



Finance and Administration Committee
March 22, 2022

Action Item - Approval of Designer Selection

FAC – 2 Jackson Library Addition and Renovation

Background Information

The Jackson Library opened in 1950, with the tower addition in 1973 and minimal updates since. The current facility is not reflective of the evolving definition of a modern-day library: a dynamic, technology-rich learning environment and intellectual community hub. Growth in enrollment, new academic programs, and library support activities have generated a need to increase programmatic space and make it critical to renovate the existing areas. The planned revitalization will innovatively and strategically support the University's institutional mission while enhancing and strengthening the library's connection to the heart of UNC Greensboro's main campus.

Jackson Library's addition and renovation project scope will consist of a comprehensive, transformative renovation to the existing building and new addition. This project will update the existing mechanical, electrical, plumbing, life safety, and audiovisual systems. ADA issues and an IT Core Distribution Facility issue will also be addressed. Located on the bustling hub that is the physical center of campus, the project is envisioned as a complex, phased construction of an occupied building. As such, implementation will require meticulous and proactive planning. The project will integrate high technology group studies, central convening spaces, and increased capacity for use by individual students. It is envisioned as a nexus of student academic success and transformative research resources. The library is considered the core of the University's intellectual space, fostering learning, knowledge creation, and community.

The University of North Carolina System website advertised the request for qualifications and letters of interest for design services for this project. Fifteen (15) firms submitted letters of interest, none from Guilford County.

The Designer Pre-Selection Committee reviewed the letters of interest and invited four (4) firms to an interview on March 16, 2022, to present their qualifications and recommend the following in ranking order.

1. LS3P, Raleigh, NC
2. Moseley Architects, Raleigh, NC
3. Jenkins Peer Architects, Charlotte, NC
4. Hanbury Evans Wright Vlattas + Company, Raleigh, NC

The firm, LS3P, is recommended as the Designer for the following reasons:

1. LS3P's presentation had the most significant alignment with the University's vision. LS3P most successfully addressed the primary aspects of the project with their design concepts, application of university design principles, and focus on student success.
2. They most effectively demonstrated risk mitigation strategies in all project phases.
3. LS3P assembled a design team, all with offices in North Carolina. They demonstrated an exceptional understanding of UNC Greensboro, The North Carolina State Construction Office, and the unique challenges of this project.

Requested Action

Based on the above information, that the Board of Trustees of the University of North Carolina at Greensboro approve the firm of LS3P. If agreeable terms cannot be met with LS3P, the Board authorizes the administration to negotiate terms with the other firms in ranking order.

Attachment:

LS3P Letter of Interest (see below)



Robert J. Shea, Jr.
Vice Chancellor for Finance *and*
Administration



RESPONSE TO REQUEST FOR QUALIFICATIONS

UNC GREENSBORO

JACKSON LIBRARY ADDITION & RENOVATION

02.02.2022

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01 INFORMATION SHEET

Tab 1



Davidson College, E. Craig Wall Academic Center | Shepley Bulfinch



Information Sheet

Firm Name

HUB Certified
 If HUB, Specify Type
 Female
 American Indian
 Hispanic
 Socially & Economically Disadvantaged
 Disabled
 Asian-American
 Black

Point of Contact E-mail Address

Street Address

City State Zip Code County

Phone # Fax #

Type of Firm (e.g. Architectural, Civil Engineering, Surveying, Etc)

Consulting Firms

| | | | | | |
|-----------------------|---|--|------------------|--|---------------------------------------|
| Architectural: | <input type="text" value="Shepley Bulfinch (WBE Nationally)"/> | <input type="checkbox"/> Check If HUB | Mechanical: | <input type="text" value="Affiliated Engineers"/> | <input type="checkbox"/> Check If HUB |
| Electrical: | <input type="text" value="Affiliated Engineers"/> | <input type="checkbox"/> Check If HUB | Plumbing: | <input type="text" value="Affiliated Engineers"/> | <input type="checkbox"/> Check If HUB |
| Structural: | <input type="text" value="SKA Consulting Eng. (SBE Nationally)"/> | <input type="checkbox"/> Check If HUB | Civil: | <input type="text" value="Timmons Group"/> | <input type="checkbox"/> Check If HUB |
| Landscape: | <input type="text" value="Stewart (MBE +HUB)"/> | <input checked="" type="checkbox"/> Check If HUB | Interior Design: | <input type="text" value="Shepley Bulfinch (WBE Nationally)"/> | <input type="checkbox"/> Check If HUB |
| Other (specify type): | <input type="text" value="S&ME // Hazardous Materials Consultant, The Fire Consultants // Code & Life Safety"/> | | | <input type="checkbox"/> Check If HUB | |
| Other (specify type): | <input type="text" value="Waveguide // AV/IT/Acoustics, Palacio Collaborative // Cost Estimating (MBE/HUB)"/> | | | <input checked="" type="checkbox"/> Check If HUB | |

02 LETTER OF INTEREST

Tab 2



Woodruff Library | Shepley Bulfinch



February 2, 2022

Terrance “Buddy” Hale, Jr.
Facilities Design & Construction Capital Project Manager
UNC Greensboro

RE: Jackson Library Addition & Renovation

To Buddy and Members of the Selection Committee:

Since its opening in 1950 and expansion in 1973, Jackson Library has served as a student and research resource at the heart of campus, though its appearance and organization have had minimal upgrades throughout the decades. The proposed expansion and comprehensive renovation of Jackson Library will **transform this core facility into a modern campus hub** that supports the University’s mission, furthers student academic success, and expands research resources.

LS3P + Shepley Bulfinch are excited to partner together on this project and look forward to collaborating with UNC Greensboro to develop an inclusive, collaborative, and responsive building that **makes a difference in the lives of your students and the greater Greensboro community.**

WHY THIS TEAM?

LS3P + Shepley Bulfinch bring a deep understanding of designing transformative renovations and additions on higher education campuses. Our previous design collaborations were founded on a focus towards improving campus community and student success. We endeavor to engage your diverse stakeholders to craft an **equitable and inclusive design process**, focused on your goals and aspirations.

This will be a significant project in our workload. From our Triangle-Region offices, both LS3P and Shepley Bulfinch have **local resources available to support you**, give your design the attention it deserves, keep design services fees in the region, and remain nimble and responsive during design and construction phases.

PROVEN COLLABORATION

LS3P + Shepley Bulfinch have a strong history of partnerships on university campuses, including the transformational, student-focused renovations and a significant addition to the UNC Wilmington Randall Library. **Both firms will be actively engaged throughout the design and construction phases** and have developed a clear collaboration plan from past projects to work seamlessly throughout this project’s duration. LS3P will provide overall project management and documentation, serving as your primary point of contact from advance planning through post-construction. Shepley Bulfinch will lead overall design concept development including program verification and stakeholder engagement and will remain active throughout design documentation and construction phases.



We offer a **deep commitment to a collaborative design process** with fellow engineers and design professionals who also support your mission. Together, our firms and our consultant team have joined forces on multiple higher education projects across the Southeast. As proven through his leadership on your Nursing & Instructional Building design team, Project Manager Chris Roberts' collaborative management style will guide our team to move your project forward responsibly, safeguarding for schedule, budget, and quality. Library Design Principal Kelly Brubaker brings a national portfolio of academic and civic library expertise as well as an approach that emphasizes the student experience while embracing the central role of the library in delivering the academic mission of the institution. This team ensures the **best practices of future-thinking library design are combined and enhanced by a local understanding of UNCG's goals and resources.**

PROVEN EXPERIENCE

Our team is **well-versed in the challenges and processes which are particular to campus design** including working with diverse stakeholders, aligning milestones with academic calendars, navigating funding mechanisms, and designing for both immediate needs and long-term flexibility. LS3P has completed 400+ higher education projects throughout the Southeast, including your transformational Nursing & Instructional Building and South Chiller Plant. Shepley Bulfinch has designed 21st century libraries and higher education facilities in 41 states and around the world.

With a portfolio demonstrating a broad range of university library transformations, re-inventing academic libraries is one of Shepley Bulfinch's core practices. Campus libraries continue to serve their foundational role for student life and scholarship and have added **greater emphasis on information sharing, content creation, and student success.** Our team's deep experience and design approach gives you tools to create the best solution for your goals, growth, and community.

LS3P + Shepley Bulfinch are highly experienced in designing within the context of existing campuses, including yours. By complementing existing campus materials, we **create timeless buildings and additions that respect campus history while serving modern functions.** We are committed to maintaining library services as fully as possible throughout the construction process and have found that careful consultation and collaboration with facilities staff, the design team, and the Construction Manager at Risk leads to smoother operations and minimized disruptions.

LS3P + Shepley Bulfinch have delivered projects within the North Carolina Office of State Construction requirements and understand the nuances of the State design review and construction processes. This will be critical for successfully completing your planned multi-phased renovations and occupancies. But don't just take our word for it. On our most recent SCO projects, **LS3P averaged a designer evaluation score of 4.8 out of 5.0 with 8 projects scoring a perfect 5.0.**

LS3P + Shepley Bulfinch are passionate about the opportunity to collaborate with you to create this **transformational and dynamic community hub on campus,** and we look forward to the opportunity to present our team and qualifications in interviews soon. Thank you for your thoughtful consideration.

Chris Roberts, AIA, LEED AP | LS3P
Principal

Kelly Brubaker, AIA, LEED AP | Shepley Bulfinch
Principal

03 PROJECT TEAM ORGANIZATION CHART

Tab 3

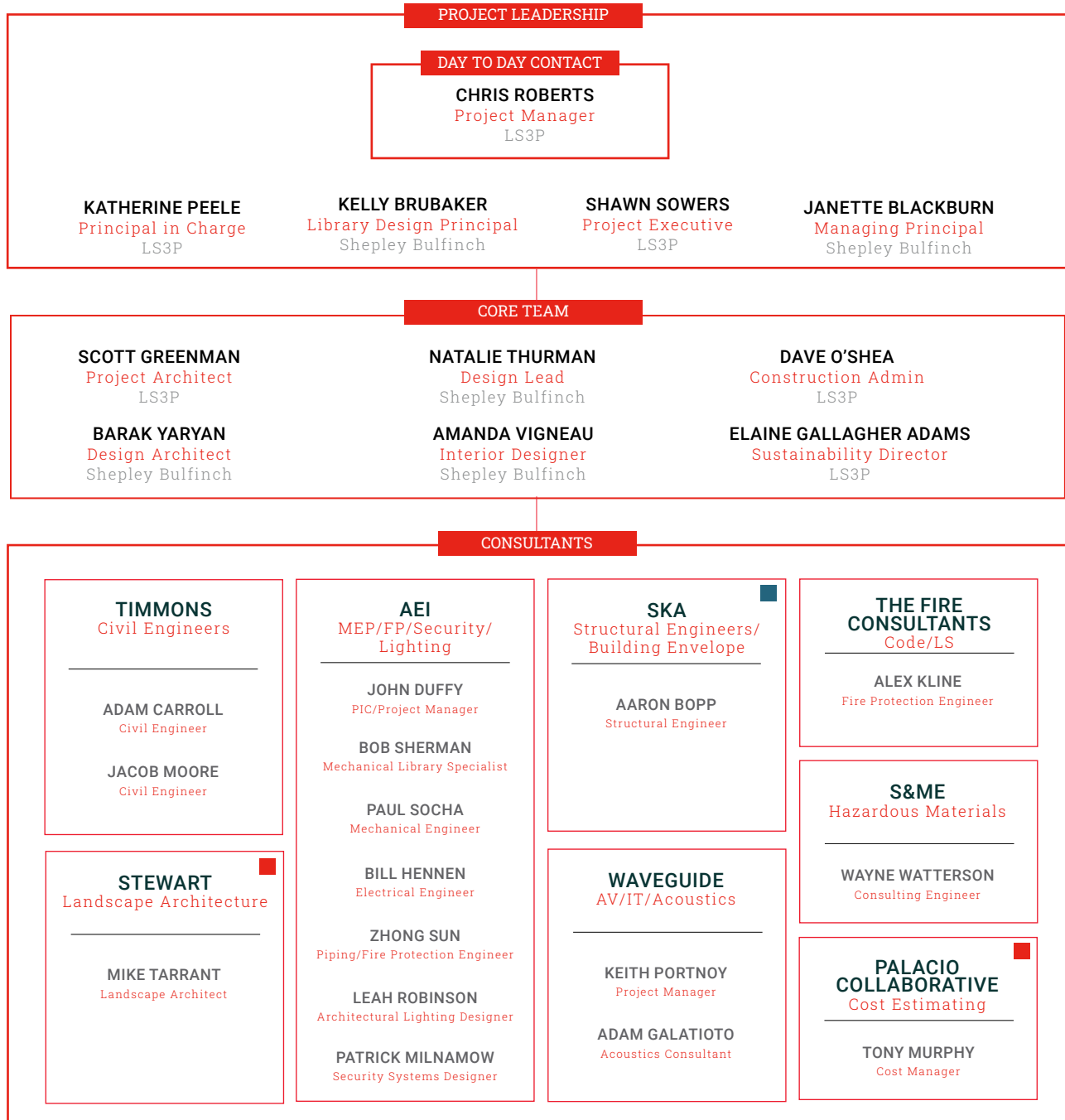


Johns Hopkins University Brody Learning Commons | Shepley Bulfinch

3.1 ADEQUATE STAFF AND PROPOSED DESIGN or consultant team and their relevant project experience



UNC GREENSBORO



■ M/WBE/HUB/SBE Firm in NC ■ M/WBE/HUB/SBE Firm National

TEAM BACKGROUNDS



University of Notre Dame, Hesburgh Libraries | Shepley Bulfinch



LS3P | ARCHITECT OF RECORD

Established in 1963, LS3P is a multidisciplinary firm offering architecture, interiors, and planning services to a wide variety of clients nationwide. Central to all regions of the Southeast with offices in Greenville, Columbia, Charleston, Myrtle Beach, Charlotte, Raleigh, Wilmington, Atlanta, and Savannah, LS3P is committed to bringing state-of-the-art design, technology, and expertise of a strong regional firm closer to our clients on a local level. With a staff of over 350 employees, we have the resources to offer total design capabilities from site selection to occupancy, yet we are small enough to give personal attention to each client.

Our practice leaders serve a broad array of markets including aviation and transportation, military and government, higher education, healthcare, K-12 education, hospitality, historic preservation, commercial, worship, and residential. The firm's extensive design portfolio also includes specialized expertise in civic, parks and recreation, and other projects. The editor of DesignIntelligence has called LS3P "the most local of the global firms and the most 'world-class' of the locals." **LS3P brings a history of over 58 years of design excellence, with over 601 design awards across diverse practice areas.**



SHEPLEY BULFINCH | DESIGN ARCHITECT

Shepley Bulfinch was established in 1874 as the architectural practice of noted American architect Henry Hobson Richardson. The firm carries forward Richardson's vision of innovation, subject matter expertise, and his legacy of design excellence. Our firm has offices in Boston, Hartford, Houston, Phoenix, and locally in Durham, North Carolina. Our national experience and local expertise blend seamlessly to serve our clients with the best possible design solutions. Shepley Bulfinch is a professional corporation and a nationally certified Women-Owned Business (WBE).

With extensive experience on higher education campuses, we have a deep understanding of the values that shape these institutions and are skilled at uncovering the unique attributes that define colleges and universities. The firm's creation of transformational buildings that redefine campus communities is underpinned by our national experience designing academic libraries, education and technology facilities, combined with our culture of collaboration. Our work with clients to synthesize the multifaceted perspectives of their project stakeholders as the team shapes innovative programmatic and spatial experiences.

TEAMING PARTNERS

Over many decades of practice, our LS3P + Shepley Bulfinch team has built productive, collegial long-term relationships with our roster of valued consultants and engineers, and we have assembled an ideal team for the UNC Greensboro Jackson Library Addition & Renovation project.

TIMMONS GROUP | CIVIL ENGINEERS*

Recognized for over 25 years as one of Engineering News Record's Top 500 Design Firms, Timmons Group provides civil engineering, environmental, geotechnical, GIS/geospatial technology, landscape architecture, and surveying services to a diverse client base. Their clients receive more than just the best engineering and professional services available. Their specialized market sector expertise makes them trusted advisors and valuable consultants on their clients' projects – from conception through completion.

STEWART | LANDSCAPE ARCHITECTURE* ■

Stewart is located throughout North Carolina and South Carolina, with offices in Durham, Raleigh, Wilmington, Charlotte, and Columbia. With a unique interdisciplinary collaborative approach that results in stronger and more creative design solutions, Stewart serves domestic and international clientele, offering a full range of services to meet the needs of their clients. Founded in 1994 by Willy E. Stewart, PE, the firm has nearly 200 employees and is owned by a select group of professionals who are personally involved in our clients' success.

AFFILIATED ENGINEERS | MEP/FP/SECURITY/LIGHTING*

Consistently ranked in the top ten engineering firms by Building Design+Construction's MEP Giants, Affiliated Engineers is a leading U.S.-based multidisciplinary consulting engineering firm that plans, designs, and delivers high performance engineered systems for technically complex building and utility infrastructure projects. Nationally and internationally, Affiliated Engineers specializes in the higher education, healthcare, research, energy production and distribution, industrial, mission critical, and sustainability markets.

AEI has been working on the UNC Greensboro campus for over 25 years. During this time, they have completed numerous building, chilled water, master planning, and utility distribution projects.

SKA CONSULTING ENGINEERS | STRUCTURAL ENGINEERS / BLDG ENVELOPE* ■

SKA was founded in 1957 in Greensboro, NC. Currently SKA has seven offices in NC, VA, and SC with 85+ employees. Their firm understands the nuances of renovation and repair work, builds partnerships that go beyond the project, multi-disciplined providing comprehensive building engineering services for their clients, and have new design experience combined with knowledge from investigations and repair project. SKA is registered in 18 states and licensed in 17 states.

■ M/WBE/HUB Firm in NC

■ M/WBE/HUB/SBE Firm Nationally

*Previous Experience with Jackson Library

WAVEGUIDE | AV/IT/ACOUSTICS

Waveguide was founded in 1996 and has been at the leading edge of advancements in communication technology and acoustics ever since – because they understand today’s buildings must power global communications, anywhere, anytime, from any device. They bring long-range, strategic thinking to this challenge, focusing not just on the technology, but also on the people, processes and places that make technology work. Their team of consultants and designers are among the most experienced and highly qualified in our industry.

Public and university libraries are changing, and the community and students they serve have come to expect a library to be more than a place to find information. They want collaborative spaces in a media-rich environment. They require support services in keeping with their digital lifestyle. Their work has encompassed this changing dynamic within libraries as they transition to becoming active learning resource centers.

THE FIRE CONSULTANTS | CODE/LIFE SAFETY ■

The Fire Consultants, Inc. is a consulting engineering firm focused on fire protection and building code compliance issues. Their professional staff includes registered Fire Protection and Mechanical Engineers with experience in all aspects of fire protection engineering. Their current engineering staff has an average of 20 years of experience in fire protection engineering.

The Fire Consultants, Inc. has experience designing fire alarm, sprinkler and special suppression systems and reviewing those designs by others, as well as developing and reviewing fire protection reports and code compliance assessments.

S&ME | HAZARDOUS MATERIALS CONSULTANT

S&ME, Inc. (S&ME) delivers engineering, design, planning, environmental and construction services for the built environment. Organized and incorporated in 1973, they have grown to an 1,100-person corporation operating from 34 offices across the US.

S&ME is a leader in its field, having won over 80 Engineering Excellence Awards from state chapters of the American Council of Engineering Companies for “achievements which demonstrate the highest degree of merit and ingenuity.” S&ME ranked #124 in the 2021 Engineering Top 500 Design Firms list and #148 in Top 200 Environmental Firms.”

They have worked with the university for more than 20 years on a variety of hazardous building assessment projects.

PALACIO COLLABOARTIVE | COST ESTIMATING ■

Palacio Collaborative is a minority-owned full service construction cost management firm with 7 locations serving clients nationwide. A certified DBE, MBE, and NC HUB firm, their team has over 150 years of combined team experience in providing higher education institutions accurate construction cost estimates through innovative tools and proactive collaboration. Palacio has completed a wide variety of projects on over 90+ campuses across the nation such as \$150 Million academic campuses to 500 sf ADA renovations. They have estimated 500+ higher education projects nationwide including 25+ projects with University of North Carolina. Additionally, they have worked on 5 University of Carolina Greensboro projects and 30+ academic library projects.

■ M/WBE/HUB Firm in NC

■ M/WBE/HUB/SBE Firm Nationally

*Previous Experience with Jackson Library

PROVEN TEAM



Clemson University College of Business | LS3P

96

Higher Ed Clients
LS3P

116

Library Projects
Shepley Bulfinch

65

Higher Ed Clients over
the Last 10 Years
Shepley Bulfinch

WHY OUR TEAM

LS3P + Shepley Bulfinch are excited to continue leveraging our current design partnership and look forward to collaborating with UNC Greensboro to develop a building solution that serves to engage, encourage, and educate your students and community.

With LS3P + Shepley Bulfinch, UNCG gets more than just another design team. We bring the best of both worlds. LS3P brings understanding of your campus, local and SCO knowledge, deep relationships with proposed consultant partners, and a longstanding history of delivering addition and renovation projects on-time and within budget. Shepley Bulfinch brings you national expertise, with a focus on landmark campus buildings, including library design and programming.

Our team's combined broad, diverse experience allows us to take a holistic approach to your project, and we have the resources, technology, multi-disciplinary expertise, and staff support to deliver a design which is tailored to your needs.

SUCCESSFUL COLLABORATIONS

LS3P + Shepley Bulfinch enjoy partnering together and are successfully completing construction documents on the UNC Wilmington Randall Library Renovation and Addition. Our firms have also partnered to deliver an addition and renovations to the 1960s era Duke Library at Furman University and to create a dynamic urban learning space for Clemson University's College of Business in downtown Greenville, SC.



CHRIS ROBERTS AIA, LEED AP

Project Manager // LS3P

Chris Roberts is a Principal with LS3P and has been with the firm for 18 years. Chris has a strong background in public facility design, extending his experience in programming, planning, and design of higher education learning environments. Chris is highly skilled in all phases of project delivery including programming, master planning, and design, and serves as a sustainability resource for the firm.

EDUCATION Pennsylvania State University, Bachelor of Architecture,

REGISTRATION(S) Architecture: NC #9554

SELECT PROJECT EXPERIENCE

UNC Greensboro Nursing and Instructional Building, Greensboro, NC // UNC Chapel Hill McColl Building Addition/Renovation, Chapel Hill, NC // Albemarle Building Renovation, Raleigh, NC // Duke University Duke Institute for Brain Sciences, Durham, NC // North Carolina State University Wolf Ridge Apartments & On the Oval, Raleigh, NC



KATHERINE PEELE FAIA, LEED AP

Principal in Charge // LS3P

In her 32 years with the firm, Katherine has managed over \$1 billion worth of construction. Katherine serves as the current President of the North Carolina Board of Architecture, and she received her AIA Fellowship in 2003 in recognition of her extensive expertise and commitment to educational facility design. In 2019 she was awarded AIA NC's highest honor: the F. Carter Williams Gold Medal in recognition of her distinguished career and accomplishments as an architect.

EDUCATION North Carolina State University, Bachelor of Environmental Design in Architecture; North Carolina State University, Bachelor of Architecture

REGISTRATION(S) Architecture: NC #5720, VA

SELECT PROJECT EXPERIENCE

UNC Greensboro Nursing and Instructional Building, Greensboro, NC // UNC Chapel Hill McColl Building Addition/Renovation, Chapel Hill, NC // North Carolina State University Wolf Ridge Apartments & On the Oval, Raleigh, NC // UNC Chapel Hill Adams School of Dentistry Renovation, Chapel Hill, NC // Albemarle Building Renovation, Raleigh, NC



KELLY BRUBAKER AIA, LEED AP

Library Design Principal // Shepley Bulfinch

Kelly is a Principal at Shepley Bulfinch, and a leader in the firm's library design practice. She is a true collaborator, driven by creating deep partnerships on higher education and civic projects. Kelly has a unique ability to synthesize and test transformative strategies to reimagine library spaces, all while aligning them with institutional values and priorities. She guides clients to think beyond their everyday and to imagine what could be. Kelly is actively involved in the American Library Association (ALA), Association of College and Research Libraries (ACRL), and the Society for College and University Planning (SCUP).

EDUCATION Georgia Institute of Technology, Master of Architecture, with focus in Urban Design; The Ohio State University, Bachelor of Architecture

REGISTRATION(S) Architecture: NC #15994, MA

SELECT PROJECT EXPERIENCE

University of North Carolina Wilmington, Randall Library, NC // University of Notre Dame, Hesburgh Libraries, IN // Virginia Commonwealth University, Cabell Library, VA // McGill University, McLennan-Redpath Library and Archives Master Plan, Renovation, and Expansion, CAN // George Mason University Fenwick Library Addition, Fairfax, VA



SHAWN SOWERS AIA, LEED AP BD+C

Project Executive // LS3P

Shawn Sowers, LS3P's Higher Education Practice Leader, serves as a firmwide resource for business development and design for higher education. She has over 25 years of experience as an architect, programmer, planner, and project manager for higher education, corporate science and technology, healthcare, and other market sectors.

EDUCATION Ball State University, Bachelor of Architecture; Ball State University, Bachelor of Science in Environmental Design

REGISTRATION(S) Architecture, NC #9313

SELECT PROJECT EXPERIENCE

UNC Greensboro Nursing and Instructional Building, Greensboro, NC // UNC Chapel Hill McColl Building Addition/Renovation, Chapel Hill, NC // Sandhills Community College Nursing School Building, Pinehurst, NC // UNC Chapel Hill School of Dentistry Renovation, Chapel Hill, NC



JANETTE BLACKBURN FAIA, LEED AP

Managing Principal // Shepley Bulfinch

Janette is a Principal and leader in Shepley Bulfinch's education practice. Her work is informed by a deep understanding of academic library, research and learning environments and the variety of programs supporting community life within colleges and universities. She has extensive experience leading projects designed in association with architectural partners, including past projects with LS3P.

EDUCATION Helsinki Institute of Technology, Fulbright Scholar; Ball State University, Bachelor of Architecture

REGISTRATION(S) Architecture: NC #14786 & 12 other states

SELECT PROJECT EXPERIENCE

University of North Carolina Wilmington, Randall Library, NC // University of Notre Dame, Hesburgh Libraries, IN // Virginia Commonwealth University, Cabell Library, VA // McGill University, McLennan-Redpath Library and Archives Master Plan, Renovation, and Expansion, CAN // George Mason University Fenwick Library Addition, Fairfax, VA



NATALIE THURMAN AIA

Design Lead // Shepley Bulfinch

With more than 15 years of design experience, Natalie has worked on a wide range of library, higher education, healthcare, and research renovation projects. She works with clients, users, and project teams from planning through construction, prioritizing high performance design and the user experience. Natalie thrives in collaborative environments, guiding teams to create innovative, sustainable, personal, and purposeful design.

EDUCATION Rice University, Bachelor of Architecture, Bachelor of Art; Rice Architecture School, Paris

REGISTRATION(S) Architecture: TX

SELECT PROJECT EXPERIENCE

Sam Houston State University, Newton Gresham Library, TX // Texas A&M SA, Academic Building, TX // University of Houston Law, John M. O'Quinn Law Building, TX // City of Houston, New Montrose Library, TX // The University of Texas at Austin Dell Medical School, Health Transformation Building and Health Discovery Building, TX * | *completed with previous firm



SCOTT GREENMAN AIA, LEED AP BD+C

Project Architect // LS3P

Scott Greenman brings over 10 years of expertise in higher education, commercial and public projects. An experienced Project Manager and Architect, he is skilled at executing all phases while ensuring all client expectations are set and met at every stage of the project. Scott is a creative thinker who enjoys collaborating and solving problems with diverse teams to meet the client's needs. His passion for sustainability aids him in designing functional spaces that yield lasting value for the clients and the environment.

EDUCATION North Carolina State University, Master of Architecture; University at Buffalo, Bachelor of Science, Architecture

REGISTRATION(S) Architecture: NC #13072

SELECT PROJECT EXPERIENCE

UNC Chapel Hill McColl Building Addition/Renovation, Chapel Hill, NC // Penn State Beaver Campus General Classroom Renovation, Beaver, PA* //Nationwide Southeast Headquarters, Raleigh, NC* | *completed with previous firm



BARAK YARYAN AIA, LEED AP

Design Architect // Shepley Bulfinch

Barak is a Project Architect specializing in systems thinking and conceptual integration in library and higher education environments. He brings an ability to distill conceptual ideals in project designs that are rigorous, investigative, and technically viable. His experience in cultivating and sharing a design vision within the entire team results in projects that are intelligent, resolved, and engaging. Barak provides focused design intent, technical savvy, and programming experience to the team.

EDUCATION Clemson University, Master of Architecture; College of Charleston, Bachelor of Arts Management

REGISTRATION(S) Architecture: TX

SELECT PROJECT EXPERIENCE

Virginia Commonwealth University, Cabell Library, VA // McGill University, McLennan-Redpath Library and Archives Master Plan, CAN // George Mason University, Fenwick Library, VA // Sam Houston State University, Newton Gresham Library, TX



AMANDA VIGNEAU IIDA, LEED AP ID+C

Interior Designer // Shepley Bulfinch

As an experienced Interior Designer, Amanda's work spans multiple sectors, with a focus on educational and corporate/workplace environments. Amanda enjoys the intersection between exterior and interior, the integration of old and new, and exploring how technology incorporates into our clients' daily lives. She works with clients to push beyond perceived standards and envision a space they would not have imagined possible.

EDUCATION New England School of Art & Design at Suffolk University, Master of Arts in Interior Design; Wellesley College, Bachelor in Architecture and Studio Art

REGISTRATION(S) IIDA, NCIDQ Certified Professional

SELECT PROJECT EXPERIENCE

University of North Carolina Wilmington, Randall Library, NC // Sam Houston State University, Newton Gresham Library, TX // Loyola University Maryland, Fernandez Center for Innovation and Collaborative Learning, MD // University of Houston Law, John M. O'Quinn Law Building, TX // University of Massachusetts Amherst, Student Union Renovation, MA



DAVE O'SHEA AIA, LEED AP

Construction Administrator // LS3P

David O'Shea, a Construction Contracts Administrator, Project Manager, and Senior Architect in LS3P's Raleigh office, offers 31 years of experience in construction administration. He has a strong background in both design and construction, and has applied that knowledge on large and multifaceted projects David has built an excellent reputation for safeguarding quality assurance, problem-solving challenging construction scenarios, and resolving field issues with win-win solutions.

EDUCATION Lawrence Institute of Technology, Bachelor of Science in Architecture; Lawrence Technological University, Bachelor of Architecture

REGISTRATION(S) Architecture, NC #11206

SELECT PROJECT EXPERIENCE

UNC Greensboro Nursing and Instructional Building, Greensboro, NC // Albemarle Building Renovation, Raleigh, NC // UNC Chapel Hill Steele Building Renovations, Chapel Hill, NC // North Carolina State University Wolf Ridge Apartments & On the Oval, Raleigh, NC // Sandhills Community College Nursing School Building, Pinehurst, NC



ELAINE GALLAGHER ADAMS AIA, LEED AP BD+C

Sustainability Director // LS3P

Elaine Gallagher Adams, AIA, LEED AP BD + C, serves as LS3P's Sustainability Leader. Elaine brings substantial multidisciplinary expertise and experience as a practicing architect, professor, sustainability consultant, historic preservation specialist, conference speaker, and contributor to national sustainability guidelines. She serves as a firmwide resource for high-performance building design assisting with project reports and analyses.

EDUCATION Savannah College of Art & Design, Bachelor of Fine Arts, Historic Preservation

REGISTRATION(S) Architecture, GA, CO

SELECT PROJECT EXPERIENCE

UNC Chapel Hill McColl Building Addition/Renovation, Chapel Hill, NC // Tri-County Technical College Student Success Center, Pendleton, NC // City of Raleigh Drinking Water Compliance Laboratory, Raleigh, NC // National Museum of African American History & Culture, Washington DC* | *completed with previous firm



ADAM CARROLL PE, LEED AP BD+C

Civil Engineer // Timmons Group

Adam serves as the Group Leader for Timmons Group's Greensboro office and brings over a decade of design skills for both public and private clients. His project experience includes commercial site plans, multifamily developments, infrastructure design, federal military projects, K-12 and higher education projects. Adam provides management support from the start of each project through final construction administration. It is his goal and main focus to ensure the clients' needs are successfully met.

EDUCATION North Carolina State University, Bachelor of Science, Civil Engineering

REGISTRATION(S) Professional Engineer: NC

SELECT PROJECT EXPERIENCE

UNC Greensboro Jackson Library, NC // UNC Greensboro Nursing and Instructional Building, Greensboro, NC // UNCG Guilford & Mary Foust Dorm Remodeling, NC // UNC School of the Arts - New Residence Hall, NC // Winston-Salem State University - Sciences and General Office Building, NC



JACOB MOORE PE

Civil Engineer // Timmons Group

Jacob is a Project Engineer for Timmons Group’s Greensboro office. He has extensive experience providing engineering design support including grading, drainage, stormwater management, utility and site development design for various public and private clients. He is involved in the design process from schematic level through construction administration. Jacob has experience working with variety of college and universities in the Triad region.

EDUCATION UNC at Charlotte, Bachelor of Science, Civil Engineering

REGISTRATION(S) Professional Engineer: NC

SELECT PROJECT EXPERIENCE

UNC Greensboro Nursing and Instructional Building, Greensboro, NC // UNC School of the Arts - New Residence Hall, NC // Winston-Salem State University - Sciences and General Office Building, NC // UNC School of the Arts Ehle Drive Repair & Repaving, NC // Davidson County Community College Health Sciences Center, NC



MIKE TARRANT PLA, ASLA

Landscape Architect // Stewart

Mike is a Managing Studio Leader in Landscape Architecture with over 17 years of experience in site reconnaissance, master planning, construction documentation, and construction administration. Mike has developed complex design development and construction documents in the college and university, healthcare and hospitality sectors.

EDUCATION Bachelor of Science in Landscape Architecture, West Virginia University; ACEC Future Leaders Program

REGISTRATION(S) Professional Landscape Architect (PLA): NC; Institute of Architects, Associate Member

SELECT PROJECT EXPERIENCE

Duke University Trent Semans Center for Health Education, Durham, NC // Duke University Medical Center Medicine Pavilion and Cancer Center, Durham, NC // Duke University Health & Wellness, Durham, NC // North Carolina State University, Case Commons Residence Hall, Raleigh, NC // North Carolina State University, Greek Village, Raleigh, NC // North Carolina State University, Centennial Campus Stateview Hotel/Conference Center, Raleigh, NC



JOHN DUFFY PE, LEED AP

Principal-in-Charge/Project Manager

John has served as Project Manager on a variety of mixed use office and academic facilities. These facilities have included libraries, lecture halls, small and mid size seminar rooms, a variety of collaborative spaces, private and semi private offices, open office seating, hotel style offices for shared use, as well as audio visual for remote teleconferences. The mechanical, electrical, and piping emphasis on these projects includes energy efficient and sustainable design, technology rich environments, and architecturally integrated lighting.

EDUCATION US Merchant Marine Academy, Bachelor of Science, Mechanical Engineering; Hofstra University, Master of Business Administration

REGISTRATION(S) Professional Engineer: NC

SELECT PROJECT EXPERIENCE

UNC Wilmington Randall Library Renovation and Expansion, Wilmington, NC // William & Mary Earl Gregg Swem Library Special Collections, Williamsburg, VA // UNC Greensboro Nursing and Instructional Building, Greensboro, NC // Elon University School of Communications, Elon NC



BOB SHERMAN PE, LEED AP

Mechanical Library Specialist / AEI

Bob's experience includes all phases of HVAC engineering from initial design concepts and optimization comparisons through construction documentation, specifications, quality control and construction administration. He has designed numerous library facilities for higher education clients. This experience includes the study and design of over 825,000 square feet of library space. His project experience includes higher education, healthcare, corporate offices, and interior fit-outs. He is equally experienced in designing systems for new buildings as well as systems integrated within existing facilities.

