result from development. Historically, both the headquarters and ASC properties were heavily forested with deciduous and coniferous trees and diverse species of shrubs and ground cover plants, but early occupants removed all significant vegetation for its economic value or agriculture purposes.

Landscape - A blend of native plants was used to create self-sustaining plant communities with beneficial habitat value. The landscapes were designed to avoid the need of constant irrigation, fertilization, mowing, or the use of environmentally damaging pesticides and herbicides. Pest and disease control complies with the Bio-technical Integrated Pest Management Program; only ecologically sound and safe treatments are used, none that are toxic to non-target organisms, persistent in the environment, of broad-spectrum activity, or potentially harmful or cumulative in effect on humans or animals. Where possible, areas were seeded with a white clover and dwarf hard fescue grass that requires infrequent to no mowing, resists weeds, pests, and disease, and stabilizes topsoil. The clover has the unique ability by a relationship with soil microorganisms to extract nitrogen from the air to actually feed itself.

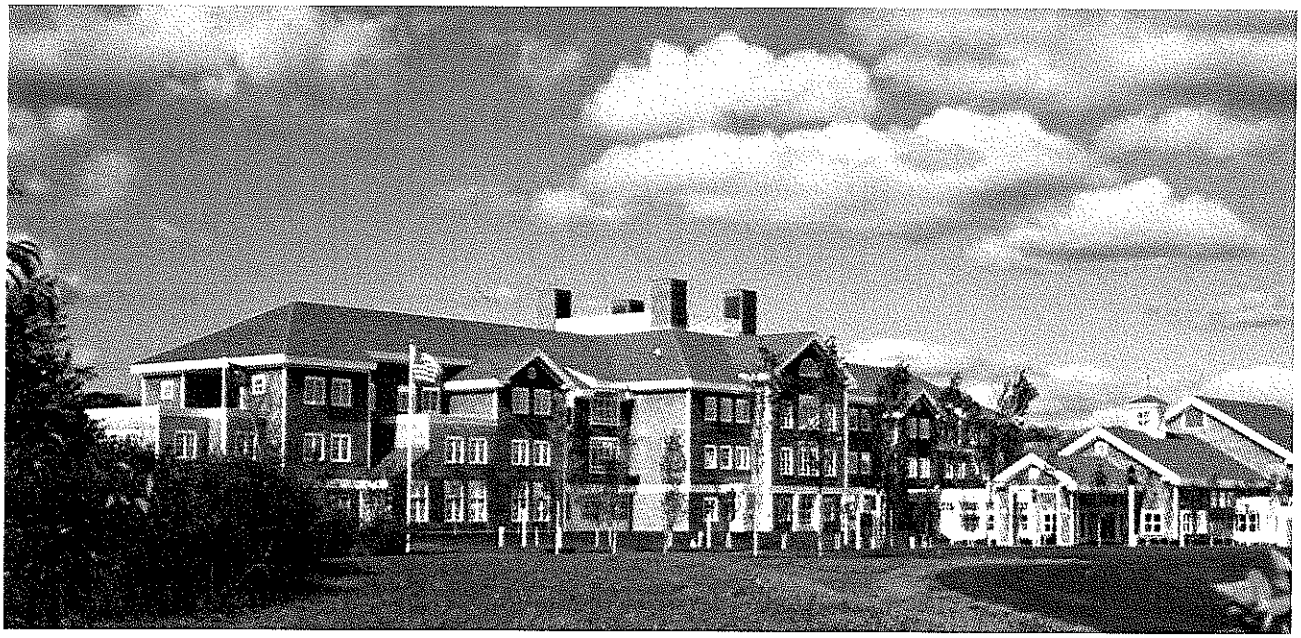
Wildlife - The wildlife value of the properties is high. Honey bees attracted to the clover blossoms pollinate nearby fruit and seed producing plants. Songbirds and other migratory birds feed in these areas. Generations of indigenous birds including Cedar Waxwings, finches, tree sparrows, robins, hummingbirds, wrens, chickadees, and nuthatches return each spring to nest. Deer, turkey, red and gray fox, coyote, herons, and egrets also frequent the sites. The ASC also has a retention pond stocked with indigenous fish species.

Kyonggi University Business Incubator

Cannon Design programmed and designed a business incubator facility to help bring together representatives of industry and commerce with the student body, better preparing them to face the challenges of the modern working world. As both a teaching and research facility, the incubator attracts a wide variety and range of students with its emphasis on business innovation, technology transfer and industrial prototyping.

In keeping with the University's "green" philosophy, the building is constructed of "green" brick, a unique new masonry product derived from recycled slag waste that was invented at the University. Mechanical systems were designed to make optimum use of recycled resources, such as water and heat. Unique design features include the consolidation of all support spaces on the north side of the building, including circulation, mechanical and support spaces. Clustering these functions in one area of the complex facilitates future vertical and lateral expansion plans. The location of the building, which was designed as the first of six modules, allows multiple linkages with the engineering quadrangle.

Acadia Hospital
Acute Care Psychiatric Hospital
Bangor, Maine



REFERENCE:

Mr. Dennis King
Former President

489 State Street
PO Box 404
Bangor, ME 04401
207.990.6110

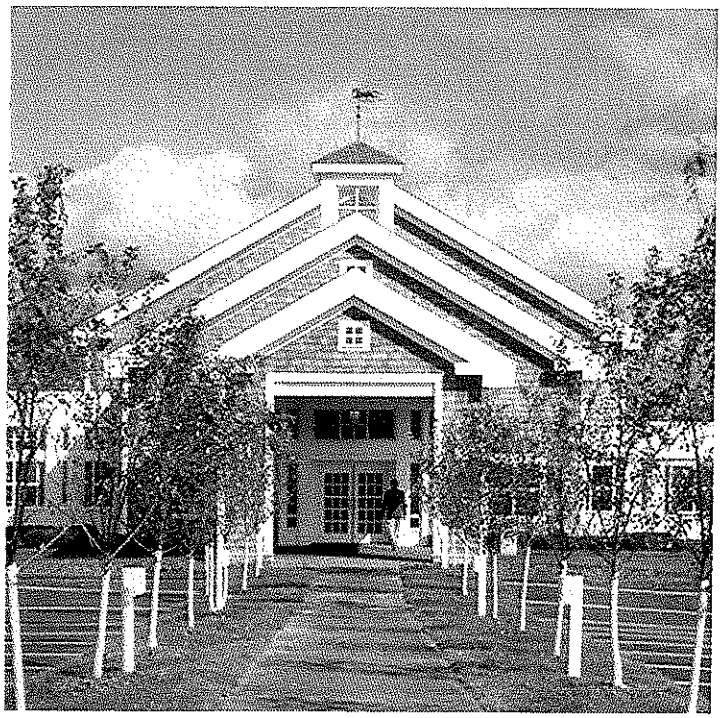
Combining both new construction and renovation, Acadia Hospital is a new, $13 million acute care facility specializing in both inpatient and outpatient treatment of mental illness, behavioral disorders, and chemical dependency.

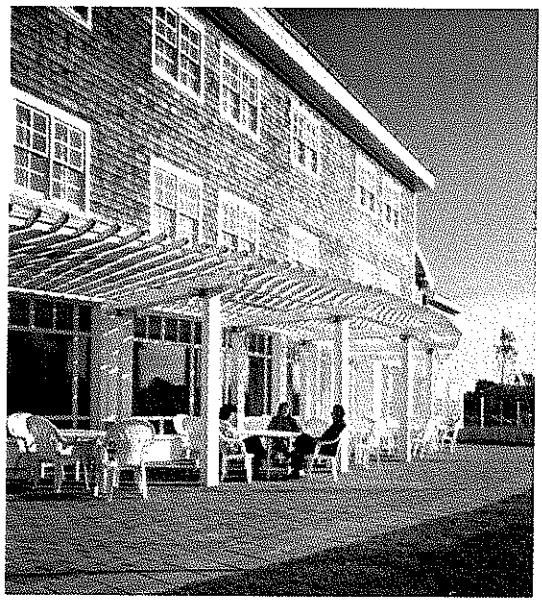
Patterned on the metaphor of the New England "farm-house, barn, and field," design elements and landscape treatment of this freestanding facility reflect features found throughout the region: stained clapboard, wood shingles, simple profiles, hedgerows of red maple and ornamental trees, and meadows of natural grasses -- features that are familiar to patients as well as to the surrounding residential community.

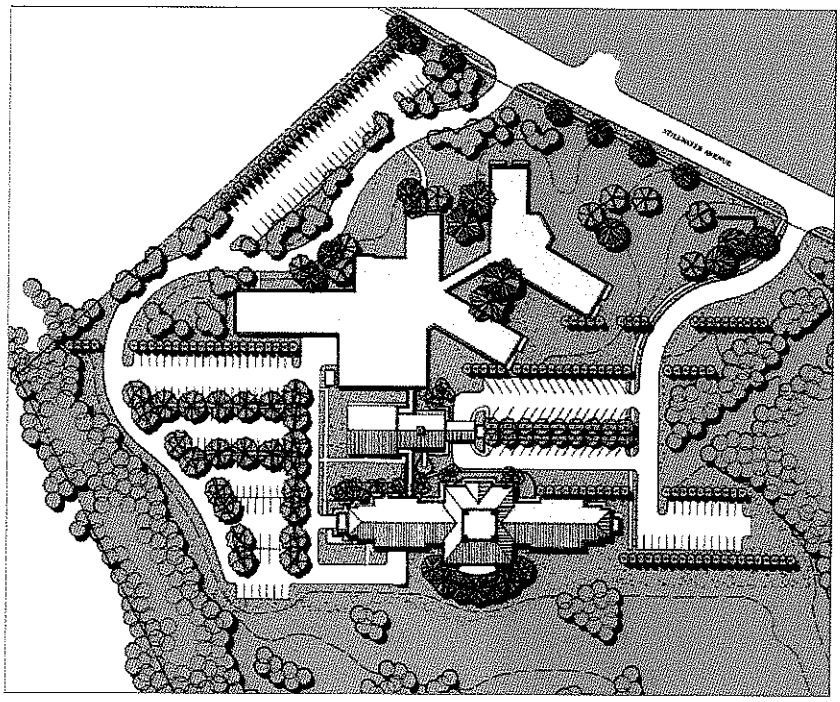
The three primary building elements are set on a 26-acre site organized in a campus plan. A new 70,000 sf, three-story structure houses admissions, dining, crisis intervention, and the 100-bed inpatient component. An existing, but inoperative, 56,000 sf osteopathic facility was renovated to house administration, day hospital, education, and occupational therapy; exterior renovations mirrored the design character of the new construction. New mechanical systems serving both buildings are concealed beneath the sloping shingle roof and false chimneys treated as architectural features.

Between the renovated and new buildings is the new main entry to the hospital (the "barn"), designed as an interior loft space featuring natural materials, textures, and lighting. Beyond this lobby, a gymnasium used for physical therapy and recreation repeats the same "barn" profile at a greater scale. An enclosed wood-and-glass loggia, the primary circulation corridor, links all three buildings, providing views to exterior courtyards and a means of patient orientation.

Cited as "well conceived and beautifully executed within a very modest budget," the project received the AIA/New England Healthcare Facilities Honor Award for Design Excellence.







Arizona State Hospital
Behavioral Health Hospital
Phoenix, Arizona

REFERENCE:

Mr. John Cooper
CEO

2500 East Van Buren Street
Phoenix, AZ 85008
602.220.6000

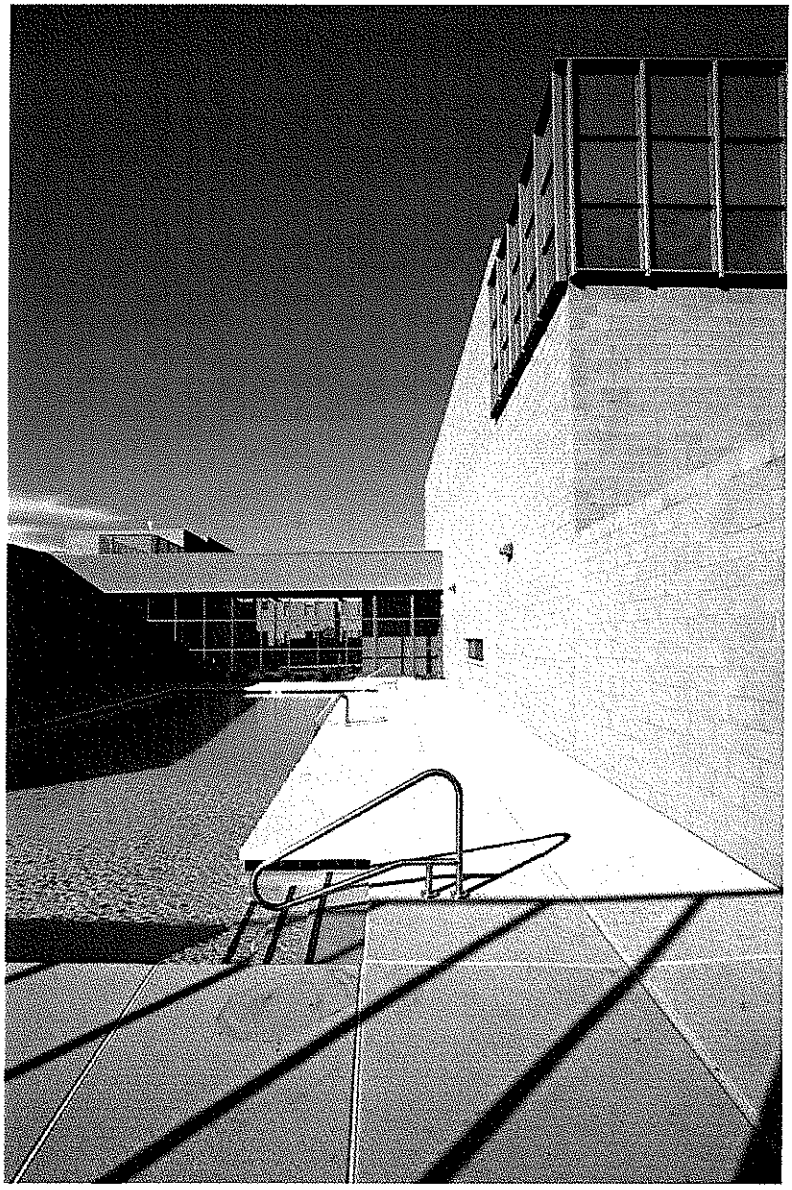
The State of Arizona challenged Cannon Design to replace the entire complement of their existing inpatient psychiatric bed levels within 2 months, adhering to a budget of $29 million. The vision, however, was greater – to provide the most advanced clinical and rehabilitative environment possible.

The new Arizona State Hospital facility is designed to conform to the residential neighborhoods in the area and purposefully remove itself from the adjacent correctional facilities. The design helps to create an environment that supports the treatment programs developed to help the patients "graduate" from the facility and move back into the community. Creating thresholds where improved behavior patterns result in increased freedoms both inside and outside of the facility provides a strong incentive for patients to adopt such patterns. The facility projects a sense of "normalization" where patients are gradually exposed to situations they can expect to encounter when they re-enter the world outside of the hospital.

The critical function of a healthcare facility is to provide an atmosphere that encourages recovery. For the mentally ill patient, this involves planning and designing a facility that closely resembles and exudes the security of the home environment. Our approach to creating a normalized environment within a psychosocial rehabilitation philosophy of care means having space and facilities that mirror a 'typical lifestyle' while in treatment and promote the patient's progression through care.

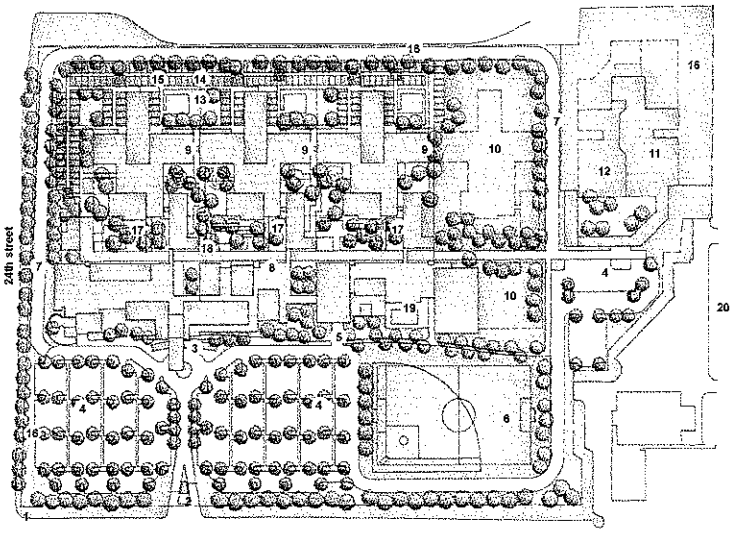
Planned as a metaphoric "community" with distinctive residential zones or neighborhoods, the new facility contains the following: the patient treatment units (PTU), public spaces outside of the PTU's, the support areas, and the main circulation zone that weaves the different zones together. Security is established through the positioning of the nursing stations on the border of the day zones and night zones, allowing nurses to keep the patients in view as much as possible, while at the same time providing secondary and tertiary areas of observation and responsibility. The scale of the new facility is kept to a residential, human scale, with the tallest building being only two stories. Layered across all of the zones is a series of exterior landscaped courtyards, "community parks" that are as important to the treatment process as the buildings themselves.

