Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Expression of Interest
Architect/Engr

Proc Folder:	1442555
Doc Description:	Building 1 Hydronic Boilers Upgrades Project
Proc Type:	Central Contract - Fixed Amt
Reason for Modification:	

Date Issued	Solicitation Closes	Solicitation No	Version
2024-06-13	2024-07-02 13:30	CEOI 0211 GSD2400000009	1

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code:

Vendor Name : ZMM Architects and Engineers

Address : 222 Lee Street West

Street :

City : Charleston

State : WV **Country :** USA **Zip :** 25302

Principal Contact : Adam Krason

Vendor Contact Phone: 304.342.0159 **Extension:** 234

RECEIVED
2024 JUN 32 PM 12: 11
WV PURCHASING DIVISION

FOR INFORMATION CONTACT THE BUYER
Melissa Pettrey
(304) 558-0094
melissa.k.pettrey@wv.gov

Vendor Signature X AG RK **FEIN#** 550676608 **DATE** July 2, 2024

All offers subject to all terms and conditions contained in this solicitation

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Printed Name and Title) Adam Krason, Principal

(Address) 222 Lee Street West, Charleston, WV 25302

(Phone Number) / (Fax Number) 304.342.0159 / 304.345.8144

(email address) ark@zmm.com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through *wv*OASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

ZMM Architects and Engineers
(Company)

(Signature of Authorized Representative)

Adam Krason, Principal 7/2/24
(Printed Name and Title of Authorized Representative) (Date)

304.342.0159 / 304. 345.8144
(Phone Number) (Fax Number)

ark@zmm.com
(Email Address)

ZMM ARCHITECTS ENGINEERS

EXPRESSION OF INTEREST

To Provide Professional Architecture/Engineering Services:

BUILDING 1 HYDRONIC BOILERS UPGRADE PROJECT

GSD2400000009
JULY 2, 2024

ZMM.COM

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STATEMENT OF QUALIFICATIONS

ZMM
ARCHITECTS
ENGINEERS

July 2, 2024

Ms. Melissa Pettrey, Senior Buyer
State of West Virginia
Department of Administration, Purchasing Department
2019 Washington Street East
Charleston, West Virginia 25305-0130

ZMM
ARCHITECTS
ENGINEERS

Subject: Expression of Interest to Provide Design Services for Construction Bidding Documents and Construction Administration for a Building 1 Hydronic Boiler System and an Upgrade of All Air-side Components Required to Support High Efficiency Operation of a Hot Water Heating Distribution System - CEOI 0211 - GSD2400000009

Ms. Pettrey:

ZMM Architects and Engineers is pleased to submit the attached information to demonstrate our experience and qualifications to provide professional design and construction phase services for the WV Capitol Complex Building 1 Hydronic Boilers Upgrades Project. ZMM understands that the intent of the project as documented in the EOI is to "provide design services for construction bidding documents and construction administration for a Building 1 hydronic boiler system and an upgrade of all air-side components required to support high efficiency operation of a hot water heating distribution system." ZMM is well-equipped to address this project's needs as we have the expertise, team and experience to accomplish the desired outcomes stated for this project.

Established in 1959, ZMM is a Charleston-based, full-service architectural and engineering firm, focused on excellence in design and client support. With more than 65 employees, ZMM provides an integrated approach by delivering all building-related design services in-house, including architecture, engineering, interior design, and construction administration. ZMM engineers are industry leaders involved in developing strategies and best practices for HVAC-related design issues on local and national levels. We have designed mechanical systems in some of West Virginia's most prominent buildings such as the WV Capitol Complex, the Clay Center for the Arts and Sciences, the Keith Albee Performing Arts Center in Huntington, and the Charleston Coliseum and Convention Center. Our past hydronic piping experience includes the WV Capitol Complex (Buildings 5, 6, and 7), the CAMC Memorial Boiler Plant, Mountain Challenge Academy South and Richwood Middle School (Nicholas County Schools).

ZMM Architects and Engineers has extensive design service project experience at the WV Capitol Complex, including engineering services for the Capitol Food Court, various interior improvements and roofing (except for the Capitol Dome). Most recently, ZMM assisted with a project that mapped all the mechanical equipment in the building to assist with ongoing maintenance and improvements. We are confident that our experience with the building's mechanical systems will help lead to the successful implementation of this project for the State of West Virginia. ZMM's engineering team will be led by Bob Doeffinger, PE, the ZMM principal responsible for engineering management, who brings more than 45 years of experience to the project. The team will also include James Lowry, PE and John Pruett, PE to lead the mechanical engineering effort.

In addition to our experience with hydronic boiler systems, ZMM has significant experience providing design services on historical structures. Our team for this project will include historic preservation consultant Mr. Mike Gioulis who has nearly 50 years of experience in historic preservation in the mountain state. Mr. Gioulis has served as Historical Architect for the West Virginia Division of Culture and History and as Assistant Director of the Historic Preservation Unit. We have partnered on a variety of projects including the rehabilitation of the historic Houston Company Store for the McDowell County EDA, the replacement of roofing and copper gutters on the WV Capitol Building, and restoration projects for the Historic Keith Albee Theater in Huntington and the Coal Heritage Discovery Center in Mount Hope.

Thank you for taking the time to review the attached expression of interest that includes a project understanding and approaches to meet the Goals and Objectives outlined in the EOI, as well as ZMM's qualifications and relevant project experience.