EDUCATION Southern Methodist University, Bachelor of Science, Mechanical Engineering

REGISTRATION(S) Professional Engineer: NC

SELECT PROJECT EXPERIENCE

UNC Greensboro Jackson Library Renovation Study, Greensboro, NC // UNC Wilmington Randall Library Renovation and Expansion, Wilmington, NC // Virginia Commonwealth University Cabell Library Addition and Renovation, Richmond, VA // NC State University James B. Hunt Jr. Library, Raleigh, NC



PAUL SOCHA PE

Mechanical Engineer // AEI

Paul's experience includes the mechanical and HVAC design for numerous higher education, corporate, and healthcare clients. His expertise includes ductwork and air distribution system design, hydronic system design, HVAC system selection, energy modeling, and sustainable design. Paul is also experienced in shop drawing review and construction support on several large institutional projects.

EDUCATION Georgia Institute of Technology, Bachelor of Science, Mechanical Engineering

REGISTRATION(S) Professional Engineer: NC

SELECT PROJECT EXPERIENCE

UNC Wilmington Randall Library Renovation and Expansion, Wilmington, NC // North Carolina State University James B. Hunt Jr. Library, Raleigh, NC // UNC Greensboro Nursing and Instructional Building, Greensboro, NC // Elon University School of Communications, Elon NC



BILL HENNEN PE

Electrical Engineer // AEI

Bill has over 35 years of experience in the design, supervision, budgeting, and construction review of electrical, high and low-voltage power distribution, fire alarm, voice/data cabling, emergency standby power generators, UPS systems, lighting, and paging systems. He has provided design for several large higher education, healthcare, and corporate facilities.

EDUCATION Ohio State University, Bachelor of Science, Electrical Engineering

REGISTRATION(S) Professional Engineer: NC

SELECT PROJECT EXPERIENCE

UNC Wilmington Randall Library Renovation and Expansion, Wilmington, NC // Virginia Commonwealth University Cabell Library Addition and Renovation, Richmond, VA // NC State University James B. Hunt Jr. Library, Raleigh, NC // UNC Greensboro Nursing/Instructional Building, Greensboro, NC



ZHONG SUN PE, CPD

Piping/Fire Protection Engineer // AEI

Zhong has been responsible for the fire protection and piping systems design for a large variety of higher education and healthcare facilities. Zhong's piping system design experience has included pure water, laboratory compressed air, laboratory vacuum, nitrogen, laboratory waste piping, domestic water, laboratory water, and fire protection systems. He has worked on new and renovation projects and numerous projects that have included phased renovation during owner occupancy and operation.

EDUCATION New Jersey Institute of Technology, Master of Science, Mechanical Engineering; Shanghai Jiao Tong University, Bachelor of Science, Mechanical Engineer

REGISTRATION(S) Professional Engineer, NC; Certified Plumbing Designer, 2017

SELECT PROJECT EXPERIENCE

UNC Greensboro Nursing and Instructional Building, Greensboro, NC // UNC Chapel Hill Medical Education Building, Chapel Hill, NC // UNC Wilmington Allied Health and Human Services Building, Wilmington, NC // East Carolina University Life Sciences and Biotechnology Building, Greenville, NC



LEAH ROBINSON LC, PE

Architectural Lighting Designer // AEI

Leah is a licensed engineer who has focused on lighting and lighting control systems design for the last decade with extensive experience in luminaire selection and specifications; layout, calculations, and renderings; control systems architecture; and analysis of life cycle cost. Leah is Lighting Certified (LC) by the National Council on Qualifications for the Lighting Professions. Leah's project experience has included design for both renovation and new facilities for higher education, healthcare, and research and development clients.

EDUCATION University of Kansas, Architectural Engineering

REGISTRATION(S) Professional Engineer, NC; Lighting Certified, 2008

SELECT PROJECT EXPERIENCE

UNC Wilmington Randall Library Renovation and Expansion, Wilmington, NC // East Carolina University Main Campus Student Union, Greenville, NC // Elon University School of Communications, Elon, NC // University of Virginia Contemplative Commons, Charlottesville, VA // North Carolina State University Plant Science Building, Raleigh, NC



PATRICK MILNAMOW

Security Systems Designer // AEI

Patrick's experience includes security consulting and loss prevention. He has expertise in security design, security needs assessments, workplace violence programs, Crime Prevention Through Environmental Design (CPTED) evaluations, and security master planning. He has also conducted physical and technical security surveys and audits. He has provided security design services for higher education, healthcare, corporate, and public municipality facilities.

EDUCATION Western Illinois University, Bachelor of Science, Criminal Justice

REGISTRATION(S) State of Texas Private Security Registration

SELECT PROJECT EXPERIENCE

UNC Chapel Hill Translational Research Building, Chapel Hill, NC // Summit County Colorado Public Facilities Security Assessment, Breckenridge, CO // CBRE Property Management Milwaukee Center, Milwaukee, WI // Exact Sciences Discovery Campus Renovation, Madison, WI



AARON BOPP PE, L EED A P B D+C

Structural Engineer // SKA

Aaron serves as a Principal Engineer and Project Manager in the Structural Engineering Group as well as handling the responsibilities of the Director of Operations for SKA. His primary design responsibilities include structural designs and analysis, preparation of construction documents and construction contract administration. Throughout his career, Arron has gained extensive experience in the educational, institutional, commercial and mixed use facility markets, with a focus on the design and repair of structural steel, masonry and reinforced concrete structures of all shapes and sizes.

EDUCATION Virginia Polytechnic Institute and State University, Civil Engineering

REGISTRATION(S) Professional Engineer: NC, GA, NV, IN

SELECT PROJECT EXPERIENCE

UNC Greensboro Nursing and Instructional Building, Greensboro, NC // UNC Greensboro 26 Dorms Condition Assessment, NC // UNC Greensboro Quad Residences, NC // UNC Greensboro School of Education, NC // UNC Greensboro Taylor Bldg Orchestra Pit, NC // Joint Science of Nanoscience & Nanoengineering, NC



KEITH PORTNOY CTS-D, RCDD

Project Manager // Waveguide

Keith Portnoy, CTS-D, RCDD, is Director of Waveguide's North Carolina operations and was promoted in 2021 to associate principal. Keith has been with Waveguide since 2002 and has extensive experience managing structured cabling projects for both public and private sector clients, major AV projects for leading universities and technology master planning projects for clients across all sectors.

EDUCATION Georgia State University, Master of Science, Computer Information Systems; Georgia Institute of Technology, Bachelor of Science, Electrical Engineering

SELECT PROJECT EXPERIENCE

University of North Carolina, Wilmington, Randall Library, Wilmington, North Carolina // North Carolina State University, DH Hill Academic Success Center, Raleigh, North Carolina // Johnston Community College, New Library, Smithfield, North Carolina // Virginia Commonwealth University, Cabell Library Addition, Richmond, Virginia



ADAM GALATIOTO

Acoustics Consultant // Waveguide

Adam Galatioto joined Waveguide in 2017 as an Associate Consultant of acoustics in our Atlanta office. Prior to joining Waveguide, Adam's work in New York City focused on environmental acoustics, including transit vibration analysis for elevated, on-grade and subterranean rail, and high-rise residential façade analysis, among other things. He has also executed small- to large-scale events in an audio and lighting design capacity, as a front of house engineer and as a sound consultant for a variety of clients in the North Florida area.

EDUCATION University of Florida, Bachelor of Science, Industrial and Systems Engineering; University of Florida, Master of Science, Architectural Studies

SELECT PROJECT EXPERIENCE

University of California Los Angeles, Anderson School of Management, Los Angeles, California // Georgia Institute of Technology, West Campus Dining Commons and School of Music, Atlanta, Georgia // University of South Florida, Morsani School of Medicine, Tampa, Florida // Purdue University Northwest, Bioscience Innovation Building, Hammond, Indiana



ALEX KLINE PE

Fire Protection Engineer // The Fire Consultants

Alex has over seventeen years of experience in Fire Protection Engineering and has worked in a variety of markets including higher education, transportation, sports & recreation, healthcare, residential, municipalities, and mixed-use throughout the country and worldwide. He provides building and fire code compliance consulting, performance-based design analysis for compliance alternatives, life safety plan drawing preparation, fire protection engineering judgments, and smoke control and fire protection system commissioning and special inspections.

EDUCATION Master of Engineering, Fire Protection Engineering, University of Maryland; B.S., Fire Protection Engineering, University of Maryland; Fire Engineering Certificate of Proficiency, University of Canterbury, New Zealand

REGISTRATION(S) Professional Engineer: NC #031536, SC, OH

SELECT PROJECT EXPERIENCE

UNC Greensboro Nursing and Instructional Building, Greensboro, NC // Wake Forest University Z Smith Reynolds Library Renovation, Winston-Salem, NC // UNC Chapel Hill, Manning Hall Library Stacks, Chapel Hill NC* // University of Chicago, Joe and Rika Mansueto Library, Chicago, IL



WAYNE WATTERSON PE

Consulting Engineer // S&ME

Mr. Watterson is a Senior Engineer in S&ME's Greensboro Office. Mr. Watterson offers over 30 years of experience with environmental site assessments, receptor surveys, remediation system design, site monitoring, remediation system operations and maintenance, hydrogeologic studies, stormwater monitoring and stormwater pollution prevention plans, Spill Prevention Control and Countermeasures (SPCC) plans, and OSHA site specific health and safety plans.

EDUCATION North Carolina State University, B.S. Materials Science and Engineering

REGISTRATION(S) Professional Engineer: NC #19243, VA

SELECT PROJECT EXPERIENCE

Moore Hall Asbestos Assessment and Abatement Design, UNCG // UNCG Registrar's Office Asbestos Services // CMossman Building 3rd Floor, UNCG // Asbestos Inspections for Demolition, Multiple Locations in NC



TONY MURPHY

Cost Manager // Palacio Collaborative

Tony has over 30 years of estimating experience in the Design and Construction industry with 23 years dedicated to the Carolinas'. He is a Senior Cost Manager with Palacio Collaborative and leads the Durham, North Carolina office, which he spearheads projects ranging from \$100,000 to over \$100 Million. Tony has built an impressive career in construction cost estimating and utilizes his knowledge of efficient construction methods to prepare quality, accurate project estimates.

EDUCATION Limerick Institute of Technology, Bachelor of Science Construction Management, 1994

SELECT PROJECT EXPERIENCE

University of North Carolina Coleman Suite 332 Basketball Office Renovation - Greensboro, NC // University of North Carolina Bee Lab Renovation - Greensboro, NC // University of North Carolina Taylor Hall Theater Renovation - Greensboro, NC // University of North Carolina Davis Library Admin Suite Renovation - Chapel Hill, NC // North Carolina State University DH Hill Library Brick Yard Entrance - Raleigh, NC

04 REVELANT EXPERIENCE & OTHER IMPORTANT FACTORS

Tab 4



Davidson College E. Craig Wall Jr. Academic Center | Shepley Bulfinch

4.1 SPECIALIZED OR APPROPRIATE EXPERTISE

in the type of project

The re-invention of academic libraries is at the heart of the work we do. Our portfolio demonstrates a broad range of library transformations on university campuses across the country.

Each project is different, responding to the specific conditions of unique context and reflecting institutional values. **We believe well-designed spaces, especially libraries, enhance life experiences.** They energize and connect communities of learners, and they supply inspiration and comfort.

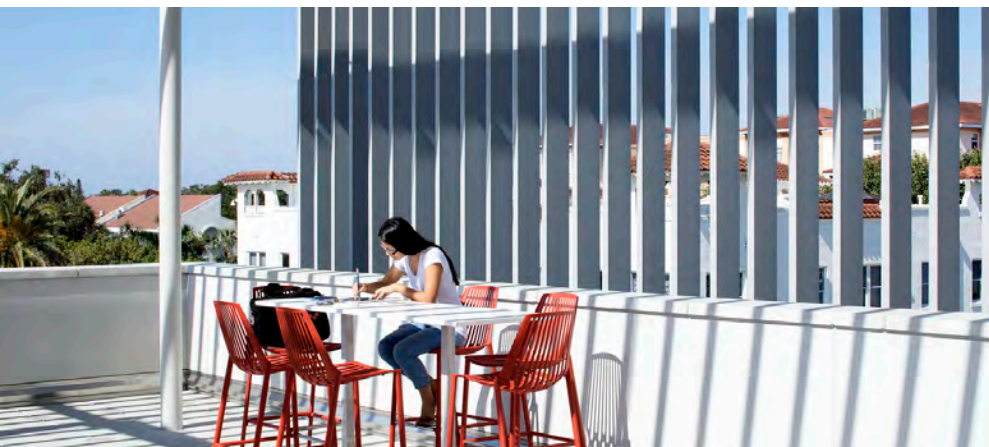
Our team's landmark library projects have improved learning outcomes and advanced innovative research, all while creating lasting places positioned to redefine how the library is experienced as they inspire their users to explore new avenues and possibilities.

21ST CENTURY LIBRARIES & STUDENT SUCCESS

The identity of the library on campus has transformed from the 19th century repository of knowledge to the 21st century forum for acquisition and creation of knowledge. This transition has shifted the programmatic focus from primarily physical collection space to multipurpose student space. These spaces are technology-rich and provide academic resources and research services customized to foster student success and advance institutional goals.

Campus libraries continue to serve their historic and foundational role for student life and scholarship, and have added a greater emphasis around information sharing and content creation. There has been a shift to leverage collaboration, digital access, and library services with the need for more study space within the library. Likewise, access to **Student Success** has shifted to a foreground resource for equipping students with tools to be able to acquire and create knowledge. The library is the place to access all academic resources including student support services to meet the full picture of student needs. In doing so libraries remain a place where students can engage academically and socially, becoming a nexus for their scholastic and community pursuits.

Our team's deep experience working with these project types gives us the tools to guide the process based on lessons learned, successful implementation strategies, and a thorough understanding of contemporary trends in academic library design. **We are listeners first and foremost, and are poised with this deep knowledge base to listen to your community and its unique goals, and will design the right project for the Jackson Library and UNC Greensboro.**



COMPLEX LIBRARY RENOVATION

We are highly experienced in designing within the context of existing campuses, including UNCG's unique location.

Successful design for these spaces requires not only consideration of spatial needs, visual access, transparency, privacy, and infrastructure systems including power and data to support contemporary space uses, but also how to implement these within an existing facility while tying into an expansion.

By complementing the campus materials palette, responding and relating to established architectural forms and styles, we create timeless buildings which respect campus history and serve modern functions. We consider anticipated growth of the campus and area around the project as well as potential impacts on pedestrian and vehicular circulation to ensure a minimal impact to campus.

We also put student access, staff accommodation, and collections strategy at the forefront in considering phases of renovation, to ensure the library continues to serve the community throughout construction. The strategies and an understanding of the needs of these spaces, and their complexities, reduces the impact of any potential construction on academic calendars and plans for student success.

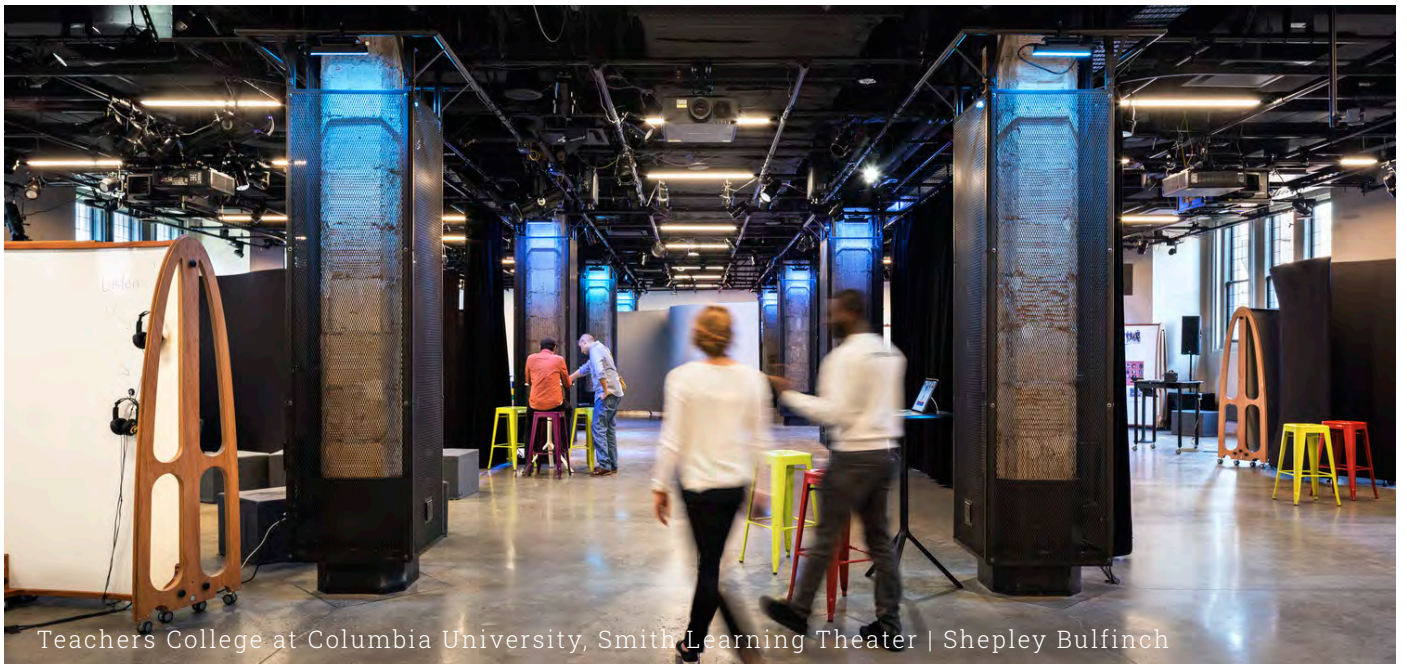
MAINTAINING OPERATIONS

Careful consultation and collaboration with facilities staff, library staff, and the CM results in a smoother process with less disruption to the core users of the library – students on their path of learning and exploration.

We are committed to maintaining library services as fully as possible throughout this project, and are excited to share projects that have minimized academic disruption.

Given the centralized location of the proposed site, focused attention should be given to maintaining operations during construction and careful attention to both safety and efficiency. To keep your operations running as smoothly as possible during construction, we will work closely with you to phase the work and minimize disruptions. We understand there may be a need to design separate, temporary circulation routes for campus users and construction staff, with temporary construction entrances to be phased.

As part of our process, we will include strategies at every stage to continuously align program and budget, and will provide cost control options via contingencies. Additionally, we can assist in the communications with your staff and students as phasing progresses and patterns alter throughout the life of the project with detailed diagrams and phasing schedules.



Teachers College at Columbia University, Smith Learning Theater | Shepley Bulfinch

4.2 PAST PERFORMANCE ON SIMILAR PROJECTS

to Jackson Library Addition & Renovation, illustrating experience with complex renovations and additions

Shepley Bulfinch brings years of experience working with clients to deliver successful renovation and addition projects in occupied facilities, and specifically in occupied libraries. Smart strategies to consider include:

- 1) **Identify priorities and tradeoffs** early in the process to guide decisions
- 2) **Clear and consistent communication** with the full team from programming through final completion
- 3) **Test phasing scenarios** to understand cost and schedule implications for various approaches
- 4) **Determine opportunities** to use new spaces as to allow for straightforward renovation of existing spaces where possible
- 5) **Strategically plan phasing** based on programmatic, operational, and building systems and understand the impacts
- 6) **Use swing space** where necessary, but limit staff department moves to single moves
- 7) **Take advantage of lessons learned** from the pandemic (for example hybrid work environments, virtual engagement between staff and students, rapid collection pickup) to enable more efficient phasing
- 8) **Consider feature-first phasing** approach
- 9) **Utilize prototyping** for high-impact spaces early in the design process
- 10) **Think creatively** and embrace the process



Duke University The EDGE Research Commons | Shepley Bulfinch

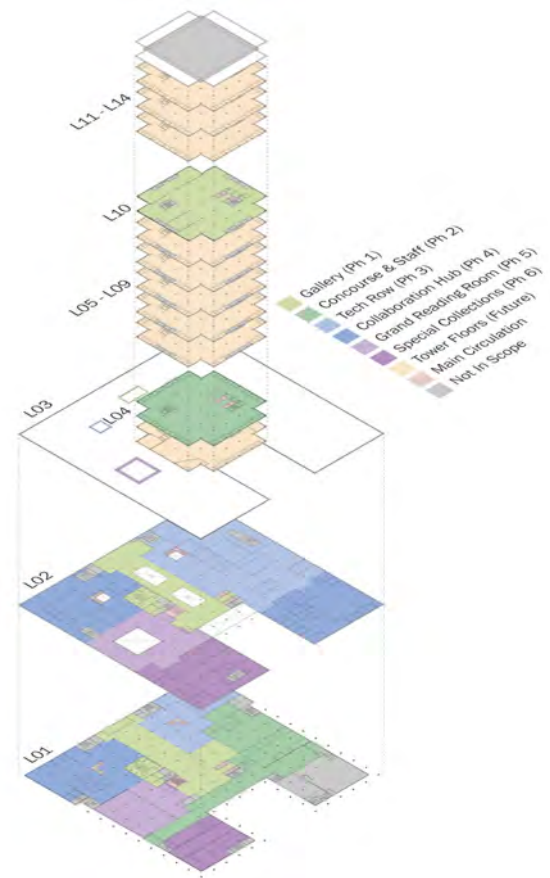


Case Study 1 | Phased Library Renovation

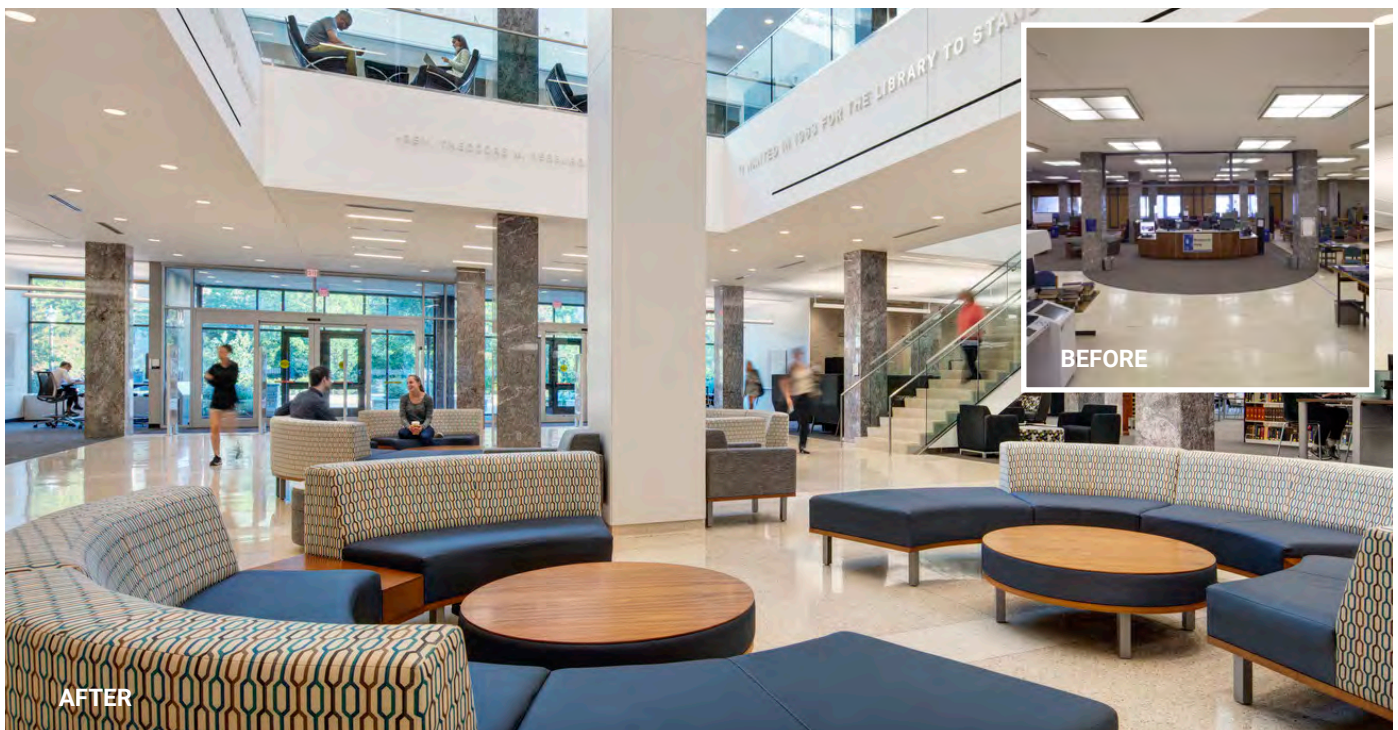
UNIVERSITY OF NOTRE DAME | HESBURGH LIBRARY

Shepley Bulfinch completed a multi-phase renovation of Hesburgh Libraries. The phased approach and design focused on bringing in natural light into the large floorplate of the building and integrating materials that complement the existing mid-century aesthetic. The first phase of the project presented a feature-space approach by renovating the entrance gallery, the spine of the building, that connects the south entrance with a new secondary entrance at the north. The entry gallery spans the first and second floor through a series of double height openings providing sightline to future resources and departments. As part of the initial phase it was important to renovate and prototype a typical tower floor allowing the university, design, and construction team to test concepts and evaluate impacts before renovating the remaining tower floor levels. This approach provided the opportunity to showcase what was to come in future renovations.

Renovating the library in quadrants allowed phasing to leverage both programmatic needs and infrastructure upgrades. New infrastructure, including innovative and high-efficiency HVAC and fire protection systems, is threaded through the building. Creating a variety of neighborhoods - a collaboration hub, a faculty research commons, to a technology row - connected students and faculty to an array of digital services and resources within the evolving academic landscape. To not disrupt the Library's day-to-day operations, the renovation was divided into smaller construction projects.



Phasing Diagram



Case Study 2 | Large, Complex Renovation

ALBEMARLE BUILDING RENOVATION

This major renovation project for downtown Raleigh's Albemarle Building created a welcoming street presence and modernized the original 1970 construction. The 12-story concrete building had become drab and dated and housed numerous administrative functions for the state government in outmoded spaces.

In addition to overall building cleaning, repair, and upgrades, the ground-level renovation greatly enhances the pedestrian experience with fresh landscaping, an outdoor plaza, and welcoming entry. The building not only improves the environment for employees, but also strengthens the prominent corner on a busy thoroughfare into downtown. **This project significantly improves downtown Raleigh's built environment, restoring an outmoded 1970's building for contemporary use as a thriving part of the urban landscape.**

The **192,000 SF renovation** created a highly visible entry, a spacious contemporary lobby, and low open workspaces allowing natural light into the interior. Major safety upgrades included a sprinkler system, hazardous materials abatement, fire stopping between floors, and a new fire alarm system. Other upgrades such as energy efficient windows, cleaning and re-caulking of exterior cladding, new finishes, ADA compliant restrooms, new data and phone wiring, and energy efficient mechanical systems all served to ready the building for a new generation of use. **The new facility is healthier, brighter, safer, more efficient, and more functional, making it a more pleasant place to work for all who use it.**



UNIVERSITY OF NORTH CAROLINA WILMINGTON RANDALL LIBRARY RENOVATION & EXPANSION

Wilmington, NC



The LS3P/Shepley Bullfinch team has been a wonderful partner for UNCW on the Randall Library project. This project, like most large capital projects, has had its challenges and this design team has worked with us to overcome them every step of the way, and has designed a beautiful building that will enliven and energize our library complex.

Rachel Patrick
*Director of Architectural and
Construction Services
UNC Wilmington*

RELEVANCY

- LS3P + Shepley Bulfinch team
- Library renovation/expansion
- Phased construction in occupied building
- Ideate, create, and showcase research
- Enhanced technology including visualization lab
- Outreach to community providing event space and adjacent rotating gallery
- Create a variety of learning environments to meet the needs of individual focused and collaborative work



This renovation and addition for UNCW's Randall Library focuses on connectivity, visibility, and the user experience. The design provides better access to student services with a one-stop shop model, and the building will serve as a campus hub and recruitment tool.

Major design goals include doubling the existing seat count, integrating technology-rich spaces throughout the library, creating appropriate space for Special Collections and providing an efficient workflow for staff. A large event space at the eastern edge of the plan gives a public facing front door to bring students and visitors to the library and new ways. A central light filled Link provides an active transition zone from from the existing library to the new spaces and programs. A phased renovation approach will allow the library to remain operational throughout the construction process.

LS3P is the Executive Architect in collaboration with Shepley Bulfinch.

YEAR COMPLETED

Est. 2023

SIZE

85,000 SF Addition; 50,000 Renovation

VIRGINIA COMMONWEALTH UNIVERSITY JAMES BRANCH CABELL LIBRARY RENOVATION & EXPANSION

Richmond, VA



“

The inspiring visual statement at the very center of our campus will say more about VCU and what it's become than any words we can find.

John E. Ulmschneider
*University Librarian,
Virginia Commonwealth University*

”

RELEVANCY

- Phased renovation and expansion to existing library
- Repositioned the library as a campus and civic landmark, better integrating the building in the urban campus fabric
- Library centrally located on campus with no back to the building
- New reading room and collaborative study spaces constructed to capitalize on natural daylighting
- Increases digital and physical maker space capacity on campus, integrating research and academic activities in the library
- Design Architect



This major addition to Cabell Library gives VCU a robust research library and a civic and campus landmark that engages the surrounding urban fabric. The expansion represents a significant investment in library research facilities driven by VCU's strategic development as a national research university and demand for student space fueled by its dramatic growth in enrollment. The project transforms the introverted form of the existing Brutalist library.

Responding to the verticality of the original building's slot windows, a series of glass fins provide solar shading and repeat the rhythm in a lighter, more accessible way. With entrances facing the city and campus and public spaces wrapped in glass, the building is a prominent part of the civic landscape. The activity within and art displays are visible from the pedestrian paths and the open spaces that flank it. The expanded library includes a dedicated faculty and graduate research center, a 300-seat event space, a ground floor café, and a range of reading rooms and collaborative study spaces.

Shepley Bulfinch was the Design Architect and lead all engagement with end users from programming through design. This project was in association with Moseley Architects as executive architect.

YEAR COMPLETED

2016

SIZE

156,000 SF

GEORGE MASON UNIVERSITY FENWICK LIBRARY RENOVATION & ADDITION

Fairfax, VA



“As I look around this new facility, I see a collaborative learning environment that offers great opportunities for innovative programming and one that can support contemporary scholarship and research—not only to meet the needs of today’s Mason students and faculty, but also tomorrow’s.”

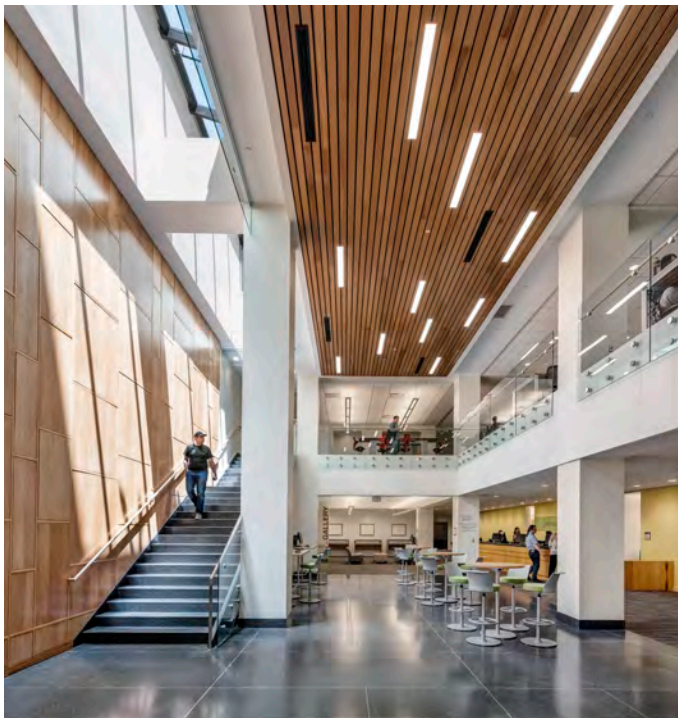
John Zenelis
*University Librarian,
George Mason University*

■ **RELEVANCY**

- Phased addition and renovation
- Expansion to create a new research commons that supports student scholarship and student success
- Increased amount and diversity of student learning spaces for individual study and group collaboration
- Design Architect
- New reconfigurable, multi-use instructional spaces with flexible technology for ease of use by varied users
- Located at the academic crossroads on campus



The Fenwick Library expansion redefines the library as the intellectual crossroads for George Mason’s distributed campus and promotes the University’s aspiration to grow as a major research institution. The focal point of the expansion is a new research commons, which supports student scholarship with integrated resources including ample access to specialized librarians, special collections, writing tutors, and data services. Multi-use instructional spaces are designed with movable partitions to accommodate a range of seating capacities, flexible technology, reconfigurable furniture, and breakout spaces for group work.



The building was designed for high energy efficiency to meet LEED Silver certification. Sustainable strategies include external shading devices, a roof garden, and a naturally irrigated rain garden. The design reinforces Fenwick’s connection to the undergraduate-oriented library in the adjacent Johnson Center, which was designed by Shepley Bulfinch in 1994.

Shepley Bulfinch was the Design Architect and Architect of Record in association with RRMM Lukmire Architects.

YEAR COMPLETED

2015

SIZE

150,000 SF

LOYOLA UNIVERSITY FERNANDEZ CENTER FOR INNOVATION AND COLLABORATIVE LEARNING RENOVATION & EXPANSION

Richmond, VA



SHEPLEY
BULFINCH



The goals of the project were simple: creating inviting spaces and environments that integrate seamlessly with the architectural design, and can be used for gatherings of all sizes and would be welcoming to the whole campus and neighboring community”

Om M. Khurjekar
*HCM, Landscape Architect
Loyola University Maryland*

RELEVANCY

- Renovation and addition to an existing historic building
- Develops new campus-city connection with Career Center and IDEA Lab enhancing community outreach with students
- New Faculty Loft provides space for deeper student/faculty research connections
- Outdoor classroom, healthy materials, and green wall integrate biophilic elements into this 24/7 student and academic space



Loyola’s new Center for Innovation and Collaborative Learning transforms the historic Beatty Hall and doubles its size. The design of the 60,000 sf center positions the renewed Beatty Hall as a centerpiece of the historic campus green, while the new city-facing expansion creates a new campus gateway and link to the community. The concept for this building was to enhance connections between faculty and students, students and the community, Loyola life and the world beyond in multi-directional relationships.

The interior concept of the building connects to the natural landscape of campus through its color palette and organic textures, reflect the collegiate community through transparency into and within the building, and encourage discovery through the layering of interior spaces. The Center’s interactive, versatile teaching and learning spaces highlight Loyola’s signature programs, such as the Idea Lab for innovation and entrepreneurship, and the University’s career services center, creating a link between student learning and the exploration and pursuit of future goals.