Across the campus a hierarchy of spaces, both interior as well as exterior, has been created, clearly delineating public, semi-public, semi-private, and private areas. As a result of the zoning of spaces and attention being paid to the hierarchy of these spaces, a truly patient-centered environment was created that contributes substantially to the supportive care network and assists individual patients and their families in coping with their illness.

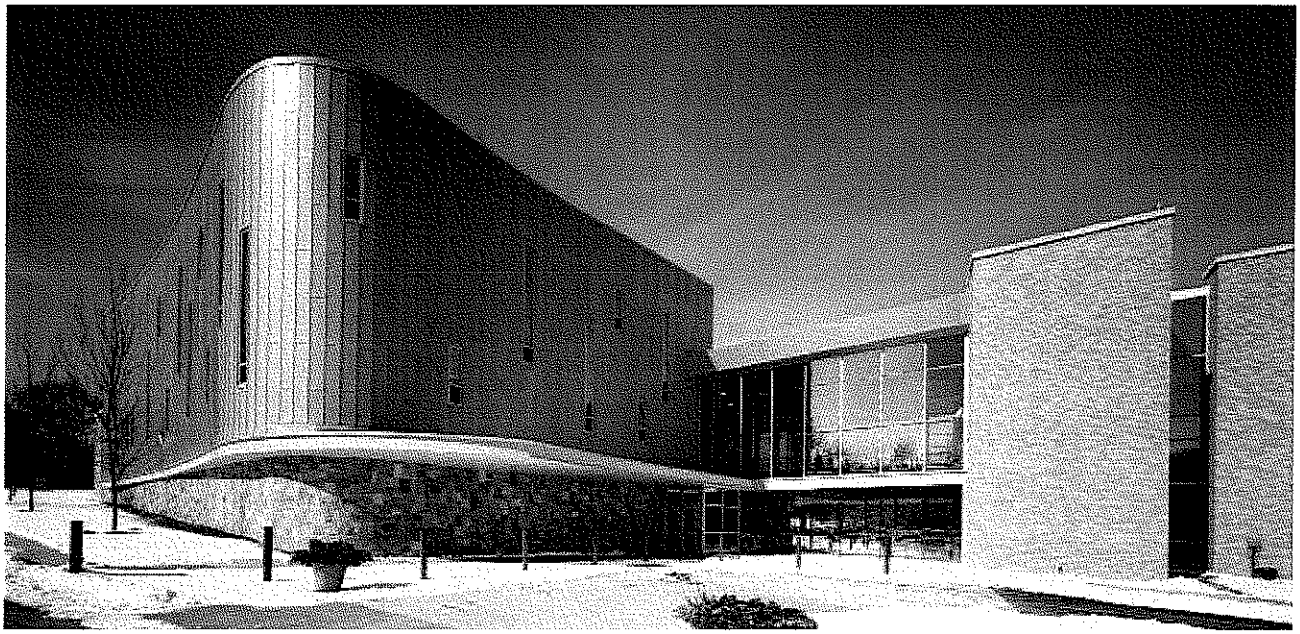


Legend

1. access road from 24th street
2. security gate
3. drop-off
4. parking area
5. service zone
6. large group activity area
7. security loop drive
8. new civil behavioral health hospital
9. patient treatment unit - typical
10. future expansion - civil
11. new adolescent behavioral health hospital
12. future expansion - adolescent
13. treatment unit exterior activity area
14. individual patient garden plot
15. shade ramada - typical
16. perimeter security enclosure
17. courtyard / garden
18. the "street" - social rehabilitation mall
19. swimming pool
20. existing ASH campus



Essex County Hospital Center
Psychiatric Care Hospital
Cedar Grove, New Jersey



REFERENCE:

Ms. Lucia Guarini
Director

204 Grove Avenue
Cedar Grove, NJ 07009
973.571.2801

Built on a sloping 11-acre site, the 151,000 sf, 180-bed Institute for Mental Health Policy, Research and Treatment was built to replace 1920s-era healthcare buildings that, although architecturally striking, had become outdated and unable to accommodate modern psychiatric treatment programs. The Institute's "matrix model" of care, founded on the principle of community reentry through a normalizing environment, focuses on exposing patients to experiences similar to those they will encounter upon returning to their lives outside of the facility.

Organized as a "healing village," the Institute is built around a community green, a secure outdoor courtyard that serves numerous social, recreational, and educational uses. An indoor social rehabilitation mall enclosing the green is the Institute's primary circulation zone, offering access to numerous buildings dedicated to patients' medical, social, and spiritual wellbeing. A two-story administrative building on the green's east side contains multipurpose classrooms on its ground floor that are available for public use after hours. On the green's north edge, two three-story "residential neighborhoods" house a total of six patient care units. Modularly designed to easily accommodate variations in the patient population, each unit features a "night zone" with bedrooms and hygienic facilities, a "day zone" with dining, on-unit treatment, recreation, and lounge spaces, and a care team center at the juncture of the two zones. Units also enjoy direct access to protected outdoor patios and porches.

The main entry, a two-story, transparent, glass-cube lobby at the junction of the administrative building and the social rehabilitation mall, offers a direct view through the lobby into the community green, visually orienting patients, families, visitors, and staff to the Institute's spatial organization. Likewise, views from the green and the social rehabilitation mall through the lobby to the outside world remind patients that their stay at the Institute is merely a step in their care. At night the well-lit glass cube serves as a campus beacon.

Lindner Center of HOPE
New Behavioral Health Center
Mason, Ohio

REFERENCE:

Dr. Paul Keck
President / CEO

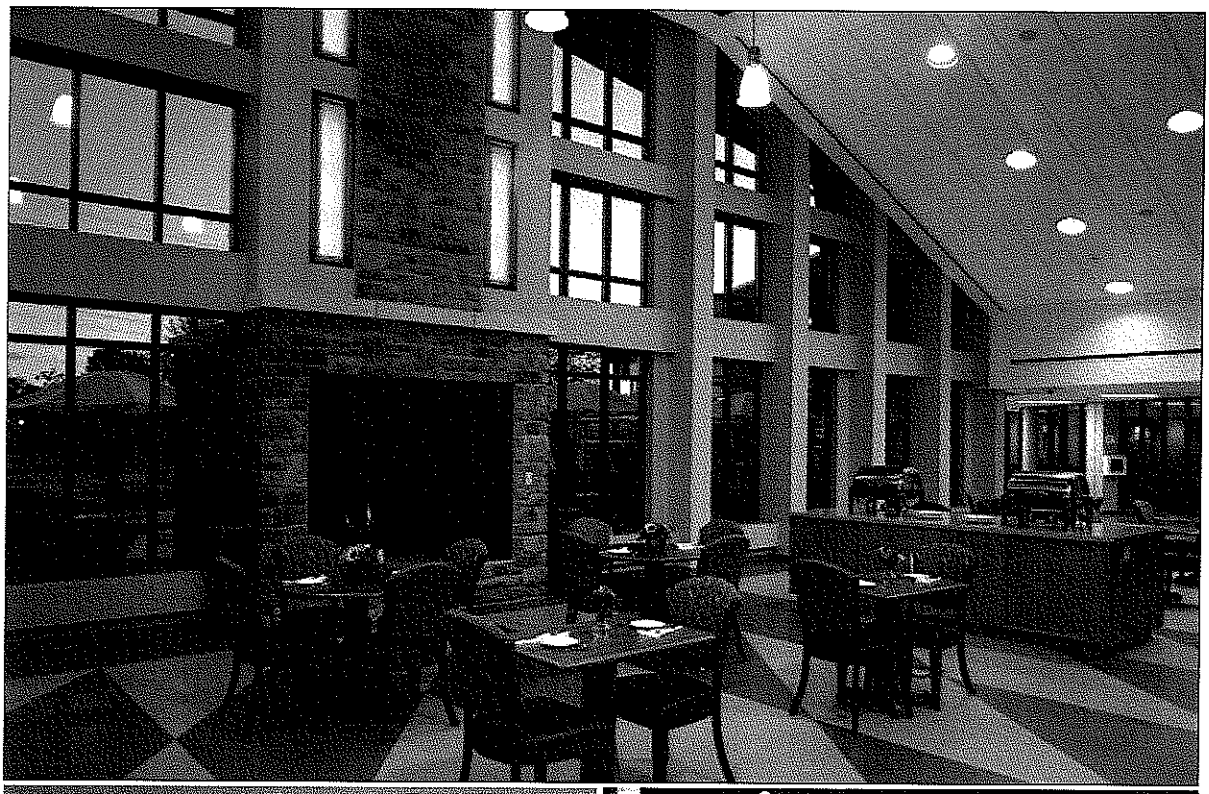
3200 Burnet Avenue
Cincinnati, OH 45229
513.558.8626

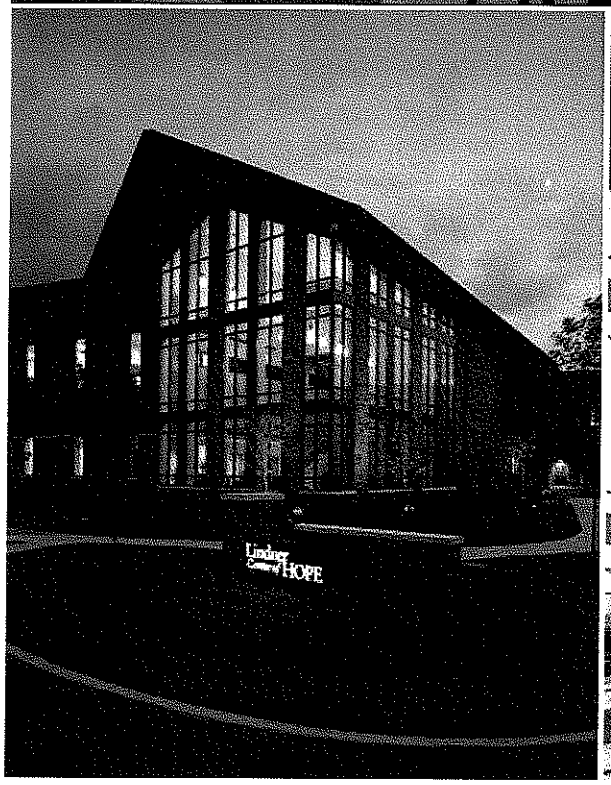
The Health Alliance of Greater Cincinnati, in conjunction with the University of Cincinnati, selected Cannon Design to provide planning, architectural, engineering, and interior design services for the Craig and Frances Lindner Center of HOPE, a $35 million, 64-bed, state-of-the-art behavioral hospital and clinic. The new 97,000 sf facility, to be operated jointly by the Health Alliance of Greater Cincinnati and the Lindner Foundation and staffed by physicians from UC College of Medicine, offers an integrated program of research, education, and inpatient care to adolescents, adults, and the elderly, as well as comprehensive outpatient services for patients of all ages. Future phases planned for the campus include a 60-bed expansion and a conference center and inn to house visiting families and international educational programs.

To achieve the Lindner Center's stated goal of providing patients with "the best evidence-based care in North America," the facility offers the latest advances in clinical neuroscience, including state-of-the-art diagnostic equipment such as 3T MRI, and devotes substantial space to integrated research and educational programs. Patient care units designed for different age groups emphasize individual patients' needs, with private patient rooms capable of accommodating "rooming-in" family members.

In support of the "active treatment" model of care, the facility is designed as a "treatment campus" that utilizes the entire site to maximize patients' exposure to mental health treatment. The Bridge Building, which houses a "treatment mall" composed of diagnostic, activity, dining, recreational, and educational functions, is both a literal and a metaphorical bridge, spanning a swale that crosses the campus and providing a highly salient access point through which all patients pass when arriving and leaving - a bridge between need and hope.

In addition to numerous active security measures such as CCTV, remote sensing devices, electronic access controls, fencing, and secure perimeters, the facility utilizes an array of passive security measures to ensure maximum safety and security for patients, visitors, staff, and the community. Staff views of patients for primary and secondary observation are maximized through careful facility planning, and all internal doors are equipped with sidelights for occupant protection. Secure enclosed courtyards are easily accessed by patients.




Lindner
HOPE


Lindner Building

Baltimore Washington Medical Center
Various Projects
Glen Burnie, Maryland

REFERENCE:

Ms. Susan Ward
Vice President

301 Hospital Drive
Glen Burnie, MD 21061
410.787.4402

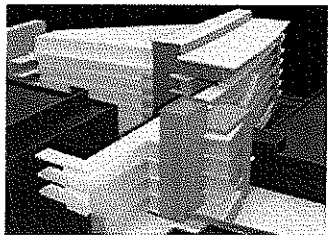
Cannon Design completed the Master Plan Phasing and Enabling Project Study to provide growth structure to an expanding community hospital between Baltimore and Washington, DC. The study served as a model for private bed organization, phasing, and implementation. In a step toward achieving the vision outlined in the campus master plan, BWMC commissioned Cannon Design to provide programming, planning, and design services for a new 60,000 sf Cancer Center and a new 245,000 sf, $110 million patient tower to expand inpatient bed capacity from 272 to 342 beds. The seven-story tower, an addition to the existing facility, will both enhance current services and accommodate a new Women's Program, three floors with 30 bed units providing 90 additional medical/surgical private rooms and a 24-bed critical care unit on the second floor will link to other existing 24-bed units. Outpatient services are provided on the first floor including Sleep Lab, Hyperbaric Oxygen/Wound Care Center and Infusion Center. The lower level provides space for support services such as facilities, materials management, laundry, and housekeeping services.

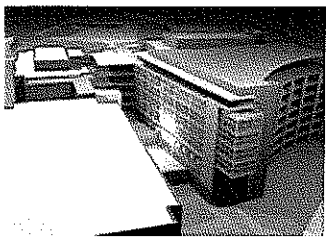
In addition to the large construction initiatives for BWMC, Cannon Design has implemented multiple, related and independent, smaller scale renovation projects that were sensitive to modifications to critical services areas staying operational while these projects were implemented. The following indentify as few scenarios:

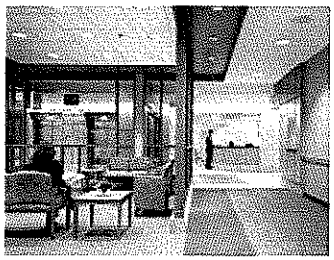
Emergency Department Psychiatric and Pediatric Expansion – In addition to an 18,200 sf main ED expansion, Cannon specifically addressed behavioral health component with the expansion of a 1,200 sf psychiatric suite to include additional administrative space, nursing areas, and a seclusion room; and renovation and conversion of 2,500 sf of support spaces into three private pediatric emergency exam rooms and a nurse station into a separate pediatrics suite.

BC Tower Renovations - Connected to the new patient Tower is the existing BC patient tower that will be entirely renovated floor-by-floor to provide private room accommodations – while adjacent floors are occupied.

2nd Psychiatric Wing Renovation - Renovation of 15,000 GSF existing psychiatric wing from 18 semiprivate rooms to 12 private rooms, updating patient toilets, and staff support spaces, nurse station, and treatment spaces. The total construction was scheduled for nine (9) months' and was completed in sin (6) months. The project was initially planned for three (3) phases by the hospital staff, but upon re-examination by Cannon Design, it was condensed into two (2) phases which condensed the construction period. The construction was completed with minimal disruption to the First Floor which housed the Operating Room and PACU for the entire facility. The only interferences were the coordination of the plumbing line above the first floor ceiling which was installed on during non- scheduled hours.

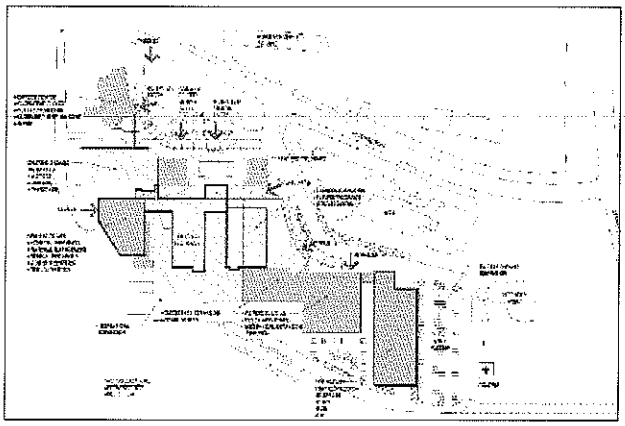


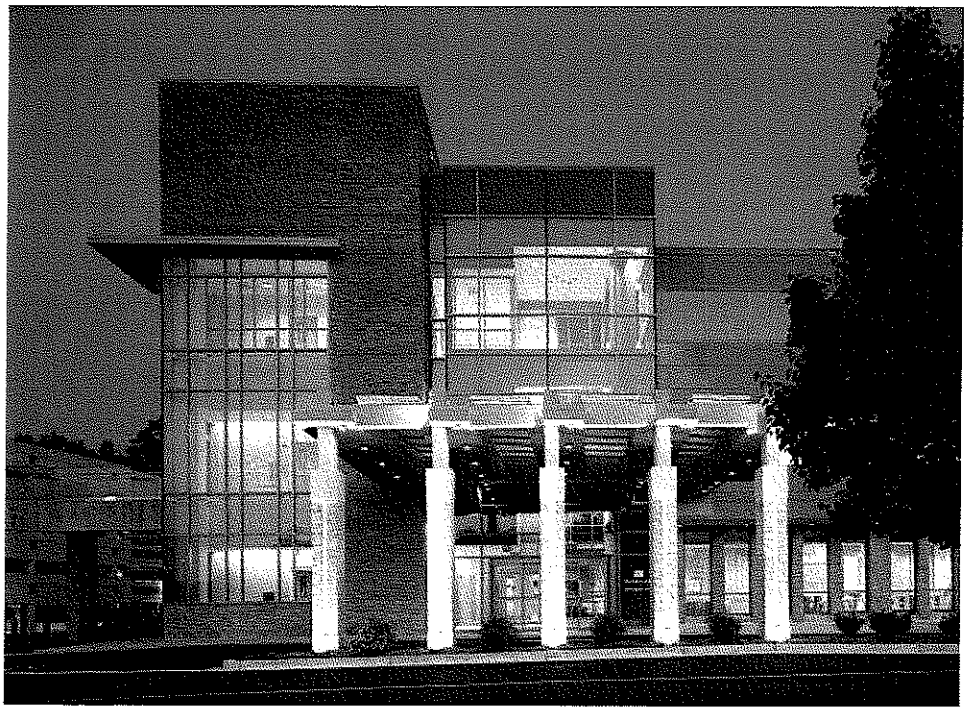




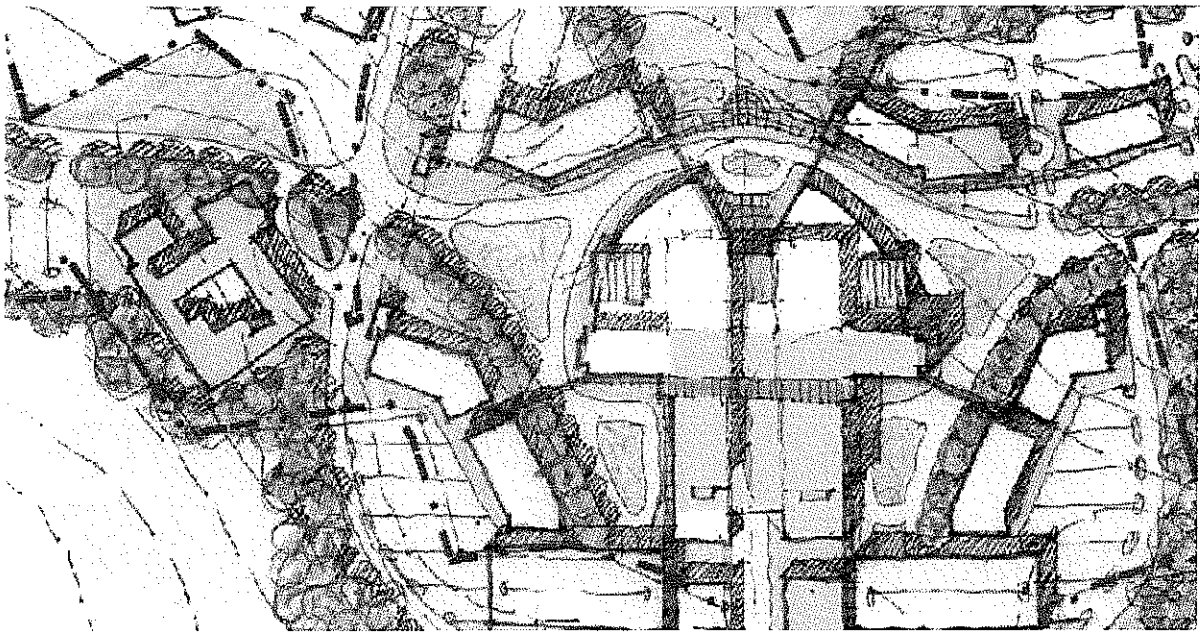
University of Maryland Vascular Laboratory – Planning, design services and construction documents for a $1.3 million renovation of an existing administration and environmental services facilities for a new vascular laboratory, vascular clinic and Administrative Services Suite for the University of Maryland Vascular Center. The entire project was completed in one (4) separate phases, of which the most complicated was the completed re-routing of the Lower Lever Kitchen, exhaust ductwork. The Kitchen was kept in operation, with a modified menu, during the switch-over of the ductwork. The adjoining corridor was found to be non-compliant and that was incorporate into the design documents. Te change Orders for un-foreseen work was 2.1% of the total construction cost and the final project costs were $15,000 less than the initial estimate.

"A" Wing Patient Care Expansion and Renovation - Conversion of Day Hospital, their associates offices, rehabilitation room, and dining room into five semiprivate patient rooms with adjoining bathrooms. Included were staff support and the customary waiting area, utility rooms. This area was immediately above the recently renovated Psychiatric Wing expansion, which remained fully operational during the co instruction period. This project was anticipated during the construction of the Psychiatric Wing on the 2nd floor. During that construction, the pluming lines for the future toilets were install and connect except for the final connections to the fixtures. The disruption was reduced to hours versus weeks.





Fauquier Hospital
Family Birthing Center and Emergency Department
Warrenton, Virginia



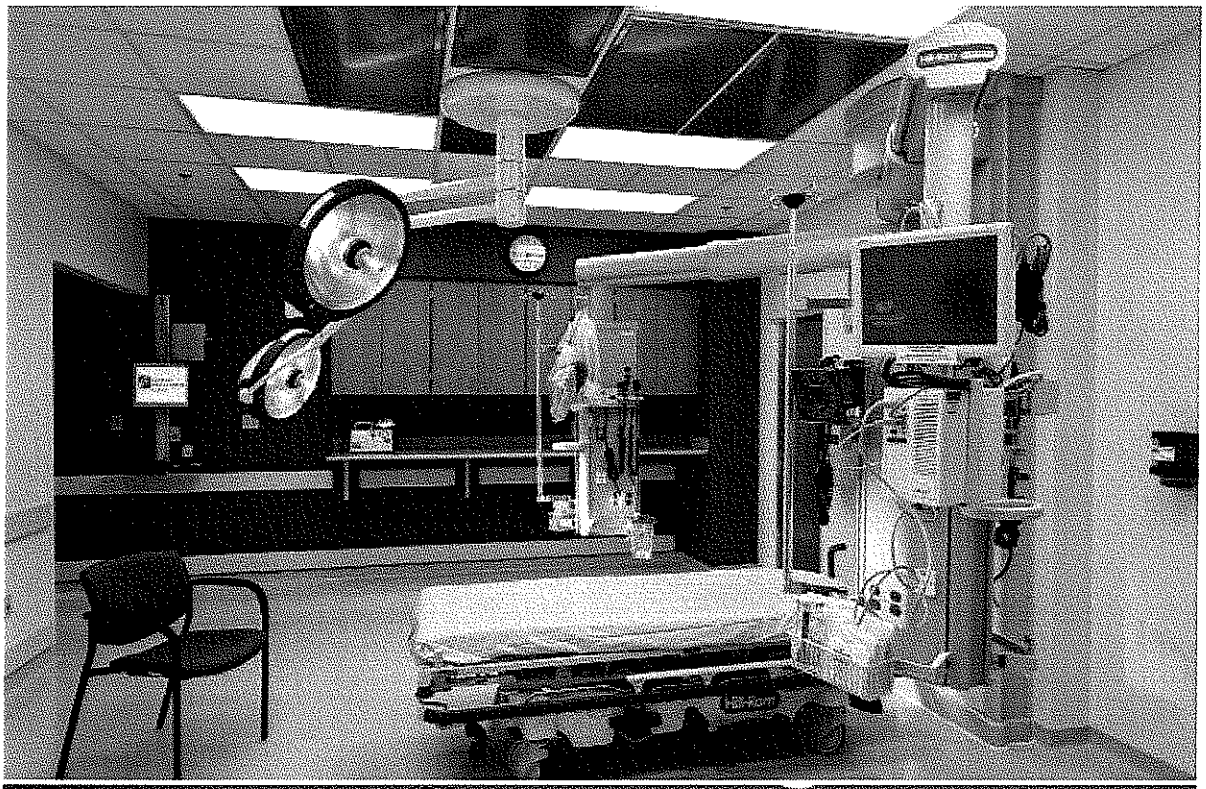
REFERENCE:

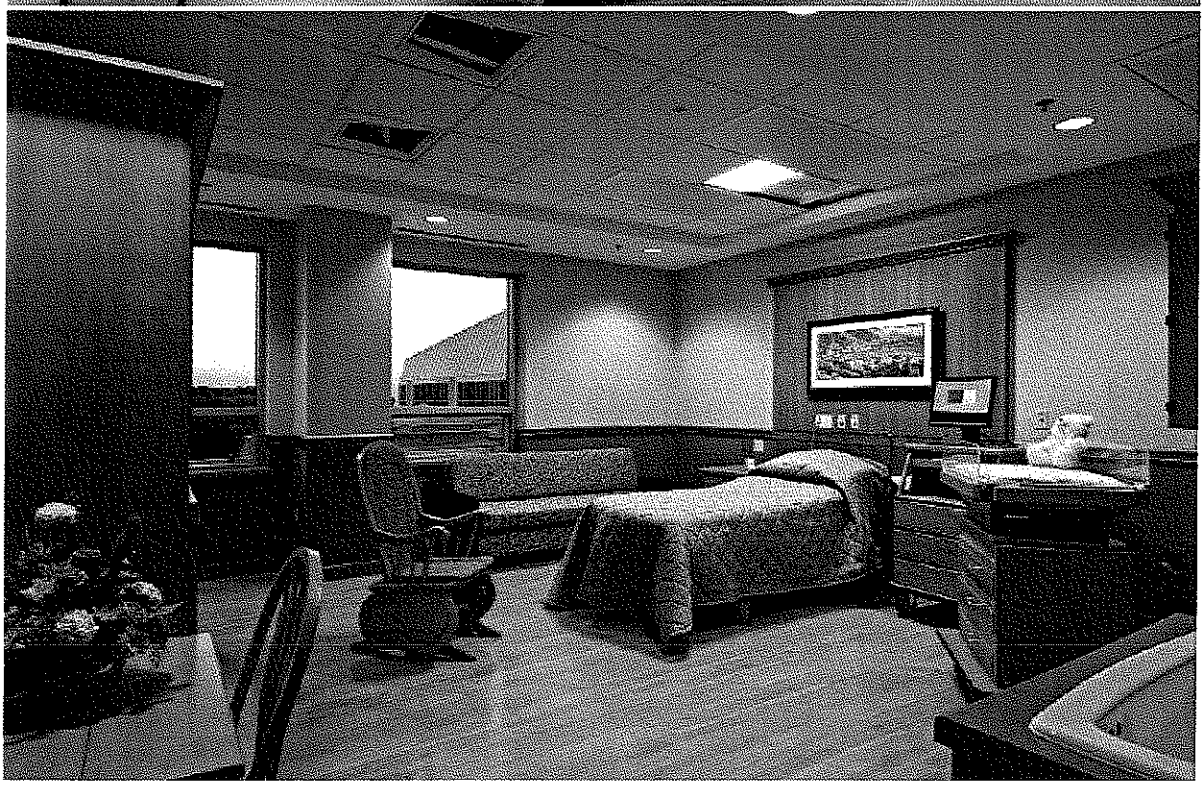
Mr. Rodger Baker
President / CEO

500 Hospital Drive
Warrenton, VA 20186
540.349.0531

Cannon Design providing planning and design services for the O'Shaughnessy Family Birthing Center at Fauquier Hospital. By offering single room maternity care (SRMC) - an LDRP (labor, delivery, recovery, postpartum) model of maternity care. The new Birthing Center expands Fauquier Hospital's range of services to improve the patient experience while separating staff flow patterns and improving staff utilization and efficiency. The 11 unit also accommodates a C-section suite and nurseries and outpatient women's services. The staff work core and support space is centralized to allow convenient access to each LDRP. With the anticipation of further growth, additional beds would be provided in space immediately adjacent to the Phase I - Birthing Center project. **Each of these project initiatives required the renovation / building-out of existing shell space of the patient tower located over occupied medical/surgical units. The projects were performed in multiple phases in order to maximize the use of the inpatient rooms on the floors below and minimize disruption to daily operations while keeping the maximum number of inpatient beds in service. Rooms were decommissioned, 2 at a time, in order to accommodate slab penetrations and improvements, as the day to day operations of the 24/7 inpatient unit were maintained.**

Fauquier Health System commissioned Cannon Design to provide master planning services for the FHS campus to accommodate patient volume growth. As a result of the master plan, Cannon Design performed planning and design services for a 12,500 sf expansion of the hospital's emergency department to accommodate 45,000 emergency patient visits. In addition to providing 18 new exam rooms, the project also encompassed multiphased interior renovations to the existing ED and creation of a new covered patient entrance and a separate ambulance entrance. Infrastructural improvements to support the addition included modifications to the hospital's existing vehicular access area, demolition of a vacated wing adjacent to the existing emergency department and an existing boiler room, and relocation and rerouting of the boiler piping and distribution system. **The entire emergency department project was implemented in phases in order to accommodate the day to day operations of the 24/7 emergency department with minimal disruption to patients, process, quality of care, throughput and staff.**





Our Lady of Peace
Skilled Nursing Facility
Lewiston, New York

REFERENCE:

Ms. Judy Mannes
President / CEO

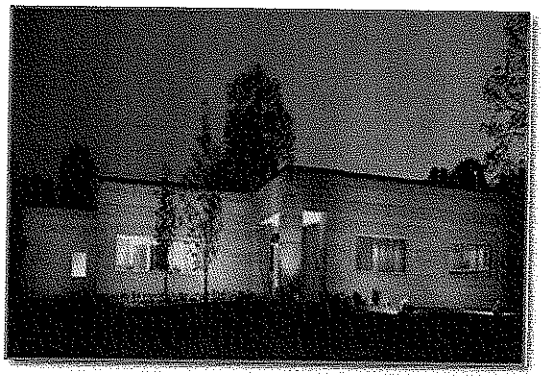
5300 Military Road
Lewiston, NY 14092
716.297.4800

Mount St. Mary's Hospital commissioned Cannon Design to program, plan and design a new 155,000 sf, 250-bed skilled nursing facility on its Lewiston, New York campus. Keenly aware of the unique needs of the skilled nursing facility's population, Cannon's design placed special emphasis on open, airy spaces with abundant natural light.

The facility is designed with five units of 42 beds each and one unit of 40 beds. Each unit is designed as a household resident room cluster with convenient living room, lounge and day-by-day living spaces. This homelike design addresses the need for residents to feel at home and to interact within their own environment. Each living area contains a dining room and servery, two "great" rooms adjacent to the dining area, and two family waiting areas that also includes a fireplace. Wide corridor areas and strategically placed observation points allow maximum visual contact between the residents and the staff.

Additional features of the three-story facility include outdoor patio areas, administrative offices and lobby space on the first floor, and a fireplace on each of the first and second floors. A multifunctional room accommodates up to 100 residents for social and group activities as well as meditation and religious services. Additional areas are also designed for group therapy in physical and occupational therapy spaces.

ABOUT THE FIRM



Scheeser Buckley Mayfield LLC is an Ohio-based Consulting Engineering firm that serves clients throughout Ohio and the surrounding states. The firm was established in 1959 by Walter L. Scheeser and Edwin J. Buckley, specializing in the design of mechanical systems for the construction industry. The firm has enjoyed a steady growth in clients and geographical area served throughout its history, and its services now include electrical, civil, and telecommunication design.

Scheeser Buckley Mayfield LLC has developed an outstanding reputation for both its accessibility to its clients and the clarity and completeness of its documents. The firm has been a leader in the application of new technology. It has extensive experience in the design and analysis of projects of all sizes, which it can draw upon for future projects. Each project requires an analysis of the most cost effective system available based on the client's design parameters. It is also the responsibility of the design team to determine if other options exist which may be beyond the scope of the current budget and which need to be considered on the current project to allow for future growth. Scheeser Buckley Mayfield LLC gives this personal attention to each project by determining the project design which can be implemented within the client's budget while applying innovative design concepts.

Many of SBM's projects originate from clients who have used its services previously and wish to continue a professional association. Scheeser Buckley Mayfield LLC strives to provide very professional and competent engineering services to all of our clients and to develop a personal relationship with these clients. This on-going association with clients provides an opportunity for them to better understand design concepts as well as the logic behind the decisions which may affect their systems for many years after the project's completion.

MICHAEL P. WESNER, P.E., LEED AP
VICE PRESIDENT – PRINCIPAL - MECHANICAL ENGINEERING

PERSONAL RESUME

Mike is a graduate of Ohio State University in Columbus, Ohio. He received a Bachelor of Science Degree in Mechanical Engineering in 1981 and later that year joined the consulting firm of Scheeser Buckley Mayfield LLC which was then known as Scheeser*Buckley*Keyser.