YEAR COMPLETED

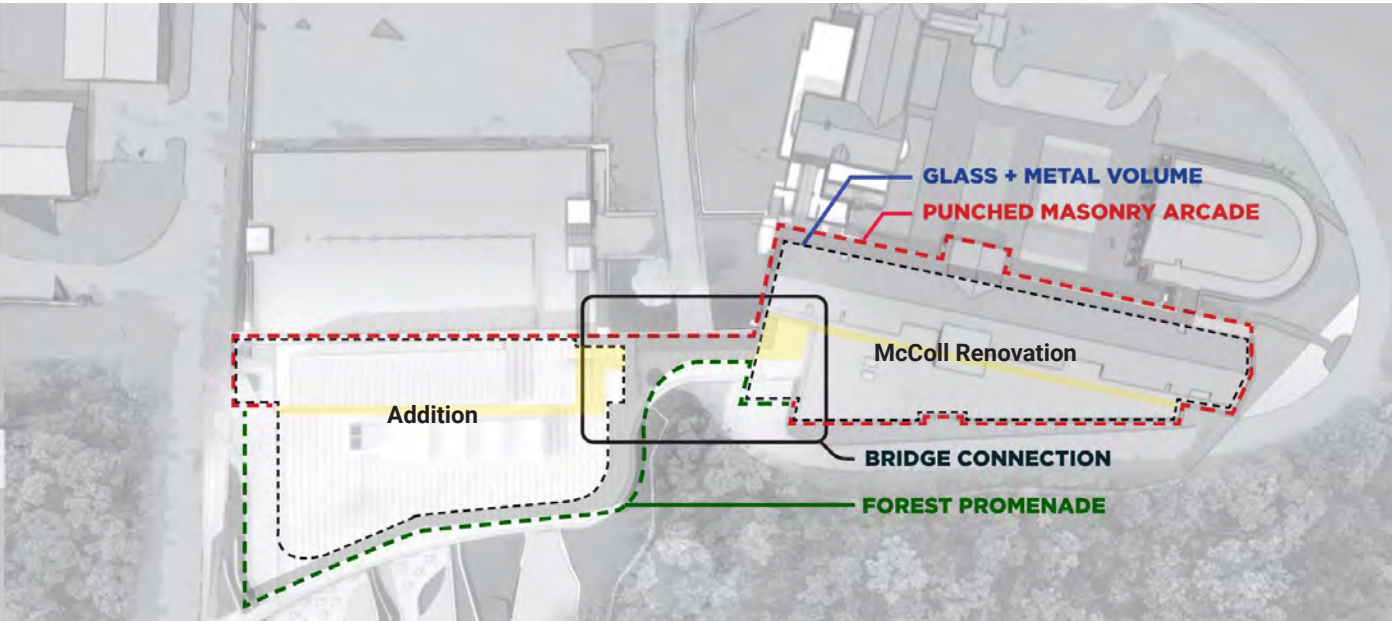
2021

SIZE

62,500 SF

UNIVERSITY OF NORTH CAROLINA CHAPEL HILL MCCOLL BUILDING RENOVATION & ADDITION

Chapel Hill, NC



RELEVANCY

- Signature project for campus master plan to define this area of campus
- Broad range of student engagement spaces from social and collaboration spaces to quiet study commons
- Creates missing connections along major campus paths
- Large, complex renovation/addition
- Phased renovation while building remains occupied
- Connections to major campus utilities
- Part of UNC System- Targeting LEED Platinum (v4.0)



LS3P and LMN partnered on the programming and design for this major addition and renovation to the McColl Building for the Kenan Flagler Business School. The project addresses several major goals supporting the UNC Campus Master Plan and KFBS. **The 150,000 SF addition and 130,000 SF renovation** will better connect the business complex to the rest of campus and Blythe Drive, which will become a major path of activity as the Master Plan is implemented. The project will accommodate a 50% increase in KFBS' undergraduate enrollment while creating an expanded precinct for business programs, clarifying space organization for undergraduates and graduates, upgrading existing spaces, and fostering authentic interaction.

The addition will serve as a "front door" to the business school complex and create a series of connecting nodes for interaction both in the addition and the existing McColl Building. The nodes are anticipated to include student common space, new dining facilities, pedestrian plazas, and various program elements to foster interactions. Major design goals for the addition include creating a path from Blythe Drive over Kenan Drive, and creating new centers of activity both within the business school precinct and along Blythe Drive as defined by the Campus Master Plan.

LS3P is the Executive Architect in collaboration with LMN.

YEAR COMPLETED

Construction - Anticipated July 2025

SIZE

150,000 SF Addition; 130,000 SF Renovation

RINGLING COLLEGE OF ART & DESIGN ALFRED R. GOLDSTEIN LIBRARY

Sarasota, FL



It is a 'creative cauldron,' and has some of the qualities of a traditional library, but it will be a gathering place for students in collaborative efforts, and also has individual learning spaces. As far as I am concerned, it is our living room for Ringling College.

Cheryl Loeffler
*Chairwoman, Ringling College
Board of Trustees*

RELEVANCY

- Open and transparent design, improving wayfinding
- High technology spaces integrated into the library
- Leveraged campus in community partnerships within the library
- Neighborhoods of seating from individual to collaboration
- Accessible and inviting special collections reading room
- Design integrated into campus context with no back door to the library



Ringling's new library creates a vibrant locus for learning at the heart of its expanding campus, an iconic form that embodies and supports the College's creative community. The library's form defines the spaces that surround it, with a robust program that engages and animates them. The library is an integral partner in the creative process at this design school, where its collections offer value both for visual inspiration and as cultural artifacts.

Open and transparent, the library's ground floor is a hub of activity, revealing the life within. Internally, the building is organized by layers of activity, progressing from most active to quietest as users move between floors and along the east-west axis from campus edge to the bayou. A series of outdoor terraces on the upper floors offer views and vantage points of the campus, providing sources of inspiration and a fresh perspective. This milestone project is quadruple the size of the existing library, which could no longer support the quality of its students' work and did not accurately reflect the caliber of Ringling as an institution. Goldstein Library is LEED Silver certified.

Shepley Bulfinch was the Design Architect in association with Sweet|Sparkman Architects of Sarasota.

YEAR COMPLETED

2017

SIZE

49,400 SF

SALEM STATE UNIVERSITY FREDERICK E. BERRY LIBRARY & LEARNING COMMONS

Salem, MA



“

It's very different from the other libraries I've worked in that were built in the '70s, '80s, '90s, that were built really first for the books, then the people. I'm running into alumni who are saying, 'Can I come in and use the library?' It's wonderful. It's really wonderful.

Susan Cirillo
*Former Dean of Library,
Salem State University*

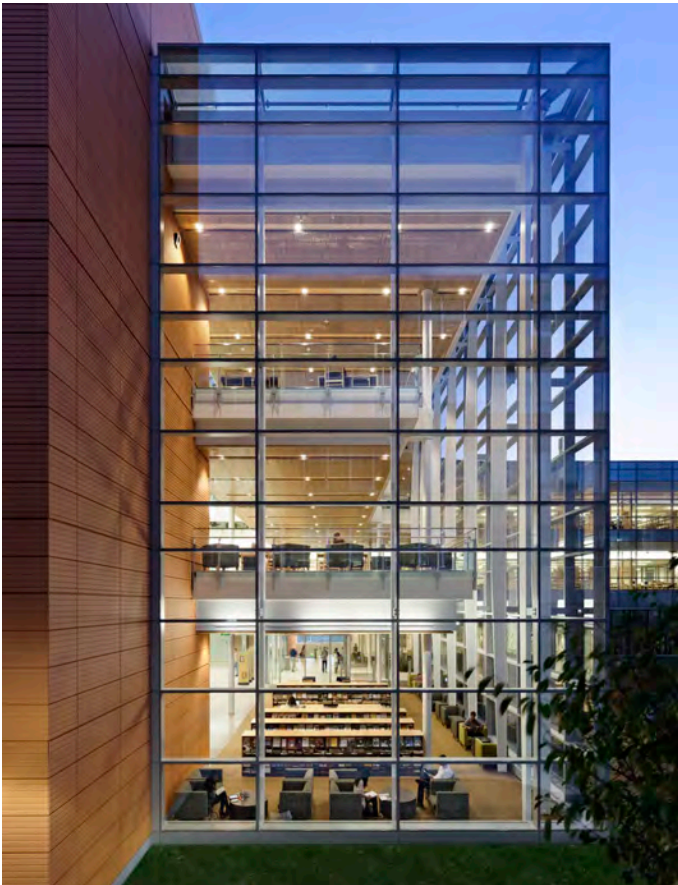
RELEVANCY

- Connects students and faculty to academic resources
- Created a holistic academic experience combining library program with academic success
- Enhanced teaching and learning spaces
- Showcase special collections and archives making it more visible and accessible to all
- Permeable building with multiple entrances
- Crossroads of campus and transportation
- LEED Silver Certified



The Frederick E. Berry Library and Learning Commons defines a new academic quad for Salem State’s North Campus and meets an urgent need for a replacement library to serve the University’s five campuses. A vibrant and welcoming academic crossroads, the Library features spaces for scholarship and collaboration, and is designed to accommodate changes in research and technology. The learning commons, rich with academic resources, is integrated with library services to provide a comprehensive and supportive learning environment.

The Library is sited to define the new quad, strengthening the identity of the North Campus as the University’s academic heart. While the first level of the four-story library offers an entrance facing College Drive, the second-floor main entrance faces the newly developed campus green. The project was designed with a range of environmental features, including a vertical closed-loop geothermal system and a recycled, regional, and healthy materials palette.



YEAR COMPLETED

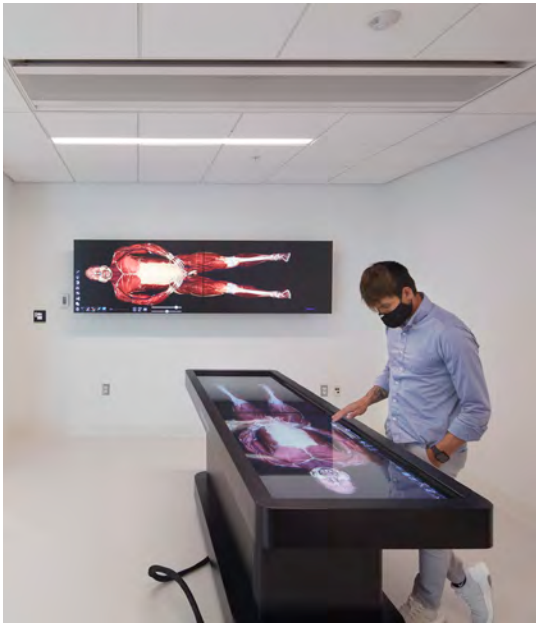
2013

SIZE

128,000 SF

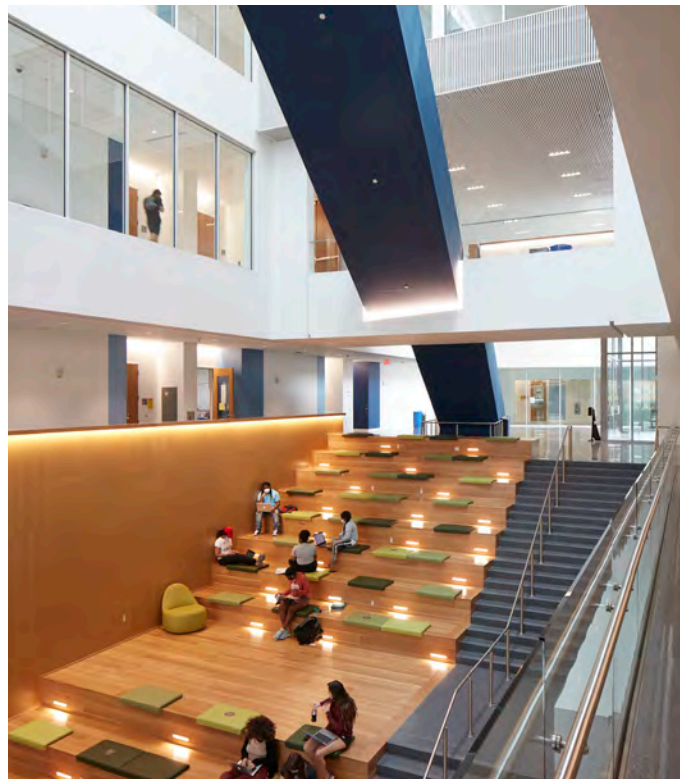
UNIVERSITY OF NORTH CAROLINA AT GREENSBORO NURSING & INSTRUCTIONAL BUILDING

Greensboro, NC



RELEVANCY

- Located in the heart of campus on major campus path
- Collaborative learning environment that fosters interdisciplinary connections
- Local knowledge of campus to provide deep understanding of the previous master plan
- Aligns with campus master plan
- LEED Gold



UNCG’s new 180,000 SF Nursing & Instructional Building provides state-of-the-art simulation, research, and classroom space for UNCG’s School of Nursing, the School of Health and Human Sciences, and the Biology and Chemistry departments. The student-focused architecture integrates best practices for a modern collaborative learning environment, while the building itself serves as a pedestrian connector via a grand internal stair between two campus nodes to improve campus circulation. The exterior materials palette of brick, glass, and metal panel complements the existing campus context, and the new site circulation pattern creates accessible pedestrian pathways. Inside, a five-story atrium visually connects the learning spaces, supporting multidisciplinary interaction and active student engagement.

The program includes classrooms that serve as both active learning and traditional lecture formats with integrated technology, as well as computer classroom; labs for nursing skills, general biology, microbiology, anatomy and physiology instruction; multiple chemistry labs; the Nursing Dean’s office and other administrative spaces; a rooftop patio; and a flexible-use “stairitorium.” Multiple nursing simulation spaces provide mock clinical environments for hands-on training with high-tech mannequins, including simulated hospital beds with headwalls, patient exam tables, labor and delivery spaces, and home health settings which mirror apartments. A shared community engagement center encourages collaboration and interaction between the Schools of Nursing and Health and Human Sciences, housing additional simulation space and exam rooms which will be used for health screenings for the community. HHS research labs will host outside participants for research studies, and a large event space accommodates groups for trainings, job fairs, or other functions.

LS3P is the Executive Architect in collaboration with SmithGroup.

YEAR COMPLETED

2020

SIZE

180,000 SF

4.3 CURRENT WORKLOAD and State projects awarded

LS3P has a comfortable current workload and is in a position to begin work on this project immediately.

LS3P consistently has over \$450 million in construction value in progress each year. We are available and can commit the necessary staff to handle your projects, and our BIM capabilities further enhance our team's design and production capacity.

We have included sufficient staffing in all disciplines to manage and design all work. With the resources of a large, flexible support staff, our assigned team can also meet aggressive schedules.

ACTIVE STATE PROJECTS

UNC Wilmington | Randall Library Renovation and Expansion
Construction Documents; Bid Spring 2022

UNC Wilmington | Student Recreational Fields (Design-Build)
Schematic Design

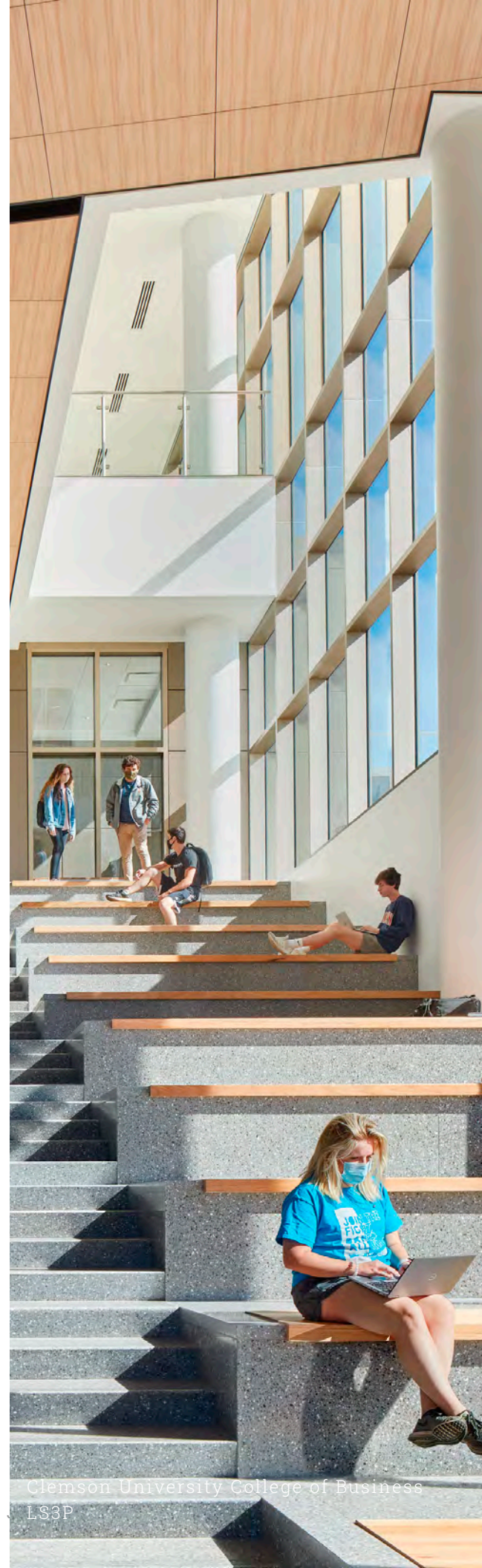
UNC Chapel Hill | McColl Building Addition & Renovation
Construction Documents; Bid Spring 2022

Department of Health and Human Services | Phase 1 Campus
Construction Documents and Bidding

Appalachian State University | Wey Hall Renovation
Schematic Design

UNC Wilmington | Student Recreational Fields (Design-Build)
Schematic Design

UNC Charlotte | Bioinformatics Building, 4th Floor Build Out
Construction Administration; Anticipated Completion Spring 2022



4.4 PROPOSED DESIGN APPROACH

for the project

Our work on campuses across the country allows us to bring best practices and lessons learned to bear on a customized solution for our clients. Shepley Bulfinch appreciates the complex landscape institutions are navigating, and we are committed to being thoughtful, engaged, and efficient thinking partners, finding the best solution for your goals, growth, and community.

Our design approach brings together rich discussions around culture, community, and learning with objective assessment and understanding of trends in academic libraries, learning spaces, information technology, and student success centers in higher education. **Our team's deep portfolio has allowed us to collaborate with universities across North America to understand the future of libraries.** We bring best practices and collective insights to each project while recognizing that each campus will demand a unique set of spaces and experiences defined by their values and goals.

PROGRAM VERIFICATION

We will work with UNCG on developing the design of a signature building that is contextual and aspirational but we recognize that even the most beautifully designed building can have functional issues if the program and activities within the building are not supported.

As part of the program verification phase, we will review and elaborate upon the spaces described in the library master plan. Libraries have grown increasingly dynamic in terms of program and activity, as they adapt to evolving technologies, social and pedagogical norms, the libraries inspire universities to think differently about the needs of their students, faculty and staff. These catalysts lead to innovation and interdisciplinary ways of exploring ideas that support academic success. We understand that the pandemic has shifted how we learn, how we work, and that libraries are at the forefront of that change.

Our approach is centered around engagement to create thought-provoking solutions. We will engage and challenge you to explore new models to ensure that the program document reflects the best design to accommodate Jackson Library today and in the future. With guidance and leadership from your team, we will structure a series of work sessions to include representatives from all interested user groups to understand what activities they want to perform in the building and what experiences they want to have in the building. It is both activities and experiences that create the right mix of environments. **Engaging with your community provides our design team insight into the core needs, but also gives the end users an honest sense of ownership in the project as it develops.** Through interactive workshops, we will test the proposed program and confirm that it still aligns with the long-term goals of the library and UNCG's mission.



We see the renovation and addition to Jackson Library as a dynamic hub where intellectual exchange and engagement takes place through community outreach and student success partnerships. The library will be versatile and provide universally inclusive and accessible environments, growing a sense of belonging for the UNCG community. We will work with you to gather information around the following programmatic themes and understand how to incorporate them into the reimagined Jackson Library. **Themes to the right:**

DESIGN CONSIDERATIONS FOR JACKSON LIBRARY

The value of a library to the campus community is defined by how it is experienced. We approach the library as a network of inter-connected destinations that are meaningful places cherished by their users. Through the way we shape form, bring in light, and frame views, we make the library intelligible and navigable.

From the inside to the outside, the library must integrate into the campus context and meet the requirements of the 2020 Campus Plan. The expansion of the library will contribute to the cohesive identity of the campus through the use of landscape, hardscape, materials, and pathways. Exterior materials will be selected from the palette of campus materials, while integrating current technology and fenestration into the façade. Articulation and rhythm of the façade and attention to the pedestrian scale will be carefully considered while highlighting the interior uses of the library. Exterior lighting and landscaping approaches will feel integral to the campus, connecting pathways, creating outdoor rooms, and emphasizing formal entrances, focal points, and vistas.



PROGRAMMATIC THEMES JACKSON LIBRARY



- Design to ensure equity of experience for the campus community so that all students feel welcomed and a sense of belonging
- Modernize staff work spaces to meet workplace needs including: privacy, collaboration, visibility, access, and hybrid environments.
- Support emerging pedagogies and learning technologies
- Create interdisciplinary learning spaces that support both tactile and digital initiatives
- Celebrate research and unique collections
- Establish a dynamic network of student success programs and potential future partnerships
- Create seating neighborhoods to accommodate both individual and collaborative work



Potential Themes | For the Reimagined Jackson Library

1 **Campus Integration:** Jackson Library should support your mission to redefine the university as an inclusive, collaborative, and responsive institution, improving the lives of students and the communities it serves. At the heart of the campus, the library is a beacon of learning and knowledge creation, where the community comes together, connecting cross disciplines and hosting university events.

The library can do this better by fostering a connection between its interior spaces and the campus, linking to pedestrian and vehicular networks. It should feel open, allowing visual connections between indoors and out. Clearly defined points of entry can emphasize its connection to the transit hub and pedestrian networks, making Jackson Library the crossroads of collaboration and learning. Active programs like an event space, a welcome center, and student collaboration spaces should be visible, accessible, and flexible, allowing the library to be nimble for unknown needs while supporting the campus into the future.

A key element of this connection is the western façade and plaza that faces the transit hub. This façade should create a focal point and vista for vehicles approaching from the west. Due to the western exposure, careful façade studies are required to meet sustainability goals while addressing the scale and articulation of the existing library façades. The plaza between the building and the transit hub should be active, incorporating seating and gathering spaces, creating a dynamic and flexible environment that encourages interaction among students while enabling the library programming to spill outside, placing the library at the crossroads of collaboration and learning on campus.



University of Notre Dame, Hesburgh Libraries | Shepley Bulfinch

2

Student Life in the Library: Jackson Library sits at the heart of campus and through this transformation can solidify its importance as the cross-section of academic and student life. Each student seeks different experiences in Jackson Library. Student A comes to the library to study every Tuesday night after lab class. Student B comes from their dorm and frequents the library after lunch and between classes to meet with a subject specialist. Student C is at the library early for a workshop on 3D printing for their class assignment. Each of these students needs space to support the way that they study, engage, learn, and socialize.

Every student should be able to find that spot in the Jackson library that feels like it is their own. Welcoming experiences for all library users allow those with disabilities to experience the same library as their peers without inconvenience. The key will be to find the right mix of open vs. closed, individual vs. group, and loud vs. quiet spaces with the right balance of seating types offered to support different learning objectives.



Teachers College at Columbia University, Smith Learning Theatre | Shepley Bulfinch



Trident Technical College SC Aeronautical Training Center | LS3P

3

Intuitive Experience: A library's interior layout should provide a consistent user experience and be easily navigated by students, faculty, and visitors alike. The existing Jackson Library buildings represent moments in time with layouts that support several outdated program types. This addition and renovation should stitch this architecture together so that no matter where you are inside, you understand that you are in Jackson Library. Our team will test this legibility with your stakeholders through a variety of tools during programming and design phases.

Wayfinding is more than signage. It is a continuity of floor and ceiling planes, interior spaces opening up for orientation and daylight, and layered transparency so as one can confidently find the way when approaching an elevator, stair, or intersection as a decision point.

Programmatic touch points, such as services and resources, link interior spaces. Clear sightlines to these featured elements express the value of these spaces within Jackson Library's identity. Visual and physical layering of spaces adds elements of discovery, finding comfortable spaces to inhabit along the way to a destination. An art exhibit in an event space on an upper floor with an open stairway can guide visitors along a journey of discovery that might not have existed without vertical connections. A special collection can be highlighted at a prominent entry to promote materials and develop pride in research as part of the library's resources. Maker spaces and visualization labs can create co-authorship and creation of ideas and tell visitors that making is an integral thread to experiencing the library.



City of Austin, Austin Central Library | Shepley Bulfinch

4

Wellness and Resiliency: People and Environment are linked. In our design process, we incorporate sustainable design strategies by beginning with four themes that integrate this thinking: Energy, Culture, Comfort, and Nourishment. We consider the life of the building, the wellness of the occupants, and the impact our decisions on materials, building systems, and culture of sustainable stewardship will have throughout its lifespan. We will workshop with you to understand your priorities for Jackson Library and the surrounding campus to create the project’s guiding principles, which serve as our guiding star throughout the design process.

Libraries must adapt to meet the changing needs of their students, faculty, and staff. With space a limited commodity, libraries are challenged to accommodate evolving programs. Through scenario planning, we work with you to map out a day-in-the-life of a library to identify programmatic needs, priorities, and frequencies. With this knowledge, we can accommodate a wide variety of activities in a smaller footprint by designing flexible, convertible spaces that can transform from day to evening; mid-semester to finals; and between terms. We will work with you to establish proposed use cases to better understand your unique needs and challenges, thinking beyond teaching spaces doubling as student study space. How does a collaboration space convert to individual study pods? Can a social lounge convert to a hack-a-thon and then host mock interviews? What would a space that meets all these needs look like for Jackson Library?

The library is an ideal platform to incorporate the University’s sustainable values, including equity, environmental, economic, and aesthetic themes, making them visible, educational tools. As we develop these approaches, we will work with your stakeholders to develop a deep understanding of place, climate, history, and culture, and to make them tangible and tailored to the unique needs of Jackson Library and the campus at large.

HOW WE WILL WORK WITH YOU

Shepley Bulfinch approaches each project with a fresh perspective and a careful understanding of the project's context. Our approach to the programming and design process is one of inclusion and collaboration. Our experience in higher education has shaped an approach that maximizes client engagement, builds trust among team members, and moves forward effectively. From project kick-off to closeout, we integrate processes to harness the richness of different perspectives, synthesize ideas, capture aspirations, and consistently use that information to guide the project forward successfully.

Creating a shared vision: The foundation of a successful project begins with a clear set of goals and guiding principles. Through collaborative workshops and visioning sessions, we use a variety of tools to engage with project leaders and stakeholders to develop consensus around a unified vision for the building. These goals and principles will be the touchstone for the project, that will return throughout the design and construction process to evaluate options and guide decision making.

Engagement and Interactive Design Process: Collaboration, along with effective questioning and active listening are at the core of our design process. Our toolkit of interactive methodologies will fully engage participants and provide meaningful feedback. We will ask both open-ended and targeted questions, and use images, diagrams, and sketches. Engagement is about defining experience and helping your stakeholders imagine the power and potential of the future space.

Throughout the course of the project, we will collect and analyze feedback to identify common themes, differentiators, and out-of-the-box ideas, playing back at regular intervals to project leadership. The continuous feedback into the design process allows the client and design team to not only gather input, but test ideas, refine or clarify concepts, and confirm project goals and principles.

Nimble and Flexible: The pandemic continues to bring uncertainty and requires the ability to quickly adjust plans and methods and may make it difficult to hold on-campus meetings at times. Virtual collaboration has been an integral part of our design process for several years. We are skilled at conducting virtual workshops over digital collaboration platforms, tailoring tools to workshop goals and participant style. Our extensive virtual toolkit includes Miro brainstorming sessions, Image Olympics portals, live-action sketching, virtual space walk-throughs, as well as live stream town halls and themed coffee talks, that allow for real-time input from project cohorts regardless of location.

Through engagement with your UNCG's core team we will collaborate to determine key issues and ideal adjacencies for the programming functions. This process will inform the design approach, which will respond thoughtfully to the existing library spaces and will integrate all the components of the project in a cohesive manner. The library will function as a holistic complex that welcomes student engagement, learning and collaborative interaction all while enhancing academia, research, and student success.



4.5 RECENT EXPERIENCE WITH PROJECT

costs and schedule adherence

(INCLUDE PROJECTS MOST SIMILAR TO JACKSON LIBRARY ADDITION & RENOVATION)

With a team of 370+ professionals and leading-edge production capabilities, we are well equipped to design and administer all work anticipated under the proposed design contract within a desired and reasonable time frame. Once a project schedule is established, we will perform regular reviews of overall project progress to keep the process moving forward.

STAYING ON SCHEDULE

LS3P has earned a reputation for on-time project delivery. The methodology we use to coordinate our work focuses on executing the basics of project delivery at a very high level. We require all consultants to participate in scheduled progress reviews to meet established deadlines. We use sound management procedures involving weekly project reviews. Projects are coordinated via multiple communications means, including FTP sites, project websites, and BIM 360 Cloud based project systems.

LS3P strongly advocates “over the shoulder reviews” with the client’s technical staff to reconcile differences over any review comments; this keeps the project moving forward. We also emphasize the importance of building good rapport and trust among all team contributors so that critical issues are addressed openly and resolved quickly.

We are proactive in having all parties discuss and coordinate the scope and schedule issues. We “plan the work and work the plan.” When possible, we conduct Process Design Meetings with the Project Team (including Owner’s representatives) at the beginning of each phase of the design work (SD, DD, CD, and CA) to ensure “buy-in” by all of the team members. This process results in a higher quality project with better-coordinated work, delivered within the agreed-upon schedule

BUDGET COMPLIANCE

LS3P’s compliance with owner’s budgets over the past 5 years has averaged three percent (3%) or less of the owner’s project budget and within 30 days or less of the owner’s projected project schedule. Our LS3P process develops the building design in parallel with a responsive cost model so that design and cost remain in balance throughout.

Our team approach to schedule control begins by clearly defining expectations and working closely with all parties to establish a design and production schedule that meets those expectations. Your Project Manager will monitor the proposed planning and design schedule and balance the project’s target milestones with the workload and available resources to develop a viable plan. The team will review this plan at internal weekly staffing meetings and team meetings to track progress and make adjustments if needed. We have a wide range of in-house resources from technical expertise to visualization experts to planning support—all available as specific needs may arise.

Successful budgeting requires cost control at project inception and extends through project construction and completion. Budget analysis will always be comprehensive, acknowledging the interrelated nature of design at every stage of development, documentation, and construction.

Please see the next page for relevant examples of schedule and budget compliance.

UNDERSTANDING OF CURRENT MARKET

Cost escalation over the life of a project can add unanticipated expense to a project. In recent years, supply chain disruptions, labor shortages, and surges in demand have led to significant escalation and greater volatility in the cost of materials and labor. LS3P + Shepley Bulfinch are experienced at navigating these complex conditions and will work closely with you to anticipate and manage issues caused by market volatility. Our process begins with close attention to project budgets and updated cost estimates at every phase of design. We manage “scope creep” that adds unplanned expenses, and we develop base-bid packages with detailed scope alternates that may be included if favorable pricing occurs. We are also adept at phasing construction to align with funding mechanisms, cash flow, long lead times, and early-construction packages if needed to maintain budget and schedule. We have a wide range of in-house resources from technical expertise to visualization experts to planning support—all available as specific needs may arise. The following case studies highlight recent and active projects and examples of our teams’ nimbleness with associated budget and schedule management strategies.

UNC WILMINGTON RANDALL LIBRARY RENOVATION & EXPANSION

Anticipated Bid / GMP Spring 2022

- Maintain integrity of existing building systems to maximize renovation value.
- Create early equipment, sitework, underground utilities, foundations, and structural steel construction packages to accelerate construction schedule.
- Coordinate with CM@R to identify and minimize projected disruptions to adjacent campus buildings and services.
- Utilize bid alternate packages to manage market flux on bid day.



APPALACHIAN STATE UNIVERSITY SANFORD HALL RENOVATION & ADDITION

Construction completed February 2021

- Work with existing structure and systems to maximize renovation value.
- Create early abatement and demolition package to accelerate construction schedule.
- Coordinate with CM@R and subcontractor submittals to facilitate JIT materials delivery due to limited construction lay-down area in heart of campus.
- Develop bid alternate and concurrent enabling packages to allow multiple funding sources to support project budget.



UNIVERSITY OF LOYOLA MARYLAND FERNANDEZ CENTER FOR INNOVATION AND COLLABORATIVE LEARNING ADDITION AND RENOVATION

Construction completed Fall 2021

- Modify site excavation and foundation strategy to limit work area and disruption to adjacent campus facilities.
- Managed construction phasing options to reduce temporary space needs during construction duration.
- Work with stakeholders and CM@R to shift costs from FFE package to improved indoor air quality and technology systems in response to COVID operations.
- Adjust construction schedule to prioritize interior items when exterior stone cladding was delayed, maintaining overall completion schedule.



4.6 CONSTRUCTION ADMINISTRATION

capabilities

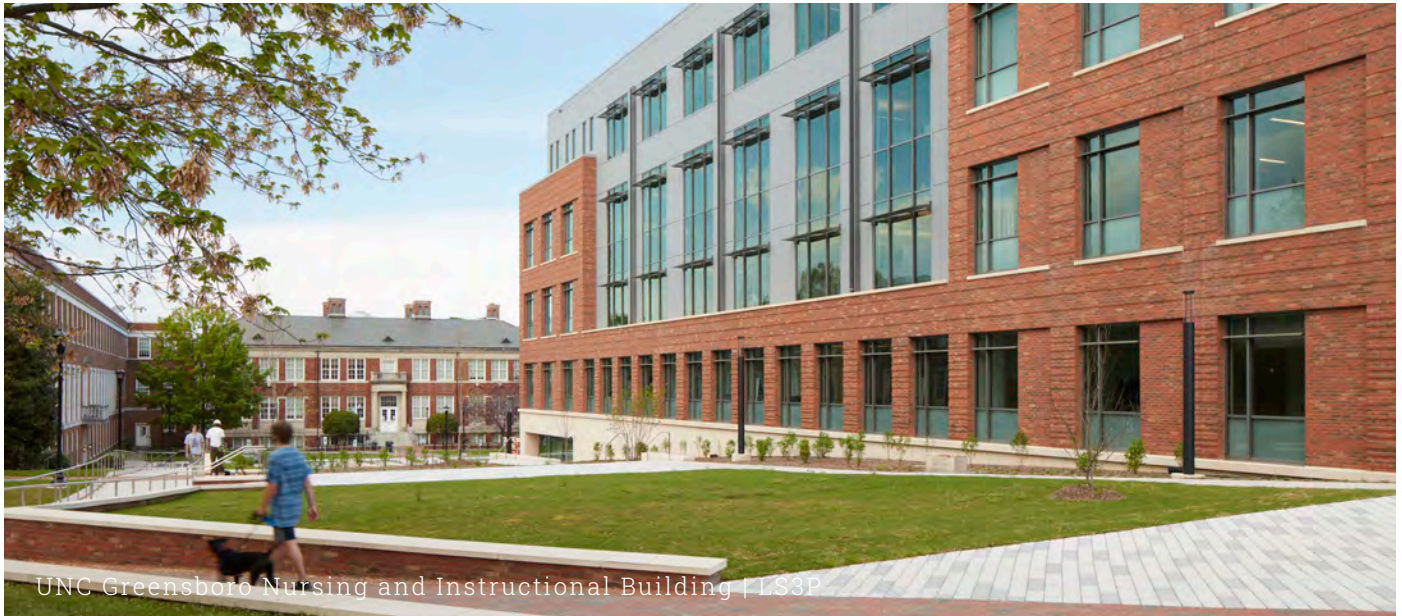
One of the most critical components of the building cycle is the construction phase, during which the Contractor's interpretation and adherence to plans and specifications becomes apparent. To address this important work, LS3P has built a dedicated team of specialists who, along with the design staff, constantly monitor construction progress on behalf of owners.

As the design team organizes the production work and refines the design into construction documents, considerations of schedule, cost, and efficiency are paramount. A member of LS3P's full-time Construction Administration staff serves as a member of the design team, assisting with monitoring overall quality, content, clarity, integration, and coordination of the documents. The content and sequence of the construction documents are continually tested against the fundamental requirements of the project: regulatory milestones, accelerated delivery packages, the public involvement process, constructability, team delivery capacity, and the effective expression and delineation of the project requirements.

The construction phase is critical to the successful completion of your project. LS3P takes a very active approach during this phase, with a dedicated staff of construction administration specialists whose sole responsibility is to administer construction contracts. The ultimate goal of the CA staff is to address issues on a timely basis, documenting each as appropriate. Our construction administration staff is local and will have a very prominent presence on the job site.

Design team members from both LS3P and Shepley Bulfinch will remain actively involved throughout this phase as well to assist in translating your project successfully from working drawings to reality.





4.7 PROXIMITY TO AND FAMILIARITY WITH THE AREA

where project is located

Our expert team will provide national and regional expertise with local knowledge and service. LS3P + Shepley is committed to bringing state-of-the-art design technology and the expertise of a strong regional firm closer to our clients on a local level.