During his first few years with the firm, Mike was heavily involved with the Title III of the National Energy Conservation Policy Act (NECPA). This governmental program was established as a cost sharing energy conservation grant programs. This program provided funds to study the operation of schools and hospitals to determine if there were ways to reduce their energy consumption. The program then funded energy conservation measures identified in the reports. As a result of this involvement in many audits and retrofit programs for public school buildings, college and university buildings and hospitals, Mike gained valuable experience in formulating and implementing energy conservation programs in buildings that result in real world savings. This experience carries on in the work that Mike does today.

Since the mid 1980's Mike's project experience has been concentrated in the following areas:

- Large hospital Expansion and remodeling projects.
- Hospital Boiler Plant / Chiller Plant replacement projects.
- University Laboratory projects, both new construction and renovation.
- University Classroom Facilities
- University Dormitory Facilities
- Animal research facilities.
- Secondary education facilities.
- Industrial facilities.
- Telephone / Communications buildings
- Recreation/Athletic Fitness Centers
- Worship Centers

On all of the above facility types, Mike has acted as the Principal in Charge for the firm. The Principal in Charge (PIC) is the single point of contact and is responsible to make sure the project gets done on time and on budget.

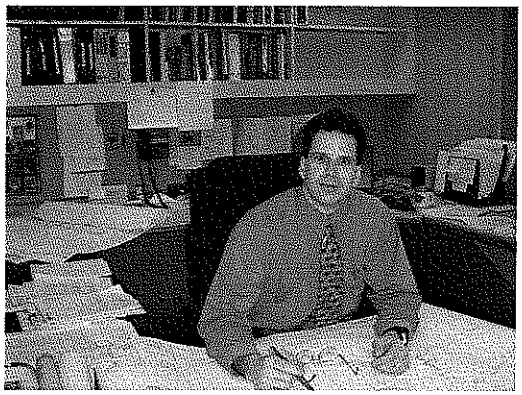
Other types of project experience Mike has had are listed as follows:

- Projects where SBM was the prime design professional hired by the Owner. Typically this has been for chiller plant/boiler plant or other type of main A/C system replacement. This work involved hiring the sub-consultants, preparing the budget/schedule, writing the "front end" specification documents and doing all of the day to day construction administration.
- Projects where SBM was hired to diagnose and correct mechanical system problems
- Projects where SBM was hired to do Mechanical and Electrical Construction Cost Estimating

Mike is a LEED™ 2.0 Accredited Professional and a member of ASHRAE, ASPE, NFPA and BOCA.

MARLON C. HATHAWAY, P.E.
VICE PRESIDENT – ELECTRICAL ENGINEERING

PERSONAL RESUME



Mr. Hathaway attended The University of Akron where, in 1992, he earned his Bachelor of Science Degree in Electrical Engineering. While at The University of Akron, Mr. Hathaway accepted a position through the cooperative education program at the Veteran's Administration Medical Center in Brecksville, Ohio. During this engagement he gained knowledge of the construction industry.

After graduation, Mr. Hathaway began his career as a consulting engineer with Scheeser Buckley Mayfield LLC. He has since been involved with all aspects of electrical design including: lighting, power distribution, telecommunications systems, fire alarm systems, video/security systems, nurse call systems and CATV/MATV distribution systems. Mr. Hathaway's responsibilities include both budget and finish electrical construction estimates. He has worked closely with electrical contractors on recent owner requested design/build projects.

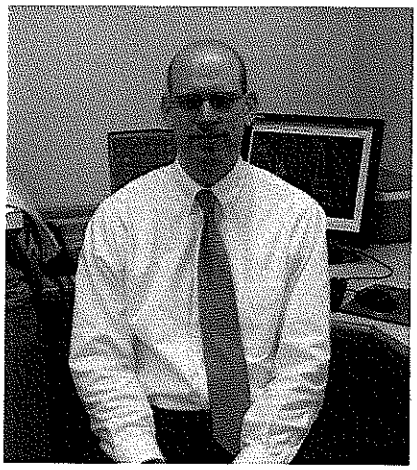
During his consulting career, Mr. Hathaway has designed many hospital and health care related buildings. His experiences cover a wide spectrum in this specific field including O.R. Suites, Pathology Labs, Emergency and Trauma Rooms and Medical Office Buildings. He has prepared contract documents for complex electrical medical equipment including x-ray, CT scanners and digital video processing equipment. He has completed projects in the states of Ohio, West Virginia, Kentucky, Pennsylvania, and Florida.

Mr. Hathaway has extensive experience in the design of complex systems such as fire alarm, audio/video, telecommunications (LAN) systems, and CATV/MATV distribution systems. He is currently a member of the Illuminating Engineering Society (IES), Cleveland Section and has also served as Treasurer in past years.

Mr. Hathaway is registered in the State of Ohio, West Virginia, Kentucky, Pennsylvania and Florida.

KIRBY A. STOLLER, P.E., LEED AP
MECHANICAL ENGINEER

PERSONAL RESUME



Mr. Stoller attended the University of Akron and received his Bachelor of Science in Mechanical Engineering, December 1999. Upon graduation, Kirby joined the firm of Scheeser Buckley Mayfield LLC. He passed his Professional Engineering License exam in April 2004.

During college, Kirby was involved in the University of Akron's co-op program and worked at Rubbermaid, Inc, in Wooster, Ohio. He assisted with design projects to support the manufacturing plant and created plant layout drawings for the installation of injection molding machines, automation, and robots. He also met with vendors, obtained quotes, and placed orders to meet project deadlines.

Since working for Scheeser Buckley Mayfield LLC, Kirby has served as the mechanical engineer on a wide variety of projects, primarily for health care facilities and universities and has experience in all aspects of the design of mechanical systems for buildings, including HVAC, Plumbing, and Fire Protection. He has also performed project management tasks within the office on many of his projects to coordinate the design team's efforts.

Larger projects in Kirby's background include a 175,000 square foot Patient Bed Tower and 50,000 square foot Cancer Center Building for Cabell Huntington Hospital located in Huntington, WV with total construction budgets of $55 million and $18 million respectively; 140,000 square foot ($42 million) Bio-Technology Lab building for Marshall University located in Huntington, WV; 80,000 square foot ($18 million) medical office building for Marshall University School of Medicine located in Huntington, WV; 260,000 square foot office building for Fed Ex located in Green, OH; 150,000 square foot church for The Chapel located in Green, OH.

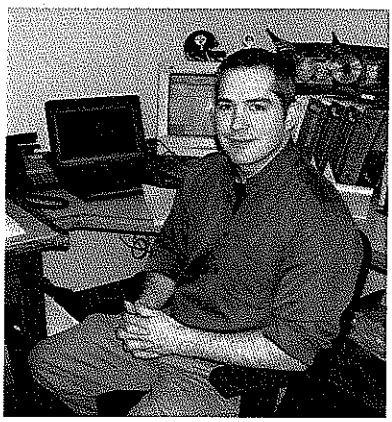
Kirby designed the mechanical systems for the renovation of Douglass High School which is listed in the National Register of Historic Places. The project consisted of a total overhaul of the existing building systems. The interior was renovated to house medical offices and classrooms.

Other projects that Kirby has designed include:

- 15,000 square foot Dialysis Clinic for Cabell Huntington Hospital
- 28,000 square foot facility for St. Timothy's Lutheran Church
- 60,000 square foot office building renovation for the VA
- Additions and renovations to St. Mary's Correctional Center dining facility
- Emergency generator replacement for First Energy
- Multiple boiler, chiller, cooling tower, and air handling unit replacement projects.
- Numerous hospital renovation projects

JOE HARLESS, RCDD
SENIOR TELECOMMUNICATIONS DESIGNER

PERSONAL RESUME



Mr. Harless has been in the telecommunications industry since he left the construction field in 1991 to install security alarms, fire alarms, CCTV systems, access control systems, CATV cabling, UTP and fiber optic structured cabling, voicemail systems, KSU's, and network electronics for GBS Computer & Communication Systems.

In 1993, Mr. Harless became a Project Manager for GBS where he supervised and coordinated all major installations. During this time he received training and certifications from many manufacturers to ensure GBS' ability to offer extended warranties for their installations.

In 1997, Mr. Harless accepted the position as Network Designer at GBS. There, he performed design, engineering and estimating duties for all GBS' structured cabling and networking projects. In addition to these functions, he provided technical training and support to the field technicians and was responsible for the research and selection of all materials, tools and test equipment.

He received the designation of Registered Communications Distribution Designer (RCDD®) from the Building Industry Consulting Services International (BICSI®) organization in 1997.

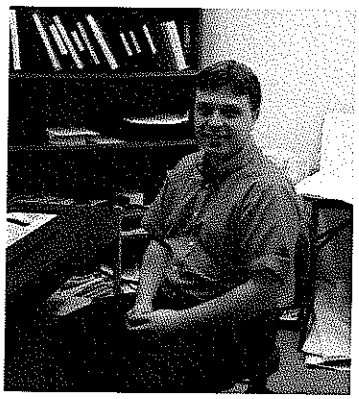
Mr. Harless joined Scheeser Buckley Mayfield LLC in July, 2002 as the Senior Telecom Designer and performs the majority of our structured cabling designs along with related telecommunications and technology systems.

Bicsi™
INDIVIDUAL
MEMBER

Bicsi™
RCDD

JOHN A. VARGA, E.I.T.
PLUMBING ENGINEER

PERSONAL RESUME



Mr. Varga attended the University of Akron where he received his Bachelor of Science in Mechanical Engineering in 1997. He has attained his E.I.T. Certification.

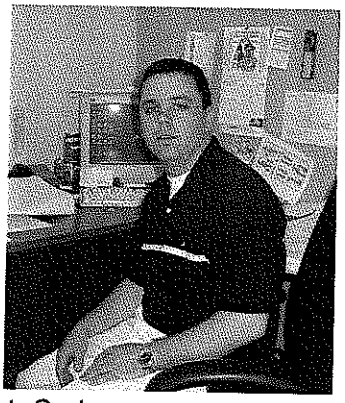
During his senior year in college, he began his engineering career working for a precast concrete manufacturer. His responsibilities included the design, layout, production and installation drawings, and volume calculations of extended aeration sewage treatment plants and pump stations. This included the calculation of treatment design based on Ohio EPA and Ten-State Standard requirements. Plant design included anti-floatation measures, tank capacities, effluent quality, and OSHA compliance. Equipment design included blower and motor sizing, pump sizing, losses through piping systems, electrical requirements, flow measurement, and preparation of specifications.

Mr. Varga joined the consulting firm of Scheeser Buckley Mayfield LLC in May of 1999. Since joining the Plumbing Department, he has performed calculations sizing water lines, sanitary lines, booster pumps, water heaters, mixing valves, medical gas systems, and fire protection systems based on Ohio Basic Building Codes, National Fire Protection Association, and local county and city codes. He has been lead plumbing engineer on several large projects including Kent State University Residential Dormitories, Marshall University Dormitories, Jackson Strausser Elementary School, Heartland Behavioral Health Campus, University of Akron Dormitories, and Huttonsville Correctional Center. These projects included multiple buildings on a campus setting with centralized mechanical equipment plants and utility distribution loops.

Mr. Varga is a member of the American Society of Plumbing Engineers.

DOUG CHAPMAN
ELECTRICAL ENGINEER

PERSONAL RESUME



Mr. Chapman attended Bowling Green University and graduated with a Bachelor of Science in Electronic Technology.

Mr. Chapman started his career at Dynamix Engineering, Ltd. located in Columbus, Ohio. He was responsible for electrical design at educational facilities, churches, outpatient clinics, tenant occupancies and offices. He also followed projects in to construction by reviewing shop drawing submittals.

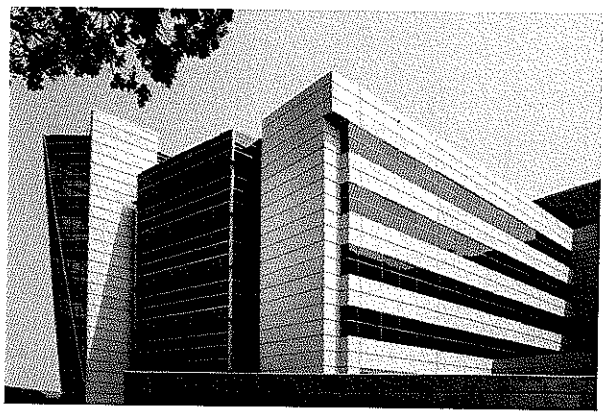
Mr. Chapman then relocated to Cleveland, Ohio and worked at Bacik Karpinski Associates, Inc. He assisted with branch circuit design for both new construction and renovation projects. He was also involved in the specification process and assisted with transferring engineering red-lines to AutoCad.

Mr. Chapman joined Scheeser Buckley Mayfield LLC in September 2001 and has been actively involved with many projects. He has been responsible for branch circuit design and configuration of new and renovated facilities including outpatient clinics, hospitals, educational facilities and offices. He has assisted with specification of lighting fixtures and corresponding lamping based on space function and client need and specification of over current, short circuit protection and safety devices for HVAC, plumbing, kitchen and other types of equipment. Mr. Chapman also assists with the design of various electrical systems, including nurse call, local intercom, and dimming.

SCHEESER BUCKLEY MAYFIELD LLC

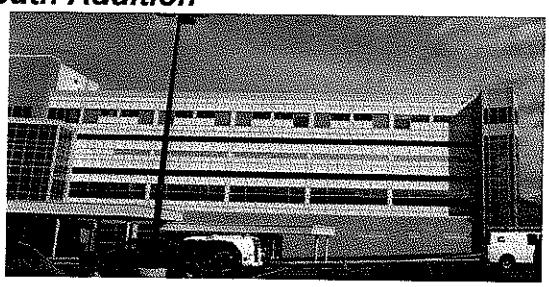
PROJECT EXPERIENCE

CABELL HUNTINGTON HOSPITAL — 165 Bed Patient Tower



The CHH Bed Tower Project is the start of a replacement hospital for this facility. The project houses a new emergency room, ICU/CCU rooms, NICU, maternity floor, and patient rooms. The total project area consists of 175,000 square feet of new construction and 50,000 square feet of remodeled areas. The electrical portion of the project involved the installation of redundant 12.47KV utility sources to an owner owned automatic throwover switch. 12.47KV distribution is fed to multiple double-ended unit substations for generation of 480V and 208V power for the 175,000 square foot hospital addition. The hospital addition includes a new emergency department and includes integration with the existing emergency department. In order to maintain operation of the emergency department, a temporary emergency department was created and built which included two new elevators which are to serve the temporary emergency department and helipad. The addition included a medical-surgical ward, Labor-Delivery-Recovery (LDR) floor with three C-section operating rooms, an intensive care ward, a critical care ward, and a pediatrics ward. The emergency power system was upgraded to include a 10,000 amp paralleling gear, existing generators added to the new paralleling gear and the addition of two 1,750KW generators. The emergency power system provided a 2,000 amp feed to the new building and distribution to the three emergency power branches (life safety, critical, and equipment branches) via use of transfer switches.

CAMDEN CLARK MEMORIAL HOSPITAL — South Addition



Scheeser Buckley Mayfield LLC provided mechanical and electrical design services for a new building addition to the Camden Clark Campus. The project was completed in several phases. The first phase involved the completion of a 13,000 square foot Plant Operation Building. This portion of the project included a 500 hp boiler installation to expand the existing plant and a 1,300 ton centrifugal chiller plant, cross connected with an existing plant. A new water service entrance was added. Electrically, the existing service was reworked to accommodate the new addition and to backfeed the existing hospital. A phased switchover of the electrical service minimized outages to the existing hospital during this work. Two 1,250 KVA generators with parallel switchgear were installed. All services were extended to be ready for connection to the new addition portion of the project.

The second phase of the project involved the construction of a four story 180,000 square foot South Addition. The building is expandable up to seven stories. This building houses approximately 95 patient beds including 11 new surgeries, an endoscopy suite, central sterile, pre-and post surgical support areas, an intensive care and critical care unit, and a kitchen/dining area. A portion of this construction (7%) was renovation work. A challenge was to keep existing surgical rooms operational while construction was occurring on the roof above. A mechanical floor was built into the project that housed all air handling equipment, a sub-cooling chiller for the operating room suite, some electrical equipment, and the heating system components. The building utilizes digital automation lighting control which allows for scheduling and versatility.