LOCATION AND LOCALITY KNOWLEDGE

Team members are based locally and are able to convene on your campus with short notice. LS3P has enjoyed our successful partnership with UNCG and we have a depth of knowledge regarding campus layouts, existing structures, and the overall locality. Our Raleigh, NC office is conveniently located within just a short drive of your campus.

We were fortunate to have designed the last major project at UNC Greensboro, which gave us a deep understanding of the previous master plan. The development of the new master plan builds on the prior ideals and creates a masterful opportunity for this project to shape UNCG.

Our team is proud to work and live locally. We take pride in helping to fuel our economy, supporting regional resources, and bringing national resources in to benefit our community and workforce. The LS3P + Shepley Bulfinch team is excited for an opportunity to support UNCG in this important work.

CAMPUS FAMILIARITY

With the recent completion of the UNCG Nursing and Instructional Building, our exposure to your campus allows our team to work within the existing framework to explore new approaches to this project, which will enhance the campus and benefit the environment. We are accomplished in working with state and local authorities, and have the benefit of knowing the steps of the design process required by the university and the state agencies.

Building on already strong campus planning, the location of the Jackson Library Addition & Renovation project has the opportunity to strengthen the new campus master plan as the anchor for multiple campus paths and the center of campus.

4.8 RECORD OF SUCCESSFULLY COMPLETED PROJECTS without major legal or technical problems

LS3P has operated successfully since 1963, with the majority of our work coming from repeat clients. We are deeply committed to excellence, and we strive to maintain excellent relationships and seek win-win solutions to any issues which arise. With over \$450 million in construction value each year, the scale of our regional practice is substantial, and from time to time in the ordinary course of business, we encounter disagreements and frivolous claims. Such claims are generally either third party or broadly cast and have not created a materially adverse effect on either our financial statements or our liability insurance.

We can confirm that there are no claims, litigation or proceedings brought within the last five years preceding the date of this RFP which are not adequately covered by the firm's

insurance policies, nor which would interfere with the work proposed herein. Historically, LS3P, its insurers, and attorneys have settled lawsuits or had them dismissed.

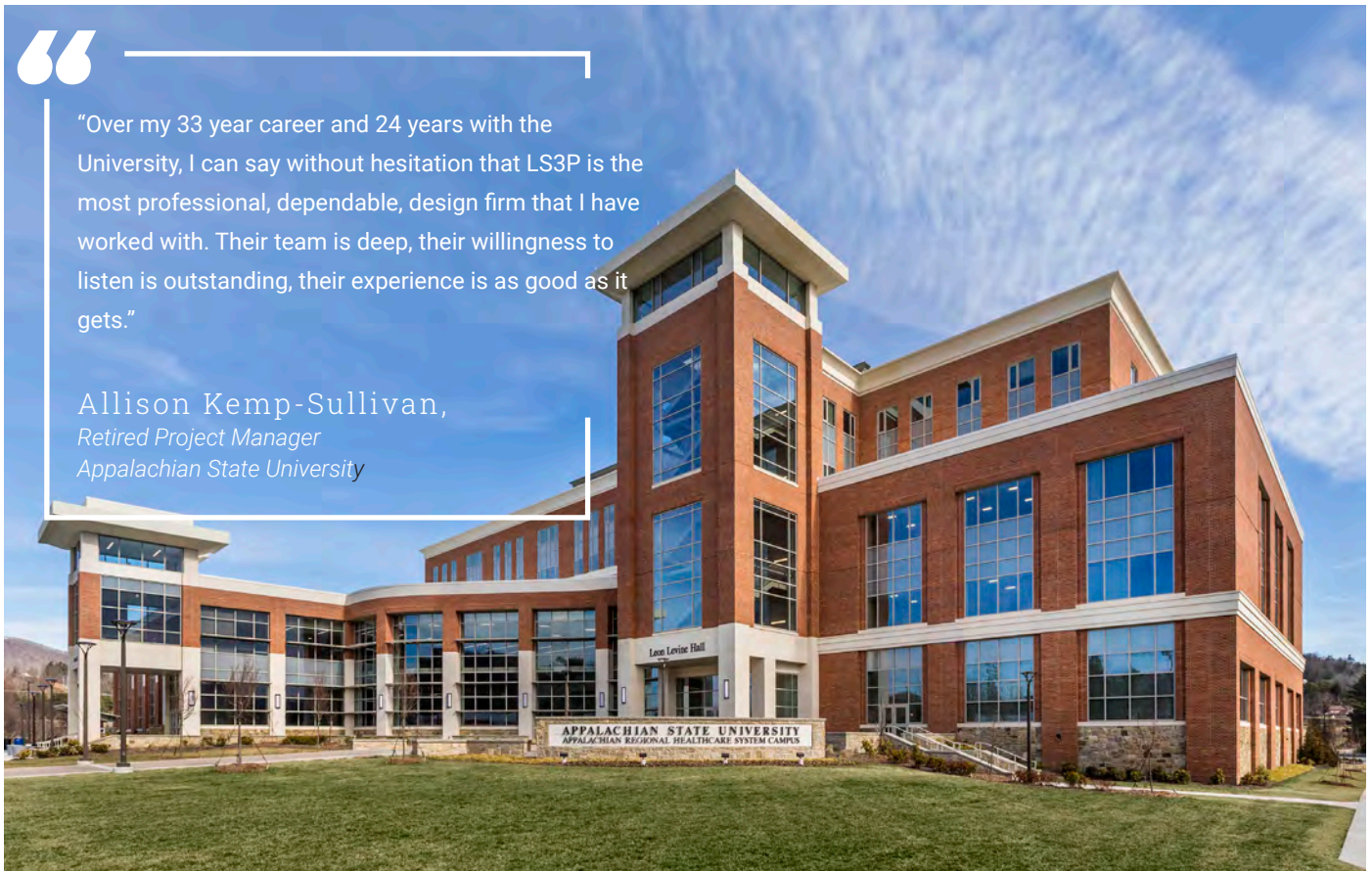
The firm is financially sound and prides itself on conservative claims management and commitment to quality work. Should you have any specific concerns, please do not hesitate to contact us and we would be happy to set up a call with our In-House Counsel to discuss.

On our 14 most recent projects for NC SCO, LS3P averaged 4.8 out of 5...and had 8 projects that scored a perfect 5.0!



“Over my 33 year career and 24 years with the University, I can say without hesitation that LS3P is the most professional, dependable, design firm that I have worked with. Their team is deep, their willingness to listen is outstanding, their experience is as good as it gets.”

Allison Kemp-Sullivan,
Retired Project Manager
Appalachian State University



4.9 ENERGY CONSERVATION

/LEED Experience

“Sustainability has gone from an inconvenient truth to an existential imperative.” – Thom Penney, Chairman LS3P Board of Directors

Colleges and universities are cathedrals for learning, incubating a scientific, artistic, humanistic, and economic future for the planet. These places for innovation and independence provide opportunity to **model possibility and demonstrate systems thinking in a way that builds upon culture, ecology, and prosperity.** We are faced with a global climate emergency that requires significant response, either as mitigation or as reaction to ongoing changes in weather patterns, species diversity, economic fluctuation, and human will.

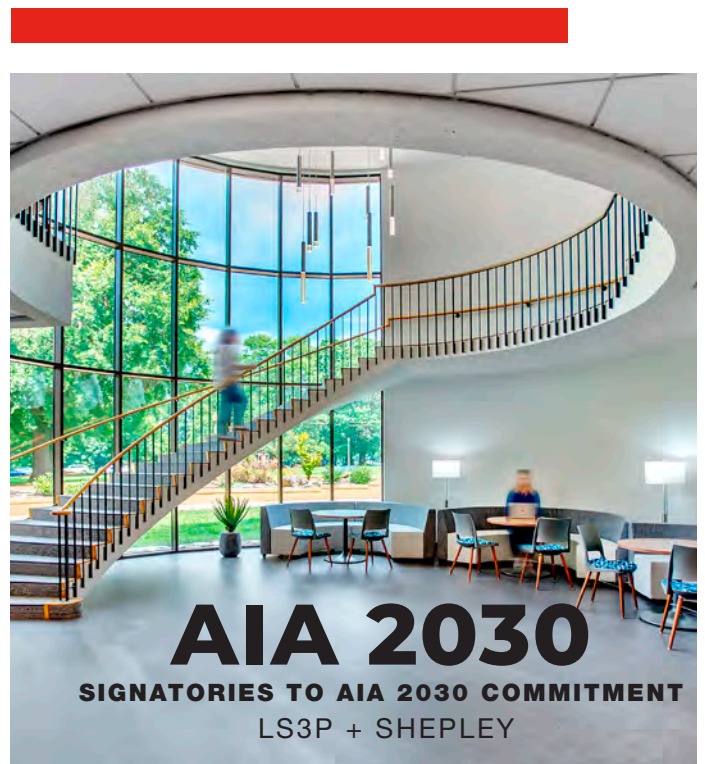
Every institution of higher education is an ecosystem. It is an academic environment with specific needs for research, thought leadership, and growth. It is a physical place that inspires and protects. It is people who have come together to share knowledge and learn from each other. It is a financial machine that must find balance at the end of each fiscal quarter. **None of these systems can stand alone.**

Sustainability is living and designing in a way that allows all living things to thrive in perpetuity. As reporting signatories to the AIA/Architecture 2030 commitment toward zero carbon buildings by 2030, LS3P + Shepley Bulfinch are **committed to reducing the impact of buildings on the environment, designing**

for equity and fairness, and planning for a resilient and optimistic future for all of us.

Sustainable and human-centered design is inherent to our firms’ design philosophy and practice. We approach sustainability holistically, evaluating the broad range of elements that the term “sustainability” encompasses and pursuing those most relevant to the project and place. By aligning the goals of the project with your institutional values, we ensure that **core sustainability principles are incorporated into each project’s programming and design recommendations.**

We believe every project we do has impact. Some have extraordinary impact. LS3P + Shepley Bulfinch practice integrative design with the understanding that **sustainable design is not a checklist,** nor is it a line item that can be separated from a project budget. All our projects embody high-performance sustainable design strategies. It is who we are and how we practice architecture. **Engaging clients and communities in thoughtful dialogue about unlimited benefits of good design changes everything.**



05 MINORITY PARTICIPATION PLAN

Tab 5



DESIGN & CONSTRUCTION EFFORTS

to reach UNCG HUB goals

We believe that diversity makes us better and stronger.

Leveraging diverse teams, collaborating with diverse partners, and engaging with our communities demonstrate that our differences are also our strengths. Inclusiveness improves all professions and strengthens the work we do together. Equitable practices ensure that diversity of population and thought are respected and valued.

DESIGN EFFORTS

LS3P is committed to including Historically Underutilized Businesses on our design teams, and we take an aggressive, proactive approach to helping owners meet HUB participation goals. We work diligently with you to increase W/MBE participation, with strategies specific to each project. LS3P has ongoing targeted outreach to engage a growing roster of W/MBE partners, contacting an average of 40 minority businesses each month via an introductory email, with the goal of encouraging businesses to join our database of vendors and consultants.

For this project, our design team includes the following W/MBE, HUB, and SBE firms:

- Shepley Bulfinch // Design Architect (WBE - Nationally)
- Stewart // Landscape Architect (MBE/HUB)
- SKA Consulting Engineers // Structural Engineering, Building Envelope (SBE - Nationally)
- Palacio Collaborative // Cost Estimator (MBE/HUB)

CONSTRUCTION EFFORTS

LS3P will work closely with the Construction Manager at Risk from pre-bid until final payment and project closeout and will assist in coordinating HUB requirements and procedures. Together with the CM@R, we employ proactive strategies to encourage and support HUB participation. These procedures, with respect to Senate Bill 914 & HUB requirements, include: providing detailed guidelines for recruitment and selection of minority businesses in all bid documents; advertising projects in targeted minority newspapers and publications; placing plans and bid documents in designated minority plan rooms; conducting pre-bid conferences to help contractors meet 50-point requirements for good faith efforts; assisting the



CM@R in the bidding process and helping educate contractors in meeting HUB requirements; preparing online “Projects for Bid” to help prospective bidders track projects, and facilitating and reviewing “Appendix E” HUB payment applications.

INCLUSIVE DESIGN

LS3P + Shepley Bulfinch design spaces for all people. **Every building should be welcoming and accessible to everyone who uses it**, and we work with our clients to create an inclusive approach to designing for diverse user groups who may have different needs and physical abilities. Buildings should be integrated into the environment with spaces to encourage gathering and relaxing inside and out; inspiring, engaging places where people want to linger build a sense of community and encourage relationships.

The spaces we design can welcome or exclude people and their varied identities. Our focus on design **strives for spaces that reflect our partner communities and aspires to make all community members feel welcomed, embraced, and empowered on their own path of discovery** through an equitable experience.

Libraries serve as the academic nexus of campus, where exploration and difficult discussions find a home. We embrace this in our design of libraries – centering the identities of users and their individual paths of discovery. Varied study spaces, both quiet and collaborative, offer distinct but **inclusive experiences for neurodiverse student bodies**. The redesign of

Jackson library must reflect its community of scholars, through its layout, wayfinding, art, and technology, so that the building grows with your campus and its diverse student body.

JUSTICE, DIVERSITY, EQUITY, AND INCLUSION

LS3P + Shepley Bulfinch **advocate not just for justice, diversity, equity, and inclusion in our firms, but also throughout our industry**, and we believe strongly that diversity elevates all that we do.

LS3P's **JEDI Advocacy Group continuously elevates the firm's diversity and inclusion efforts** in our business and practice, and we are implementing ongoing initiatives from our Diversity + Inclusion Strategic Plan while continuing important conversations with our clients, colleagues, and communities.

Within the past few years, Shepley Bulfinch has sought to further our action around equity and inclusion. Our firm has **undertaken unconscious bias training** that engaged the whole firm, but with a particular focus on our entire leadership and board groups. Our leadership groups recognized that progress towards positive change requires commitment from leadership, and they have taken that to heart.

Diversity has been a stated core value of Shepley Bulfinch for more than 20 years. As a nationally certified woman-owned business (WBE), the firm supports a range of policies, practices, and cultural norms that foster a diverse and inclusive environment, including equitable promotion and stock ownership opportunities. Our Strategic Framework dedicates resources to what we call Engage & Impact, which details our charge to "act as a responsible environmental and community citizen, to make a difference in the world and our profession."

This framework recognizes that the **commitment to diversity, equity, and inclusion intertwines with our work on sustainability and resiliency** and must build strength and opportunity in our communities.

While we have actively pushed equity and diversity as a core value, we still have work to do in this predominantly white industry. LS3P is committed to providing opportunities to help the next generation of architects grow in the profession. We actively recruit on over 30 job boards reaching veterans, differently abled, and underrepresented groups in our industry. We attend career fairs at colleges and universities across our region and beyond, and we engage in design reviews, studio visits, and sponsored studios with our local college and university partners. We welcome the **opportunity to engage your Interior Architecture Department** through this design and construction process. Our student summer interns represent a broad range of geographies, experiences, and perspectives, and we have an ongoing engagement with NOMA students through sponsored fellowship research projects.

Shepley Bulfinch has continued to foster and develop the growth of our BIPOC employees through internal engagement and highlighting continued professional and project successes within the firm and the larger architectural community. We have committed financial and staff resources to support NOMA's Project Pipeline, directly supporting the growth and diversification of design professions. Shepley Bulfinch actively partners with HBCU and HSI architecture and design programs to provide career advice, portfolio reviews, as well as leading Professional Practice classes to connect aspiring architects of color to current practitioners. Our recruiting efforts celebrate the unique perspectives diverse candidates bring to their design work.



06 CURRENT SF330

Tab 6



Clemson University Starbucks Cafe at Cooper Library | LS3P

ARCHITECT-ENGINEER QUALIFICATIONS

LS3P

PART I: CONTRACT-SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION

UNC Greensboro Jackson Library Addition & Renovation
Greensboro, NC

2. PUBLIC NOTICE DATE

1/4/2022

3. SOLICITATION OR PROJECT NUMBER

N/A

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME // TITLE

Katherine Peele // Principal in Charge

5. NAME OF FIRM

LS3P

6. TELEPHONE

919.829.2700

7. FAX

919.829.2730

8. E-MAIL

katherinepeeel@ls3p.com

C. PROPOSED TEAM

| | PRIME (CHECK) | JV PARTNER | SUB- CONTRACTOR | 9. FIRM NAME | 10. ADDRESS | 11. ROLE IN THIS CONTRACT |
|---|-------------------------------------|------------|-------------------------------------|---|---|---------------------------|
| a | <input checked="" type="checkbox"/> | | | LS3P <input checked="" type="checkbox"/> CHECK IF BRANCH | 434 Fayetteville St. Ste. 1700 Raleigh, NC 27601 | Architect of Record |
| b | | | <input checked="" type="checkbox"/> | Shepley Bulfinch <input checked="" type="checkbox"/> CHECK IF BRANCH | P.O. Box 14512 Durham, NC 27709 | Design Architect |
| c | | | <input checked="" type="checkbox"/> | Timmons Group <input checked="" type="checkbox"/> CHECK IF BRANCH | 8642 W. Market St, Ste. 136 Greensboro, NC 27409 | Civil Engineering |
| d | | | <input checked="" type="checkbox"/> | Stewart <input type="checkbox"/> CHECK IF BRANCH | 223 S. West St, Ste. 1100 Raleigh, NC 27603 | Landscape Architecture |
| e | | | <input checked="" type="checkbox"/> | Affiliated Engineers <input checked="" type="checkbox"/> CHECK IF BRANCH | 1414 Raleigh Rd, Ste. 305 Chapel Hill, NC 27517 | MEP/FP/Security/Lighting |
| f | | | <input checked="" type="checkbox"/> | SKA Consulting Engineers <input type="checkbox"/> CHECK IF BRANCH | 7900 Triad Center Dr, Ste 200 Greensboro NC, 27409 | Structural Engineering |
| g | | | <input checked="" type="checkbox"/> | Waveguide <input checked="" type="checkbox"/> CHECK IF BRANCH | 8362 Six Forks Rd, Ste. 102 Raleigh, NC 27615 | AV/IT/Acoustics |

C. PROPOSED TEAM (Continued)

| | PRIME (CHECK) | JV PARTNER | SUB- CONTRACTOR | 9. FIRM NAME | 10. ADDRESS | 11. ROLE IN THIS CONTRACT |
|---|-------------------------------------|------------|-------------------------------------|--|--|---------------------------|
| h | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> | The Fire Consultants <input checked="" type="checkbox"/> CHECK IF BRANCH | 182 Briarfield Drive Apex, NC 27502 | Code/Life Safety |
| i | | | <input checked="" type="checkbox"/> | S&ME <input checked="" type="checkbox"/> CHECK IF BRANCH | 3201 Spring Forest Rd Raleigh, NC 27616 | Hazardous Materials |
| j | | | <input checked="" type="checkbox"/> | Palacio Collaborative <input checked="" type="checkbox"/> CHECK IF BRANCH | 4819 Emperor Blvd, Ste 400 Durham, NC 27703 | Cost Estimating |



D. ORGANIZATIONAL CHART OF PROPOSED TEAM

ATTACHED

D. ORGANIZATIONAL CHART



UNC GREENSBORO



PROJECT LEADERSHIP

DAY TO DAY CONTACT

CHRIS ROBERTS
Project Manager
LS3P

KATHERINE PEELE
Principal in Charge
LS3P

KELLY BRUBAKER
Library Design Principal
Shepley Bulfinch

SHAWN SOWERS
Project Executive
LS3P

JANETTE BLACKBURN
Managing Principal
Shepley Bulfinch

CORE TEAM

SCOTT GREENMAN
Project Architect
LS3P

NATALIE THURMAN
Design Lead
Shepley Bulfinch

DAVE O'SHEA
Construction Admin
LS3P

BARAK YARYAN
Design Architect
Shepley Bulfinch

AMANDA VIGNEAU
Interior Designer
Shepley Bulfinch

ELAINE GALLAGHER ADAMS
Sustainability Director
LS3P

CONSULTANTS

TIMMONS
Civil Engineers

ADAM CARROLL
Civil Engineer

JACOB MOORE
Civil Engineer

STEWART
Landscape Architecture

MIKE TARRANT
Landscape Architect

AEI
MEP/FP/Security/
Lighting

JOHN DUFFY
PIC/Project Manager

BOB SHERMAN
Mechanical Library Specialist

PAUL SOCHA
Mechanical Engineer

BILL HENNER
Electrical Engineer

ZHONG SUN
Piping/Fire Protection Engineer

LEAH ROBINSON
Architectural Lighting Designer

PATRICK MILNAMOW
Security Systems Designer

SKA
Structural Engineers/
Building Envelope

AARON BOPP
Structural Engineer

WAVEGUIDE
AV/IT/Acoustics

KEITH PORTNOY
Project Manager

ADAM GALATIOTO
Acoustics Consultant

THE FIRE CONSULTANTS
Code/LS

ALEX KLINE
Fire Protection Engineer

S&ME
Hazardous Materials

WAYNE WATTERSON
Consulting Engineer

PALACIO COLLABORATIVE
Cost Estimating

TONY MURPHY
Cost Manager

■ M/WBE/HUB/SBE Firm in NC

■ M/WBE/HUB/SBE Firm National


E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT



12. NAME
Chris Roberts, AIA, LEED AP

13. ROLE IN THIS CONTRACT
Project Manager

14. YEARS EXPERIENCE
a. TOTAL b. CURRENT
22 18

15. FIRM NAME AND LOCATION
 LS3P
Raleigh, NC

16. EDUCATION
Bachelor of Architecture // Pennsylvania State University
// 1999

17. CURRENT PROFESSIONAL REGISTRATION
Registered Architect: NC (2003)
LEED Accredited Professional

18. OTHER PROFESSIONAL QUALIFICATIONS

Chris Roberts has been with LS3P since 2003 and is currently the Director of the Design Studio in the Raleigh office. Chris has a strong background in public facility design and extensive experience in the programming, planning, and design of higher education learning environments. He has developed a long and productive relationship with the State Construction Office over the course of several university and other state-funded projects and is widely respected in the professional community; he also recently served as President of the 2014 Board of Directors for AIA Triangle.

19. RELEVANT PROJECTS

| (1) TITLE AND LOCATION | | (2) YEAR COMPLETED | |
|------------------------|---|-----------------------|--------------|
| | | PROFESSIONAL SERVICES | CONSTRUCTION |
| a | UNCG Nursing and Instructional Building Greensboro, NC | 2016 | 2020 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM UNCG's new 180,000 SF Nursing & Instructional Building provides state-of-the-art simulation, research, and classroom space for UNCG's School of Nursing, the School of Health and Human Sciences, and the Biology and Chemistry departments. Role: Project Manager // Cost: \$72M | | |
| b | UNC Chapel Hill McColl Building Addition/Renovation Chapel Hill, NC | 2022 | 2025 (est) |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM LS3P and LMN partnered on the programming and design for this major addition and renovation to the McColl Building. The estimated 150,000 SF addition and 130,000 SF renovation will support undergraduate enrollment growth, update existing classrooms, and consolidate staff currently located off site in lease space. Role: Sector Leader Cost: \$116M | | |
| c | Albemarle Building Renovation Raleigh, NC | 2015 | 2017 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM This project is a complete renovation of a 12-story office building built in 1970, including asbestos abatement, ADA and energy improvements, as well as complete building systems replacements. This project significantly improves downtown Raleigh's built environment, restoring the outmoded building for contemporary use as a thriving part of the urban landscape. Role: Project Manager // Cost: \$37.8M | | |
| d | NCSU Wolf Ridge Apartments & On the Oval Raleigh, NC | 2014 | 2014 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM This 550,000 SF project provides about 1,200 undergraduate beds in apartment style housing. The six residential buildings complete and define the middle section of the Oval. Role: Project Manager // Cost: \$113.4 M | | |
| e | Duke Institute for Brain Sciences Durham, NC | 2013 | 2014 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM The DIBS project is the transformation of a 11,000 sf abandoned chiller equipment space in the basement of the Levine Science Research Center Building at Duke University into a light filled, creative, and collaborative work space for the Duke Institute for Brain Sciences. Role: Studio Leader // \$4.3M | | |


E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT



12. NAME
Katherine Peele, FAIA, LEED AP

13. ROLE IN THIS CONTRACT
Principal In Charge

14. YEARS EXPERIENCE
a. TOTAL b. CURRENT
39 33

15. FIRM NAME AND LOCATION
 LS3P
Raleigh, NC

16. EDUCATION
Bachelor of Environmental Design, NCSU
Bachelor of Architecture, NCSU

17. CURRENT PROFESSIONAL REGISTRATION
Registered Architect in NC (#5720), VA, CO
LEED Accredited Professional

18. OTHER PROFESSIONAL QUALIFICATIONS

In her 33 years with the firm, Katherine has managed over \$1 billion worth of construction. Katherine serves as the current President of the North Carolina Board of Architecture, and she received her AIA Fellowship in 2003 in recognition of her extensive expertise and commitment to educational facility design. In 2019 she was awarded AIA NC's highest honor: the F. Carter Williams Gold Medal in recognition of her distinguished career and accomplishments as an architect.

19. RELEVANT PROJECTS

| (1) TITLE AND LOCATION | | (2) YEAR COMPLETED | |
|------------------------|---|-----------------------|--------------|
| | | PROFESSIONAL SERVICES | CONSTRUCTION |
| a | UNCG Nursing and Instructional Building Greensboro, NC | 2016 | 2020 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM UNCG's new 180,000 SF Nursing & Instructional Building provides state-of-the-art simulation, research, and classroom space for UNCG's School of Nursing, the School of Health and Human Sciences, and the Biology and Chemistry departments. Role: Principal-in-Charge // Cost: \$72M | | |
| b | UNC Chapel Hill McColl Building Addition/Renovation Chapel Hill, NC | 2022 | 2025 (est) |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM LS3P and LMN partnered on the programming and design for this major addition and renovation to the McColl Building. The estimated 150,000 SF addition and 130,000 SF renovation will support undergraduate enrollment growth, update existing classrooms, and consolidate staff currently located off site in lease space. Role: Principal-in-Charge // Cost: \$116M | | |
| c | Albemarle Building Renovation Raleigh, NC | 2015 | 2017 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM This project is a complete renovation of a 12-story office building built in 1970, including asbestos abatement, ADA and energy improvements, as well as complete building systems replacements. This project significantly improves downtown Raleigh's built environment, restoring the outmoded building for contemporary use as a thriving part of the urban landscape. Role: Principal-in-Charge // Cost: \$37.8M | | |
| d | NCSU Wolf Ridge Apartments & On the Oval Raleigh, NC | 2014 | 2014 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM This 550,000 SF project provides about 1,200 undergraduate beds in apartment style housing. The six residential buildings complete and define the middle section of the Oval. Role: Principal-in-Charge // Cost: \$113.4 M | | |
| e | UNC Chapel Hill Adams School of Dentistry Renovation Chapel Hill, NC | 2021 | 2021 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM This 61,600 SF extensive renovation for UNC's Adams School of Dentistry will provide updated clinical and lab spaces in two existing buildings. The program includes a revitalized patient admissions clinic, dental faculty practice clinic, health care systems simulation lab, Center for Digital Innovation, and multidisciplinary clinic. Role: Principal-in-Charge // Cost: 10.5M | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT



12. NAME
Kelly Brubaker, AIA, LEED AP

13. ROLE IN THIS CONTRACT
Library Design Principal

14. YEARS EXPERIENCE
a. TOTAL b. CURRENT
21 18

15. FIRM NAME AND LOCATION
SHEPLEY BULFINCH Shepley Bulfinch
Boston, MA

16. EDUCATION
Master of Architecture // Georgia Institute of Technology
// Bachelor of Architecture // Ohio State University

17. CURRENT PROFESSIONAL REGISTRATION
Registered Architect: NC #15994, MA

18. OTHER PROFESSIONAL QUALIFICATIONS
Kelly has worked on a wide range of academic libraries throughout the United States. Kelly has a unique ability to synthesize and test transformative strategies to reimagine library spaces, all the while aligning them with institutional values and priorities. Kelly is committed to delivering cohesive and successful projects while managing design and documentation within the framework of schedule and budgetary goals. Kelly is involved in many professional activities, some of those include; American Library Association, Association of College and Research Libraries, SCUP, and is an Architecture/ Construction/Engineering (ACE) Board Member. Some of Kelly's papers and presentations include "Rethink it 2018: Libraries for a New Age, Austin's New Central Library—The Library of the Future", American Library Association Conference, Tying It All Together from the book 'Beyond the Information Commons', IFLA 2019 presentation 'The Academic Library as a Platform for University and Civic Engagement', and "Library Design for the 21st Century: Collaborative Strategies to Ensure Success".

19. RELEVANT PROJECTS

| (1) TITLE AND LOCATION | | (2) YEAR COMPLETED | |
|------------------------|--|-------------------------------|----------------------------|
| a | University of North Carolina Wilmington, William Madison Randall Library Wilmington, NC | PROFESSIONAL SERVICES 2022 | CONSTRUCTION 2023 (est) |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE ■ CHECK IF PERFORMED WITH CURRENT FIRM The existing library space will be selectively renovated to enhance programmatic elements while existing windows will be replaced to improve overall performance. Reno. & Add., Add.: 40,000 sf ; Reno: 150,000 sf, Est. \$60m, Senior Library Planner/Programmer | | |
| b | University of Notre Dame, Hesburgh Libraries Master Plan & Renovation Notre Dame, IN | PROFESSIONAL SERVICES 2014 | CONSTRUCTION 2019 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE ■ CHECK IF PERFORMED WITH CURRENT FIRM The phased renovation advances Notre Dame's vision of a research library for the 21st century, transforming the 14-story building by connecting students and faculty with services and resources that support scholarship and research. Master Plan and Renovation, 146,650 sf (Phases 1-4), \$25.1m (Phases 1-4), Project Manager & Senior Library Planner/Programmer | | |
| c | Virginia Commonwealth University, James Branch Cabell Library Richmond, VA | PROFESSIONAL SERVICES 2013 | CONSTRUCTION 2016 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE ■ CHECK IF PERFORMED WITH CURRENT FIRM The project represents a significant investment in library research facilities driven by VCU's strategic development as a national research university and demand for student space. Renovation and Addition, 156,000 sf, \$36.6m, Project Manager & Senior Library Planner/Programmer | | |
| d | Sam Houston State University, Newton Gresham Library Renovation Huntsville, TX | PROFESSIONAL SERVICES 2021 | CONSTRUCTION 2021 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE ■ CHECK IF PERFORMED WITH CURRENT FIRM The first renovation that serves as a major rethinking of the library and its role on campus, a key programmatic motivation for the project is the consolidation and integration of the Academic Success Center. Reno., 70,000 sf, \$10.8m, Senior Library Planner/Programmer | | |
| e | George Mason University, Fenwick Library Addition Fairfax, VA | PROFESSIONAL SERVICES 2012 | CONSTRUCTION 2015 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE ■ CHECK IF PERFORMED WITH CURRENT FIRM The addition redefines the library as the intellectual crossroads for George Mason's distributed campus and promotes the University's aspiration to grow as a major research institution. Addition, 150,000 sf, \$42.3m, Senior Library Planner/Programmer | | |


E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT



12. NAME
Shawn Sowers, AIA, LEED AP
BD+C

13. ROLE IN THIS CONTRACT
Project Executive

14. YEARS EXPERIENCE
a. TOTAL b. CURRENT
25 2

15. FIRM NAME AND LOCATION
 LS3P
Raleigh, NC

16. EDUCATION
Bachelor of Architecture // Ball State University //
Bachelor of Science, Environmental Design // Ball State
University

17. CURRENT PROFESSIONAL REGISTRATION
Registered Architect: NC
LEED Accredited Professional

18. OTHER PROFESSIONAL QUALIFICATIONS
Shawn Sowers, LS3P’s Higher Education Practice Leader, serves as a firmwide resource for business development and design for higher education. She has 25 years of experience as an architect, programmer, planner, and project manager for higher education, corporate science and technology, healthcare, and other market sectors. Relevant work experience from previous firms includes a healthcare grossing lab, animal necropsy rooms, and veterinary anatomy lab.

19. RELEVANT PROJECTS

| (1) TITLE AND LOCATION | | (2) YEAR COMPLETED | |
|------------------------|---|-------------------------------|----------------------------|
| a | UNCG Nursing and Instructional Building Greensboro, NC | PROFESSIONAL SERVICES 2016 | CONSTRUCTION 2022 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM UNCG’s new 180,000 SF Nursing & Instructional Building provides state-of-the-art simulation, research, and classroom space for UNCG’s School of Nursing, the School of Health and Human Sciences, and the Biology and Chemistry departments. Role: Practice Leader // Cost: \$72M | | |
| b | UNC Chapel Hill McColl Building Addition/Renovation Chapel Hill, NC | PROFESSIONAL SERVICES 2022 | CONSTRUCTION 2025 (est) |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM LS3P and LMN partnered on the programming and design for this major addition and renovation to the McColl Building. The estimated 150,000 SF addition and 130,000 SF renovation will support undergraduate enrollment growth, update existing classrooms, and consolidate staff currently located off site in lease space. Role: Practice Leader // Cost: \$116M | | |
| c | Sandhills Community College Kennedy Hall Health Sciences Bldg Renovation Pinehurst, NC | PROFESSIONAL SERVICES 2022 | CONSTRUCTION 2022 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM This 36,000 SF renovation and 36,000 SF addition for the 1970s-era Kennedy Hall provides a home for updated, expanded health sciences and nursing programs for Sandhills Community College. The design knits together the campus fabric on a site previously occupied by a large parking lot. Role: Practice Leader // Cost: \$17M | | |
| d | UNC Chapel Hill Adams School Of Dentistry Renovation Chapel Hill, NC | PROFESSIONAL SERVICES 2021 | CONSTRUCTION On-hold |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM This extensive renovation for UNC’s Adams School of Dentistry will provide updated clinical and lab spaces in two existing buildings. The program includes a revitalized patient admissions clinic, dental faculty practice clinic, health care systems simulation lab, Center for Digital Innovation, and multidisciplinary clinic. Role: Practice Leader // Cost: 10.5M | | |
| e | UNC Chapel Hill Koury Oral Health Sciences Building Chapel Hill, NC | PROFESSIONAL SERVICES 2013 | CONSTRUCTION 2013 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM This 216,000 SF facility is comprised of instructional, research, and academic/research support spaces. The complex space includes flexible labs for tissue culture, genomics, proteomics, biomaterials, and biomechanics research, a vivarium, expansive atrium, tiered classrooms, a dental simulation lab, and a BSL-3 suite. Role: Project Manager // Cost: \$101 M | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT



12. NAME
Janette Blackburn, FAIA, LEED AP

13. ROLE IN THIS CONTRACT
Managing Principal

14. YEARS EXPERIENCE
a. TOTAL b. CURRENT
37 33

15. FIRM NAME AND LOCATION
SHEPLEY BULFINCH Shepley Bulfinch
Boston, MA

16. EDUCATION
Helsinki Institute of Technology, Fulbright Scholar
Bachelor of Architecture // Ball State University

17. CURRENT PROFESSIONAL REGISTRATION
Registered Architect: In NC and 12 other states

18. OTHER PROFESSIONAL QUALIFICATIONS

Janette is a principal and leader in Shepley Bulfinch’s education practice. Her work is informed by a deep understanding of library research and learning environments and the variety of programs supporting community life within colleges and universities. Janette presents and publishes regularly, and is an active member of the American Library Association and the Society for College and University Planning. A few of the professional activities Janette is involved in include, American Institute of Architects, American Library Association, Association of College Unions International, Boston Society of Architects, and the Society for College and University Planning. Some papers and presentations of Janette’s include, “Libraries as Spaces for 21st Century Learners and Learning”, Library Design for the 21st Century: Collaborative Strategies to Ensure Success, Co-author: “Collaborating for a successful master plan—art or science?”, and Harvard Libraries, Ever Evolving Lecture Series, “Curating University Library Space and Experience”.

19. RELEVANT PROJECTS

| (1) TITLE AND LOCATION | | (2) YEAR COMPLETED | |
|--|--|-------------------------------|----------------------------|
| a | University of North Carolina Wilmington, William Madison Randall Library Wilmington, NC | PROFESSIONAL SERVICES 2022 | CONSTRUCTION 2023 (est) |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM | | |
| The existing library space will be selectively renovated to enhance programmatic elements while existing windows will be replaced to improve overall building performance. Renovation and addition, Expansion: 40,000 sf ; Renovation: 150,000 sf, Est. \$60m, Principal in Charge | | | |
| b | University of Notre Dame, Hesburgh Libraries Master Plan & Renovation Notre Dame, IN | PROFESSIONAL SERVICES 2014 | CONSTRUCTION 2019 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM | | |
| The phased renovation advances Notre Dame’s vision of a research library for the 21st century, transforming the 14-story building by connecting students and faculty with services and resources that support scholarship and research. Master Plan and Renovation, 146,650 sf (Phases 1-4), \$25.1m (Phases 1-4), Principal in Charge | | | |
| c | Virginia Commonwealth University, James Branch Cabell Library Richmond, VA | PROFESSIONAL SERVICES 2013 | CONSTRUCTION 2016 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM | | |
| The project represents a significant investment in library research facilities driven by VCU’s strategic development as a national research university and demand for student space. Renovation and Addition, 156,000 sf, \$36.6m, Principal in Charge | | | |
| d | George Mason University, Fenwick Library Addition Fairfax, VA | PROFESSIONAL SERVICES 2012 | CONSTRUCTION 2015 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM | | |
| The addition redefines the library as the intellectual crossroads for George Mason’s distributed campus and promotes the University’s aspiration to grow as a major research institution. Addition, 150,000 sf, \$42.3m, Principal in Charge | | | |
| e | Princeton University, Firestone Library Princeton, NJ | PROFESSIONAL SERVICES 2013 | CONSTRUCTION 2019 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM | | |
| The renovation upgraded building systems; secured and preserved high-value collections; and improved circulation and functionality throughout the 1948 building and its several additions. Master Plan & Renovation, 425,000 sf, \$156m, Library Planning Principal | | | |


E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT



12. NAME
 Scott Greenman, AIA, LEED AP
 BD+C

13. ROLE IN THIS CONTRACT
 Project Architect

14. YEARS EXPERIENCE
 a. TOTAL b. CURRENT
 10 1

15. FIRM NAME AND LOCATION
 LS3P
 Raleigh, NC

16. EDUCATION
 Master of Architecture // North Carolina State University
 Bachelor of Science, Architecture // University at Buffalo

17. CURRENT PROFESSIONAL REGISTRATION
 Registered Architect: NC # 13072

18. OTHER PROFESSIONAL QUALIFICATIONS
 Scott brings over 10 years of expertise in higher education, commercial and public projects. An experienced project manager and architect, he is skilled at executing all phases while ensuring all client expectations are set and met at every stage of the project. Scott is a creative thinker who enjoys collaborating and solving problems with diverse teams to meet the client's needs. His passion for sustainability aids him in designing functional spaces that yield lasting value for the clients and the environment.

19. RELEVANT PROJECTS

| (1) TITLE AND LOCATION | | (2) YEAR COMPLETED | |
|------------------------|--|-----------------------|--------------|
| | | PROFESSIONAL SERVICES | CONSTRUCTION |
| a | UNC Chapel Hill McColl Building Addition/Renovation Chapel Hill, NC | 2022 | 2025 (est) |
| | <p>(3) BRIEF DESCRIPTION & SPECIFIC ROLE <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM</p> <p>LS3P and LMN partnered on the programming and design for this major addition and renovation to the McColl Building. The estimated 150,000 SF addition and 130,000 SF renovation will support undergraduate enrollment growth, update existing classrooms, and consolidate staff currently located off site in lease space. Role: Project Architect Cost: \$116M</p> | | |
| b | Penn State Beave Campus General Classroom Renovation Beaver, PA | ongoing | 2023 (est) |
| | <p>(3) BRIEF DESCRIPTION & SPECIFIC ROLE <input type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM</p> <p>Major renovation to existing classroom building in order to update classrooms, lecture auditorium, student spaces and accessibility. The team was challenged to create a front door for the building and bring a presence to campus. The design includes a new entry addition and elevator for accessibility. Role: Project Architect</p> | | |
| c | Nationwide Southeast Headquarters Raleigh, NC | 2016 | 2018 |
| | <p>(3) BRIEF DESCRIPTION & SPECIFIC ROLE <input type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM</p> <p>Major renovation to dramatically improve the buildings exterior, main entry, workspaces and connection in order to increase employee satisfaction. Relocation of all major infrastructure was necessary as it was at end of life in order to enhance views to the exterior and connect previously disconnected spaces. Addition of central communicating stairs and large cafeteria spaces enhanced employee connections. Role: Project Architect</p> | | |
| d | Fidelity Investments North Carolina Corporate Campus Durham, NC | 2012 | 2016 |
| | <p>(3) BRIEF DESCRIPTION & SPECIFIC ROLE <input type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM</p> <p>Complete renovation of almost 700,000 SF corporate campus into a modern flexible work environment. The team was challenged with creating open and collaborative spaces while enhancing daylight and views into large deep floor plates. The team was challenged to take a holistic approach to the campus and align various stakeholders to create a sense of community across several buildings. Role: Project Architect</p> | | |
| e | Dow DC-1 Renovation Midland, MI | | 2018 |
| | <p>(3) BRIEF DESCRIPTION & SPECIFIC ROLE <input type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM</p> <p>Major Renovation to create a test space for new space standard for the Dow corporate portfolio. The team meet with stakeholders to co-create spaces that included large commons spaces and flex zones for open collaboration. Flexible and moveable furniture allow the teams to gather seamlessly on a open plan and adapt space to the needs of the projects. Role: Project Architect</p> | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT



12. NAME
Barak Yaryan, AIA, LEED AP

13. ROLE IN THIS CONTRACT
Design Architect

14. YEARS EXPERIENCE
a. TOTAL b. CURRENT
11 11

15. FIRM NAME AND LOCATION
SHEPLEY BULFINCH Shepley Bulfinch
Houston, TX

16. EDUCATION
Master of Architecture // Clemson University // 2011
Bachelor of Arts Management // College of Charleston // 2007

17. CURRENT PROFESSIONAL REGISTRATION
Registered Architect in TX, USGBC

18. OTHER PROFESSIONAL QUALIFICATIONS
Barak specializes in systems thinking and conceptual integration. His experience in cultivating, managing, and sharing a design vision within the entire team results in successful projects. Barak has a deep portfolio in library projects for higher education clients including Texas A&M University's (TAMUSA) Academic Building II—Library and College of Business, Sam Houston State University's Newton Gresham Library, Virginia Commonwealth University's James Branch Cabell Library, and the City of Texas City's Moore Memorial Library.

19. RELEVANT PROJECTS

| (1) TITLE AND LOCATION | | (2) YEAR COMPLETED | |
|------------------------|---|-------------------------------|----------------------------|
| a | Sam Houston State University, Newton Gresham Library Renovation Huntsville, TX | PROFESSIONAL SERVICES 2021 | CONSTRUCTION 2021 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM The first renovation that serves as a major rethinking of the library and its role on campus, a key programmatic motivation for the project was the consolidation and integration of the Academic Success Center. Renovation, 70,000 sf, \$10.8m, Project Architect | | |
| b | Texas A&M University San Antonio, Academic and Administrative Building | PROFESSIONAL SERVICES 2021 | CONSTRUCTION 2022 (est) |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM The cornerstone of a new academic quad, the project was designed as homes for The College of Business and Library. The building is designed flexibly in anticipation of its long term transformation to fully serve either one of the current programs as TAMUSA grows. New Construction, 101,900 sf, \$53m, Project Architect | | |
| c | City of Houston, New Montrose Library Houston, TX | PROFESSIONAL SERVICES 2021 | CONSTRUCTION 2022 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM The Design-Build project will be on the 2nd and 3rd floor of a mixed-use development Montrose Collective, by Radom Capital, which will include ground floor retail and office space. New Construction, 9,750 sf, Est. \$3.3m, Project Architect | | |
| d | Virginia Commonwealth University, James Branch Cabell Library Richmond, VA | PROFESSIONAL SERVICES 2013 | CONSTRUCTION 2016 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM The project represents a significant investment in library research facilities driven by VCU's strategic development as a national research university and demand for student space. Renovation and Addition, 156,000 sf, \$36.6m, Project Architect | | |
| e | City of Texas City, Moore Memorial Library Texas City, TX | PROFESSIONAL SERVICES 2019 | CONSTRUCTION 2019 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE <input type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM The renovation of public spaces and refresh of staff areas has equipped the Library to serve current and future residents of Texas City more effectively, more graciously, and with a more broadly welcoming architectural spirit. Renovation, 21,800 sf, \$1.15m, Project Architect | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT



12. NAME
Natalie Thurman, AIA

13. ROLE IN THIS CONTRACT
Design Lead

14. YEARS EXPERIENCE
a. TOTAL b. CURRENT
17 3

15. FIRM NAME AND LOCATION
SHEPLEY BULFINCH Shepley Bulfinch
Houston, TX

16. EDUCATION
Bachelor of Architecture // Rice University // 2007
Bachelor of Art // Rice University // 2005
Rice Architecture School, Paris // 2007

17. CURRENT PROFESSIONAL REGISTRATION
Registered Architect in TX

18. OTHER PROFESSIONAL QUALIFICATIONS
With more than 15 years of design experience, Natalie has worked on a wide range of healthcare, research, and higher education projects. She works with clients, users, and project teams from planning through construction, prioritizing high performance design and the user experience. Natalie thrives in collaborative environments, guiding teams to create innovative, sustainable, personal, and purposeful design.

Natalie is involved in many professional activities, some of those include; American Institute of Architects, and the Rice Design Alliance Group (RDA). Some of her papers and presentations include, Patterson, Mic (2011) Structural Glass Facades and Enclosures. (pp. 196) Hoboken, New Jersey: John Wiley & Sons, Inc.

19. RELEVANT PROJECTS

| (1) TITLE AND LOCATION | | (2) YEAR COMPLETED | |
|------------------------|--|--|----------------------------|
| a | Sam Houston State University, Newton Gresham Library Renovation Huntsville, TX | PROFESSIONAL SERVICES 2021 | CONSTRUCTION 2021 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE The first renovation that serves as a major rethinking of the library and its role on campus, a key programmatic motivation for the project is the consolidation and integration of the Academic Success Center. Renovation, 70,000 sf, \$10.8m, Project Designer | <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM | |
| b | Texas A&M University San Antonio, Academic and Administrative Building | PROFESSIONAL SERVICES 2021 | CONSTRUCTION 2022 (est) |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE The cornerstone of a new academic quad, the project was designed as homes for The College of Business and Library. The building is designed flexibly in anticipation of it's long term transformation to fully serve either one of the current programs as TAMUSA grows. New Construction, 101,900 sf, \$53m, Project Designer | <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM | |
| c | University of Houston, John M. O'Quinn Law Building Houston, TX | PROFESSIONAL SERVICES 2021 | CONSTRUCTION 2022 (est) |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE The new building will promote community engagement and provide a modern, interdisciplinary legal education in a student-focused environment. New Construction, 188,600 sf, \$73m, Project Designer | <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM | |
| d | City of Houston, New Montrose Library Houston, TX | PROFESSIONAL SERVICES 2021 | CONSTRUCTION 2022 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE The Design-Build project will be on the 2nd and 3rd floor of a mixed-use development Montrose Collective, by Radom Capital, which will include ground floor retail and office space. New Construction, 9,750 sf, Est. \$3.3m, Project Designer | <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM | |
| e | The University of Texas at Austin, Dell Medical School, Health Transformation Building and Health Discovery Building * | PROFESSIONAL SERVICES 2014 | CONSTRUCTION 2016 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE Brings together interdisciplinary research and clinical groups in a multi-story collaborative space. New Construction, 264,430 sf of Research Building, 293,370 sf MOB, \$200m, Designer (* Project done in association with another firm) | <input type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT



| | | |
|--|---|---|
| <p>12. NAME Amanda Vigneau, NCIDQ, LEED AP ID+C</p> | <p>13. ROLE IN THIS CONTRACT Interior Designer</p> | <p>14. YEARS EXPERIENCE a. TOTAL b. CURRENT 16 4</p> |
|--|---|---|

15. FIRM NAME AND LOCATION
SHEPLEY BULFINCH Shepley Bulfinch
Boston, MA

| | |
|---|--|
| <p>16. EDUCATION Master of Arts in Interior Design // New England School of Art & Design at Suffolk University Bachelor of Architecture // Wellesley College</p> | <p>17. CURRENT PROFESSIONAL REGISTRATION NCIDQ Certified Professional</p> |
|---|--|

18. OTHER PROFESSIONAL QUALIFICATIONS
As an experienced Interior Designer, Amanda’s work spans multiple sectors, with a focus on educational and corporate/ workplace environments. Amanda enjoys the intersection between exterior and interior, the integration of old and new, and exploring how technology incorporates into our clients’ daily lives. She works with clients to push beyond perceived standards and envision a space they would not have imagined possible.

19. RELEVANT PROJECTS

| | (1) TITLE AND LOCATION | | (2) YEAR COMPLETED | |
|----------|---|-------------------------------|----------------------------|--|
| a | University of North Carolina Wilmington, William Madison Randall Library Wilmington, NC | PROFESSIONAL SERVICES 2022 | CONSTRUCTION 2023, | <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM |
| | <p>(3) BRIEF DESCRIPTION & SPECIFIC ROLE The existing library space will be selectively renovated to enhance programmatic elements while existing windows will be replaced to improve overall building performance. Renovation & Addition, Add.: 40,000 sf ; Reno: 150,000 sf, Est. \$60m, Interior Designer</p> | | | |
| b | Sam Houston State University, Newton Gresham Library Renovation Huntsville, TX | PROFESSIONAL SERVICES 2021 | CONSTRUCTION 2021 | <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM |
| | <p>(3) BRIEF DESCRIPTION & SPECIFIC ROLE The cornerstone of a new academic quad, the project was designed as homes for The College of Business and Library. The building is designed flexibly in anticipation of it’s long term transformation to fully serve either one of the current programs as TAMUSA grows. New Construction, 101,900 sf, \$53m, Interior Designer</p> | | | |
| c | University of Houston, John M. O’Quinn Law Building Houston, TX | PROFESSIONAL SERVICES 2021 | CONSTRUCTION 2022 (est) | <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM |
| | <p>(3) BRIEF DESCRIPTION & SPECIFIC ROLE The new building will promote community engagement and provide a modern, interdisciplinary legal education in a student-focused environment. New Construction, 188,600 sf, \$73m, Interior Designer</p> | | | |
| d | Loyola University Maryland, Fernandez Center for Innovation & Collaborative Learning | PROFESSIONAL SERVICES 2019 | CONSTRUCTION 2021 | <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM |
| | <p>(3) BRIEF DESCRIPTION & SPECIFIC ROLE The Center’s interactive, versatile teaching and learning spaces highlight Loyola’s signature programs, creating a link between student learning and the exploration and pursuit of future goals. Renovation and Addition, 62,500 sf, \$29.7m, Interior Designer</p> | | | |
| e | University of New Brunswick, Harriet Irving Library Research Commons Fredericton, NB, Canada | PROFESSIONAL SERVICES 2019 | CONSTRUCTION 2020 | <input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM |
| | <p>(3) BRIEF DESCRIPTION & SPECIFIC ROLE The project transforms the entire third floor of the Harriet Irving Library into a modern, interdisciplinary, research-driven learning environment to further innovation, scholarship and research. Renovation, 23,000 sf, \$5m, Interior Designer</p> | | | |


E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT



12. NAME
David O'Shea, AIA, LEED AP BD+C

13. ROLE IN THIS CONTRACT
Construction Administrator

14. YEARS EXPERIENCE
a. TOTAL b. CURRENT
32 14

15. FIRM NAME AND LOCATION
 LS3P
Raleigh, NC

16. EDUCATION
Bachelor of Science in Architecture, Lawrence Institute of Technology; Bachelor of Architecture, Lawrence Technological University

17. CURRENT PROFESSIONAL REGISTRATION
Registered Architect: NC # 11206

18. OTHER PROFESSIONAL QUALIFICATIONS
David has 32 years of experience in both the public and private architecture markets. He has a strong background in both design and construction, and has applied that knowledge on large and multifaceted projects. David has built an excellent reputation for safeguarding quality assurance, problem-solving challenging construction scenarios, and resolving field issues with win-win solutions.

19. RELEVANT PROJECTS

| | (1) TITLE AND LOCATION | (2) YEAR COMPLETED | |
|----------|--|---|--------------|
| | | PROFESSIONAL SERVICES | CONSTRUCTION |
| a | UNCG Nursing and Instructional Building Greensboro, NC | 2016 | 2020 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE | ■ CHECK IF PERFORMED WITH CURRENT FIRM | |
| | UNCG's new 180,000 SF Nursing & Instructional Building provides state-of-the-art simulation, research, and classroom space for UNCG's School of Nursing, the School of Health and Human Sciences, and the Biology and Chemistry departments. Role: Construction Administrator // Cost: \$72M | | |
| b | Albemarle Building Renovation Raleigh, NC | 2015 | 2017 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE | ■ CHECK IF PERFORMED WITH CURRENT FIRM | |
| | This project is a complete renovation of a 12-story office building built in 1970, including asbestos abatement, ADA and energy improvements, as well as complete building systems replacements. This project significantly improves downtown Raleigh's built environment, restoring the outmoded building for contemporary use as a thriving part of the urban landscape. Role: Construction Administrator // Cost: \$37.8M | | |
| c | NCSU Wolf Ridge Apartments & On the Oval Raleigh, NC | 2014 | 2014 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE | ■ CHECK IF PERFORMED WITH CURRENT FIRM | |
| | This 550,000 SF project provides about 1,200 undergraduate beds in apartment style housing. The six residential buildings complete and define the middle section of the Oval. Role: Construction Administrator // Cost: \$113.4 M | | |
| d | University of North Carolina at Chapel Hill Steele Building Renovation Chapel Hill, NC | 2007 | 2008 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE | ■ CHECK IF PERFORMED WITH CURRENT FIRM | |
| | The Steele Building houses a number of administrative offices, including Academic Advising and the Office of Undergraduate Education. The exterior remains relatively unchanged from the original design. It has undergone a near complete renovation with new plumbing, mechanical, electrical and data systems. Role: Construction Administrator // \$5.1M | | |
| e | Sandhills Community College Kennedy Hall Health Sciences Bldg Renovation Pinehurst, NC | 2022 | 2022 |
| | (3) BRIEF DESCRIPTION & SPECIFIC ROLE | ■ CHECK IF PERFORMED WITH CURRENT FIRM | |
| | This 36,000 SF renovation and 36,000 SF addition for the 1970s-era Kennedy Hall provides a home for updated, expanded health sciences and nursing programs for Sandhills Community College. The design knits together the campus fabric on a site previously occupied by a large parking lot. Role: Construction Administrator // Cost: \$17M | | |


E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT



12. NAME
Elaine Gallagher Adams, AIA,
LEED AP BD + C

13. ROLE IN THIS CONTRACT
Sustainability Leader

14. YEARS EXPERIENCE
a. TOTAL b. CURRENT
30 3+

15. FIRM NAME AND LOCATION
 LS3P
Greenville, SC

16. EDUCATION
Master of Architecture // The University of Kansas // 1994

17. CURRENT PROFESSIONAL REGISTRATION
Architecture, Georgia, 2019 #RA014102 & Colorado, 2019 #203416

18. OTHER PROFESSIONAL QUALIFICATIONS
Elaine brings substantial multidisciplinary expertise and experience as a practicing architect, professor, sustainability consultant, historic preservation specialist, conference speaker, and contributor to national sustainability guidelines. She serves as a firmwide leader and resource for high performance building design. Her portfolio includes sustainability consulting for nationwide corporate retrofits, city sustainability initiatives, campuses, federal buildings, and international mixed-use developments.

19. RELEVANT PROJECTS

| (1) TITLE AND LOCATION | (2) YEAR COMPLETED | |
|--|--|------------------------------|
| <p>Advanced Energy Retrofit Guide NREL, Golden, CO</p> | <p>PROFESSIONAL SERVICES 2013</p> | <p>CONSTRUCTION 2013</p> |
| <p>a (3) BRIEF DESCRIPTION & SPECIFIC ROLE</p> <p>Three of five retrofit guides commissioned by the U.S. Department of Energy. By presenting general project planning guidance as well as more detailed descriptions and financial payback metrics for the most important and relevant energy efficiency measures, the guides provide a practical roadmap for effectively planning and implementing performance improvements in existing buildings.</p> | <p><input type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM</p> | |

| (1) TITLE AND LOCATION | (2) YEAR COMPLETED | |
|---|---|-----------------------------|
| <p>UNC Chapel Hill McColl Building Addition Chapel Hill, NC</p> | <p>PROFESSIONAL SERVICES 2018</p> | <p>CONSTRUCTION N/A</p> |
| <p>b (3) BRIEF DESCRIPTION & SPECIFIC ROLE</p> <p>Site analysis and concept design for this major addition and renovation to the McColl Building for the Kenan Flagler School of Business. The 140,000 GSF addition and 130,000 renovation will support undergraduate enrollment growth, update existing classrooms, and consolidate staff currently located off site in lease space. Cost: \$116M</p> | <p><input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM</p> | |

| (1) TITLE AND LOCATION | (2) YEAR COMPLETED | |
|---|--|------------------------------|
| <p>National Museum of African American History & Culture Washington, DC</p> | <p>PROFESSIONAL SERVICES 2014</p> | <p>CONSTRUCTION 2016</p> |
| <p>c (3) BRIEF DESCRIPTION & SPECIFIC ROLE</p> <p>High Performance Buildings Consultant / Designed to be LEED Gold, this \$650M national museum with an international profile achieved aggressive sustainability, programming, and security goals through an integrative process with a large design team.</p> | <p><input type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM</p> | |

| (1) TITLE AND LOCATION | (2) YEAR COMPLETED | |
|--|---|---------------------------------|
| <p>City of Raleigh Drinking Water Compliance Laboratory Raleigh, NC</p> | <p>PROFESSIONAL SERVICES 2017</p> | <p>CONSTRUCTION Ongoing</p> |
| <p>d (3) BRIEF DESCRIPTION & SPECIFIC ROLE</p> <p>The facility will provide 13,000 net square feet of space for labs, lab offices, a water quality technician suite, training, administrative offices, and associated support functions. The function of the facility will be to test samples from the city's two water treatment plants and 240 collection stations throughout the drinking water distribution system.</p> | <p><input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM</p> | |

| (1) TITLE AND LOCATION | (2) YEAR COMPLETED | |
|--|---|---------------------------------|
| <p>Tri-County Technical College Student Success Center Pendleton, SC</p> | <p>PROFESSIONAL SERVICES 2015</p> | <p>CONSTRUCTION Ongoing</p> |
| <p>e (3) BRIEF DESCRIPTION & SPECIFIC ROLE</p> <p>The new Student Success Center design fits into the existing steep landscape, merging seamlessly with the campus environment while providing student services (IT, printing, counseling), library & study spaces with vertical book storage, and dining with supporting food services. The ultimate goals for the Center include student retention, ease of matriculation, and ultimately overall student success. The building incorporates strategies for sustainability, and is certified with 2 Green Globes. Cost: \$37.5M</p> | <p><input checked="" type="checkbox"/> CHECK IF PERFORMED WITH CURRENT FIRM</p> | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

| | | | |
|---------------------------------------|---|----------------------|----------------------------|
| 12. NAME Adam Carroll, PE, LEED AP | 13. ROLE IN THIS CONTRACT Civil Engineer | 14. YEARS EXPERIENCE | |
| | | a. TOTAL 15 | b. WITH CURRENT FIRM 15 |

15. FIRM NAME AND LOCATION *(City and State)*
Timmons Group, Greensboro, NC

| | |
|---|---|
| 16. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> Bachelor of Science / Civil Engineering / North Carolina State University | 17. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> NC / Professional Engineer: 038573 NC / LEED Accredited Professional BD+C |
|---|---|

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
Adam serves as the Group Leader for Timmons Group's Greensboro office and brings over a decade of design skills for both public and private clients. His project experience includes commercial site plans, multifamily developments, infrastructure design, federal military projects, K-12 and higher education projects. Adam provides management support from the start of each project through final construction administration. It is his goal and main focus to ensure the clients' needs are successfully met.

19. RELEVANT PROJECTS

| | (1) TITLE AND LOCATION <i>(City and State)</i> | (2) YEAR COMPLETED | |
|----|--|-----------------------|-------------------------------------|
| | | PROFESSIONAL SERVICES | CONSTRUCTION <i>(If Applicable)</i> |
| a. | UNC Greensboro - Jackson Library Greensboro, NC | 2019 | 2019 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager. Timmons Group worked with UNC Greensboro to develop a master plan and preliminary programming for Jackson Library. Timmons Group assisted the architect and design team with a comprehensive review and analysis of the existing facilities and related infrastructure. This included site evaluation for regulatory constraints (zoning, use, etc.), physical characteristics, environmental issues, flood plain, etc. | | |
| b. | UNC Greensboro School of Nursing Building Greensboro, NC | Ongoing | Ongoing |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager. Timmons Group is providing civil engineering services for a new Nursing & Instructional Building and a new chiller plant on the campus of UNC Greensboro. The project includes the demolition of the existing McIver Building and the construction of an approximately 180,000 GSF new building consisting of laboratory and support space, academic teaching facilities, and offices. | | |
| c. | UNC School of the Arts - New Residence Hall Winston-Salem, NC | 2020 | Ongoing |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager. The UNC School of the Arts saw an opportunity to provide an immersive environment for their students to practice and rehearse their art. The Campus Master Plan and Residence Hall Study called for the demolition of the Bailey Street Apartments in favor of a new, multi-story residence hall to be located near the main entrance of the University. The building is organized into two wings bridged in the center with an open first floor. The hall was sited to frame views of downtown Winston-Salem; the ensuing space was developed by Timmons Group in close collaboration with university architects, and will become an exciting part of the Art Walk that extends through campus. Timmons Group provided the demolition plans for the apartments as well as full Civil Engineering and Landscape Architecture services associated with the new construction. | | |
| d. | UNCG Guilford & Mary Foust Dorm Remodeling Greensboro, NC | 2010 | 2010 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager. Timmons Group collaborated on the early programming and conceptual site planning for the development of a new Science and Laboratory Building on the campus of Winston-Salem State University. We provided civil engineering, site planning and landscape architecture services along with associated permitting and reviews with the City of Winston-Salem, DENR and State Construction Office. | | |
| e. | Winston-Salem State University - Sciences and General Office Building Winston-Salem, NC | 2014 | 2014 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager. Timmons Group provided civil engineering and geotechnical services for a parking lot repaving project at the South Piedmont Community College Lockhart-Taylor Center in Wadesboro, NC. We evaluated the condition of the existing pavement, then developed plans and specifications for the repaving, including identifying areas for heavy-duty sections with anticipated heavy truck traffic. We also assisted with bidding the project for inspection and construction administration services. | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

| | | | |
|-----------------------------|---|----------------------|---------------------------|
| 12. NAME Jacob Moore, PE | 13. ROLE IN THIS CONTRACT Civil Engineer | 14. YEARS EXPERIENCE | |
| | | a. TOTAL 5 | b. WITH CURRENT FIRM 5 |

15. FIRM NAME AND LOCATION *(City and State)*
Timmons Group, Greensboro, NC

16. EDUCATION *(Degree and Specialization)*
Bachelor of Science / Civil Engineering / UNC at Charlotte

17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
NC / Professional Engineer: 050512

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
Jacob is a Project Engineer for Timmons Group's Greensboro office. He has extensive experience providing engineering design support including grading, drainage, stormwater management, utility and site development design for various public and private clients. He is involved in the design process from schematic level through construction administration. Jacob has experience working with variety of college and universities in the Triad region.

19. RELEVANT PROJECTS

| | (1) TITLE AND LOCATION <i>(City and State)</i> | (2) YEAR COMPLETED | |
|----|--|--|-------------------------------------|
| | | PROFESSIONAL SERVICES | CONSTRUCTION <i>(If applicable)</i> |
| a. | Davidson County Community College Health Sciences Center Walkway, Davidson County, NC | 2019 | 2019 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Civil Engineer. Project consisted of a pedestrian walkway to provide a safe and efficient means of egress linking the main campus to the newly constructed Smith Health Sciences Center (SHSC) and a repaving plan for Parking Lots B&C. The pedestrian walkway was designed to conform to ADA standards and requirements. Timmons Group provided survey, utility marking, and schematic design and development documents of two pathway options for Client consideration. Once the final design was vetted final construction documents, bidding assistance, and construction administration was provided. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| b. | UNC Greensboro School of Nursing Building Greensboro, NC | Ongoing | Ongoing |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Civil Engineer. Timmons Group is providing civil engineering services for a new Nursing & Instructional Building and a new chiller plant on the campus of UNC Greensboro. The project includes the demolition of the existing McIver Building and the construction of an approximately 180,000 GSF new building consisting of laboratory and support space, academic teaching facilities, and offices. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| c. | UNC School of the Arts New Residence Hall Winston-Salem, NC | Ongoing | Ongoing |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Civil Engineer. The UNC School of the Arts saw an opportunity to provide an immersive environment for their students to practice and rehearse their art. The Campus Master Plan and Residence Hall Study called for the demolition of the Bailey Street Apartments in favor of a new, multi-story residence hall to be located near the main entrance of the University. The building, designed by Ayers Saint Gross and LS3P Architects, is organized into two wings bridged in the center with an open first floor. The hall was sited to frame views of downtown Winston-Salem; the ensuing space was developed by Timmons Group in close collaboration with university architects and will become an exciting part of the Art Walk that extends through campus. Timmons Group provided the demolition plans for the apartments as well as full Civil Engineering and Landscape Architecture services associated with the new construction. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| d. | UNC School of the Arts Ehle Drive Repair & Repaving Winston-Salem, NC | 2016 | 2016 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Civil Engineer. Timmons Group provided civil engineering and construction administration services for the repairs and repaving of Ehle Drive at the UNC School of the Arts. Responsibilities included schematic design and design development, preparation of construction documents, bidding and negotiation, and all construction administration site visits and reviews for a two month duration. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| e. | Winston-Salem State University Sciences and General Office Building Winston-Salem, NC | 2020 | 2020 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Civil Engineer. Timmons Group collaborated with Design Collective on the early programming and conceptual site planning for the development of a new Science and Laboratory Building on the campus of Winston-Salem State University. We provided civil engineering, site planning and landscape architecture services along with associated permitting and reviews with the City of Winston-Salem, DENR and State Construction Office. | <input checked="" type="checkbox"/> Check if project performed with current firm | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each person)


| | | | |
|--|--|---|----------------------------|
| 12. NAME AND TITLE MIKE TARRANT , PLA, ASLA Managing Studio Leader, Landscape Architecture | 13. ROLE IN THIS CONTRACT LANDSCAPE ARCHITECT | 14. YEARS EXPERIENCE | |
| | | a. TOTAL 17 | b. WITH CURRENT FIRM 15 |
| 15. FIRM NAME AND LOCATION (City and State) STEWART - Durham, North Carolina | | | |
| 16. EDUCATION (DEGREE AND SPECIALIZATION) Bachelor of Landscape Architecture West Virginia University | | 17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Landscape Architect (PLA): North Carolina #1664 | |
| 18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Secretary of North Carolina Association of Landscape Architects (2017-2019) | | | |

19. RELEVANT PROJECTS

| | | | | | |
|--|--|---------------------|-------|--|--------------------------------------|
| a. | (1) TITLE AND LOCATION (City and State) UNC GREENSBORO SCHOOL OF NURSING GREENSBORO, NORTH CAROLINA | | | (2) YEAR COMPLETED | |
| | | | | PROFESSIONAL SERVICES 2021 | CONSTRUCTION (if applicable) 2021 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| | ROLE: | QA/QC | SIZE: | | COST: |
| This project reconnects the southwest corner of the campus to the main campus with a new unifying landscape. The design reorganizes parking and vehicular access, creating new pedestrian paths that connect to the student center and pedestrian mall. A new terraced quad provides outdoor classroom and lounge space for students and faculty, as well as stormwater treatment gardens. | | | | | |
| b. | (1) TITLE AND LOCATION (City and State) DUKE UNIVERSITY TRENT SEMANS CENTER FOR HEALTH EDUCATION DURHAM, NORTH CAROLINA | | | (2) YEAR COMPLETED | |
| | | | | PROFESSIONAL SERVICES 2013 | CONSTRUCTION (if applicable) 2013 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| | ROLE: | Landscape Architect | SIZE: | 2.5 acres | COST: |
| This 2.5-acre campus space completes the pedestrian greenway connection between the university and medical center. The elevation rises 30 feet through the site, so careful consideration was paid to ensure ADA compliance throughout the pedestrian corridor. The project achieved LEED Gold certification and sustainable site design, such as a stormwater fountain, bio-retention terraces and an irrigation system that uses captured rainwater, contributed 20% of the required LEED credits. | | | | | |
| c. | (1) TITLE AND LOCATION (City and State) DUKE UNIVERSITY MEDICAL CENTER MEDICINE PAVILION AND CANCER CENTER DURHAM, NORTH CAROLINA | | | (2) YEAR COMPLETED | |
| | | | | PROFESSIONAL SERVICES 2012 | CONSTRUCTION (if applicable) 2012 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| | ROLE: | Design Team Member | SIZE: | 8.5 acres | COST: |
| This one-billion dollar expansion to the Duke University Medical Center includes the 550,000 square foot Duke Medicine Pavilion and 265,000 square foot Duke Cancer Center. The project also dedicated 8.5 acres to site design totaling \$9.5 million in site work costs. The primary issue with this project was finding the balance between the healthcare environment and the urban realities associated with such a complex medical center. To achieve the balance between healthcare and urban environments, a three-acre Quadrangle was designed as a large sustainable space comprised of a series of smaller healthcare places. The design is comprised of varying scales of space with calming | | | | | |
| d. | (1) TITLE AND LOCATION (City and State) DUKE UNIVERSITY HEALTH & WELLNESS DURHAM, NORTH CAROLINA | | | (2) YEAR COMPLETED | |
| | | | | PROFESSIONAL SERVICES 2017 | CONSTRUCTION (if applicable) 2017 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| | ROLE: | Landscape Architect | SIZE: | 71,000 square feet | COST: |
| Central to the campus, the site provided unique challenges for the design team including sensitive existing utilities, considerable grade change, and the need to maintain an important accessible route through the site. The landscape architecture focused on facilitating pedestrian movement through the site while creating a peaceful and contemplative aesthetic to the entrance of the Student Health and Wellness building. Between building and forest, a contemplation garden will provide spaces for meditation, focused relaxation and reflection, and break-out spaces for meeting rooms. | | | | | |
| e. | (1) TITLE AND LOCATION (City and State) NORTH CAROLINA STATE UNIVERSITY, CASE COMMONS RESIDENCE HALL RALEIGH, NORTH CAROLINA | | | (2) YEAR COMPLETED | |
| | | | | PROFESSIONAL SERVICES 2017 | CONSTRUCTION (if applicable) N/A |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| | ROLE: | Project Manager | SIZE: | 28,000 square feet | COST: |
| This residence hall project consists of 28,000 square feet and houses 62 students and student-athletes on its 4 floors. The rooms allow for either single occupancy, for student-athletes, or double occupancy, for the general student population. The building includes a commons/study room on each floor, main entry lobby with a monitored front desk; a social lounge with a kitchen and vending area; a theater/meeting room; laundry and mail facilities; a resident director apartment; a Housing staff office; and building support space. | | | | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person)


| | | | |
|---|--|--|----------------------|
| 12. NAME | 13. ROLE IN THIS CONTRACT | 14. YEARS OF EXPERIENCE | |
| John Duffy, PE, LEED AP | Principal-in-Charge/Project Manager | a. TOTAL | b. WITH CURRENT FIRM |
| | | 40 | 25 |
| 15. FIRM NAME AND LOCATION (City and State) | | | |
| Affiliated Engineers, Inc. - Chapel Hill, NC | | | |
| 16. EDUCATION (DEGREE AND SPECIALIZATION) | | 17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) | |
| Bachelor of Science / Mechanical Engineering / US Merchant Marine Academy Master of Business Administration / Hofstra University | | Registered Professional Engineer NC, Mechanical, 1997 LEED Accredited Professional, 2004 | |
|  | | | |
| 18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) | | | |
| Member - American Society of Heating, Refrigeration and AC Engineers; Member - National Society of Professional Engineers; Speaker - "Integrating Energy Conservation and Occupant Safety" - 2019 I2SL Annual Conference; | | | |