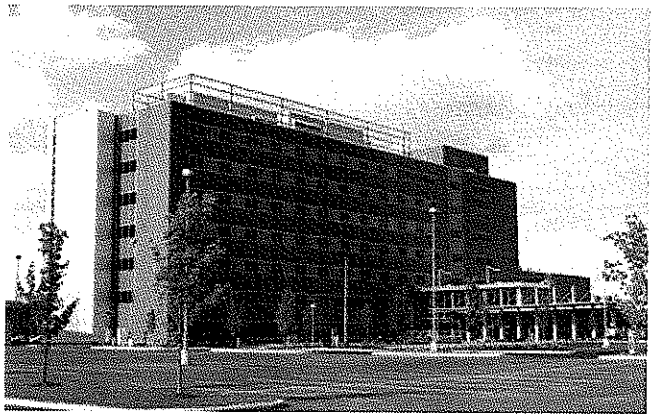
KINGS DAUGHTERS MEDICAL CENTER – Heart Center

Scheeser Buckley Mayfield LLC performed mechanical, electrical and civil design for a new 200,000 sq. ft., 5 story addition to the existing hospital building. The building is expandable up to ten stories so future capacity was designed into the building to support five stories initially with medium voltage growth to ten stories. Design included lighting, receptacles, and systems devices for 70+ patient rooms, 9 Cath/EP labs, and various other spaces. 12.47 KV was extended from the main hospital building through a tunnel system under Medical Plaza Building A to an indoor 12.47KV switchgear arrangement. This arrangement is setup to allow for this building to accept redundant feeds from the utility and be taken off of the current system. The indoor 12.47KV switchgear then feeds a 2000KVA indoor dry type substation with fans stepping down to 480/277V distribution voltage. Secondary electrical closets were designed on each floor, stepped down to 208/120V and distributed to each tenant space. In some locations the electrical panels were installed flush in the walls. Lighting throughout the building was 277V with feature lighting on an indoor sculpture and waterfall. The fire alarm system was designed for high rise construction so a voice system was design with future fire fighter telephone jacks located at each stairwell. Lighting protection was designed for future extension of the building. Site design included lighting of a healing garden with sculptures, and a future fountain with a sculpture. Essential power was extended from the main hospital's emergency power distribution system through the tunnel to an emergency distribution switchboard. This emergency distribution switchboard provides power to Life Safety, Critical, and Equipment branch transfer switches and downstream switchboards and distribution panels. Nurse Call and Code Blue systems were designed for each patient care area and other code required spaces. The Code Blue system will be extended from the existing head-end equipment located in Medical Plaza Building A. Public Address/Sound Systems were also designed for each floor in multiple zones to allow each area to provide its own music and distributed paging.

The HVAC system for the building consists of central station air handling units located in the basement of the addition. Chilled water and steam from the facility's existing chiller plant and boiler plant were extended to serve the new addition and interconnected with the utility services serving the M.O.B. to provide a system loop. The air distribution system consists of VAV terminals with hot water reheat coils. A smoke control system was designed to accommodate the two-story atrium with design considerations given to the addition of future floors and extension/relocation of the smoke control fans located on the roof of the addition. Chilled water and steam/condensate piping were sized and roughed-in for future 10-story expansion. A large portion of the project involved relocating existing underground steam, chilled water, storm, sanitary, fire, and electrical utilities from within the footprint of the new addition. An early site utility relocation package was issued to help facilitate the fast track pace of the project. Phasing of the utility relocation was critical to minimize system downtime. Project also included the installation of a new 400 bhp boiler, upgrades to the existing boiler flue stacks, and a new deaerator system to increase the Boiler Plant capacity.

An early site package was issued to address ongoing flooding problems. Two major storms in 2004 dumped excess amounts of rainfall in the Ashland area. These heavy rains caused the existing public storm and sewer system to back-up and flood the hospital's medical office building that was under construction. These floods caused damage to the new basement mechanical room. SBM completed design to remove and replace the existing public system which included control weirs and overflow structures. The design of the Heart Center building included sanitary and storm duplex pump stations with back-up power.

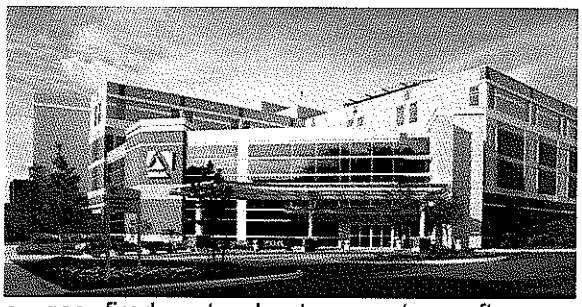
ST. ELIZABETH HEALTH CENTER – New Hospital in Boardman, Ohio



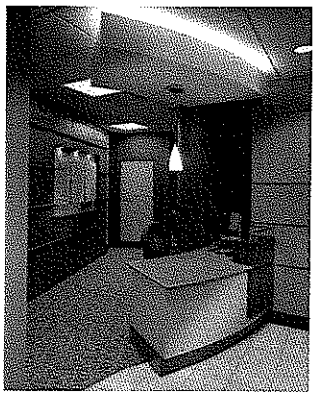
This project consists of a new 210,000 sq. ft. Hospital addition to the existing Diagnostics Building. This addition consists of a seven-story facility containing 128 general medical surgical beds, 12 ICU beds and five surgical suites. Other areas include Central Sterile, Endoscopy, Physical Medicine and Rehabilitation, Pharmacies, Lab Areas, and a second floor Kitchen and Dining area open to an Atrium at the new Main Entry Lobby. The mechanical design includes the installation of an 1,800 ton central chilled water system, a 27,000 MBTU heating water system, and a steam boiler plant located within the facility. The main plants were designed to incorporate the potential future addition of another 100 bed patient tower as well as back-feeding the existing Diagnostic Building. Multiple design strategies were used for energy efficiency including the use of variable volume flow on air, chilled water, and heating water systems. The steam boiler plant was designed with stack economizers to recover heat rejected through the boiler stacks. Multiple air handling units utilizing variable air volume terminal units with hot water reheat coils were used to maintain minimum air quantities. Plumbing systems included the design of medical gas utilities including new manifold systems, alarms, compressors, and associated piping. A secondary water service entrance and fire pump was also designed for the facility. Fuel oil systems were also designed serving steam boilers, hot water heaters, and generators, utilizing transfer pumps, day tanks, and an underground storage tank.

The electrical design includes the upgrade of the existing electrical service, installation of an emergency generator, upgrade of the fire alarm system, nurse call, and clock system. The lighting throughout is primarily 277 volt, and is an extension of the design of the existing Diagnostic Center. Accent lighting was designed in dining and serving areas. A new exterior mounted, medium voltage switchboard was designed to set up the new service arrangement. This three output switchboard backfeeds the existing Diagnostic Center, feeds two new 3000kva, 12.47kv delta to 480/277Y secondary, 3 phase, 4 wire unit substations, and has one spare for future expansion. Secondary electrical closets were set up on each floor to distribute power to branch circuits. Motor Control Centers were designed in mechanical spaces for distribution to mechanical equipment. The essential power distribution design included a new 1500kw, 480/277 volt, 3 phase, 4w diesel generator, which serves transfer switches and downstream switchboards for critical, life safety and equipment branch distribution systems. A voice type fire alarm system for a high rise building was designed, which included upgrading the existing Diagnostic Center system. A public address/paging system was designed which included multiple zones for each area for separate paging and music. An XM Radio system was designed in operating rooms, endoscopy rooms and main lobby. A wireless clock system was designed for ease of expandability and maintenance. Site design included area, canopy and pathway lighting. The Telecom Structured Cabling Design consisted of one main server room and nine telecom rooms. Connectivity between these rooms was achieved with multipair copper (voice,) singlemode and multimode fiber optic (data), and RG-11 (CATV) cable. These rooms terminated over 2000 CAT6 cables from outlets located throughout the facility.

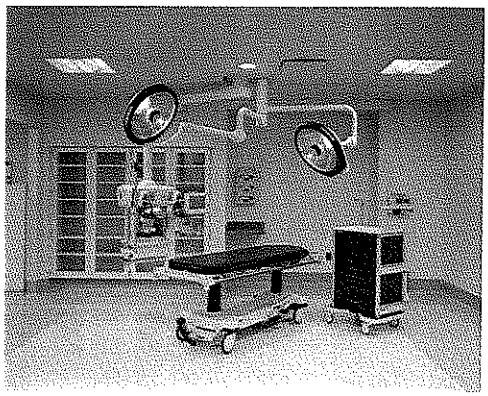
AULTMAN HOSPITAL -2010 Project



Scheeser Buckley Mayfield LLC will provide mechanical, electrical and civil design services for a new 300,000 square foot four-story medical building housing a Women's Center, Heart Center, Emergency Department, connecting to the existing Aultman Hospital. The new building will also have a helipad on its roof. Fire protection will include a fully sprinkled building. Also, included will be the design of a foam extinguishing system for the helipad. Central plumbing



equipment and systems, i.e. gas fired water heaters, water softeners, booster pumps, sewage ejectors, etc., which will be required to serve the building and will be designed and will be independent of any existing plumbing equipment and systems now serving the adjacent hospital buildings. A complete system of direct digital controls will be designed for all HVAC equipment. Interior lighting system for the subject buildings and spaces to include energy efficient lighting systems that utilize, in general, T8 fluorescent lamps and electronic ballast. Building exit signage will also be connected to the buildings emergency power distribution system. Exterior lighting system for any new walkway areas and parking lots for the new building will be designed. SBM civil design work includes relocated and reconditioning existing public 42" storm sewer system, 12" sanitary sewer system, and 12" water main system to allow for the vacation of public streets. This work included 30' deep cuts and bore and jack operations along with video inspection and dye testing of existing lines. Sliplining and removed and replaced procedures where analyzed to determine most cost effective approach.



CABELL HUNTINGTON HOSPITAL - Joan C. Edwards Comprehensive Cancer Center

This comprehensive cancer center is part of the Edwards Foundation at Marshall University. The project consists of a 50,000 sq. ft. addition situated in front of Cabell Huntington Hospital and the Joan C. Edwards School of Medicine. The building layout consists of a basement, ground and first floor along with a connector bridge to connect the addition to the existing hospital.

The building will function as a somewhat stand-alone entity on the medical center campus and therefore all parties involved prefer to have the utilities for the building separated from the existing hospital and medical school building. To this end, a new water service, gas service entrance and electrical service shall be designed for this addition.

The HVAC system for the building consists of central station air handling units located in the basement of

the facility, a modular packaged boiler heating water plant, water cooled helical screw chillers and a direct digital control system. One of the air handling units in the basement shall be dedicated to serving the egress corridors in the building. Use of an air handling unit to serve the egress corridors is a requirement particular to NFPA 90A and this requirement is strictly enforced in the state of West Virginia. Having an air handling unit dedicated strictly for egress corridors increases the degree of difficulty in duct routing in the hospital tremendously especially when there are low floor-to-floor conditions such as in this cancer hospital addition. The air distribution system consists of VAV terminals with hot water reheat coils. Perimeter areas in the building with large amounts of glazing will have a separate radiant panel heating system.

The electrical portion of the project included addition of new medium voltage switch to an existing lineup to serve a new unit substation located at the cancer center. This unit substation provides 480V throughout the multiple floors as well as feeding the normal power to the three emergency power branches (life safety, critical, and equipment) via use of multiple transfer switches. Existing hospital emergency power distribution was extended to serve the cancer center. Also included in the design was a stairtower that connected the existing hospital to the cancer center. Multiple specialized medical equipment areas were designed including two linear accelerators, PET scan, CT scan, CT simulator as well as public, private, and pediatric infusion areas. A new atrium was built between the existing hospital and the cancer center and the existing servery and dining areas were also renovated as part of the project.

THOMAS MEMORIAL HOSPITAL – Clinical Pavillion

The new Clinical Pavilion at Thomas Memorial Hospital consists of a six-story, 160,000 sq.ft. of new construction and approximately 14,000 sq.ft. of renovation. General scope of new construction included: Three new surgeries and provisions for a fourth future surgery; full service kitchen and dining area; central sterile; outpatient prep/recovery; 19-bed OB unit; the top three floor contained 32 private patient rooms per floor with each floor being equipped with two negative pressure isolation rooms. General scope of renovation consisted of converting an existing surgery waiting area to a new 18-bed P.A.C.U unit. The mechanical design included expansion of the existing steam boiler plant and extension of the existing steam and condensate system from the existing boiler plant to the new addition; new high pressure, variable volume air handling systems with steam to water heat exchangers and variable volume terminal units for individual temperature control; new variable flow chilled water plant consisting of two 450 ton centrifugal water chillers and state of the fiberglass reinforced plastic cooling towers. Both the new chiller and cooling towers were interconnected to the existing chiller and tower piping to provide for a mean of redundancy. New local direct digital control systems for major HVAC equipment; new central medical vacuum and air systems. Modification and extension of the domestic water system extension of the existing fire protection system with standpipes and full automatic sprinkler project was designed.

SHELLEY
METZ
BAUMANN
HAWK

STRUCTURAL ENGINEERING

Shelley Metz Baumann Hawk, Inc. specializes in providing structural engineering services for architects, contractors and building owners. Our commitment to providing quality service since 1972 has resulted in exceptional experience with all project types including:

- Educational
- Institutional
- Residential
- Commercial
- Recreational
- Industrial & Distribution Centers
- Healthcare
- Public Projects

As a full service structural engineering firm Shelley Metz Baumann Hawk, Inc. provides the following services:

- Design and documentation of building projects including new construction and renovations
- Assessment and Analysis of existing structural systems
- Failure Analysis and Investigations
- Expert Witness Testimony
- Foundation Systems
- Feasibility Studies
- Code Analysis

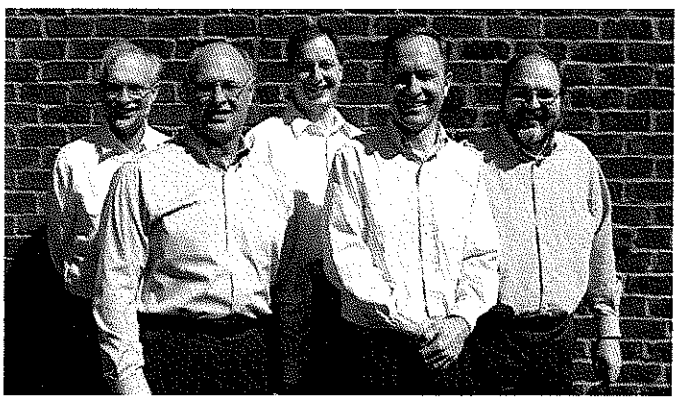
The firm and individual staff members are committed to providing service of the highest quality. The key to success of any project is balancing design, functionality and costs. We work closely with our clients to ensure that the structural design compliments each building.

Our staff of 28 includes, 12 registered engineers, 6 design engineers, 6 CAD specialists, 3 administrative assistants and 1 Director of Business Development. Two of our engineers are **LEED Accredited Professionals**.

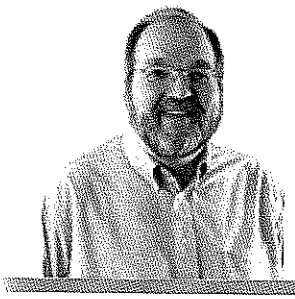
The leadership team of **Shelley Metz Baumann Hawk, Inc.** has over 185 years of combined experience in structural design.

Shelley Metz Baumann Hawk, Inc. enjoys the challenge of developing creative structural engineering solutions.

We listen to our clients.



1166 Dublin Road Suite 200 Columbus Ohio 43215-1038 T 614 481-9800 F 614 481-9353 www.smbhinc.com



Robert A. Baumann, PE - Vice President

Shelley Metz Baumann Hawk, Inc.

Project Responsibility: Vice President

DEGREES/REGISTRATION/EXPERIENCE

Bachelor of Science	Civil Engineering, University of Cincinnati 1980
Master of Science	Civil Engineering, University of Cincinnati 1981
Registration	West Virginia, Rhode Island, Washington, South Carolina, Oregon, Ohio, Nevada, Nebraska, Kentucky, Iowa, Georgia
Member	American Concrete Institute American Concrete Institute - Central Ohio Chapter American Council of Engineering Companies (ACEC) American Forest & Paper Association American Institute of Architects American Institute of Architects - West Virginia Chapter American Institute of Steel Construction (AISC) American Society of Civil Engineers (ASCE) St. Elizabeth Church-Finance Committee Chairman Structural Engineers Association of Ohio Tilt-Up Concrete Association

ACKGROUND EXPERIENCE

Mr. Baumann has been employed in the consulting structural engineering business since 1981. His prior office and field experience with a registered land surveyor contributes to his knowledge of the design and construction process. His work experience with a general contractor included the construction of building types built of reinforced concrete, steel, wood, masonry and precast concrete. Mr. Baumann has designed new buildings as well as additions and large renovation projects.

Mr. Baumann is experienced in the design of structures built from many types of construction materials including post tensioned concrete. His many years of experience allow him to design innovative, economical, and serviceable structures. Mr. Baumann is experienced in investigative work for adaptive reuse of existing structures. He has provided field observation during construction of many of the projects that he has designed.

ROJECT RESPONSIBILITIES

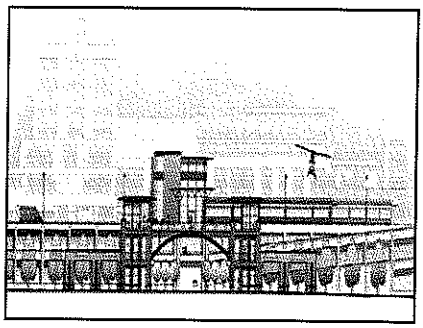
As Project Manager, Bob will be the primary point of contact for the project. He will provide design input during the conceptual and schematic design phases. Bob will lead the scheduling of the project and coordinate with the Project Engineer for the design and production of the construction documents. He will be involved with the project from beginning to end

obert A. Baumann, PE - Vice President
Shelley Metz Baumann Hawk, Inc.

REPRESENTATIVE EXPERIENCE

/heeling Tower 5 - Wheeling Hospital
/heeling, West Virginia
onstruction Cost: $40,000,000
ompletion Date: 2010

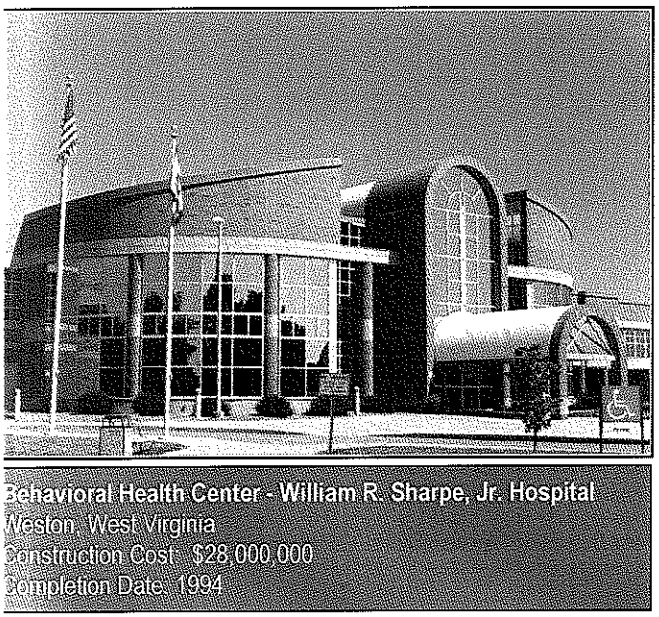
- **Behavioral Health Center**
  William R. Sharpe, Jr. Hospital
  Weston, West Virginia
  Construction Cost: $28,000,000
  Completion Date: 1994



North Expansion
Fairfield Medical Center
Lancaster, Ohio
Construction Cost: $15,000,000
Completion Date: 2004

- **Addition & Renovation - Good Samaritan Hospital**
  Ashland, Ohio
  Construction Cost: $1,500,000
  Completion Date: 2005
- **MRI & Nuclear Medicine**
  Madison County Hospital
  London, Ohio
  Construction Cost: $1,200,000
  Completion Date: 2005
- **Renovation - Doctor's Hospital North**
  Columbus, Ohio
  Construction Cost: $17,500,000
  Completion Date: 2007
- **Cancer Center**
  West Virginia University
  Morgantown, West Virginia
  Construction Cost: $16,000,000
  Completion Date: 2009
- **Emergency Department Facility**
  Mt. Carmel/Fairfield Medical Center
  Canal Winchester, Ohio
  Construction Cost: $21,000,000
  Completion Date: 2009
- **Pharmacy Upgrades**
  The Ohio State University Medical Center
  Columbus, Ohio
  Construction Cost: $4,000,000
  Completion Date: 2009

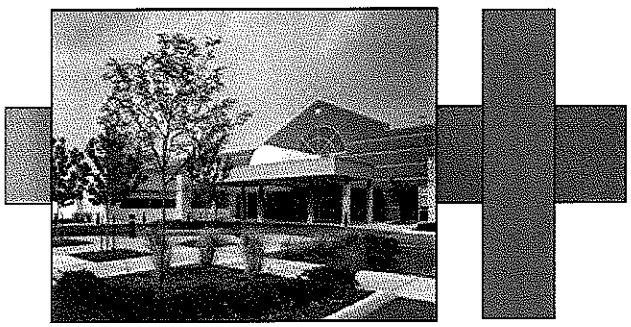
Representative Experience
Shelley Metz Baumann Hawk, Inc.



Behavioral Health Center - William R. Sharpe, Jr. Hospital
Weston, West Virginia
Construction Cost: $28,000,000
Completion Date: 1994

Equity - Mt. Carmel Medical Center
This project is a three-story, steel-framed medical office building in Westerville. The third floor features dormers that allow natural light into the space.
Columbus, Ohio
Construction Cost: $5,000,000
Completion Date: 2001

King's Daughters' Medical Center
Ashland, Kentucky
Construction Cost: $10,000,000
Completion Date: 2002



Sawmill Center for Orthopedic Excellence
Columbus, Ohio
Construction Cost: $10,000,000
Completion Date: 2002

- **Green Street Surgery Center**
  Mt. Carmel Medical Center, West
  Columbus, Ohio
  Construction Cost: $4,000,000
  Completion Date: 2003

- **Radiology Expansion**
  Mt. Carmel Medical Center, West
  Columbus, Ohio
  Construction Cost: $2,000,000
  Completion Date: 2003

- **North Expansion - Fairfield Medical Center**
  Capitalizing on 20 years of partnership with the owner and architect on additions and renovations of the Fairfield Medical Center campus, SMBH was retained for completion of the north expansion project. A distinctive space-frame canopy is used as a focal point for the entry doors. The helipad, which was originally situated at ground level and adjacent to the emergency room parking, was relocated to the roof where an adjacent elevator now provides immediate access to the emergency room. The loading docks are concealed below the lower level floor structure and provide a secure and covered environment for the off-loading of medical supplies.
  Lancaster, Ohio
  Construction Cost: $15,000,000
  Completion Date: 2004

- **ICU Medical - Surgical Renovation - Morris Hospital**
  Morris, Illinois
  Construction Cost: $2,000,000
  Completion Date: 2005

- **Pars - Brain & Spine Institute**
  Parkersburg, West Virginia
  Construction Cost: $4,000,000
  Completion Date: 2005

presentative Experience
helley Metz Baumann Hawk, Inc.

dical Office Building - Fairfield Medical Center
e Fairfield Medical Office building, which would become part of the npus at the Fairfield Medical Center (FMC), was constructed to pport the growth of the hospital and to recruit new doctors. SMBH s hired to design a steel- framed structure that was economical, gant and functional in order to attract new doctor tenants. To meet desire for an aesthetically-appealing building, the team utilized nerous windows to provide natural lighting and a spacious feeling de the building. Linked to the main facility by a connecting bridge he 600-car parking garage, this office building will be one of two kends that will form the gateway to the FMC campus.
ıcaster, Ohio
ıstruction Cost: $5,000,000
ıpletion Date: 2005

Renovation - Doctor's Hospital North
Additions and renovations converting an office building into a hospital.
Columbus, Ohio
Construction Cost: $17,500,000
Completion Date: 2007

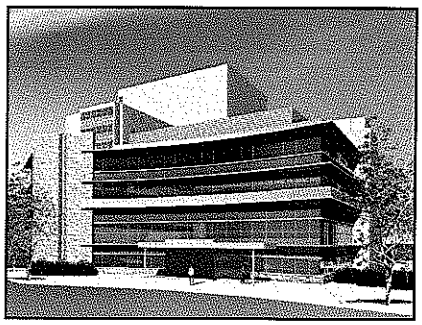
North Expansion - Morris Hospital
The North Expansion is a single-story building that will serve the Emergency and Imaging departments. The structure has been designed for future vertical expansion that will include a surgery floor and three patient floors. The expansion project connects to the existing hospital.
Morris, Illinois
Construction Cost: $25,000,000
Completion Date: 2010

- **Pharmacy Upgrades**
  The Ohio State University Medical Center
  The Pharmacy Upgrades project includes the renovation of six existing spaces in Rhodes Hall to accommodate distribution of pharmaceuticals. A feasibility study conducted by SMBH indicated that a vertical expansion above the second floor low roof was possible. The second floor area will become an interstitial mechanical room. The 7,000 square foot area at the third floor will be dedicated to chemotherapy pharmacology. This expansion will be adjacent to the new Ross Heart – Electrophysiology lab.
  Columbus, Ohio
  Construction Cost: $4,000,000
  Completion Date: 2009

- **Holzer Clinic - Jackson - Addition**
  Jackson, Ohio
  Construction Cost: $4,700,000
  Completion Date: 2008

- **ICU Renovation - Hardin Memorial Hospital**
  Kenton, Ohio
  Construction Cost: $1,500,000
  Completion Date: 2008

Cancer Center
West Virginia University



This 70,000 square foot building sits on a hillside site. The southern half is a four-story building with a basement and connects through a new atrium to the existing cancer center. The northern half connects the facility to the adjacent Learning Center. The tall narrow clerestory allows for maximum day lighting. Tunnels to the south connect mechanical systems to the adjacent Ruby Hospital and two large drop-off canopies with domed skylights allow for easy access by the patients.
Morgantown, West Virginia
Construction Cost: $16,000,000
Completion Date: 2009

epresentative Experience

helley Metz Baumann Hawk, Inc.

Zanesville Dialysis Clinic
Zanesville, Ohio
Construction Cost: $500,000
Completion Date: 2008

Electrophysiology Lab Expansion
Ross Heart Hospital
The Ohio State University
The project is a 16,000 square foot expansion to the Ross Heart Hospital. A feasibility study is ongoing to determine if one additional floor can be constructed above the existing emergency department. The project will also extend onto the 2nd floor low roof of Rhodes Hall. This project will be adjacent to and share a column line with the Rhodes Hall Pharmacy upgrades project. A connector to the next phase of the East of Cannon project will pass through these projects. Extensions of chilled water lines from Ross to Rhodes will also be included in the scope of this work.
Columbus, Ohio
Construction Cost: $7,300,000
Completion Date: 2011

Wheeling Tower 5 - Wheeling Hospital
The proposed addition is seven stories with a 20,000 square foot footprint for a total area of 140,000 square feet. An existing one-story building will be demolished to make way for the addition on the northwest corner of the existing mechanical room. The scope also includes design to accommodate a helipad on the roof and may include salvaging an existing tunnel. The preliminary construction cost is 37-million dollars for the tower and 3 million for the parking garage.
Wheeling, West Virginia
Construction Cost: $40,000,000
Completion Date: 2010

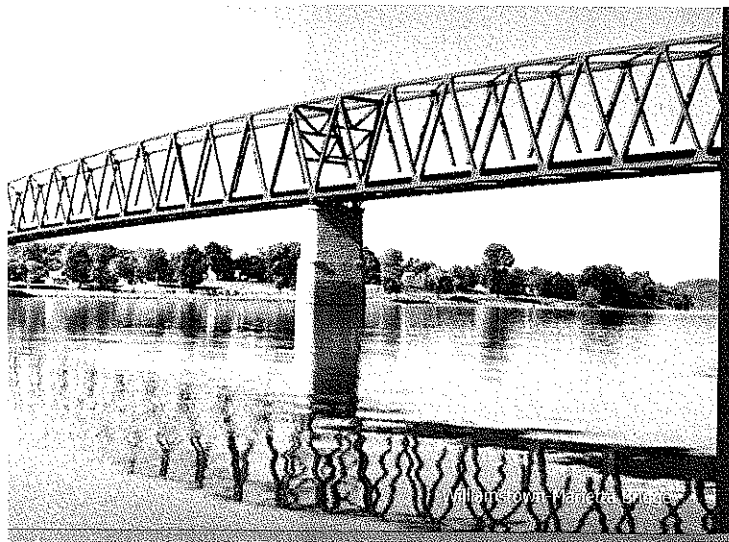
- **MRI Addition - Wheeling Hospital**
  Wheeling, West Virginia
  Construction Cost: $1,500,000
  Completion Date: 2010

- **Greene Memorial Hospital**
  Beavercreek, Ohio
  Construction Cost: $6,200,000
  Completion Date: 1999

- **St. Joseph Hospital**
  Kokomo, Indiana
  Construction Cost: $8,000,000
  Completion Date: 1999

- **Clinical Improvements**
  Veteran's Administration Hospital
  Five story precast parking garage of 360 spaces.
  Huntington, West Virginia
  Construction Cost: $47,000,000
  Completion Date: 1993

- **Nuclear Facility**
  Veteran's Administration Hospital
  Huntington, West Virginia
  Construction Cost: $6,000,000
  Completion Date: 1998



gai consultants
transforming ideas into reality

Engineering Solutions
Environmental Stewardship
Community Enhancement

GAI Consultants, Inc. - Corporate Profile
Transforming Ideas Into Reality

What We Do

GAI Consultants, Inc. delivers professional and personalized consulting in the fields of engineering, planning, environmental, and construction services. Our clients are provided exceptional value through full-service capabilities, state-of-the-art design, and talented, experienced staff.

Our primary service areas address project conception through construction, and meet the needs of our clients in five targeted market sectors.

Primary Market Sectors

Government

Maintaining our nation's infrastructure and national security are top concerns in today's government market. Whether at the federal, state, or local level, government agencies continually find themselves understaffed, overburdened, and under funded. Yet they are expected to fulfill their duties and meet the growing needs of the public whether designing flood control measures or providing environmental compliance services. GAI constantly scans and analyzes the needs of the government market sector to assist our government clients in meeting the needs of the public and in achieving their goals. We act as an extension to the governments' team of professionals. We are able to accomplish this in an efficient manner through providing the "best value" to the government by deploying our skilled professionals to perform specialized services, or by providing a full range of services.

Real Estate

The competitive world of private land development and real estate has created an ever-growing need for fast, accurate, and cost-effective information on which to base critical business decisions. We understand the importance of this information to public and private developers and, in response, provide our clients with a full range of professional services for all stages of the development life cycle – from initial concept, through planning, investigation, design, construction, commissioning, operations, and maintenance. Our goal is to present real solutions to today's most prevalent development challenges by focusing on quality service and achieving the greatest return on our clients' investment dollars.

Transportation

The need for expanded and improved transportation systems at the state and local levels is continually increasing, while federal funding is under constant pressure. This requires state and local transportation agencies to discover new and inventive ways to reduce costs and overhead, while improving efficiency. Through cooperation and innovation we are assisting our transportation clients with everything from preliminary to final design services by fostering public/private partnerships that lead to cost savings, improved quality, accommodation of peak demand, better managed risks, technology sharing, and faster project delivery. Our goal is to enter into these partnerships by assisting our transportation clients and providing them with the support and expertise necessary to meet the transportation-related infrastructure demands of thriving economies.

Energy

Meeting the demands of the ever-increasing energy consuming public, as well as the regulatory requirements of the government, presents specific challenges to the various energy utilities. To be successful, companies involved with the production and transmission of energy products must provide reliable and low cost output to survive. GAI provides expertise, guidance, and a comprehensive support system that enables our clients to make informed decisions and successfully navigate the challenges of this highly regulated and competitive market. Our goal is that through sound information and guidance on items such as coal combustion byproduct disposition and transmission line siting, we will alleviate the regulatory burden that our clients face, while providing them with the ability to remain competitive within their market.

Industry

The industrial market, as well as the industrial processing and manufacturing of various consumable goods, continues to play a vital role in the growth and stability of our national economy. Due to the effects of the global economy, industry in the United States must remain competitive through increased efficiency and tight cost-control measures. GAI fully understands the constraints faced by the industrial sector, especially the high cost of regulatory compliance with federal, state, and local mandates. Our goal is to partner with our industrial clients in an all-out effort to remain competitive by providing them with the expertise necessary, such as environmental compliance, or structural analysis, to effectively and efficiently comply with the various regulatory bodies as well as make informed and cost-effective decisions regarding their operational and infrastructure needs.

Primary Service Areas

and Development and Planning

- Site Selection and Design
- Land Use Studies, Economic Feasibility, and Site Planning
- Community and Regional Planning
- Planning and Engineering Approvals/Permitting
- Land Surveying and Construction Layout
- Code Impact Assessment and Permit Acquisition
- Facilities Planning and Infrastructure Design
- Landscape Architecture and Streetscape Design

onstruction Engineering and Inspection

- Construction Monitoring and Inspection
- Constructability Reviews
- Materials Testing
- CPM Scheduling and Reporting
- Innovative Construction Management
- Utility Construction Coordination

vironmental Engineering, iences, & Remediation

- Hydrogeologic and Hydraulic Studies and Design
- Ground-water Modeling and Monitoring
- Water and Wastewater Treatment Systems
- Flood Control and Coastal Studies
- Solid and Hazardous Waste Management Design
- Industrial Hygiene and Safety Compliance
- Environmental Impact Statements and Assessments
- Wetland Delineation, Watershed and Stream Restoration, Threatened and Endangered Species
- Gas and Electric Transmission Line Siting
- Geographic Information Systems (GIS) Mapping and Information Management

Transportation Planning and Design

- Bridge, Highway, and Roadway Design
- Bridge Inspection and Rehabilitation
- Transportation Planning and Transit Studies
- Airport Facilities Design and Reconstruction
- Traffic Studies and Traffic Control Plans
- Eminent Domain Consultation
- Public and Private Agency Coordination
- NEPA / Section 4f Studies / Section 106 Studies

Geotechnical and Structural Engineering

- Dam Rehabilitation and Design
- Transmission Line Design
- Geologic Studies and Subsurface Explorations
- Subsidence Studies and Remediation
- Mining Engineering and Mine Fire Abatement
- Vibration, Seismic, and Structural Reliability Studies
- Slope Stabilization Analysis and Design
- Foundation Research and Design
- Earth and Rock Retaining Structure Design
- Structural Rehabilitation

Cultural Resources and Historic Preservation

- Historic Architectural Surveys and Context Studies
- Comprehensive Historic Preservation Plans
- Geographic Information Systems Predictive Modeling
- Prehistoric, Historical and Urban Archaeology
- Phase I, II, and III Surveys and Mitigation
- Public Outreach Programs
- Geomorphology, Pedology, and Soils Surveys
- National Register Inventories and Evaluations

Our Clients. We take great pride in serving both public and private sector clients with whom we have developed long-term relationships. These include public utilities, transportation departments, federal, state and local governments, private developers, and private corporations.