19. RELEVANT PROJECTS

| | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
|----|--|-----------------------|--------------|
| | | PROFESSIONAL SERVICES | CONSTRUCTION |
| a. | University of North Carolina at Wilmington - Randall Library Renovation and Expansion Wilmington, North Carolina | 2022 | 2024 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Principal-in-Charge and Project Manager for the 40,000 sf expansion to the existing William Madison Randall Library, as well as the renovation of the 150,000 sf existing building to add necessary program space, modernize the existing facility, and meet the needs of students and faculty. Size: 190,000 SF Cost: \$60M | | |
| b. | William & Mary - Earl Gregg Swem Library Special Collections Williamsburg, Virginia | 2013 | 2014 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Principal-in-Charge for the Earl Gregg Swem Library Special Collections HVAC Improvements. This project upgraded the AHU and dehumidification systems and improved system reliability by connecting to an existing generator system. Size: 6,000 SF Cost: \$625,000 | | |
| c. | University of North Carolina at Greensboro - Nursing/Instructional Building Greensboro, North Carolina | 2018 | 2021 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Principal-in-Charge and Project Manager for the new 180,000 sf facility consisting of laboratory and support space, academic teaching facilities, and offices. The building was designed for maximum flexibility for rapidly changing academic programs. The building's primary occupants include: School of Nursing, College of Arts and Sciences, and School of Health and Human Services. The project also includes a stand-alone chiller plant with an initial build out of 2,000 tons with future expansion capabilities to an ultimate capacity of 7,500 tons. This project was awarded LEED Gold Certification. Size: 180,000 SF Cost: \$72M | | |
| d. | University of North Carolina at Greensboro - 2019 Campus Master Plan Greensboro, North Carolina | 2021 | N/A |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Principal-in-Charge and Project Manager for the the assessment of the current campus spaces and an intensive study of future campus development – including academics and research, strategic partnerships, campus life and planning (living - learning hubs, interaction nodes, academic and innovation districts, promenades / pathways, landmarks), landscape preservation and enhancement, mobility, sustainability initiatives, utilities and infrastructure, stormwater management, transportation planning, and locations offsite all which supports the strategic vision of UNC Greensboro. Size: N/A Cost: N/A | | |
| e. | Elon University - Schar Hall - School of Communications Elon, North Carolina | 2015 | 2017 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Principal-in-Charge and Project Manager for the 53,000 sf new facility which houses Elon's School of Communications. The building includes classrooms, a sound engineering studio, video and audio editing suites, and a 250-seat theatre. AEI also provided energy modeling, commissioning, and LEED documentation. This project was awarded LEED Silver Certification. Size: 53,000 SF Cost: \$21M | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person)

| | | | |
|---|--------------------------------------|---|----------------------|
| 12. NAME | 13. ROLE IN THIS CONTRACT | 14. YEARS OF EXPERIENCE | |
| Bob Sherman, PE, LEED AP | Mechanical Library Specialist | a. TOTAL | b. WITH CURRENT FIRM |
| | | 29 | 18 |
| 15. FIRM NAME AND LOCATION (City and State) | | | |
| Affiliated Engineers, Inc. - Chapel Hill, NC | | | |
| 16. EDUCATION (DEGREE AND SPECIALIZATION) | | 17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) | |
| Bachelor of Science / Mechanical Engineering / Southern Methodist University | | Registered Professional Engineer NC - Mechanical, 2007 LEED Accredited Professional, 2004 | |
|  | | | |
| 18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) | | | |
| Member - American Society of Heating, Refrigeration & Air Conditioning Engineers; Speaker - SE SCUP Conference 2012 - "North Carolina State University James B. Hunt Library; Saving Space and Energy with New Technologies"; Speaker - "ECU Main Campus Student Union Energy Efficiency Strategies" - NCAPPA Annual Educational & Networking Conference 2019 | | | |

19. RELEVANT PROJECTS

| | | | |
|---|--|--|--------------|
| a. | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
| | University of North Carolina at Greensboro - Jackson Library Renovation Study Greensboro, North Carolina | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2018 | N/A |
| (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| Project Manager and Lead Mechanical Engineer for a comprehensive renovation study of the 238,000 sf, high-rise library. This project included a detailed review and analysis of existing facilities, related infrastructure, systems, building codes, programs, and services resulting in a plan for new construction and renovation over the next 10 years. This will include a 38,600 sf addition and renovations throughout the existing building area. Size: 238,000 SF Cost: N/A | | | |
| b. | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
| | University of North Carolina at Wilmington - Randall Library Renovation and Expansion Wilmington, North Carolina | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2022 | 2024 |
| (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| Peer Review for the 40,000 sf expansion to the existing William Madison Randall Library, as well as the renovation of the 150,000 sf existing building to add necessary program space, modernize the existing facility, and meet the needs of students and faculty. Size: 190,000 SF Cost: \$60M | | | |
| c. | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
| | Virginia Commonwealth University - Cabell Library Addition and Renovation Richmond, Virginia | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2014 | 2016 |
| (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| Project Manager for the addition and renovation of an academic research library designed for study and interaction. The library consists of 82,848 sf of new construction and 62,713 sf of renovation space. The facility includes flexible and collaborative study spaces, a two-story lecture hall, an outdoor terrace, reception space and conference rooms, 300-seat media-rich public events space, a Graduate Student and Faculty Research Center with seating for 120, and a state-of-the-art service desk. This project was awarded LEED Silver Certification. Size: 145,500 SF Cost: \$37M | | | |
| d. | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
| | North Carolina State University - James B. Hunt Jr. Library Raleigh, North Carolina | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2010 | 2013 |
| (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| Project Manager for the 253,000 sf facility including student study, stack, resource, classroom, conference, research, office, and food service spaces. The library includes 88,000 sf of library function space, 24,000 sf for IEI functions, 7,000 sf of Chancellor's spaces, 8,000 sf of shared support space, and a robot-driven bookBot and automated book delivery system. This project was awarded LEED Silver Certification. Size: 253,000 SF Cost: \$115M | | | |
| e. | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
| | East Carolina University - Main Campus Student Center Greenville, North Carolina | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2015 | 2019 |
| (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| Principal-in-Charge and Project Manager for the new 214,000 sf student center, a stand-alone regional chiller plant, and a 700-car parking deck. The student center includes: areas for student activities, leadership, and involvement; the Ledonia Write Cultural Center; a Black Box theatre; large event space; bookstore; group study spaces; game lounge; governance rooms; a Trustees suite; and a dining facility. Size: 214,000 SF Cost: \$115M | | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person)

| | | | |
|--|----------------------------|--|----------------------|
| 12. NAME | 13. ROLE IN THIS CONTRACT | 14. YEARS OF EXPERIENCE | |
| Paul Socha, PE | Mechanical Engineer | a. TOTAL | b. WITH CURRENT FIRM |
| | | 15 | 15 |
| 15. FIRM NAME AND LOCATION (City and State) | | | |
| Affiliated Engineers, Inc. - Chapel Hill, NC | | | |
| 16. EDUCATION (DEGREE AND SPECIALIZATION) | | 17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) | |
| Bachelor of Science / Mechanical Engineering / Georgia Institute of Technology | | Registered Professional Engineer NC, Mechanical, 2013 | |
| 18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) | | | |
| Member - American Society of Heating, Refrigeration & Air Conditioning Engineers; Member - North Carolina Hospital Engineers Association | | | |



19. RELEVANT PROJECTS

| | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
|---|--|-----------------------|--|
| a. | University of North Carolina at Wilmington - Randall Library Renovation and Expansion Wilmington, North Carolina | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2022 | 2024 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm |
| Lead Mechanical Engineer for the 40,000 sf expansion to the existing William Madison Randall Library, as well as the renovation of the 150,000 sf existing building to add necessary program space, modernize the existing facility, and meet the needs of students and faculty. Size: 190,000 SF Cost: \$60M | | | |
| b. | University of North Carolina at Greensboro - Nursing/Instructional Building Greensboro, North Carolina | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2018 | 2021 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm |
| Lead Mechanical Engineer for the new 180,000 sf facility consisting of laboratory and support space, academic teaching facilities, and offices. The building was designed for maximum flexibility for rapidly changing academic programs. The building's primary occupants include: School of Nursing, College of Arts and Sciences, and School of Health and Human Services. The project also includes a stand-alone chiller plant with an initial build out of 2,000 tons with future expansion capabilities to an ultimate capacity of 7,500 tons. This project was awarded LEED Gold Certification. Size: 180,000 SF Cost: \$72M | | | |
| c. | North Carolina State University - James B. Hunt Jr. Library Raleigh, North Carolina | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2010 | 2013 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm |
| Mechanical Engineer for the 253,000 sf facility including student study, stack, resource, classroom, conference, research, office, and food service spaces. The library includes 88,000 sf of library function space, 24,000 sf for IEI functions, 7,000 sf of Chancellor's spaces, 8,000 sf of shared support space, and a robot-driven bookBot and automated book delivery system. This project was awarded LEED Silver Certification. Size: 253,000 SF Cost: \$115M | | | |
| d. | Elon University - Schar Hall - School of Communications Elon, North Carolina | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2015 | 2017 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm |
| Lead Mechanical Engineer for the 53,000 sf new facility which houses Elon's School of Communications. The building includes classrooms, a sound engineering studio, video and audio editing suites, and a 250-seat theatre. AEI also provided energy modeling, commissioning, and LEED documentation. This project was awarded LEED Silver Certification. Size: 53,000 SF Cost: \$21M | | | |
| e. | University of North Carolina System - General Administration Office Renovation Chapel Hill, North Carolina | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2007 | 2009 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm |
| Mechanical Engineer for the 6,500 sf renovation of space on the basement level. The renovations included office and print-shop space. The existing air handling unit was replaced and upgraded to meet current codes and construction standards. Size: 6,500 SF Cost: \$1M | | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person)

| | | | |
|--|----------------------------|--|----------------------|
| 12. NAME | 13. ROLE IN THIS CONTRACT | 14. YEARS OF EXPERIENCE | |
| Bill Hennen, PE | Electrical Engineer | a. TOTAL | b. WITH CURRENT FIRM |
| | | 36 | 18 |
| 15. FIRM NAME AND LOCATION (City and State) | | | |
| Affiliated Engineers, Inc. - Chapel Hill, NC | | | |
| 16. EDUCATION (DEGREE AND SPECIALIZATION) | | 17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) | |
| Bachelor of Science / Electrical Engineering / Ohio State University | | Registered Professional Engineer NC, Electrical, 1997 | |
| 18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) | | | |
| Member - Institute of Electrical & Electronics Engineers; Member - National Fire Protection Association, Health Care Section | | | |



19. RELEVANT PROJECTS

| | | | |
|--|--|--|--------------|
| a. | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
| | University of North Carolina at Wilmington - Randall Library Renovation and Expansion Wilmington, North Carolina | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2022 | 2024 |
| (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| Lead Electrical Engineer for the 40,000 sf expansion to the existing William Madison Randall Library, as well as the renovation of the 150,000 sf existing building to add necessary program space, modernize the existing facility, and meet the needs of students and faculty. Size: 190,000 SF Cost: \$60M | | | |
| b. | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
| | Virginia Commonwealth University - Cabell Library Addition and Renovation Richmond, Virginia | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2014 | 2016 |
| (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| Peer Review for the addition and renovation of an academic research library designed for study and interaction. The library consists of 82,848 sf of new construction and 62,713 sf of renovation space. The facility includes flexible and collaborative study spaces, a two-story lecture hall, an outdoor terrace, reception space and conference rooms, 300-seat media-rich public events space, a Graduate Student and Faculty Research Center with seating for 120, and a state-of-the-art service desk. This project was awarded LEED Silver Certification. Size: 145,500 SF Cost: \$37M | | | |
| c. | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
| | North Carolina State University - James B. Hunt Jr. Library Raleigh, North Carolina | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2010 | 2013 |
| (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| Peer Review for the 253,000 sf facility including student study, stack, resource, classroom, conference, research, office, and food service spaces. The library includes 88,000 sf of library function space, 24,000 sf for IEL functions, 7,000 sf of Chancellor's spaces, 8,000 sf of shared support space, and a robot-driven bookBot and automated book delivery system. This project was awarded LEED Silver Certification. Size: 253,000 SF Cost: \$115M | | | |
| d. | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
| | University of North Carolina at Greensboro - Nursing/Instructional Building Greensboro, North Carolina | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2018 | 2021 |
| (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| Peer Review for the new 180,000 sf facility consisting of laboratory and support space, academic teaching facilities, and offices. The building was designed for maximum flexibility for rapidly changing academic programs. The building's primary occupants include: School of Nursing, College of Arts and Sciences, and School of Health and Human Services. The project also includes a stand-alone chiller plant with an initial build out of 2,000 tons with future expansion capabilities to an ultimate capacity of 7,500 tons. This project was awarded LEED Gold Certification. Size: 180,000 SF Cost: \$72M | | | |
| e. | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
| | Duke University - Teer Engineering Renovation Durham, North Carolina | PROFESSIONAL SERVICES | CONSTRUCTION |
| | | 2020 | 2021 |
| (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| Lead Electrical Engineer for the 40,000 sf renovation to the main mechanical and electrical rooms. The project includes a HVAC renovation to the first and fourth floors and stand-alone HVAC for the Necropsy laboratory. This project includes a whole-building electrical system upgrade and replacement, including a new optional generator branch. In addition, the fire alarm and sprinkler systems were upgraded and arc flash mitigation was included. Size: 40,000 SF Cost: Confidential | | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person)

| | | | |
|---|--|---|----------------------|
| 12. NAME | 13. ROLE IN THIS CONTRACT | 14. YEARS OF EXPERIENCE | |
| Zhong Sun, PE, CPD | Piping/Fire Protection Engineer | a. TOTAL | b. WITH CURRENT FIRM |
| | | 17 | 5 |
| 15. FIRM NAME AND LOCATION (City and State) | | | |
| Affiliated Engineers, Inc. - Chapel Hill, NC | | | |
| 16. EDUCATION (DEGREE AND SPECIALIZATION) | | 17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) | |
| Master of Science / Mechanical Engineering / New Jersey Institute of Technology Bachelor of Science / Mechanical Engineering / Shanghai Jiao Tong University | | Registered Professional Engineer NC, Mechanical, 2018 Certified Plumbing Designer, 2017 | |
| 18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) | | | |
| Member - American Society of Plumbing Engineers, Member - Society of Fire Protection Engineers | | | |



19. RELEVANT PROJECTS

| | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
|----|---|-----------------------|--------------|
| | | PROFESSIONAL SERVICES | CONSTRUCTION |
| a. | University of North Carolina at Greensboro - Nursing/Instructional Building Greensboro, North Carolina | 2018 | 2021 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Piping/Fire Protection Engineer for the new 180,000 sf facility consisting of laboratory and support space, academic teaching facilities, and offices. The building was designed for maximum flexibility for rapidly changing academic programs. The building's primary occupants include: School of Nursing, College of Arts and Sciences, and School of Health and Human Services. The project also includes a stand-alone chiller plant with an initial build out of 2,000 tons with future expansion capabilities to an ultimate capacity of 7,500 tons. Size: 180,000 SF Cost: \$72M | | |
| b. | University of North Carolina at Chapel Hill - Medical Education Building Chapel Hill, North Carolina | 2019 | 2022 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Fire Protection Engineer for the new 172,000 sf, nine-story facility that will house the UNC School of Medicine. The facility will include a large active learning theater, simulation facility, gross anatomy lab, microbiology lab, and a leadership suite as well as flexible classrooms, group study spaces, offices, and conference space. 172,000 SF Cost: \$90M | | |
| c. | University of North Carolina at Wilmington - Allied Health and Human Services Building Wilmington, North Carolina | 2018 | 2020 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Piping/Fire Protection Designer for the new 174,400 sf facility that houses the College of Health and Human Services, the Center for Healthy Living, existing academic programs in Health and Applied Human Sciences and Social Work, the College of Arts and Sciences, support space for military-affiliated students, classrooms, and lecture halls. The facility also includes a gross anatomy lab with both an anatomage table and cadaver storage. Size: 174,040 SF Cost: \$66M | | |
| d. | East Carolina University - Life Sciences and Biotechnology Building Greenville, North Carolina | 2019 | 2021 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Fire Protection Engineer for the new 145,000 sf facility which includes a 500-space parking garage. The facility houses the Pharmaceutical Development and Manufacturing Center of Excellence, the bioprocess and biomedical engineering programs, and is a new home for the ECU Department of Biology. Size: 145,000 SF Cost: \$95M | | |
| e. | Winston-Salem State University - New Science Building Winston-Salem, North Carolina | 2018 | 2021 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Fire Protection Engineer for the new, 126,000 sf, six-story, multi-use facility. The building includes lecture halls, classrooms, laboratories, study rooms, break rooms, a café, offices, and workstations. The building supports Life Sciences, Clinical Lab Sciences, Chemistry, Forensics, and the Biomedical Research Infrastructure Center (BRIC) departments and includes a small animal holding facility. Size: 126,000 SF Cost: \$42.5M | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person)

| | | | |
|---|--|--|----------------------|
| 12. NAME | 13. ROLE IN THIS CONTRACT | 14. YEARS OF EXPERIENCE | |
| Leah Robinson, LC, PE | Architectural Lighting Designer | a. TOTAL | b. WITH CURRENT FIRM |
| | | 22 | 21 |
| 15. FIRM NAME AND LOCATION (City and State) | | | |
| Affiliated Engineers, Inc. - Chapel Hill, NC | | | |
| 16. EDUCATION (DEGREE AND SPECIALIZATION) | | 17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) | |
| Bachelor of Science / Architectural Engineering / University of Kansas | | Registered Professional Engineer NC - Architectural Engineering, 2006 Lighting Certified, 2008 | |
|  | | | |
| 18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) | | | |
| Member - Illuminating Engineering Society; Member - National Council on Qualifications for the Lighting Professions | | | |

19. RELEVANT PROJECTS

| a. | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
|----|---|-----------------------|--------------|
| | | PROFESSIONAL SERVICES | CONSTRUCTION |
| | University of North Carolina at Wilmington - Randall Library Renovation and Expansion Wilmington, North Carolina | 2022 | 2024 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Lighting Designer for the 40,000 sf expansion to the existing William Madison Randall Library, as well as the renovation of the 150,000 sf existing building to add necessary program space, modernize the existing facility, and meet the needs of students and faculty. Size: 190,000 SF Cost: \$60M | | |
| | East Carolina University - Main Campus Student Center Greenville, North Carolina | 2015 | 2019 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Lighting Designer for the 214,000 sf student center, a stand-alone regional chiller plant and a 700-car parking deck. The student center is the new main campus "living room" and includes a center for student activities, the Ledonia Wright Cultural Center, a multipurpose Black Box theater, a divisible Ballroom, bookstore, and retail dining facility. Size: 214,000 SF Cost: \$115M | | |
| | Elon University - Schar Hall - School of Communications Elon, North Carolina | 2015 | 2017 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Lighting Designer for the 53,000 sf new facility which houses Elon's School of Communications. The building includes classrooms, a sound engineering studio, video and audio editing suites, and a 250-seat theatre. AEI also provided energy modeling, commissioning, and LEED documentation. This project was awarded LEED Silver Certification. Size: 53,000 SF Cost: \$21M | | |
| | University of Virginia - Contemplative Commons Charlottesville, Virginia | 2021 | 2023 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Lighting Designer for the new multipurpose facility that will be located in the heart of UVA Grounds. The new 57,000 sf Contemplative Commons will include a combination of academic classroom, research laboratory, immersive learning space, event space, innovation hub, and serene contemplative spaces. The facility will also comprise many new outdoor spaces including, a contemplative gardens, a tree-lined courtyard, and green pedestrian bridge. Size: 57,000 SF Cost: \$38.4M | | |
| | East Carolina University - Life Sciences and Biotechnology Building Greenville, North Carolina | 2019 | 2021 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Lighting Designer for a new four-story, 145,000 sf facility that houses the Pharmaceutical Development and Manufacturing Center of Excellence, the bioprocess and biomedical engineering programs and will provide a new home for the ECU Department of Biology, where researchers and students will focus on molecular and cell biology, microbiology, biochemistry, genetics, evolutionary biology and environmental biology. Size: 145,000 SF Cost: \$95M | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person)

| | | | |
|--|----------------------------------|--|----------------------|
| 12. NAME | 13. ROLE IN THIS CONTRACT | 14. YEARS OF EXPERIENCE | |
| Patrick Milnamow | Security Systems Designer | a. TOTAL | b. WITH CURRENT FIRM |
| | | 6 | 4 |
| 15. FIRM NAME AND LOCATION (City and State) | | | |
| Affiliated Engineers, Inc. - Chicago, IL | | | |
| 16. EDUCATION (DEGREE AND SPECIALIZATION) | | 17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) | |
| Bachelor of Science / Criminal Justice / Western Illinois University | | State of Texas Private Security Registration | |
| 18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) | | | |
| Member - American Society for Industrial Security; Member - InfraGard Partnership for Protection; Member - Association of Threat Assessment Professionals; Award: "40 under 40" Award – Security Systems News (2019) | | | |



19. RELEVANT PROJECTS

| | (1) TITLE AND LOCATION (City and State) | (2) YEAR COMPLETED | |
|----|---|-----------------------|--------------|
| | | PROFESSIONAL SERVICES | CONSTRUCTION |
| a. | University of North Carolina at Chapel Hill - Translational Research Building Design Chapel Hill, North Carolina | 2019 | N/A |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Security Systems Designer for access control, video surveillance, and intrusion detection for this seven-story facility that will consolidate 100,000 sf of vivarium space with 60,000 sf of new space and will include the addition of another floor. The additional floor will be devoted to a new BSL-3 laboratory. This project will address the need for research growth space in addition to solve the maintenance issues that exist in the current facilities. The replacement of multiple old facilities will allow UNC to compete with top biomedical academic research institutions across the country. AEI worked on this project through Schematic Design. Size: 160,000 SF Cost: N/A | | |
| b. | Summit County Colorado - Public Facilities Security Assessment Breckenridge, Colorado | 2021 | N/A |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Security Systems Designer for the security assessment that included the historic 20,000 sf County Courthouse, the 39,000 sf Public Building, the 7,000 sf North Branch Library, 11,000 sf South Branch Library, the county-owned 36,000 sf medical office building, and a water treatment facility. Size: 113,000 SF Cost: N/A | | |
| c. | CBRE Property Management - Milwaukee Center Milwaukee, Wisconsin | 2020 | 2020 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Security Systems Designer for this 373,000 sf, 32-story multi-tenanted building. AEI provided security design services including replacement of the access control system, destination dispatch integration, camera and intercom design, and turnstile integration. Size: 373,000 SF Cost: \$600,000 (Security Systems Value) | | |
| d. | Exact Sciences Corporation - Discovery Campus Madison, Wisconsin | 2018 | 2019 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Security Systems Designer for the 231,000 sf renovation. AEI provided security design services including comprehensive security systems design, surveillance, access control, intercom systems, compartmentalization program, turnstile/biometrics seamless entry, and site security surveillance programming. Size: 231,000 SF Cost: \$157.7M | | |
| e. | University of Mississippi Medical Center - Mississippi Integrated Public Safety Communications Center , Jackson, Mississippi | 2018 | 2020 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| | Security Systems Designer for the 20,000 sf medical communications and command center hardened against tornados that includes helicopter hangers and emergency care training spaces. The center house the education, clinical, and research divisions that will allow the Mississippi Center for Emergency Services to improve and expand its telemedicine capabilities. AEI provided MEP engineering and security design services. Size: 20,000 SF Cost: \$9M | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

| | | | | |
|--|---|---|----------------------|----------------------------|
| 12. NAME Aaron B. Bopp, PE, LEED AP BD+C |  | 13. ROLE IN THIS CONTRACT Structural Engineer | 14. YEARS EXPERIENCE | |
| | | | a. TOTAL 22 | b. WITH CURRENT FIRM 22 |

| | |
|--|---|
| 15. FIRM NAME AND LOCATION <i>(City and State)</i> SKA Consulting Engineers, Inc. (Greensboro, NC) |  |
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|--|---|
| 16. EDUCATION <i>(Degree and Specialization)</i> BS Civil Engineering Virginia Polytechnic Institute and State University | 17. CURRENT PROFESSIONAL REGISTRATION <i>(State and Discipline)</i> Engineer: North Carolina, Georgia, Nevada, Indiana |
|--|---|

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|---|
| 18. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i> Awards: Pratt Fellowship Recipient Professional Associations: ASCE, AISC, CPN, NSPE, SEA, A4LE, CEN, NAIOP |
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19. RELEVANT PROJECTS

| (1) TITLE AND LOCATION <i>(City and State)</i> | (2) YEAR COMPLETED | |
|---|--|-------------------------------------|
| | PROFESSIONAL SERVICES | CONSTRUCTION <i>(If applicable)</i> |
| UNC Greensboro Nursing and Instructional Building <i>(Greensboro, NC)</i> | 2016 | 2021 |
| a. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE The project included the demolition of the existing McIver Building and the construction of a 180,000 sf building consisting of laboratory and support space, academic teaching facilities, and offices. The Nursing building was designed for maximum flexibility for rapidly changing academic programs. The project also included a stand-alone chiller plant with an initial build out of 2,000 tons with future expansion capabilities to an ultimate capacity of 7,500 tons. Served as project manager / structural engineer. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
|  | | |
| UNC Greensboro 26 Dorms Condition Assessment <i>(Greensboro, NC)</i> | 2018 | 2019 |
| b. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE SKA completed a Housing and Residence Life Facility Condition Assessments project at UNC Greensboro. The scope of this project was to provide a Facilities Condition Assessment for twenty-six UNCG Residence Halls with a prioritized ten (10) year forecast of Capital, and Renovation and Repair projects. The on-site field evaluations occurred during two phases: Winter Break 2018 evaluation of eighteen (18) residence halls and Summer Break 2019 evaluation of eight (8) residence halls. The project's culmination resulted in the production of a single report document encompassing all evaluated buildings. Served as structural engineer. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
|  | | |
| UNC Greensboro Quad Residences <i>(Greensboro, NC)</i> | 2010 | 2012 |
| c. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE SKA was selected for design, special inspections, renovations, design review, and construction administration on this dormitory facility. The goal of this project was to update seven, 90-year-old dormitories and provide the students with the modern conveniences, necessities and amenities expected with current collegiate life. Early in the design phase, SKA performed thorough reviews of the existing construction materials and overall condition of the structural and envelope components. Special inspections and observations were successful in identifying discrepancies during the construction so corrective measures could be made. Construction value \$50 million. LEED Gold . Served as project manager. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
|  | | |
| UNC Greensboro School of Education <i>(Greensboro, NC)</i> | 2007 | 2011 |
| d. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE The new 110,500 square foot facility is the first LEED Certified building on the campus, providing a green learning environment that offers an array of tools and state of the art enhancements for use by the faculty and students. In keeping with the charge to provide a state of the art facility for the University, the design process utilized the latest three-dimensional Building Information Modeling software to design, detail and help facilitate the construction of the building from foundations through interior finishes. In addition to providing structural design services, SKA served as the Special Inspector during the construction process, helping to ensure the construction complied with the design documents. Additional services include envelope peer review and window testing. Served as principal-in-charge. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
|  | | |
| UNC Greensboro Taylor Theater Multiple Projects <i>(Greensboro, NC)</i> | 2016 | 2021 |
| e. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE As part of our small services contract, SKA assisted UNCG with making structural modifications and improvements to Taylor Theater through multiple projects. The existing orchestra pit framing that was flagged during a safety audit. SKA reviewed the safety audit concerns, assessed the current conditions, and developed a scope of work to address the safety issues. Likewise, strengthening measures and improvements were designed for the roof access and protection, for emergency shoring of the hydraulic stage and for catwalk access to production equipment for the stage. Served as project manager and structural engineer. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person)

| | | | |
|--|--|----------------------|----------------------------|
| 12. NAME Keith Portnoy, CTS-D, RCDD | 13. ROLE IN THIS CONTRACT Project Manager | 14. YEARS EXPERIENCE | |
| | | a. TOTAL 30 | b. WITH CURRENT FIRM 20 |

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|--|
| 15. FIRM NAME AND LOCATION <i>(City and State)</i> Waveguide LLC, Raleigh, North Carolina |
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| | |
|--|---|
| 16. EDUCATION <i>(Degree and Specialization)</i> 1992, Georgia Institute of Technology, Bachelor of Science, Electrical Engineering | 17. CURRENT PROFESSIONAL REGISTRATION <i>(State and Discipline)</i> |
|--|---|

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|--|
| 18. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i> Certified Technology Specialist in Design (CTS-D) BICSI, RCDD |
|--|

| 19. RELEVANT PROJECTS | | | |
|-----------------------|---|-----------------------|-----------------|
| | (1) TITLE AND LOCATION <i>(City and State)</i> | (2) YEAR COMPLETED | |
| | | PROFESSIONAL SERVICES | |
| a. | University of North Carolina, Wilmington, Randall Library, Wilmington, North Carolina | 2020 | Est. April 2024 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Waveguide is providing AV and acoustic consulting on the library expansion and renovation. The \$46.1M project represents 85,000 square feet within the multi-story addition. Technology-enabled spaces include nearly 30 small and medium meeting rooms, a computer classroom, active learning classroom, digital creation hub, flexible event space, lobby, tech hub and exhibit area display. Keith is the PM. | | |
| b. | North Carolina State University, DH Hill Academic Success Center, Raleigh, North Carolina | 2017 | 2020 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The newly renovated spaces feature the Academic Success Center and technology-rich Libraries spaces, making the Hill Library NC State's one-stop hub for learning, teaching, research, collaboration and experimentation. Waveguide provided AV programming, design and project management for the 36,000-square-foot project, including the Viz Studio and instructional spaces. Keith was the project manager. | | |
| c. | Virginia Commonwealth University, Cabell Library Addition, Richmond, Virginia | 2013 | 2015 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Waveguide provided AV, IT and acoustics consulting and design for the \$34 million Cabell Library addition project, a new 93,169 SF four-story addition to the north side of the library. The technology supports large presentations in the multimedia space, class sessions in the instructional spaces and small groups in the various group study rooms. Keith Portnoy was the project manager. | | |
| d. | Virginia Polytechnic Institute and State University, Newman Library, Blacksburg, Virginia | 2013 | 2014 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm This redesign of the Newman Library 27,500 SF second floor created an inspiring, flexible and aesthetically pleasing space that engages students in technology rich learning and collaboration. The learning environment incubates new forms of scholarship and cross-campus collaboration to advance the mission of learning, discovery and engagement that will accommodate individual learners as well as students in groups. Keith Portnoy was the project manager. | | |
| e. | Johnston Community College, New Library, Smithfield, North Carolina | 2010 | 2012 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Waveguide provided AV consulting services for this new 81,000-square-foot, Silver LEED certified building providing AV system infrastructure and AV presentation services for a classroom, children's collection area and two distance learning labs. Keith Portnoy was project manager. | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

| | | | |
|---|---|---|-----------------------------|
| 12. NAME Adam Galatioto | 13. ROLE IN THIS CONTRACT Acoustics Consultant | 14. YEARS EXPERIENCE | |
| | | a. TOTAL 12 | b. WITH CURRENT FIRM 4.5 |
| 15. FIRM NAME AND LOCATION <i>(City and State)</i> Waveguide LLC, Decatur, Georgia | | | |
| 16. EDUCATION <i>(Degree and Specialization)</i> University of Florida, Bachelor of Science, Industrial and Systems Engineering, 2010; University of Florida, Master of Science, Architectural Studies, 2013 | | 17. CURRENT PROFESSIONAL REGISTRATION <i>(State and Discipline)</i> | |
| 18. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i> | | | |

19. RELEVANT PROJECTS

| | (1) TITLE AND LOCATION <i>(City and State)</i> | (2) YEAR COMPLETED | |
|----|---|-------------------------------|------|
| a. | Georgia Institute of Technology, West Campus Dining Commons and School of Music, Atlanta, Georgia | PROFESSIONAL SERVICES 2015 | 2017 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The new \$18.5 million, 42,000-SF Dining Commons is designed to allow maximum flexibility for the dining components, the seating areas and the academic space. Seating areas serve as a student lounge and study areas when not actively used for dining. Similarly, instructional space is available for use as meeting and study space when not scheduled for specialized instructional use. Introducing multiuse space by integrating flexible classroom components into the project help intensify overall space use. The School of Music has primary use of the spaces, requiring acoustics treatments. Adam served as an acoustics consultant on this project. | | |
| b. | University of South Florida, Morsani School of Medicine, Tampa, Florida | PROFESSIONAL SERVICES 2016 | 2019 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm A 319,000-SF medical education building with 100,000 SF of AV-enabled classroom space. Includes an auditorium with green room, café, demo classroom, multiple group learning rooms and 50-seat classrooms, 10 learning communities, one seminar room, one experiential learning lab, multiple huddle and conference rooms and private offices, as well as an AV control room and lobby space. Adam is an acoustics consultant on this project. | | |
| c. | Sherman College of Chiropractic, Renovations and New Student Life Center, Boiling Springs, South Carolina | PROFESSIONAL SERVICES 2017 | 2019 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm An 85,500-SF renovation and new construction project that updates and modernizes the Scallon, Health Science and New Student Life Center at the school. Spaces include a divisible student center/large event space, two-way divisible classroom, six classrooms of various sizes, four technique classrooms, computer and biochemistry labs, conference rooms, public area signage and an AV control center. Adam is an acoustics consultant on this project. | | |
| d. | Purdue University Northwest, Bioscience Innovation Building, Hammond, Indiana | PROFESSIONAL SERVICES 2018 | 2020 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The Purdue University College of Nursing and Biology built an approximately 69,000 GSF facility to add technologically advanced lab and learning space for these departments, as well as provide classroom space for use by the general student population. Learning spaces are flexible and promote problem- and team-based learning. Additionally, a stated goal of this project is to showcase innovation and collaboration happening in the building to students, faculty and visitors traveling through the public spaces in the building. Waveguide provided AV, IT and acoustic consulting and design throughout the building including in nursing skills, simulation and assessment areas, multiple biology teaching labs, three up-scale classrooms, eight conference rooms and lobby/public areas. Adam was the acoustics consultant for this project. | | |
| e. | University of California Los Angeles, Anderson School of Management, Los Angeles, California | PROFESSIONAL SERVICES 2015 | 2019 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The new 62,000-SF building addition accommodates technologically equipped teaching spaces; reorganizes admissions, career, and event functions; and provides student study and commons space. Spaces include a 200-seat auditorium, three 90-seat active learning classrooms, one event space, Dean's suite meeting rooms, small meeting rooms, public lobbies and an AV control room. Adam was an acoustics consultant for this project. | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

| | | | |
|---|---|--|---------------------------|
| 12. NAME Alex J. Kline, P.E. | 13. ROLE IN THIS CONTRACT Fire Protection Engineer | 14. YEARS EXPERIENCE | |
| | | a. TOTAL 15 | b. WITH CURRENT FIRM 4 |
| 15. FIRM NAME AND LOCATION <i>(City and State)</i> The Fire Consultants, Inc Apex, NC | | | |
| 16. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> Master of Engineering – Fire Protection Engineering Bachelor of Science- Fire Protection Engineering | | 17. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> PE Fire Protection Engineering – NC, SC, OH | |
| 18. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i> | | | |

| 19. RELEVANT PROJECTS | | | |
|--|------------------------------------|---|--|
| (1) TITLE AND LOCATION <i>(City and State)</i> | (2) YEAR COMPLETED | | |
| a. Appalachian State University- College of Health Sciences Boone, NC | PROFESSIONAL SERVICES 2015 | CONSTRUCTION <i>(If applicable)</i> Future | |
| (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Provided building code consulting and architectural drawing reviews for a five story Health Sciences building | | | |
| b. Wake Forest University Z Smith Reynolds Library Renovation Winston-Salem, NC | PROFESSIONAL SERVICES 2016-2017 | CONSTRUCTION <i>(If applicable)</i> 2018 | |
| (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Provided building code consulting and architectural drawing reviews for the central library renovation. | | | |
| c. UNCG School of Nursing Greensboro, NC | PROFESSIONAL SERVICES 2017-2018 | CONSTRUCTION <i>(If applicable)</i> Future | |
| (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Building code consulting, architectural drawing reviews, and atrium smoke control system fire modeling. | | | |
| d. University of North Carolina- Koury Oral Health Sciences Building Chapel Hill, NC | PROFESSIONAL SERVICES 2007-2012 | CONSTRUCTION <i>(If applicable)</i> 2012 | |
| (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Provided building code consulting, atrium smoke control smoke modeling, and a HAZMAT analysis for the new high-rise dental school building. | | | |
| e. University of North Carolina- Imaging Research Building Chapel Hill, NC | PROFESSIONAL SERVICES 2012 | CONSTRUCTION <i>(If applicable)</i> 2016 | |
| (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Provided building code consulting and a HAZMAT analysis for the new high-rise laboratory building. | | | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

| | | | |
|---|---|---|-----------------------------------|
| 12. NAME Wayne Watterson | 13. ROLE IN THIS CONTRACT Consulting Engineer | 14. YEARS EXPERIENCE | |
| | | a. TOTAL YEARS 35 | b. WITH CURRENT FIRM 35 |
| 15. FIRM NAME AND LOCATION (City and State) S&ME, Inc. Greensboro, SC | | | |
| 16. EDUCATION (DEGREE AND SPECIALIZATION) B.S., Materials Science and Engineering, (1985) Environmental Engineering Hazardous Material Assessment | | 17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Registered Engineer, NC and VA | |
| 18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards.) AHERA Asbestos Inspector, VA | | | |