Our People. Our employee-owned firm consists of a team of more than 450 highly dedicated and talented engineers, scientists, planners, environmental specialists, construction specialists, and support staff that are known for their solid professional reputations, and personalized quality service.

Our Ideals. Built on 45 years of a strong vision and mission, GAI's ethics, principles, and core values guide us and our work. We are committed to the success of our clients and our employees. Quality, respect, innovation, and teamwork are the values that drive our company.

Our Work. Simply put, we are in this business to deliver successful projects to our clients, and to help them exceed the expectations of the communities that they serve.

.I Consultants, Inc.
arleston Office
) Summers Street, 3rd floor
arleston, WV 25301
4.926.8100

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com or call 304.926.8100.

David Gilmore, RLA, CLARB

Land Development Services Manager; Landscape Architecture Services Manager

Education

BSLA, College of Agriculture & Forestry, 1988 West Virginia University

Professional Affiliations

American Society of Landscape Architects, ASLA
WV Chapter of American Society of Landscape Architects
Council of Landscape Architectural Review Board, CLARB

Professional Development

WVASLA State Licensing Board Member, 2003-2006
Past President, WVASLA
Executive Committee Member, WVASLA
Chairman, WVASLA Licensing and Sunset Review Committee
Judge, Senior Design Awards, West Virginia University

Registrations

Council of Landscape Architectural Registration Board Certified
West Virginia Professional Landscape Architect: No. 247
Indiana Professional Landscape Architect: No. LA 20700137
Pennsylvania Professional Landscape Architect: No. LA 002737
Ohio Professional Landscape Architect: No.0801200
Kentucky Professional Landscape Architect: No. 768

Awards

- Merit Award (WVASLA): 'Hyper' Employee Plaza, Main Entrance Improvements
  Client: Dupont Company
- Merit Award (WVASLA): Florida Street Revitalization Master Plan
  Client: West Side Neighborhood Association

Professional Experience

Mr. Gilmore has 19 years of experience on a diverse range of projects encompassing all aspects of landscape architectural design in both the public and private sector. Experience includes, but is not limited to: project and office management, construction document and technical specification preparation, site analysis, schematic design, construction administration, master & land-use planning (resort, parks, recreational, residential, industrial, commercial), streetscape and municipality improvements, landscape and hardscape design, graphic presentation drawing.

Streetscape / Urban Revitalization:

- Pennsylvania Street, Carmel Indiana
- St. Albans Master Plan, St. Albans, WV.
- St Albans Phase I Construction Drainage
- St. Albans Phase II Construction Drainage
- Pennsylvania Avenue Gateway, Charleston, WV
- Florida Street Revitalization Master Plan, Charleston, WV.
- Williamson Master Plan, Williamson, WV.
- MacCorkle Avenue Greenspace Improvements, Kanawha City, WV.
- Kanawha Valley Rapid Transit Shelter/Plaza Design

David Gilmore, ASLA, CLARB

Land Development Services Manager; Landscape Architecture Services Manager

Parks & Recreation:

- Stonewall Jackson State Park Masterplan, Roanoke, West Virginia
- Twin Falls State Park, Twin Falls, West Virginia
- Dow Heritage Park, Charleston, West Virginia
- Charleston Area Medical Center General Division Employee Park, Charleston, West Virginia
- Dupont 'Hyper' Plaza, Belle, West Virginia
- Ohio to Erie Trail, Multiple Counties, Ohio
- Coonskin Park , Charleston, West Virginia
- Veterans Memorial Park, Waterloo, Indiana

Hospitals / Institutional / Campus Planning:

- Dow South Charleston Plant
- Beckley Federal Courthouse Security Upgrades
- Charleston Area Medical Center Memorial Park
- King's Daughters Medical Center
- WVU Gateway Study
- Town of Fayetteville Cemetery Master plan
- Trinity Lutheran Church Columbarium Master Plan
- First Presbyterian Church Columbarium Master Plan
- Yeager Airport Master Plan
- The Church of Jesus Christ of Latter-Day Saints, Multiple Projects
- Marshall University Dormitory / Alumni Center
- West Virginia University Dormitory, Evansdale Campus
- West Virginia University Dormitory, Downtown Campus
- Potomac State Dormitory
- West Virginia State Student Housing, Institute, West Virginia

Development / Site Planning:

- Cheat Landing Office Park, Morgantown, West Virginia
- The Villages at Cheat Landing, Morgantown, West Virginia
- The Pines Country Club, Morgantown, West Virginia
- Stonegate at Cranberry, Cranberry Township, Pennsylvania
- Chesapeake Energy Regional Headquarters, Charleston, West Virginia
- Chesapeake Energy Field Office, Jane Lew, West Virginia
- Chesapeake Energy Field Office, Mount Morris, Pennsylvania
- Chesapeake Energy Field Office, Honey Branch, Kentucky
- Ridge Run @ North Camp, Wisp Ski Resort, Deep Creek Maryland
- Cambridge Place Office Park, Bridgeport, West Virginia
- Stonewall Jackson State Park Masterplan, Roanoke, West Virginia
- Land-use Study / Development Alternatives, Aspen Corporation, Lewisburg, West Virginia
- Commerce Park Mixed-use Development Masterplan, Huntington, West Virginia
- Fort Boreman Mixed-use Development Masterplan, Parkersburg, West Virginia
- Wilkerson Dental Office, Charleston, West Virginia
- Ocean Isle Beach Resort Masterplan, Ocean Isle, South Carolina
- 5/3 Bank, Cross Lanes, WV.
- Banc One, Teays Valley WV

Residential Planning & Landscape Design:

- < 500 Projects

James A. Hemme, P.E., L.R.S.

Senior Project Manager

Education

B.S. Civil Engineering, 1989 West Virginia University Institute of Technology
Marshall University Graduate College, Environmental Engineering Coursework

Registrations/Certifications

West Virginia Professional Engineer No. 12195
Kentucky Professional Engineer No. 25437
Ohio Professional Engineer No. 72851
Indiana Professional Engineer No. 10809277
Pennsylvania Professional Engineer No. 75494
New York Professional Engineer No. 85794
West Virginia Licensed Remediation Specialist No. 003

Relevant Training/Courses

OSHA 40 hour Hazwopper Training
NICET 1 Geosynthetics Installation Inspection (expired)
Nuclear Density Gage Training, DOT and NRC (expired)
MSHA Safety Training (expired)

Summary

Mr. Hemme specializes in site engineering, including planning, permitting and stormwater management, with emphasis on parks and recreation areas and streetscapes. He brings a multi-disciplinary background to projects and this enables him to see the "big picture" of what will be needed to take a project from start to finish. Mr. Hemme is also competent in geotechnical engineering, environmental disciplines including NEPA compliance, and transportation services. He has worked extensively with private developers, architects, municipalities and government agencies.

Mr. Hemme has worked on landfills, quarries, mines, industrial, and commercial sites and facilities. He has performed numerous Phase 1 Environmental Site Assessments (ESAs) providing solid waste, industrial waste, and Erosion and Sediment (E&S) control permitting. Mr. Hemme designs storm water management systems, site developments ranging from 1 acre to over 60 acres in size, and wetland mitigation areas. He prepares geotechnical reports, flood plain modeling, highway and roadway designs, right-of-way plans, detailed construction plans, and cost estimates for projects ranging from $10,000 to over $2 million in construction cost.

Mr. Hemme volunteered his time and knowledge to assist with preparation of the Greater Charleston Greenway Initiative by the West Virginia Land Trust Company in Charleston, West Virginia. He authored the analysis section of the report and peer-reviewed the entire document. Mr. Hemme is a current volunteer with the Riverside South Committee, which is working with the Charleston Land Trust to beautify and possibly promote pedestrian access on the south side of the Kanawha River. He has developed schematic plans and reviewed narratives for inclusion into several progress updates to the Land Trust.

Professional Experience

Civil Engineering and Permitting

- Site Design for over 100 different projects throughout West Virginia, Ohio, Kentucky and Pennsylvania. NEPA compliance for wetlands, streams, cultural resources, and endangered species. Phase 1 Environmental Site Assessments for a wide range of facilities.

- Designed over 50 stormwater management systems including run-on and run-off control utilizing ditches, berms, sumps, sediment ditches, storm sewers, culverts, drop structures, ponds, energy dissipaters, etc. Work included technical specifications, cross sections, profiles, site grading detail development and hydrologic and hydraulic modeling.
- Developed detailed designs for over 100 different ponds at multiple sites throughout West Virginia and other states, including sediment ponds, treatment ponds, leachate storage ponds, and stormwater detention ponds. Work included hydrologic and hydraulic routing calculations, volume estimates, embankment design, treatment efficiency, dewatering calculations, etc.
- Prepared over 50 detailed Erosion and Sediment (E&S) control plans for various sites throughout West Virginia, including coal mines, quarries, highways, landfills and site developments. Work included technical specifications, re-vegetation plans, temporary control details and sequencing plans.
- Prepared numerous National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit Applications for sites throughout West Virginia and Ohio.
- Prepared a complete set of construction plans and specifications consisting of a detailed grading plan, a storm sewer system consisting of 34 drop inlets and over 3,800 feet of piping, and parking lot layout.
- West Virginia State College. Design of a revised stormwater system around the student union to help alleviate basement flooding issues.
- Town of Buffalo. Phase I storm sewer design and construction administration for over 2,000 ft. of storm sewer with discharge to the Kanawha River, that included permitting work with the Corps of Engineers.
- Analyzed various culvert scenarios consisting of modeling existing culverts and potential new corrugated metal pipe, steel pipe, concrete pipe and concrete box culverts to prevent upstream flooding from fill placement for Marietta Industrial Enterprises, Parkersburg, West Virginia.
- Designed an extensive stormwater management system consisting of several thousand feet of ditch and storm sewers, and two sediment ponds designed to limit inflow to pre-existing conditions for the 2-, 10-, 50-, and 100-year storm events for Hanover County Sanitary Landfill, Virginia.
- Melinda Street Stormwater Improvements. Underground stormwater detention system and storm sewer improvements design for the City of Parkersburg, West Virginia.

Site Development and Planning

- Coldwater Creek Distribution Center in Parkersburg, West Virginia. Wetland mitigation for a 7.5-acre area that required a detailed planting plan, pavement design and an engineers' cost estimate.
- Ft. Boreman Development in Parkersburg, West Virginia. Utility master planning, site preparation, roadway design, permitting, and stormwater management for the proposed 170-acre Fort Boreman mixed-used development near Martown Road interchange off U.S. Route 50 in Parkersburg.
- Chesapeake Energy Regional Headquarters in Charleston, West Virginia (LEED Project). Chesapeake Energy Field Offices in Jane Lew, West Virginia; Mount Morris, Pennsylvania; and Honey Branch, Kentucky.
- The Pines Country Club in Morgantown, West Virginia
- Dow Chemical South Charleston Plant Entrance, Parking and Pedestrian Improvements in West Virginia
- Tamarack Phase 2 Expansion in Beckley, West Virginia
- Morgan County Courthouse Replacement in Berkeley Springs, West Virginia. Greenbrier County Courthouse Annex and Expansion in Lewisburg, West Virginia
- Marshall University Clinical Outreach and Education Center, Huntington, West Virginia
- Cheat Landing Office Park in Morgantown, West Virginia. The Villages at Cheat Landing in Morgantown, West Virginia
- Almost Heaven Habitat for Humanity, South Fork Crossing Subdivision, Pendleton County, West Virginia.
- Stonegate at Cranberry Development in Cranberry Township, Pennsylvania.

Parks and Recreation Areas

- April Dawn Sprayground and Park in Huntington, West Virginia. Lead Engineer for the continued development of the park consisting of an in-ground computer controlled fountain covered by suspended concrete pavers, a unique "Teays Valley Monster" concrete dragon over 8'-tall integrated into the design with slide and cool steam nostrils and a special soft surface design. The project won awards from the West Virginia Sections of the American Society of Landscape Architects and the American Consulting Engineers Council.
- Rotary Park Improvements Project in Huntington, West Virginia. Lead Engineer responsible for new parking areas, unique picnic shelter, utilities, and a new entrance that blended with existing facilities.
- Reviewed multiple playground components for compliance with the "Handbook for Public Playground Safety" published by the U.S. Consumer Product Safety Commission.
- Assisted with designing ballfields, park facilities, and a large parking lot incorporating Bio-Retention/Treatment swales for treatment of stormwater in Stark County, Ohio.
- Golf Club House and Lodge Site Development at Stonewall Jackson State Park in West Virginia. Project Manager for infrastructure including site design of the 100+-room lodge, parking, sewage lift station, extensive landscaping, and all aspects of construction administration.
- Cedar Creek State Park Camp Ground Expansion, Glenville, West Virginia. Dow Heritage Park in Charleston, West Virginia. Fort Boreman Historic Park in Parkersburg, West Virginia.
- Dupont 'Hyper' Plaza in Belle, West Virginia.

Streetscape and Trails

- Kanawha Trestle and Rail Trail Master Plan. Project Manager and Lead Engineer responsible for development. The plan covered the existing CSX trestle crossing the Kanawha River in Charleston and approximately 2 miles of Norfolk and Southern rail corridor through the West Side of Charleston.
- Project Manager or Design Engineer on multiple streetscape projects throughout West Virginia including Phase 1 Florida Street Streetscape, and Washington Street East Phase 2 and Pennsylvania Avenue streetscapes in Charleston, West Virginia.
- North Bend Rail Trail. Prepared construction documents to repair flood damage to almost 50 miles of trail.
- Florida Street Master Plan for the City of Charleston, West Side Neighborhood Association
- City of Richwood, West Virginia Streetscape Master Plan and Phase 1 Construction
- City of Charleston East End Design Cheret and "Think Tank" Design Cheret

Solid Waste Management and Engineering

- Design and permitting for 50 different solid waste facilities in West Virginia, Virginia, and Ohio.
- Berkeley County Solid Waste Authority. Siting Study regarding suitability of property.
- North Fork Landfill. 50-acre landfill over previously deep mined area.
- Nicholas County Landfill. Small rural landfill expansion with special steep slope design.
- Disposal Service Landfill. Unique multi-stage expansion of a landfill including steep slope design.
- Boone County Commission. Permitting of various solid waste transfer stations.
- Page County, Virginia comprehensive countywide search for a regional landfill
- Anker Energy Conceptual Study to determine feasibility of fly ash disposal facility
- Elkem Metals fly ash landfill utilizing a geosynthetic clay liner and special slope design

Waste Water and Potable Water Design

- National Radio Astronomy Observatory. Designed unique, non-mechanical, award-winning treatment system that uses no electricity and treats the entire campus wastewater load.
- Manufactured Housing Development Waterline Replacement. Designed over 5 miles of water line within an existing 1000+-unit manufactured housing development.
- Huttonsville Correctional Facility. Provided retrofit design for temperature, grease and trash issues.

- Anthony Correctional Center. Designed package water treatment plant for correctional facility.
- St. Mary's Correctional Facility. Retrofit design to address trash and grease issues.
- Pocahontas County Landfill. Modular trickling sand filters with aeration pond and polishing wetland.
- Multiple Landfills. Pre-treatment system design to remove high BOD levels prior to WWTP.
- Storage Tank Design. Multiple bolted or welded steel tanks primarily for leachate storage.

Abandoned Mine Land (AML) Reclamation and Acid Mine Drainage (AMD)Treatment

- Richard Mine Acid Mine Drainage. Treatment Alternatives Report, Monongalia County, West Virginia.
- Richard Mine Flow Monitoring Study. Design, installation, full time flow monitoring and reporting for a 1 year period on drainage from a substantial AMD discharge.
- East Branch Raccoon Creek Acid Mine Drainage (AMD) Treatment Design for the Ohio Department of Natural Resources.
- Vens Run Landslide Reclamation No. 2 Design and Permitting in Harrison County, West Virginia.
- Whites Run Reclamation Permitting in Randolph County, West Virginia.