19. RELEVANT PROJECTS

| | | | |
|-----------|---|--|--------------|
| | (1) TITLE AND LOCATION (City and State) Moore Hall Asbestos Assessment and Abatement Design UNCG, Greensboro, NC | (2) YEAR COMPLETED | |
| | | PROFESSIONAL SERVICES 2019 - Present | CONSTRUCTION |
| a. | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager for additional asbestos assessment to further define the extent of asbestos containing materials in Moore Hall, prior to anticipated building renovations. S&ME also completed an asbestos abatement design for Vines Architecture as part of the project documents. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| b. | (1) TITLE AND LOCATION (City and State) UNCG Registrar's Office Asbestos Services UNCG, Greensboro, NC | (2) YEAR COMPLETED | |
| | | PROFESSIONAL SERVICES 2019 | CONSTRUCTION |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager for asbestos sampling, and air clearance monitoring services for UNCG during renovations of Registrar's office on campus. The project included several site visits to review contractor's work, and consult with UNCG regarding required actions. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| c. | (1) TITLE AND LOCATION (City and State) Mossman Building 3rd Floor UNCG, Greensboro, NC | (2) YEAR COMPLETED | |
| | | PROFESSIONAL SERVICES 2019 | CONSTRUCTION |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager for asbestos sampling, and air clearance monitoring services of three separate areas of the Mossman building during renovation activities | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| d. | (1) TITLE AND LOCATION (City and State) Asbestos Inspections for Demolition Multiple Locations in North Carolina | (2) YEAR COMPLETED | |
| | | PROFESSIONAL SERVICES 2018 - present | CONSTRUCTION |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager for Asbestos sampling services for properties scheduled for redevelopment. Services included asbestos inspections of buildings prior to demolition. Building sizes range from about 3,000 to 6,000 square feet. | <input checked="" type="checkbox"/> Check if project performed with current firm | |

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

| | | | | | |
|--|--|---------------------------|--|-----------------------|--|
| 12. NAME | | 13. ROLE IN THIS CONTRACT | | 14. YEARS EXPERIENCE | |
| Tony Murphy | | Cost Manager | | a. TOTAL | b. WITH CURRENT FIRM |
| | | | | 31 | 4 |
| 15. FIRM NAME AND LOCATION (City and State) | | | | | |
| Palacio Collaborative – Durham, NC | | | | | |
| 16. EDUCATION (Degree and Specialization) | | | 17. CURRENT PROFESSIONAL REGISTRATIONS | | |
| B.S. Construction Management | | | N/A | | |
| 18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) | | | | | |
| Tony Murphy has worked in the Carolina region for over 30 years providing timely and accurate Construction Cost Estimating. | | | | | |
| 19. RELEVANT PROJECTS | | | | | |
| a. | (1) TITLE AND LOCATION (City and State) | | | (2) YEAR COMPLETED | |
| | University of North Carolina Coleman Suite 332 Basketball Office Renovation Greensboro, NC | | | PROFESSIONAL SERVICES | CONSTRUCTION (If applicable) |
| | | | | 2021 | 2022 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | | X | Check if project performed with current firm |
| Lead Cost Manager 3,200 sf \$300,000 Provided Cost Management for interior renovations to update finishes and change space layouts. | | | | | |
| b. | (1) TITLE AND LOCATION (City and State) | | | (2) YEAR COMPLETED | |
| | University of North Carolina Bee Lab Renovation Greensboro, NC | | | PROFESSIONAL SERVICES | CONSTRUCTION (If applicable) |
| | | | | 2018 | Unbuilt |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | | X | Check if project performed with current firm |
| Lead Cost Manager 2,861 sf \$306,784 Provided Cost Management for an interior fit out of a new Seminar Classroom, Wet Lab & Molecular Lab spaces for the Universities Plant & Pollinator Center. | | | | | |
| c. | (1) TITLE AND LOCATION (City and State) | | | (2) YEAR COMPLETED | |
| | University of North Carolina Taylor Hall Theater Renovation Greensboro, NC | | | PROFESSIONAL SERVICES | CONSTRUCTION (If applicable) |
| | | | | 2022 | 2023 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | | X | Check if project performed with current firm |
| Lead Cost Manager N/A \$10.5M Provided Cost Management for a renovation that will include theater, stairwell, balcony, and basement modifications. | | | | | |
| d. | (1) TITLE AND LOCATION (City and State) | | | (2) YEAR COMPLETED | |
| | University of North Carolina Davis Library Admin Suite Renovation Chapel Hill, NC | | | PROFESSIONAL SERVICES | CONSTRUCTION (If applicable) |
| | | | | 2020 | 2021 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | | X | Check if project performed with current firm |
| Lead Cost Manager 1,460 sf \$360,000 Provided Cost Management for a 1,460 sf renovation to the library's admin suite. | | | | | |
| e. | (1) TITLE AND LOCATION (City and State) | | | (2) YEAR COMPLETED | |
| | North Carolina State University DH Hill Library Brick Yard Entrance Raleigh, NC | | | PROFESSIONAL SERVICES | CONSTRUCTION (If applicable) |
| | | | | 2019 | 2020 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE | | | X | Check if project performed with current firm |
| Lead Cost Manager 6,550 sf \$508,140 Provided Cost Management for the entrance and vestibule to library which includes selective demolition, aluminum entrance storefront and other storefront, security desk, glazed aluminum curtain wall, turnstile, and finishes. | | | | | |

F. EXAMPLE PROJECTS BEST ILLUSTRATING PROPOSED TEAM'S QUALIFICATIONS

20. EXAMPLE PROJECT KEY

01

21. TITLE AND LOCATION

**University of North Carolina at Greensboro
Nursing & Instructional Building**
Greensboro, NC

22. YEARS COMPLETED

| PROFESSIONAL | CONSTRUCTION |
|--------------|--------------|
| 2016 | 2020 |

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

University of North Carolina at Greensboro

b. NAME

Sameer Kapileshwari, Associate
Vice Chancellor for Facilities

c. TELEPHONE

336.334.3496

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

UNCG's new 180,000 SF Nursing & Instructional Building provides state-of-the-art simulation, research, and classroom space for UNCG's School of Nursing, the School of Health and Human Sciences, and the Biology and Chemistry departments. The student-focused architecture integrates best practices for a modern collaborative learning environment, while the building itself serves as a pedestrian connector via a grand internal stair between two campus nodes to improve campus circulation. The exterior materials palette of brick, glass, and metal panel complements the existing campus context, and the new site circulation pattern creates accessible pedestrian pathways. Inside, a five-story atrium visually connects the learning spaces, supporting multidisciplinary interaction and active student engagement.

The program includes classrooms that serve as both active learning and traditional lecture formats with integrated technology, as well as computer classroom; labs for nursing skills, general biology, microbiology, anatomy and physiology instruction; multiple chemistry labs; the Nursing Dean's office and other administrative spaces; a rooftop patio; and a flexible-use "stairitorium." Multiple nursing simulation spaces provide mock clinical environments for hands-on training with high-tech mannequins, including simulated hospital beds with headwalls, patient exam tables, labor and delivery spaces, and home health settings which mirror apartments. A shared community engagement center encourages collaboration and interaction between the Schools of Nursing and Health and Human Sciences, housing additional simulation space and exam rooms which will be used for health screenings for the community. HHS research labs will host outside participants for research studies, and a large event space accommodates groups for trainings, job fairs, or other functions.

■ Relevancy

- Local knowledge of campus
- Comprehensive interior design
- Collaborative learning environment that fosters interdisciplinary connections
- LEED Gold
- CM@ Risk project delivery
- Aligns with campus master plan
- Located in the heart of campus on major campus path



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

| | (1) FIRM NAME | (2) FIRM LOCATION | (3) ROLE |
|---|----------------------------|-------------------|--------------------------------------|
| a | LS3P | Raleigh, NC | Architect of Record, Interior Design |
| b | Stewart | Raleigh, NC | Landscape Architecture |
| c | Affiliated Engineers, Inc. | Chapel Hill, NC | MEP + FP Engineering |
| d | Timmons Group | Greenville, NC | Civil Engineering |
| e | SKA Consulting Engineers | Greensboro, NC | Structural Engineering |
| f | The Fire Consultants | Apex, NC | Code/Fire Consultant |

F. EXAMPLE PROJECTS BEST ILLUSTRATING PROPOSED TEAM'S QUALIFICATIONS

20. EXAMPLE PROJECT KEY

02

21. TITLE AND LOCATION

UNC Wilmington Randall Library Renovation And Expansion
Wilmington, North Carolina

22. YEARS COMPLETED

| | |
|--------------|--------------|
| PROFESSIONAL | CONSTRUCTION |
| 2021 | 2023 est |

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

The University of North Carolina at Wilmington

b. NAME

Rachel Patrick, Director of Architectural and Construction

c. TELEPHONE

910.962.3869

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

This renovation and addition for UNCW's Randall Library focuses on connectivity, visibility, and the user experience. The design provides better access to student services with a one-stop shop model, and the building will serve as a campus hub and recruitment tool.

Major design goals include doubling the existing seat count, integrating technology-rich spaces throughout the library, creating appropriate space for Special Collections, and providing an efficient workflow for staff. A new café provides gathering and work areas as well as refreshment, and an event space adjacent to library exhibits helps to expand opportunities for engagement. The project will be phased to allow the facility to remain operational throughout the construction process.

LS3P is the Executive Architect in collaboration with Shepley Bulfinch.

Relevancy

- LS3P/Shepley Bulfinch team
- Library renovation/addition
- Renovate higher ed facility on an existing campus
- Phasing capabilities
- CM@ Risk project delivery
- Ideate, create, and showcase research
- Enhanced technology including visualization lab
- Outreach to community providing event space and adjacent rotating gallery
- Create a variety of learning environments to meet the needs of individual focused and collaborative work



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

| | (1) FIRM NAME | (2) FIRM LOCATION | (3) ROLE |
|---|----------------------|-------------------|----------------------|
| a | LS3P | Wilmington, NC | Architect of Record |
| b | Shepley Bulfinch | Boston, MA | Design Architect |
| c | Affiliated Engineers | Chapel Hill, NC | MEP + FP Engineering |
| d | Waveguide | Raleigh, NC | AV/IT/Acoustics |

F. EXAMPLE PROJECTS BEST ILLUSTRATING PROPOSED TEAM'S QUALIFICATIONS

20. EXAMPLE PROJECT KEY

03

21. TITLE AND LOCATION

Virginia Commonwealth University James Branch Cabell Library
Richmond, VA

22. YEARS COMPLETED

| | |
|--------------|--------------|
| PROFESSIONAL | CONSTRUCTION |
| 2013 | 2016 |

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

Virginia Commonwealth University

b. NAME

Lauren L. Bailey,
Project Manager

c. TELEPHONE

804 828 0541

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

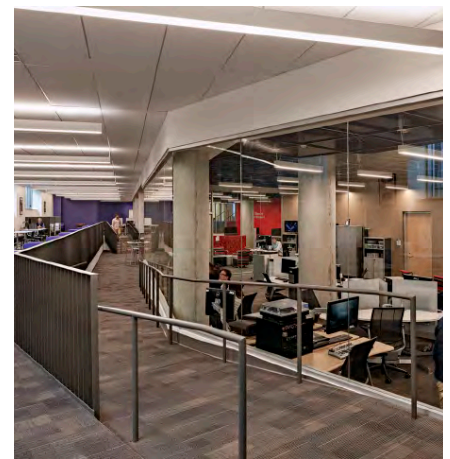
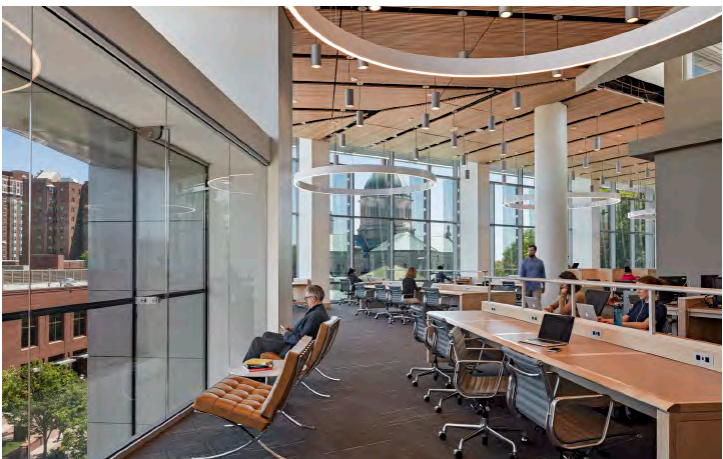
The major addition and renovation to the Cabell Library produces a vibrant, people-focused space that transforms a mid-century library and positions VCU as a world-class research institute.

This major addition to Cabell Library gives VCU a robust research library and a civic and campus landmark that engages the surrounding urban fabric. The expansion represents a significant investment in library research facilities driven by VCU's strategic development as a national research university and demand for student space fueled by its dramatic growth in enrollment. The project transforms the introverted form of the existing Brutalist library. Responding to the verticality of the original building's slot windows, a series of glass fins provide solar shading and repeat the rhythm in a lighter, more accessible way. With entrances facing the city and campus and public spaces wrapped in glass, the building is a prominent part of the civic landscape. The activity within and art displays are visible from the pedestrian paths and the open spaces that flank it. The expanded library includes a dedicated faculty and graduate research center, a 300-seat event space, a ground floor café, and a range of reading rooms and collaborative study spaces.

Shepley Bulfinch was the Design Architect, in association with Moseley Architects.

Relevancy

- Renovation and addition of an existing library
- Reading rooms and collaborative study spaces
- Civic and campus landmark
- Advances research with collaborative study spaces
- Design Architect



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

| | (1) FIRM NAME | (2) FIRM LOCATION | (3) ROLE |
|---|------------------|-------------------|----------------------|
| a | Shepley Bulfinch | Boston, MA | Architect of Design |
| b | Waveguide | Raleigh, NC | AV/Acoustics |
| c | AEI | Raleigh, NC | MEP + FP Engineering |

F. EXAMPLE PROJECTS BEST ILLUSTRATING PROPOSED TEAM'S QUALIFICATIONS

20. EXAMPLE PROJECT KEY

04

21. TITLE AND LOCATION

University of Notre Dame Hesburgh Libraries Master Plan & Renovation
Notre Dame, IN

22. YEARS COMPLETED

| | |
|--------------|--------------|
| PROFESSIONAL | CONSTRUCTION |
| 2014 | 2019 |

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

University of Notre Dame

b. NAME

Jessica Kayongo, Global Affairs and Sociology Librarian

c. TELEPHONE

574 631 5176

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

The Hesburgh Libraries Renovation challenged Shepley Bulfinch to fulfill Notre Dame's vision of designing a forward-thinking academic research library fit for the 21st century.

The phased renovation of Hesburgh Libraries advances Notre Dame's vision of a research library for the 21st century, transforming the 14-story building by connecting students and faculty with services and resources that support scholarship and research. In the first phase the design challenge focused on making the first two floors more open and inviting while maintaining the spirit of the original mid-century aesthetic. This phase established a base design vocabulary that was carried through to future phases. The second phase of renovations infused Hesburgh's main campus connector with a sense of the library experience and introduced a Scholars' Lounge, which mediates the space between the Connector and the Library.

New sky-lit floor openings draw daylight deep into the interior and visually connect the floors while an interior glass wall provides views toward the stadium. On the tenth floor, a new graduate research room and reference space serves as a prototype for the renovation of other stack tower floors. The Library remained operational throughout the project. The renovation implemented recommendations in Shepley Bulfinch's 2013 library master plan.

Relevancy

- Phased renovation
- Connects students and faculty with services and resources
- New sky-lit floor openings make the first two floors more open and inviting
- Digital Scholarship and Technology Hub
- Design Architect



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

(1) FIRM NAME

(2) FIRM LOCATION

(3) ROLE

| | | | |
|---|------------------|------------|---------------------|
| a | Shepley Bulfinch | Boston, MA | Architect of Record |
|---|------------------|------------|---------------------|

F. EXAMPLE PROJECTS BEST ILLUSTRATING PROPOSED TEAM'S QUALIFICATIONS

20. EXAMPLE PROJECT KEY

05

21. TITLE AND LOCATION

George Mason University Fenwick Library Renovation
Fairfax, VA

22. YEARS COMPLETED

| | |
|--------------|--------------|
| PROFESSIONAL | CONSTRUCTION |
| 2012 | 2015 |

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

George Mason University

b. NAME

Cathy Pinskey, Program Director

c. TELEPHONE

703 993 2610

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

Fenwick Library unites the best of George Mason's research resources under one roof and positions the school as a world-renowned leader in public research.

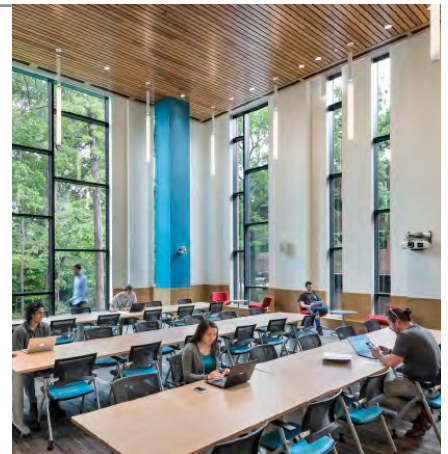
The Fenwick Library expansion redefines the library as the intellectual crossroads for George Mason's distributed campus and promotes the University's aspiration to grow as a major research institution. The focal point of the expansion is a new research commons, which supports student scholarship with integrated resources including ample access to specialized librarians, special collections, writing tutors, and data services. Multi-use instructional spaces are designed with movable partitions to accommodate a range of seating capacities, flexible technology, reconfigurable furniture, and breakout spaces for group work.

The building was designed for high energy efficiency to meet LEED Silver certification. Sustainable strategies include external shading devices, a roof garden, and a naturally irrigated rain garden. The design reinforces Fenwick's connection to the undergraduate-oriented library in the adjacent Johnson Center, which was designed by Shepley Bulfinch in 1994.

Shepley Bulfinch was the Design Architect and Architect of Record in association with RRMM Lukmire Architects.

Relevancy

- Expansion to create a new research commons
- Diversity of student learning spaces
- Design Architect
- Multi-use instructional spaces and flexible technology



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

(1) FIRM NAME

(2) FIRM LOCATION

(3) ROLE

| | | | |
|---|------------------|------------|------------------|
| a | Shepley Bulfinch | Boston, MA | Design Architect |
|---|------------------|------------|------------------|

F. EXAMPLE PROJECTS BEST ILLUSTRATING PROPOSED TEAM'S QUALIFICATIONS

20. EXAMPLE PROJECT KEY

06

21. TITLE AND LOCATION

Sam Houston State University Newton Gresham Library Renovation
Huntsville, TX

22. YEARS COMPLETED

| | |
|--------------|--------------|
| PROFESSIONAL | CONSTRUCTION |
| 2021 | 2021 |

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

Sam Houston State University

b. NAME

Adrian del Rio,
Project Manager II

c. TELEPHONE

936 294 2723

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

Since the four-story brutalist Newton Gresham Library originally opened in 1968, the building has undergone only minor renovations to address immediate needs and changes to the Sam Houston State University (SHSU) curriculum and culture. This project is the first renovation that serves as a major rethinking of the library and its role on campus, and focuses on the library's first two floors.

The key programmatic motivation for the project is the consolidation and integration of the University's Academic Success Center into the library, which demonstrates a key evolutionary trend in university libraries: moving away from the library as a repository for books and documents, and towards the library as an academic and scholarly center—a comprehensive learning ecosystem. The majority of the public and staff areas on these floors will be renovated, in addition to toilet facilities, data systems, and MEP system upgrades. Both floors are connected to grade as the library is built into a slope on the central campus's east edge. The first floor connects to the east parking lot and loading zone to the south, while the second floor connects to the campus core to the west and serves as the building's main entrance. Shepley Bulfinch's planning approach is influenced by this dual entry condition and the architectural potential it offers for a new user experience. Interior materials and finishes establish a classic, modern palette of warm beige and golden wheat hues. True to the building's modern roots, the renovation plays off this classic styling. Eschewing bright and saturated colors for the interior architectural finishes, floors, walls, and ceilings complement the existing materials to create a serene and calming backdrop for learning.

Relevancy

- Renovation of an existing library
- Incorporation of Academic Success Center into library
- Modernizes but honors original brutalist architectural style
- Materials and finishes in a classic modern palette create a serene, welcoming learning environment



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

| | (1) FIRM NAME | (2) FIRM LOCATION | (3) ROLE |
|---|------------------|-------------------|---------------------|
| a | Shepley Bulfinch | Boston, MA | Architect of Design |

F. EXAMPLE PROJECTS BEST ILLUSTRATING PROPOSED TEAM'S QUALIFICATIONS

20. EXAMPLE PROJECT KEY

07

21. TITLE AND LOCATION

Loyola University Maryland Fernandez Center for Innovation and Collaborative Learning
Baltimore, MD

22. YEARS COMPLETED

| | |
|--------------|--------------|
| PROFESSIONAL | CONSTRUCTION |
| 2019 | 2021 |

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

Loyola University Maryland

b. NAME

Helen Schneider, Associate VP for Facilities and Campus Services

c. TELEPHONE

410 617 2995

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

The new Fernandez Center for Innovation and Collaborative Learning breathes new life into Loyola's historic Beatty Hall. This facility provides students with diverse learning environments, helping them achieve their future goals.

Loyola's new Center for Innovation and Collaborative Learning transforms the historic Beatty Hall and doubles its size. The design of the 60,000 sf center positions the renewed Beatty Hall as a centerpiece of the historic campus green, while the new city-facing expansion creates a new campus gateway and link to the community. The concept for this building is to enhance connections between faculty and students, students and the community, Loyola life and the world beyond in multi-directional relationships.

The interior concept of the building connects to the natural landscape of campus through its color palette and organic textures, reflect the collegiate community through transparency into and within the building, and encourage discovery through the layering of interior spaces. The Center's interactive, versatile teaching and learning spaces highlight Loyola's signature programs, such as the Idea Lab for innovation and entrepreneurship, and the University's career services center, creating a link between student learning and the exploration and pursuit of future goals.

Relevancy

- Renovation and addition to existing campus building
- Connection between innovation, entrepreneurship and student learning
- 24-hour student space on campus
- Versatile and outdoor teaching spaces



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

(1) FIRM NAME

(2) FIRM LOCATION

(3) ROLE

| | | | |
|---|------------------|------------|---------------------|
| a | Shepley Bulfinch | Boston, MA | Architect of Record |
|---|------------------|------------|---------------------|

F. EXAMPLE PROJECTS BEST ILLUSTRATING PROPOSED TEAM'S QUALIFICATIONS

20. EXAMPLE PROJECT KEY

08

21. TITLE AND LOCATION

McGill University McLennan-Redpath Library and Archives Master Plan & Renovation/Addition
Montreal, QC, Canada

22. YEARS COMPLETED

| | |
|--------------|--------------|
| PROFESSIONAL | CONSTRUCTION |
| 2023 | Est. 2027 |

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

McGill University

b. NAME

Dr. Colleen Cook,
Dean of Libraries

c. TELEPHONE

514 398 4204

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

The Library Archives Master Plan for McGill University balances existing architectural beauty with new structures, and addresses the evolving needs of the twenty-first century student.

This system-wide master plan provides McGill Libraries a strategy to transform its facilities to meet the evolving needs of the 21st century user. The re-imagined Library embraces the architectural beauty of the past, integrates the evolving needs of today, and prepares for the technological advances of the future. The master plan rebuilds Redpath Library with study spaces adjacent to outdoor terraces, a stepped forum, and a generous grand staircase. The design's street-level café and grand reading room featuring views of the campus and the city beyond reinforce the Library's connection to the city of Montreal.

The nine-month exercise included an extensive analysis of space needs and collection storage strategies for this highly constrained site. Space use alternatives explored included high density, robotic and high bay systems both within and remote to the central library site. Comparative analyses that included operational costs for each system were developed. The inclusive process engaged members from across the McGill community to develop a bold new vision for the Libraries. This design effort is underway, with expected completion in 2023, Shepley Bulfinch was selected, in collaboration with Provencher Roy, for the renovation and addition of the McLennan Redpath Library complex.

Relevancy

- Renovation of an existing library
- Contemporary library spaces in dialogue with historic architecture
- Robust conceptual design process
- Design Architect



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

| | (1) FIRM NAME | (2) FIRM LOCATION | (3) ROLE |
|---|------------------|-------------------|---------------------|
| a | Shepley Bulfinch | Boston, MA | Architect of Design |

F. EXAMPLE PROJECTS BEST ILLUSTRATING PROPOSED TEAM'S QUALIFICATIONS

20. EXAMPLE PROJECT KEY

09

21. TITLE AND LOCATION

UNC Chapel Hill McColl Building Addition and Renovation
Chapel Hill, NC

22. YEARS COMPLETED

| PROFESSIONAL | CONSTRUCTION |
|--------------|--------------|
| 2020 (est) | 2025 (est) |

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

The University of North Carolina at Chapel Hill

b. NAME

Evan Yassky, AIA
Exec. Dir. FP&D

c. TELEPHONE

919.843.5103

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

LS3P and LMN partnered on the programming and design for this major addition and renovation to the McColl Building for the Kenan Flagler Business School. The project addresses several major goals supporting the UNC Campus Master Plan and KFBS. The 150,000 SF addition and 130,000 SF renovation will better connect the business complex to the rest of campus and Blythe Drive, which will become a major path of activity as the Master Plan is implemented. The project will accommodate a 50% increase in KFBS' undergraduate enrollment while creating an expanded precinct for business programs, clarifying space organization for undergraduates and graduates, upgrading existing spaces, and fostering authentic interaction.

The addition will serve as a "front door" to the business school complex and create a series of connecting nodes for interaction both in the addition and the existing McColl Building. The nodes are anticipated to include student common space, new dining facilities, pedestrian plazas, and various program elements to foster interactions. Major design goals for the addition include creating a path from Blythe Drive over Kenan Drive, and creating new centers of activity both within the business school precinct and along Blythe Drive as defined by the Campus Master Plan.

Relevancy

- Part of UNC system
- Large renovation/addition
- Ability to renovate a higher ed facility on an existing campus
- Phased renovation while building is occupied
- Complex site with addition to connect with major campus paths
- Targeting LEED Platinum
- Meets the needs of undergraduate growth in enrollment



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

| | (1) FIRM NAME | (2) FIRM LOCATION | (3) ROLE |
|---|----------------------|-------------------|---------------------|
| a | LS3P | Raleigh, NC | Architect of Record |
| b | The Fire Consultants | Apex, NC | Code/Life Safety |

F. EXAMPLE PROJECTS BEST ILLUSTRATING PROPOSED TEAM'S QUALIFICATIONS

20. EXAMPLE PROJECT KEY

10

21. TITLE AND LOCATION

Albemarle Building Renovation
Raleigh, NC

22. YEARS COMPLETED

| | |
|--------------|--------------|
| PROFESSIONAL | CONSTRUCTION |
| 2015 | 2017 |

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

NC Office of State Construction

b. NAME

Robert Talley, Jr.

c. TELEPHONE

919.807.4125

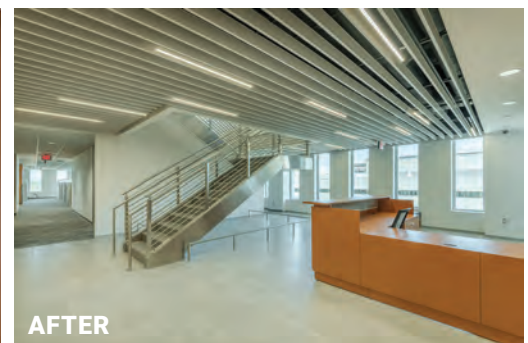
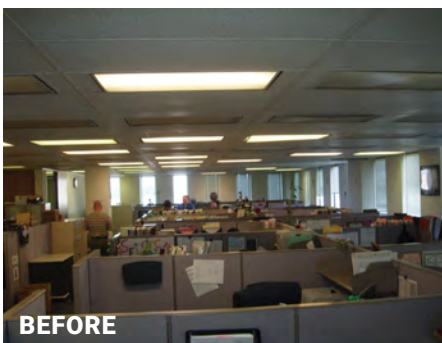
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

This project is a complete renovation of a 12-story office building built in 1970, including asbestos abatement, ADA and energy improvements, as well as complete building systems replacements. General construction improvements include proper fire stopping between floors, new energy efficient windows, cleaning and re-caulking exterior cladding, new finishes and ADA compliant restrooms, installation of new fire sprinkler system and new fire alarm system. This project includes all new data and phone wiring, server rooms and modular office furnishings for open floor plan.

LS3P also provided FFE bidding and procurement services and assisted in the move management duties.

Relevancy

- \$37,800,000
- 190,000 SF
- Large, complex renovation
- Phased renovation with hazardous material abatement
- CM@ Risk Project Delivery



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

| | (1) FIRM NAME | (2) FIRM LOCATION | (3) ROLE |
|---|---------------|-------------------|--------------------------|
| a | LS3P | Raleigh, NC | Architect of Record |
| b | S&ME | Raleigh, NC | Geotechnical Engineering |

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

| 26. NAMES OF KEY PERSONNEL | 27. ROLE IN THIS CONTRACT | 28. EXAMPLE PROJECTS LISTED IN SECTION F | | | | | | | | | | |
|----------------------------|--------------------------------|--|---|---|---|---|---|---|---|---|----|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| Chris Roberts | Project Manager LS3P | ■ | | | | | | | | | ■ | ■ |
| Katherine Peele | Principal in Charge LS3P | ■ | | | | | | | | | ■ | ■ |
| Kelly Brubaker | Library Design Principal SB | | ■ | ■ | ■ | ■ | ■ | | | ■ | | |
| Shawn Sowers | Project Executive LS3P | ■ | | | | | | | | | | |
| Janette Blackburn | Managing Principal SB | | ■ | ■ | ■ | ■ | | | ■ | ■ | | |
| Scott Greenman | Project Architect LS3P | | | | | | | | | | ■ | |
| Barak Yaryan | Design Architect SB | | | ■ | | ■ | ■ | | ■ | | | |
| Natalie Thurman | Design Lead SB | | | | | | ■ | | | | | |
| Amanda Vigneau | Interior Designer SB | | ■ | | | | ■ | ■ | | | | |
| Dave O'Shea | Construction Admin LS3P | ■ | | | | | | | | | | ■ |
| Elaine Gallagher Adams | Sustainability Director LS3P | | | | | | | | | | ■ | |
| Adam Carroll | Civil Engineer Timmons | ■ | | | | | | | | | | |
| Jacob Moore | Civil Engineer Timmons | ■ | | | | | | | | | | |
| Mike Tarrant | Landscape Arch. Stewart | ■ | | | | | | | | | | |
| John Duffy | PIC/Project Manager AEI | ■ | ■ | | | | | | | | | |
| Bob Sherman | Library Specialist AEI | | ■ | ■ | | | | | | | | |
| Paul Socha | Mechanical Engineer AEI | ■ | ■ | | | | | | | | | |
| Bill Hennen | Electrical Engineer AEI | ■ | ■ | ■ | | | | | | | | |
| Zhong Sun | Fire Protection Eng. AEI | ■ | | | | | | | | | | |
| Leah Robinson | Lighting Designer AEI | | ■ | | | | | | | | | |
| Patrick Milnamow | Security System Design AEI | | | | | | | | | | | |
| Aaron Bopp | Structural Engineer SKA | ■ | | | | | | | | | | |
| Keith Portney | Project Mgr Waveguide | | ■ | ■ | | | | | | | | |
| Adam Galatioto | Acoustics Waveguide | | | | | | | | | | | |
| Alex Kline | Fire Protect. Eng. Fire Con. | ■ | | | | | | | | | | |
| Wayne Watterson | Consulting Eng. S&ME | | | | | | | | | | | |
| Tony Murphy | Cost Manager Palacio | | | | | | | | | | | |

29. EXAMPLE PROJECTS

| | TITLE OF EXAMPLE PROJECT |
|----|--|
| 1 | UNCG Nursing & Instructional Building // Greensboro, NC |
| 2 | UNC Wilmington Randall Library Renovation/Expansion // Wilmington, NC |
| 3 | Virginia Commonwealth University James Branch Cabell Library // Richmond, VA |
| 4 | University of Notre Dame Hesburgh Libraries Master Plan & Renovation // Notre Dame, IN |
| 5 | George Mason University Fenwick Library Renovation // Fairfax, VA |
| 6 | Sam Houston State University Newton Gresham Library Renovation // Huntsville, TX |
| 7 | Loyola University Maryland Fernandez Center for Innovation and Collaborative Learning // Baltimore, MD |
| 8 | McGill University McLennan-Redpath Library and Archives Master Plan & Renovation/Addition // Montreal, QC, Canada |
| 9 | UNC Chapel Hill McColl Building Addition/Renovation // Chapel Hill, NC |
| 10 | Albemarle Building Renovation // Raleigh, NC |



The North Carolina Board of Architecture

certifies that

LS3P Associates LTD.

is registered and authorized to practice
Architecture in the State of North Carolina.

In testimony whereof this certificate has been issued
by the authority of this Board.

Registration number: 50417
Initial registration: 10/12/1987
Expires on: 12/31/2021



Catharine M. Evans

Executive Director

I. AUTHORIZED SIGNATURE

31. SIGNATURE

Katherine N. Peele

33. NAME AND TITLE

Katherine Peele | Principal in Charge

32. DATE

1/27/2022

ARCHITECT-ENGINEER QUALIFICATIONS

LS3P

PART II: GENERAL QUALIFICATIONS

1. SOLICITATION NUM-
NUMBER

2a. FIRM (OR BRANCH OFFICE) NAME

LS3P

2b. STREET

Two Hanover Square, 434 Fayetteville Street, Suite 1700

2c. CITY

Raleigh

2d. STATE

NC

2e. ZIP CODE

27601

6b. TELEPHONE

919.829.2700

6c. EMAIL ADDRESS

stevehepler@ls3p.com

3. YR. EST.

1963

4. DUNS NO.

156633435

5. OWNERSHIP

a. TYPE

Corporation

b. SMALL BUSINESS STATUS

No

7. NAME OF FIRM

LS3P ASSOCIATES LTD.

8b. YR. EST.

8c. DUNS NO.

| 9. EMPLOYEES BY DISCIPLINE | | | | 10. PROFILE OF FIRM'S EXPERIENCE & ANNUAL AVERAGE REVENUE FOR LAST 5 YRS | | |
|----------------------------|------------------------------|---------------------|-----|--|--|----------------------|
| a. FUNCTION CODE | b. DISCIPLINE | c. NO. OF EMPLOYEES | | a. PROFILE CODE | b. EXPERIENCE | c. REVENUE INDEX NO. |
| | | (1) | (2) | | | |
| 06 | Architect | 134 | 16 | A06 | Airports; Terminals; & Hangars, Freight | 5 |
| | Architectural Intern | 67 | 3 | A11 | Auditoriums & Theaters | 1 |
| 37 | Interior Designer | 35 | 0 | B01 | Barracks; Federal Dormitories | 2 |
| | Non-Licensed Project Manager | 7 | 10 | B11 | Higher Education Dormitories | 2 |
| 56 | Specifications Writer | 5 | 0 | C06 | Churches; Chapels | 5 |
| | Construction Administrator | 21 | 2 | C10 | Commercial Building; (Low Rise); Shopping | 6 |
| 08 | CADD/BIM Technician | 3 | 0 | C107 | Mixed Use | 1 |
| 02 | Administrative | 15 | 0 | D07 | Dining Halls; Clubs; Restaurants | 4 |
| | Business Development | 4 | 2 | E02 | Classrooms (Educational Facilities) | 7 |
| | Marketing | 15 | 4 | E026 | Higher Education | 6 |
| | Accounting | 9 | | F02 | Arenas; Sports Facilities | 4 |
| | IT Professional | 7 | | G01 | Garages; Parking Decks; Vehicle | 6 |
| | Human Resources | 4 | | H09 | Hospitals & Medical Facilities | 5 |
| | Legal | 1 | | H10 | Hotels; Motels | 6 |
| | | | | H11 | Housing (Residential, Multifamily) | 6 |
| | | | | H115 | Housing (Single Family) | 3 |
| | | | | I05 | Interior Design; Space Planning | 1 |
| | | | | L04 | Libraries; Museums; Galleries | 3 |
| | | | | O01 | Office Building; Headquarters | 8 |
| | Other Employees | 9 | 1 | P06 | Planning (Site, Installation, and Project) | 6 |
| | Total | 336 | 38 | R04 | Recreational Facilities (Parks, Marinas, etc.) | 4 |

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

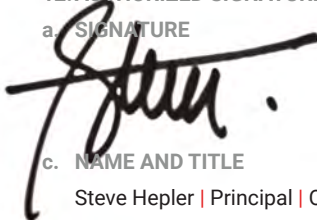
a. FEDERAL WORK 5
b. NON-FEDERAL WORK 9
c. TOTAL WORK 10

PROFESSIONAL SERVICES REVENUE INDEX BY NUMBER

1. Less than \$100,000
2. \$100,000 to less than \$250,000
3. \$250,000 to less than \$500,000
4. \$500,000 to less than \$1 million
5. \$1 million to less than \$2 million
6. \$2 million to less than \$5 million
7. \$5 million to less than \$10 million
8. \$10 million to less than \$25 million

12. AUTHORIZED SIGNATURE

a. SIGNATURE



c. NAME AND TITLE

Steve Hepler | Principal | Office Leader

b. DATE

1/27/2022

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (if any)

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

| | | | | |
|---|-----------------|-----------------------|---|---|
| 2a. FIRM (or Branch Office) NAME Shepley Bulfinch Richardson and Abbott, Inc. ("Shepley Bulfinch") | | | 3. YEAR ESTABLISHED 1874 | 4. UNIQUE ENTITY IDENTIFIER 04-2504672 |
| 2b. STREET P.O. Box 14513 | | | 5. OWNERSHIP | |
| 2c. CITY Durham | 2d. STATE NC | 2e. ZIP CODE 27709 | a. TYPE Corporation | |
| 6a. POINT OF CONTACT NAME AND TITLE Kelly Brubaker, AIA, Library Design | | | b. SMALL BUSINESS STATUS N/A | |
| 6b. TELEPHONE NUMBER 404 808 1899 | | | 6c. E-MAIL ADDRESS kbrubaker@shepleybulfinch.com | |
| | | | 7. NAME OF FIRM (If Block 2a is a Branch Office) N/A | |

| | | | |
|---|--|-----------------------------|-------------------------------------|
| 8a. FORMER FIRM NAME(S) (If any) Shepley Bulfinch Richardson & Abbott (1952-2000); Coolidge Shepley Bulfinch & Abbott (1924-1952); Coolidge and Shattuck (1915-1924); Shepley Rutan & Coolidge (1886-1915); H. H. Richardson (1874-1886) | | 8b. YEAR ESTABLISHED N/A | 8c. UNIQUE ENTITY IDENTIFIER N/A |
|---|--|-----------------------------|-------------------------------------|

| 9. EMPLOYEES BY DISCIPLINE | | | | 10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR THE LAST 5 YEARS | | |
|----------------------------|-------------------|------------------------|------------|--|--|-------------------------|
| a. Function Code | b. Discipline | c. Number of Employees | | a. Profile Code | b. Experience | c. Revenue Index Number |
| | | (1) FIRM | (2) BRANCH | | | |
| 06 | Architect | 124 | | B01 | Barracks; Dormitories | 1 |
| 37 | Interior Designer | 14 | | C06 | Churches; Chapels | 1 |
| 02 | Administrative | 11 | | C10 | Commercial Buildings | 4 |
| | Marketing | 9 | | D07 | Dining Halls; Clubs; Restaurants | 6 |
| | IT | 7 | | E02 | Educational Facilities | 8 |
| | HR | 5 | | G01 | Garages; Vehicle Main Facilities... | 1 |
| | Accounting | 5 | | H05 | Health Systems Planning | 4 |
| | Model Builder | 1 | | H08 | Historical Preservation | 2 |
| | | | | H09 | Hospital & Medical Facilities | 8 |
| | | | | H11 | Housing | 7 |
| | | | | I05 | Interior Design; Space Planning | 3 |
| | | | | J01 | Judicial and Courtroom Facilities | 3 |
| | | | | L01 | Laboratories; Medical Research | 4 |
| | | | | L04 | Libraries; Museums, Galleries | 6 |
| | | | | 001 | Office Buildings | 1 |
| | | | | P06 | Planning (Site, Installation, Project) | 5 |
| | | | | U03 | Utilities | 1 |
| | Other Employees | | | Z01 | Zoning Lands Use Studies | 1 |
| | Total | 176 | | | | |

| | | | | | |
|--|----|--|---|--|---|
| 11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (Insert revenue index number shown at right) | | PROFESSIONAL SERVICES REVENUE INDEX NUMBER | | | |
| a. Federal Work | 1 | 1. Less than \$100,000 | 6. \$2 million to less than \$5 million | 7. \$5 million to less than \$10 million | 8. \$10 million to less than \$25 million |
| b. Non-Federal Work | 10 | 2. \$100,000 to less than \$250,000 | 9. \$25 million to less than \$50 million | 10. \$50 million or greater | |
| c. Total Work | 10 | 3. \$250,000 to less than \$500,000 | | | |
| | | 4. \$500,000 to less than \$1 million | | | |
| | | 5. \$1 million to less than \$2 million | | | |

| | |
|---|-----------------------------|
| 12. AUTHORIZED REPRESENTATIVE | |
| The foregoing is a statement of facts. | |
| a. SIGNATURE <i>Kelly L Brubaker</i> | b. DATE February 2, 2022 |
| c. NAME AND TITLE Kelly Brubaker, Library Design Principal | |

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (if any)


PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

| | | | | |
|---|--|---|---|---|
| 2a. FIRM (OR BRANCH OFFICE) NAME Timmons Group, Inc. | | | 3. YEAR ESTABLISHED 2003 | 4. DUNS NUMBER 049968738 |
| 2b. STREET 8642 W. Market Street, Suite 136 | | | 5. OWNERSHIP | |
| 2c. CITY Greensboro | | 2d. STATE NC | a. TYPE Corporation | |
| | | 2e. ZIP CODE 27409 | b. SMALL BUSINESS STATUS N/A | |
| 6a. POINT OF CONTACT NAME AND TITLE Brian Crutchfield, PE, PLS - Principal | | | 7. NAME OF FIRM (if block 2a is a branch office) Timmons Group, Inc. | |
| 6a. TELEPHONE NUMBER (336) 662-0411 | | 6b. E-MAIL ADDRESS brian.crutchfield@timmons.com | | |
| 8a. FORMER FIRM NAME(S) (if any) J.K. TIMMONS TIMMONS, Inc. | | | 8b. YR. ESTABLISHED 1953 1996 | 8c. DUNS NUMBER 049968738 049968738 |

| 9. EMPLOYEES BY DISCIPLINE | | | | 10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS | | |
|----------------------------|----------------------------------|---------------------|------------|--|--|-------------------------------------|
| a. Function Code | b. Discipline | c. No. of Employees | | a. Profile Code | b. Experience | c. Revenue Index Number (see below) |
| | | (1) FIRM | (2) BRANCH | | | |
| 02 | Administrative | 65 | | C06 | Churches; Chapels | 3 |
| 08 | CADD Designer/Technician | 16 | | C10 | Commercial Buildings; Shopping Centers | 6 |
| 12 | Civil Engineer | 230 | 8 | D02 | Dams; Dikes; Levees | 3 |
| 15, 16 | Construction Manager/Inspector | 5 | | D04 | Design-Build Preparation of Requests | 5 |
| 27 | Geotechnical Engineer | 6 | | E02 | Educational Facilities; Classrooms | 6 |
| 23, 24 | Environmental Sci./Engr/Tech | 30 | | E09 | Environmental/Natural Resource Mapping | 3 |
| 38 | Land Surveyor/Field Technician | 149 | | G04 | GIS Services | 7 |
| 39 | Landscape Architect | 26 | | H07 | Highways; Streets; Parking Lots | 6 |
| 57 | Structural Engineer | 9 | | H09 | Hospital and Medical Facilities | 4 |
| 29 | GIS Specialist | 69 | | H11 | Housing (Residential, Multi-Family, etc.) | 7 |
| 60 | Transportation Engineer/Planner | 33 | 1 | L02 | Land Surveying | 6 |
| 41 | Materials Testing/Lab Mgr. | 7 | | L03 | Landscape Architecture | 3 |
| | | | | O01 | Office Buildings; Industrial Parks | 4 |
| 30 | Geologist | 1 | | R04 | Recreational Facilities (Parks; Marinas, etc.) | 3 |
| | Asset Management | 16 | | S04 | Sewage Collection Treatment W&Wastewater | 5 |
| | Applications Developer | 27 | | S13 | Stormwater Handling and Facilities | 4 |
| | Right of Way Specialist | 3 | | T03 | Traffic and Transportation Engineering | 6 |
| | Electrical Designer/Planner/Eng. | 12 | | T04 | Topographic Surveying and Mapping | 5 |
| Total | | 704 | 9 | | | |

| 11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS | | PROFESSIONAL SERVICES REVENUE INDEX NUMBER | | | |
|--|----|--|---|--|--|
| (Insert revenue index number shown at right) | | | | | |
| a. Federal Work | 6 | 1. Less than \$100,000 | 6. \$2 million to less than \$5 million | | |
| b. Non-Federal Work | 10 | 2. \$100,000 to less than \$250,000 | 7. \$5 million to less than \$10 million | | |
| c. Total Work | 10 | 3. \$250,000 to less than \$500,000 | 8. \$10 million to less than \$25 million | | |
| | | 4. \$500,000 to less than \$1 million | 9. \$25 million to less than \$50 million | | |
| | | 5. \$1 million to less than \$2 million | 10. \$50 million or greater | | |

| 12. AUTHORIZED REPRESENTATIVE | |
|--|-----------------------------|
| The foregoing is a statement of facts. | |
| a.  | b. DATE January 18, 2022 |
| c. NAME AND TITLE Brian Crutchfield, PE, PLS - Principal | |

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (If any)

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

| | | | | |
|---|--|-----------------|--|-------------------------------|
| 2a. FIRM (OR BRANCH OFFICE) NAME STEWART | | | 3. YEAR ESTABLISHED 1994 | 4. DUNS NUMBER 92-765-4004 |
| 2b. STREET 223 S. West Street, Suite 1100 | | | 5. OWNERSHIP | |
| 2c. CITY Raleigh | | 2d. STATE NC | 2e. ZIP CODE 27603 | |
| 6a. POINT OF CONTACT NAME AND TITLE Joe Puckett, PE, LEED AP VP/Practice Leader, Civil Engineering | | | a. TYPE Corporation | |
| 6b. TELEPHONE NUMBER 919.866.4829 | | | 6c. E-MAIL ADDRESS jppuckett@stewartinc.com | |
| 6a. POINT OF CONTACT NAME AND TITLE | | | b. SMALL BUSINESS STATUS N/A | |
| 8a. FORMER FIRM NAME(S) (If any) N/A | | | 7. NAME OF FIRM (If block 2a is a branch office) | |
| 8a. FORMER FIRM NAME(S) (If any) | | | 8b. YR. ESTABLISHED N/A | 8c. DUNS NUMBER N/A |


| 9. EMPLOYEES BY DISCIPLINE | | | | 10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS | | |
|----------------------------|-----------------------------------|---------------------|------------|--|--|-------------------------------------|
| a. Function Code | b. Discipline | c. No. of Employees | | a. Profile Code | b. Experience | c. Revenue Index Number (see below) |
| | | (1) FIRM | (2) BRANCH | | | |
| 02 | Administration | 29 | 26 | A06 | Airports; Terminals & Hangars | 2 |
| 08 | CADD Technician | 13 | 8 | A11 | Auditoriums / Theaters | 1 |
| 12 | Civil Engineering | 20 | 13 | B01 | Barracks / Dormitories | 5 |
| 15 | Construction Inspection & Testing | 18 | 10 | B02 | Bridges | 5 |
| 38 | Land Surveying | 38 | 18 | C06 | Churches, Chapels | 1 |
| 39 | Landscape Architecture | 28 | 14 | C10 | Commercial; Shopping Centers | 4 |
| 47 | Planning: Urban/Regional | 6 | 6 | C15 | Construction Management | 6 |
| 57 | Structural Engineering | 26 | 14 | D07 | Dining Halls, Clubs, Restaurants | 1 |
| 60 | Transportation Engineering | 8 | 8 | E02 | Educational Facility, Classrooms | 6 |
| 27 | Geotechnical Engineering | 3 | 2 | F02 | Field Houses, Stadiums | 3 |
| 06 | Architecture | 1 | 1 | G01 | Garages, Parking Decks | 3 |
| | | | | H07 | Highways; Streets; Parking Lots | 5 |
| | | | | H09 | Hospital, Medical Facilities | 4 |
| | | | | H10 | Hotels, Motels | 1 |
| | | | | H11 | Housing | 4 |
| | | | | H12 | Hydraulics | 2 |
| | | | | I01 | Industrial Buildings | 2 |
| | | | | L04 | Libraries, Museums, Galleries | 1 |
| | | | | O01 | Office Buildings, Industrial Parks | 4 |
| | | | | P06 | Planning (site, installation, project) | 5 |
| | | | | T02 | Testing & Inspection Services | 6 |
| TOTAL | | 190 | 120 | T03 | Traffic & Transportation Engineering | 6 |

| | |
|--|--|
| 11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (Insert revenue index number shown at right) | PROFESSIONAL SERVICES REVENUE INDEX NUMBER |
| a. Federal Work | 1. Less than \$100,000 2. \$100,000 to less than \$250,000 3. \$250,000 to less than \$500,000 4. \$500,000 to less than \$1 million 5. \$1 million to less than \$2 million 6. \$2 million to less than \$5 million 7. \$5 million to less than \$10 million 8. \$10 million to less than \$25 million 9. \$25 million to less than \$50 million 10. \$50 million or greater |
| b. Non-Federal Work | |
| c. Total Work | |

12. AUTHORIZED REPRESENTATIVE
The foregoing is a statement of facts.

| | |
|------------------|-----------------------------|
| a. SIGNATURE | b. DATE January 12, 2022 |
|------------------|-----------------------------|

Joe Puckett, PE, LEED AP Vice President/Practice Leader, Civil Engineering

| ARCHITECT-ENGINEER QUALIFICATIONS PART 2--GENERAL QUALIFICATIONS (If a firm has branch offices, complete for each specific branch office seeking work) | | | | 1. SOLICITATION NUMBER (if any) | | |
|--|---|--------------------|--------------|--|---|---|
| 2a. FIRM (OR BRANCH OFFICE) NAME | | | | 3. YEAR ESTABLISHED | | 4. DUNS NUMBER |
| Affiliated Engineers, Inc. | | | | 2006 | | 800964533 |
| 2b. STREET | | | | 5. OWNERSHIP | | |
| 10 South LaSalle Street, Suite 2700 | | | | a. Type | | Corporation |
| 2c. CITY | | 2d. STATE | 2e. ZIP CODE | b. Small Business Status | | N/A |
| Chicago | | IL | 60603 | 7. NAME OF FIRM (if block 2a is a branch office) | | |
| 6a. POINT OF CONTACT NAME AND TITLE | | | | Affiliated Engineers, Inc. | | |
| Scott Foster, PE, LEED AP, Principal | | | | 8b. YEAR ESTABLISHED | | 8c. DUNS NUMBER |
| 6b. TELEPHONE NUMBER | | 6c. EMAIL ADDRESS | | N/A | | N/A |
| 312-977-2816 | | sfoster@aeieng.com | | | | |
| 8a. FORMER FIRM NAME(S) (if any) | | | N/A | | | |
| 9. EMPLOYEES BY DISCIPLINE | | | | 10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS | | |
| a. Function Code | b. Discipline | c. No of Employees | | a. Function Code | b. Experience | c. Revenue Index Number (see below) |
| | | Firm | Branch | | | |
| 02 | Administrative | 103 | 4 | A11 | Auditoriums and Theaters | 1 |
| 08 | BIM/CADD Technicians | 22 | 2 | C13 | Computer Facilities | 3 |
| 18 | Estimators | 3 | | E02 | Educational Facilities; Classrooms | 4 |
| 21 | Electrical Engineers | 108 | 6 | E03 | Electrical Studies and Design | 5 |
| 42 | Mechanical Engineers | 208 | 8 | H04 | HVAC | 4 |
| 25 | Fire Protection Engineers/Designers | 3 | 1 | H09 | Hospital & Medical Facilities | 4 |
| 10 | Chemical Engineers | 9 | | I01 | Industrial Building; Manufacturing Plants | 2 |
| 57 | Structural Engineers | 1 | | L05 | Lighting | 1 |
| | Instrumentation & Controls Engineers/Designers | 18 | 1 | O01 | Office Buildings; Industrial Parks | 3 |
| | Information Technology Engineers/Designers | 24 | 3 | P08 | Plumbing & Piping Design | 4 |
| | Lighting Engineers/Designers | 9 | 3 | R08 | Research Facilities | 4 |
| | Mechanical Designers | 57 | 2 | U03 | Thermal and Electric Utilities | 5 |
| | Electrical Designers | 32 | 2 | | Commissioning | 1 |
| | Piping Engineers/Designers | 63 | 2 | | | |
| | Commissioning Field Services | 43 | 1 | | | |
| | Interns/LTE | 34 | | | | |
| TOTAL | | 736 | 35 | | | |
| 11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS | | | | PROFESSIONAL SERVICES REVENUE INDEX NUMBER | | |
| a. Federal Work | 3 | | | 1 Less than \$100,000 | | 6 \$2 million to less than \$5 million 7 \$5 million to less than \$10 million 8 \$10 million to less than \$25 million 9 \$25 million to less than \$50 million 10 \$50 million or greater |
| b. Non-Federal Work | 7 | | | 2 \$100,000 to less than \$250,000 | | |
| c. TOTAL WORK | 7 | | | 3 \$250,000 to less than \$500,000 | | |
| | | | | 4 \$500,000 to less than \$1 million | | |
| | | | | 5 \$1 million to less than \$2 million | | |
| 2. AUTHORIZED REPRESENTATIVE (The foregoing is a statement of facts) | | | | | | |
| a. SIGNATURE |  | | | b. DATE | January 14, 2022 | |
| c. NAME AND TITLE | Scott Foster, PE, LEED AP, Principal | | | | | |

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (If any)

PART II – GENERAL QUALIFICATIONS


(If a firm has branch offices, complete for each specific branch office seeking work.)

| | | | | |
|---|--|--|--|------------------------------|
| 2a. FIRM (OR BRANCH OFFICE) NAME SKA Consulting Engineers, Inc. | | | 3. YEAR ESTABLISHED 1957 | DUNS NUMBER 067439547 |
| 2b. STREET 7900 Triad Center Drive, Suite 200 | | | 5. OWNERSHIP | |
| 2c. CITY Greensboro | | | 2d. STATE NC | 2e. ZIP CODE 27409 |
| 6a. POINT OF CONTACT NAME AND TITLE Stephen Robinson, PE President | | | a. TYPE Corporation | |
| 6b. TELEPHONE NUMBER 336.855.0993 | | | 6c. E-MAIL ADDRESS sprobinson@skaeng.com | |
| 8a. FORMER FIRM NAME(S) (If any) | | | 8b. YR. ESTABLISHED 1967 1957 | 8c. DUNS NUMBER 067439547 |
| Sutton-Kennerly & Associates, Inc. John V. Sutton Consulting Engineers | | | | |
| 6a. POINT OF CONTACT NAME AND TITLE Stephen Robinson, PE President | | | b. SMALL BUSINESS STATUS Yes | |
| | | | 7. NAME OF FIRM (If block 2a is a branch office) | |

| 9. EMPLOYEES BY DISCIPLINE | | | | 10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS | | |
|----------------------------|-----------------------------------|---------------------|------------|--|--|-------------------------------------|
| a. Function Code | b. Discipline | c. No. of Employees | | a. Profile Code | b. Experience | c. Revenue Index Number (see below) |
| | | (1) FIRM | (2) BRANCH | | | |
| 02 | Administrative | 11 | 9 | A06 | Airports; Terminals; & Hangers; Freight | 1 |
| 08 | CADD Technician | 9 | 5 | A11 | Auditoriums & Theatres | 2 |
| 14 | Computer Programmer | 3 | 3 | B01 | Barracks; Dormitories | 4 |
| 21 | Electrical Engineers | 2 | 2 | B02 | Bridges | 1 |
| 25 | Fire Protection Engineer | | | C06 | Churches; Chapels | 2 |
| 42 | Mechanical Engineers | 2 | 1 | C10 | Commercial Building; (low rise); Shopping | 3 |
| 57 | Structural Engineers | 15 | 10 | E02 | Educational Facilities; Classrooms | 5 |
| 58 | Technician/Analyst | 20 | 14 | F02 | Field Houses; Gymnasiums; Stadiums | 2 |
| | Building Envelope Engineers (Str) | 16 | 4 | G01 | Garages; Vehicle Maintenance Facilities; | 4 |
| | | | | H07 | Highways; Streets; Airfield Paving; Parking | 1 |
| | | | | H09 | Hospitals & Medical Facilities | 5 |
| | | | | H10 | Hotels; Motels | 1 |
| | | | | H11 | Housing (Residential Multifamily | 5 |
| | | | | I01 | Industrial Buildings; Manufacturing Plants | 5 |
| | | | | J01 | Judicial and Courtroom Facilities | 3 |
| | | | | L04 | Libraries; Museums; Galleries | 2 |
| | | | | O01 | Office Building; Industrial Parks | 3 |
| | | | | P13 | Public Safety Facilities | 1 |
| | | | | R04 | Recreational Facilities (Parks; Marinas; etc.) | 4 |
| | | | | U03 | Utilities (Gas and Steam) | 2 |
| | Other Employees | 10 | 6 | W01 | Warehouses & Depots | 2 |
| | | | | W03 | Water Supply; Treatment and Distribution | 2 |
| Total | | 88 | 55 | | | |

| | | | | | | | | | |
|---|--|---|---------------------|---|----------------------|----------|--|--|--|
| 11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS <i>(Insert revenue index number shown at right)</i> | PROFESSIONAL SERVICES REVENUE INDEX NUMBER | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>a. Federal Work</td><td style="text-align: center;">2</td></tr> <tr><td>b. Non-Federal Work</td><td style="text-align: center;">8</td></tr> <tr><td>c. Total Work</td><td style="text-align: center;">8</td></tr> </table> | a. Federal Work | 2 | b. Non-Federal Work | 8 | c. Total Work | 8 | <table style="width: 100%;"> <tr> <td style="width: 50%;"> 1. Less than \$100,000 2. \$100,000 to less than \$250,000 3. \$250,000 to less than \$500,000 4. \$500,000 to less than \$1 million 5. \$1 million to less than \$2 million </td> <td style="width: 50%;"> 6. \$2 million to less than \$5 million 7. \$5 million to less than \$10 million 8. \$10 million to less than \$25 million 9. \$25 million to less than \$50 million 10. \$50 million or greater </td> </tr> </table> | 1. Less than \$100,000 2. \$100,000 to less than \$250,000 3. \$250,000 to less than \$500,000 4. \$500,000 to less than \$1 million 5. \$1 million to less than \$2 million | 6. \$2 million to less than \$5 million 7. \$5 million to less than \$10 million 8. \$10 million to less than \$25 million 9. \$25 million to less than \$50 million 10. \$50 million or greater |
| a. Federal Work | 2 | | | | | | | | |
| b. Non-Federal Work | 8 | | | | | | | | |
| c. Total Work | 8 | | | | | | | | |
| 1. Less than \$100,000 2. \$100,000 to less than \$250,000 3. \$250,000 to less than \$500,000 4. \$500,000 to less than \$1 million 5. \$1 million to less than \$2 million | 6. \$2 million to less than \$5 million 7. \$5 million to less than \$10 million 8. \$10 million to less than \$25 million 9. \$25 million to less than \$50 million 10. \$50 million or greater | | | | | | | | |

12. AUTHORIZED REPRESENTATIVE
The foregoing is a statement of facts.

| | |
|---|-----------|
| a. SIGNATURE | DATE |
|  | 1/24/2022 |

c. NAME AND TITLE
Aaron Bopp, PE, LEED AP BD+C | VP, Director of Operations

ARCHITECT ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (If any)

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

| | | | | |
|--|---|-----------------------|---|--|
| 2a. FIRM (or Branch Office) NAME The Fire Consultants, Inc. | | | 3. YEAR ESTABLISHED 2006 | 4. UNIQUE ENTITY IDENTIFIER 619166502 |
| 2b. STREET 182 Briarfield Drive | | | 5. OWNERSHIP | |
| 2c. CITY Apex | 2d. STATE NC | 2e. ZIP CODE 27502 | a. TYPE Corporation | |
| 6a. POINT OF CONTACT NAME AND TITLE Alex J. Kline, P.E. | | | b. SMALL BUSINESS STATUS Small Business Enterprise | |
| 6b. TELEPHONE NUMBER 919-301-0126 | 6c. E-MAIL ADDRESS akline@thefireconsultants.com | | 7. NAME OF FIRM (If Block 2a is a Branch Office) | |
| 8a. FORMER FIRM NAME(S) (If any) | | | 8b. YEAR ESTABLISHED | 8c. UNIQUE ENTITY IDENTIFIER |
| N/A | | | 2006 | |

| 9. EMPLOYEES BY DISCIPLINE | | | | 10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS | | | |
|----------------------------|--------------------------|---------------------|------------|--|-----------------|-------------------------------------|---|
| a. Function Code | b. Discipline | c. No. of Employees | | a. Profile Code | b. Experience | c. Revenue Index Number (see below) | |
| | | (1) FIRM | (2) BRANCH | | | | |
| 25 | Fire Protection Engineer | 12 | 4 | F03 | Fire Protection | | 6 |
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| | | | | | | | |
| Other Employees | | | | | | | |
| Total | | 12 | 4 | | | | |

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|--|--|--|--|--|
| 11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (Insert revenue index number shown at right) | PROFESSIONAL SERVICES REVENUE INDEX NUMBER | | | |
| a. Federal Work | | | | |
| b. Non-Federal Work | | | | |
| c. Total Work | | | | |

- 1. Less than \$100,000.
- 2. \$100,000 to less than \$250,000
- 3. \$250,000 to less than \$500,000
- 4. \$500,000 to less than \$1 million
- 5. \$1 million to less than \$2 million
- 6. \$2 million to less than \$5 million
- 7. \$5 million to less than \$10 million
- 8. \$10 million to less than \$25 million
- 9. \$25 million to less than \$50 million
- 10. \$50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

| | |
|--|-------------------|
| a. SIGNATURE  | b. DATE 8/4/20 |
| c. NAME AND TITLE Craig E. Hofmeister, P.E., Principal | |

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (if any)

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

| | | | | |
|---|--|------------------------------|---|---|
| 2a. FIRM (OR BRANCH OFFICE) NAME S&ME, Inc. Raleigh Branch | | | 3. YEAR ESTABLISHED 1973 | 4. UNIQUE ENTITY IDENTIFIER 027854566 |
| 2b. STREET 3201 Spring Forest Road | | | 5. OWNERSHIP a. TYPE Corporation | |
| 2c. CITY Raleigh | 2d. STATE NC | 2e. ZIP CODE 27616 | b. SMALL BUSINESS STATUS | |
| 6a. POINT OF CONTACT NAME AND TITLE Eric Shaffer, PE Office Principal | | | 7. NAME OF FIRM (if block 2a is branch office) S&ME, Inc. | |
| 6b. TELEPHONE NUMBER 919-872-2660 | 6c. E-MAIL ADDRESS eshaffer@smeinc.com | | | |
| 8a. FORMER FIRM NAME(S) (if any) | | | 8b. YR. ESTABLISHED | 8c. UNIQUE ENTITY IDENTIFIER |

9. EMPLOYEES BY DISCIPLINE

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

| a. Function Code | b. Discipline | c. No. of Employees | | a. Profile Code | b. Experience | c. Revenue Index Number (see below) |
|------------------|-------------------------------------|---------------------|------------|-----------------|---|-------------------------------------|
| | | (1) Firm | (2) Branch | | | |
| 02 | Administrative | 128 | 45 | A06 | Airports; Terminals and Hangers; Freight Handling | 1 |
| 05 | Archeologist | 4 | | B02 | Bridges | 2 |
| 07 | Biologist | 2 | | C10 | Commercial Building (low rise); Shopping Centers | 3 |
| 08 | CADD Technician | 14 | | D02 | Dams (Earth; Rock); Dikes; Levees | 2 |
| 12 | Civil Engineer | 31 | 2 | E02 | Educational Facilities; Classrooms | 3 |
| 15 | Construction Inspector | 272 | 29 | E07 | Energy Conservation; New Energy Sources | 1 |
| 16 | Construction Manager | 6 | 1 | H09 | Hospital & Medical Facilities | 2 |
| 23 | Environmental Engineer | 12 | 1 | H11 | Housing (Residential, Multi-Family; Apartments; Condominiums) | 4 |
| 24 | Environmental Scientist | 35 | 1 | I01 | Industrial Buildings; Manufacturing Plants | 3 |
| 27 | Foundation/Geotechnical Engineer | 58 | 8 | I03 | Industrial Waste Treatment | 1 |
| 30 | Geologist | 30 | 4 | N03 | Nuclear Facilities; Nuclear Shielding | 2 |
| 36 | Industrial Hygienist | 17 | 3 | O01 | Office Buildings; Industrial Parks | 1 |
| 38 | Land Surveyor | 5 | | P02 | Petroleum and Fuel (Storage and Distribution) | 1 |
| 39 | Landscape Architect | 7 | | P04 | Pipelines (Cross-Country – Liquid & Gas) | 3 |
| 40 | Materials Engineer | 7 | 1 | P12 | Power Generation, Transmission, Distribution | 1 |
| 47 | Planner: Urban/Regional | 10 | 1 | R04 | Recreation Facilities (Parks, Marinas, etc.) | 1 |
| 48 | Project Manager | 139 | 12 | S04 | Sewage Collection, Treatment, and Disposal | 1 |
| 51 | Safety/Occupational Health Engineer | 9 | 2 | S07 | Solid Wastes; Incineration; Landfill | 1 |
| 58 | Technician/Analyst | 109 | 20 | T03 | Traffic & Transportation Engineering | 3 |
| 60 | Transportation Engineer | 8 | 1 | T05 | Towers (Self-Supporting & Guyed Systems) | 1 |
| | Engineering Staff Professionals | 142 | 14 | W01 | Warehouses & Depots | 1 |
| | Drillers | 54 | 14 | W03 | Water Supply; Treatment & Distribution | 1 |
| TOTAL | | 1,099 | 161 | W03 | Water Supply; Treatment and Distribution | 2 |

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS


(Insert revenue index number shown at right)

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

| | | | |
|---------------------|----------|---|---|
| a. Federal Work | 1 | 1. Less than \$100,000 | 6. \$2 million to less than \$5 million |
| b. Non-Federal Work | 8 | 2. \$100,000 to less than \$250,000 | 7. \$5 million to less than \$10 million |
| c. Total Work | 8 | 3. \$250,000 to less than \$500,000 | 8. \$10 million to less than \$25 million |
| | | 4. \$500,000 to less than \$1 million | 9. \$25 million to less than \$50 million |
| | | 5. \$1 million to less than \$2 million | 10. \$50 million or greater |

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

| | |
|---|---------------------------------|
| a. SIGNATURE  | b. DATE July 14, 2021 |
| c. NAME AND TITLE Eric Shaffer, PE Office Principal | |

ARCHITECT - ENGINEER QUALIFICATIONS

PART II - GENERAL QUALIFICATIONS

1. SOLICITATION NUMBER (if any)

2a. FIRM (or branch office) NAME

Palacio Collaborative – Durham Office

3. YEAR ESTABLISHED

2006

4. DUNS NUMBER

790798081

2b. STREET

4819 Emperor Blvd, Suite 400

5. OWNERSHIP

a. TYPE

S-Corporation

2c. CITY

Durham

2d. STATE

NC

2e. ZIP

27703

b. SMALL BUSINESS STATUS

DBE, MBE, NC HUB

6a. POINT OF CONTACT NAME AND TITLE

Tony Murphy, NC Business Director and Senior Cost Manager

7. NAME OF FIRM (if block 2a is a branch office)

6b. TELEPHONE NUMBER

919.605.8952

6c. E-MAIL ADDRESS

tmurphy@palaciocollaborative.com

N/A

8a. FORMER FIRM NAME(s) (if any)

N/A

8b. YR. ESTABLISHED

N/A

8c. DUNS NUMBER

N/A

9. EMPLOYEES BY DISCIPLINE**10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR THE LAST FIVE YEARS**


| a. Function Code | b. Discipline | c. No of Employees | | a. Profile Code | b. Experience | c. Revenue Index Number (see below) |
|------------------|---------------------------|--------------------|------------|-----------------|----------------------------|-------------------------------------|
| | | (1) FIRM | (2) BRANCH | | | |
| 02 | Administrative/Operations | 3 | 0 | C18 | Cost Management/Estimating | 6 |
| 18 | Cost Managers/Estimating | 12 | 1 | | | |
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| | | | | | | |
| Total | | 15 | 1 | | | |

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (insert revenue index number shown at right)

| a. Federal Work | | PROFESSIONAL SERVICES REVENUE INDEX NUMBER | |
|---------------------|---|--|---|
| 1 | | 1. Less than \$100,000 | 6. \$2 million to less than \$5 million |
| b. Non-Federal Work | 6 | 2. \$100,000 to less than \$250,000 | 7. \$5 million to less than \$10 million |
| | | 3. \$250,000 to less than \$500,000 | 8. \$10 million to less than \$25 million |
| c. Total Work | 6 | 4. \$500,000 to less than \$1 million | 9. \$25 million to less than \$50 million |
| | | 5. \$1 million to less than \$2 million | 10. \$50 million or greater |

12. AUTHORIZED REPRESENTATIVE (the foregoing is a statement of facts)

a. SIGNATURE



b. DATE

1/14/2022

c. NAME AND TITLE

Michael D. Palacio, President and Chief Cost Manager

LS3P + SHEPLEY
BULFINCH