Project Awards

National Radio Astronomy Observatory (NRAO) Wastewater Treatment Plant Design, West Virginia ACEC Gold Award, Project Manager

Florida Street Streetscape Masterplan, WV ASLA Honor Award, Senior Engineer

Dupont Hyper Plaza Design, WV ASLA Honor Award, Senior Engineer

Kanawha Trestle Rail Trail Masterplan, WV ASLA Merit Award and WV ACEC Silver Award, Project Manager

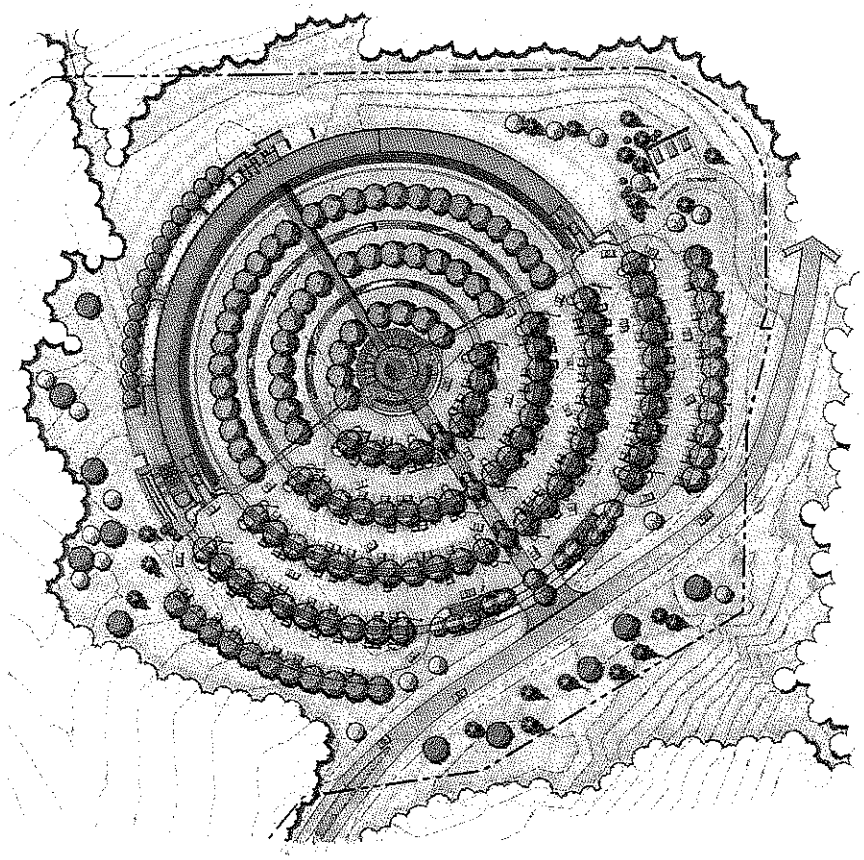
April Dawn Park Sprayground "Teays Valley Monster," WV ASLA Honor Award and WV ACEC Gold Award, Senior Engineer

Coldwater Creek Distribution Center Site Preparation, WV ACEC Gold Award, Project Manager

Land Development
Landscape Architecture and Engineering

gai consultants
transforming ideas into reality®

Chesapeake Energy Eastern Division Headquarters
Charleston, West Virginia



GAI Project Manager:
David Gilmore, ASLA, CLARB

Project Team:
GAI Consultants, Inc. (Prime)

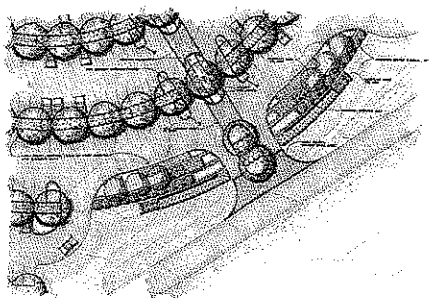
Client:
Elliott + Associates Architects

Client Contact:
Bill Yen
405.232.9554

Project Cost:
$35 Million

Completion Date:
2009

#E070497



Brief Project Description

GAI Consultants, Inc. (GAI) was contracted by Elliott and Associates Architects to provide site design services for Chesapeake Energy's Regional Headquarters. The project included preliminary site layout, coordination of subsidence investigation, grading, storm water, utilities, landscaping, and signage. Also included in the project tasks was obtaining permitting through West Virginia Department of Environmental Protection and Army Corp of Engineers. In addition to the permitting, the building and site were designed using the LEED (Leadership in Energy and Environmental Design) rating system to attain a silver or gold designation. The site LEED elements included capturing rainwater for reuse to supplement the site irrigation system, and minimizing site footprint. The site supports a 4-story 121,000-square-foot building that contains 366 offices, an employee cafeteria, and a 6,500-square-foot fitness center.

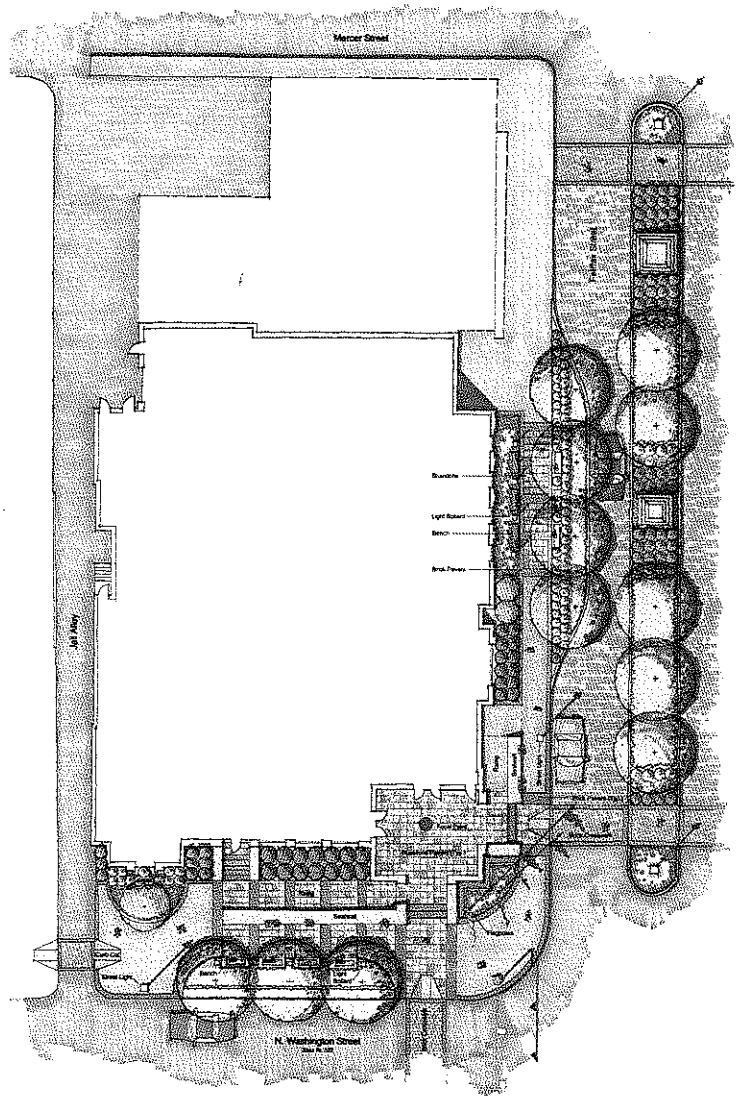
Work Tasks/Services

- Preliminary site layout
- Coordination of subsidence reports
- Grading
- Storm water design
- Coordination of lighting and irrigation design
- Utility design
- Landscaping/signage design
- Permitting (WVDEP, Corps of Engineers)
- Assist in LEED requirements

Land Development
Landscape Architecture and Engineering

gai consultants
transforming ideas into reality®

Morgan County Courthouse
Morgan County, West Virginia



GAI Project Manager:
David Gilmore, ASLA, CLARB

Project Team:
Silling Associates Architects (Prime)
GAI Consultants, Inc. (Subconsultant)

Client:
Morgan County

Client Contact:
Tom Potts, AIA
304.346.0565

Project Cost:
$12 Million

Completion Date:
2009

#E080211

Brief Project Description

GAI Consultants, Inc. (GAI) was contracted by Silling Associates Architects to provide site design services for the new Morgan County Courthouse located in historic Berkeley Springs, West Virginia. The project included preliminary site master planning, utility design, grading, and site drainage. Also, included in the tasks was coordination of site design with a streetscape plan that had been initiated prior to the start of GAI's site design. The site supports a three story, 13,415-square-foot courthouse building that will support many of Morgan County's judicial offices including Magistrate Court, Family Law Court, and Circuit Court.

Work Tasks/Services

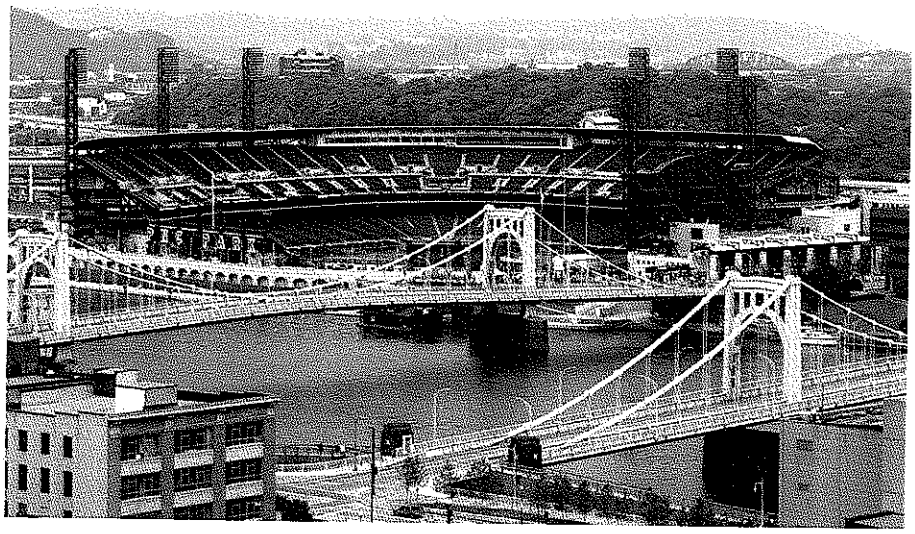
- Preliminary master planning and design
- Coordination of utilities
- Utility design
- Grading
- Site drainage
- Landscaping/site amenities
- Coordination of design with local streetscape committee

For more information on GAI Consultants, Inc., please visit www.gaiconsultants.com.

Land Development
Site Development Services

gai consultants
transforming ideas into reality

PNC Park Baseball Stadium
Pittsburgh, Pennsylvania



Brief Project Description

Involvement in the 39,000-seat PNC Park project by GAI Consultants, Inc. (GAI) began with the demolition of the old North Side neighborhood, required to make way for the project, and continued throughout construction. GAI determined detour routes, relocated public utilities, and obtained all necessary permits, including the NPDES Permit for industrial discharge and Joint 105/404 Permit for construction.

During the design development phase, GAI provided site and utilities engineering design of the River Bulkhead Wall, the Sewage Facilities Planning Module, conducted a flood risk assessment including hydrological and hydrogeological studies, coordinated all field surveying activities with the project surveyor, and designed a reliable and cost-effective 1,110-foot-long anchored sheet pile wall to support an attractive riverwalk area between the baseball park and the Allegheny River. The curved alignment of the wall increased design and construction complexity. The tieback system consisted of 142 inclined soil anchors at 8-foot intervals, each with a 42-ton capacity and embedded 51 feet into the soil.

Similar services were provided by GAI during the final design phase, including design modifications to two existing ALCOSAN diversion chambers to accommodate the construction of the new ballpark, and design of the underdrain system and flood control vault.

GAI monitored construction of the Allegheny River bulkhead wall and the abandonment of the existing 120-inch diameter canal sewer through the site.

GAI Project Manager:
Anthony F. Morrocco, P.E.

Project Team:
GAI Consultants, Inc. (Prime)
L.D. Astorino & Associates, Ltd. (Subconsultant)

Client:
Hellmuth, Obata & Kassabaum, Inc. (Site Planning)
L. D. Astorino & Associates, Ltd. (Final Design)
Pittsburgh Pirates (Bulkhead Wall)

Client Contact:
Robert L. Watson (HOK)
816.221.1576
Dennis Astorino (LDA)
816.221.1576

Completion Date:
2001

#C980426 (HOK) #C980491 (LDA)
#C990244 (Pittsburgh Pirates)

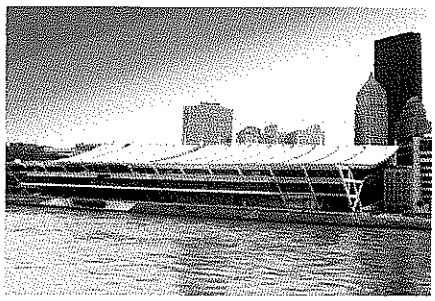
Work Tasks/Services

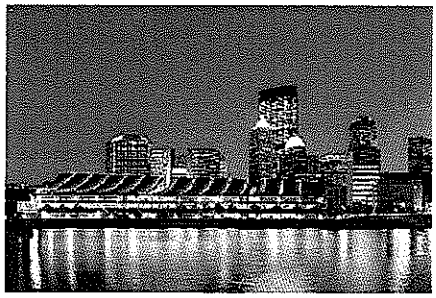
- Civil site layout
- Flood risk assessment
- Hydrologic and hydraulic studies
- Utility design
- Site design and grading
- Permitting
- Hydrogeologic investigations
- Flood control system
- Coordination with regulatory agencies
- NPDES Permit for industrial discharge
- Complex wall and tieback system design and construction
- Anchor load test monitoring
- Sheet pile wall and anchor construction monitoring

Land Development
Utility Design Services

gai consultants
transforming ideas into reality

David L. Lawrence Convention Center
City of Pittsburgh, Pennsylvania





GAI Project Manager:
Anthony F. Morrocco, P.E.

Project Team:
GAI Consultants, Inc. (Prime)

Client:
DMJM Harris

Client Contact:
John S. Prizner
412.395.8888

Completion Date:
2002

#C990327

Brief Project Description

GAI Consultants, Inc. (GAI) created the site plan utility design for a water supply to the new David L. Lawrence Convention Center (Expansion), to include permit and design of new separate storm and sanitary sewers for the new building and streetscape.

The Fort Duquesne Boulevard roadway infrastructure project at the David L. Lawrence Convention Center required special designs and details with respect to vaults and utility conflicts with proposed water lines, sewer lines, and appurtenances for a new convention center.

Work Tasks/Services

- Civil Engineering and Permitting
- Project management
- Field survey
- Erosion control plans
- Permitting
- Permits processing
- Hydraulic river modeling
- Storm and Sanitary Sewers
  - Utility and water supply design
  - Storm and sanitary sewer separation
  - Erosion and sediment control
  - River wall penetration design
  - Environmental permitting
  - Hydrologic and hydraulic investigations
- Roadway Improvements
  - Preliminary Erosion and Sediment Control Plans and permits
  - Separate water distribution system replacement plan and profile
  - Structural and hydraulic analysis of existing sewer system

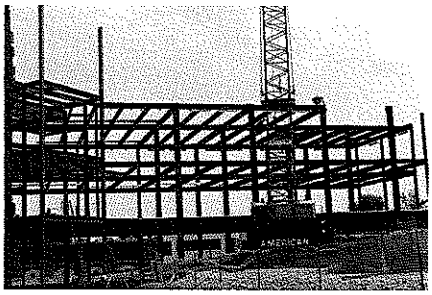
Value Added Innovations

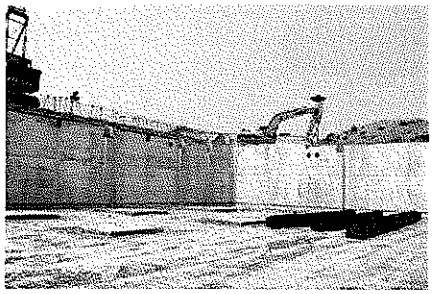
Design and permits for separate sewers reduced combined sewer overflows to the Allegheny River.

Construction Engineering & Inspection
Construction Materials Testing & Inspection

gai consultants
transforming ideas into reality

Villanova University College of Nursing
Chester County, Pennsylvania





GAI Project Manager:
John M. Branyan, P.E.

Project Team:
Valley Forge Laboratories (Prime)

Client:
Villanova University

Client Contact:
Ann Barrow McKenzie
610.519.6000

Completion Date:
2008

F070358

Brief Project Description

Valley Forge Laboratories, Inc. (VFL), a part of GAI Consultants, Inc. (GAI), provided construction engineering and inspection services for Villanova University's $32-million, state-of-the-art nursing eductation facility. The facility was designed to support the education of the next generation of nurses, committed to nursing education as part of Villanova University's institutional and social mission.

The 75,500-square-foot building includes a 200-seat auditorium and a 200-seat lecture hall; seminar rooms and classrooms; future-oriented clinical simulation labs for health assessment, adult health, maternal/child health, anesthesia, and critical care; simulation labs for "standardized patient" observation and testing; a center for nursing research and scholarship; a reading room that also houses Nursing's historical collection; space for prayer and reflection; space for global health studies; space for international student activities; spaces for student, faculty and alumni events and social interaction; office space for faculty work, student organizations and administrative support; and a courtyard.

Work Tasks/Services

- VFL provided the following on site and laboratory inspection and testing:
  - Soils (foundation and structural fill)
  - Cast-in-place Portland cement concrete
  - Reinforcing steel
  - Masonry
  - Spray fire-resistant material
  - Structural steel/welded connections

Lasting Benefits

The College, a National League for Nursing Center of Excellence in Nursing Education, enjoys a worldwide reputation for its superior programs and graduates. This new building will support its initiatives including student learning in technology-driven clinical simulation labs and enhance an environment for teaching and scholarship. It will provide an atmosphere that stimulates advancing the future of nursing. Additionally, this environmentally friendly building will provide space for University events.