You can explore the full range of our projects on our website at zmm.com. We appreciate your consideration for this important endeavor and look forward to the opportunity to assist on the Building 1 Hydronic Boilers Upgrades Project.

Respectfully submitted,
ZMM Architects and Engineers

Adam R. Krason, AIA, NCARB, LEED-AP
Principal

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STATEMENT OF QUALIFICATIONS

ZMM ARCHITECTS ENGINEERS

1.

FIRM HISTORY

ABOUT
ZMM ARCHITECTS & ENGINEERS

ZMM was founded in 1959 in Charleston, West Virginia by Ray Zando, Ken Martin, and Monty Milstead. Since the inception of the firm, ZMM has been dedicated to providing an integrated approach to building design for our clients.

ZMM delivers this integrated approach by providing all building related design services, including architecture, engineering (civil, structural, mechanical, and electrical), interior design, and construction administration with our in-house team. Our integrated design approach makes ZMM unique among architecture/engineering firms, and helps to ensure the quality of our design solutions by providing more thoroughly coordinated construction documents.

ZMM has maintained a diverse portfolio since the founding of the firm. Early commissions included higher education projects for West Virginia University and Concord College, State Office Buildings 5, 6, & 7 on the State of West Virginia Capitol Campus, and armories for the West Virginia Army National Guard.

Maintaining a diverse practice for over 60 years has provided ZMM with extensive experience in a variety of building types, including educational facilities, governmental facilities (military, justice, correctional), healthcare facilities, recreation facilities, commercial office space, light industrial facilities, and multi-unit residential buildings.

The original partners transferred ownership of the firm to Robert Doeffinger, PE and Steve Branner in 1986. Mr. Doeffinger and Mr. Branner helped guide and expand the firm to its present size of 35 people. Over the past 20 years David Ferguson, AIA, and Adam Krason, AIA, LEED-AP joined in ownership of the firm. In 2020, Randy Jones also joined in ownership of the firm when ZMM acquired Blacksburg-based OWPR Architects & Engineers to create a regional design firm that employs more than 60 highly-skilled professionals.

ZMM has become a leader in sustainable / energy-efficient design, and a trusted resource on complex renovation projects. ZMM's unique renovation project approach and ability to

ZMM ARCHITECTS ENGINEERS

About ZMM Architects & Engineers (cont.)

provide comprehensive design services has also led the firm to be selected to improve landmark buildings, including the Charleston Coliseum & Convention Center, the Clay Center for the Arts and Sciences, the State of West Virginia Culture Center, and the West Virginia State Capitol Building. Additional significant projects designed by the firm include the Explorer Academy (Cabell County Schools), the Logan-Mingo Readiness Center, the Manassas Park Community Center and Natatorium, the design of the Fourth High School (Frederick County Public Schools), the new Harrington Waddell Elementary School (Lexington City Schools), CAMC Teays Valley ICU, and Ridgeview Elementary School (Raleigh County Schools). ZMM has also provided design services on more than 300 school projects throughout the region.

ZMM's building-related design services include:

Pre-Design
- Educational Facility Planning
- Existing Building Evaluation
- Space Planning
- Master Planning
- Programming
- Feasibility Studies
- Site Evaluation and Analysis
- Construction Cost Estimating

Design
- Architectural Design
- Interior Design
- Lighting Design
- Sustainable Design
- Landscape Architecture

Engineering
- Civil Engineering
- Mechanical Engineering
- Energy Consumption Analysis
- Structural Engineering
- Electrical Engineering
- Net Zero Buildings

Post-Design
- Construction Administration
- Life Cycle Cost Analysis
- Value Engineering
- Post-Occupancy Evaluation

As ZMM looks to the future, we remain committed to the ideal of providing high-quality, client-focused design solutions that meet budget and schedule requirements. We listen, we respond promptly with innovative and efficient solutions, and we deliver quality projects and develop lasting relationships. You see us in **YOUR** community every day.

AWARD WINNING DESIGN

2020
AIA West Virginia Chapter: Merit Award
Achievement in Architecture for New Construction
Mountain Valley Elementary School
Bluefield, West Virginia

AIA West Virginia Chapter: Merit Award
Achievement in Architecture
Ridgeview Elementary School
Crab Orchard, West Virginia

2019
AIA West Virginia Chapter: Honor Award
AIA West Virginia Chapter: Citation Award
AIA West Virginia Chapter: People's Choice Award
Charleston Coliseum & Convention Center
Charleston, West Virginia

2018
AIA West Virginia Chapter: Citation Award
Unbuilt Project
Charleston EDGE
Charleston, West Virginia

2017
AIA West Virginia Chapter: Merit Award
Achievement in Architecture
Explorer Academy
Huntington, West Virginia

AIA West Virginia Chapter: Merit Award
Achievement in Sustainability
Logan - Mingo Readiness Center
Holden, West Virginia

2016
AIA West Virginia Chapter: Merit Award
Achievement in Architecture in Interior Design
Christ Church United Methodist
Charleston, West Virginia

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ZMM ARCHITECTS ENGINEERS

2.

PROJECT APPROACH

PROJECT APPROACH

Building 1 Hydronic Boilers Upgrades Project Goals and Objectives: Project Understanding, Anticipated Concepts, and Methods of Approach

PROJECT UNDERSTANDING

ZMM Architects and Engineers recommends the following approach to complete the projects for the Open End Architectural Services.

As it states in the EOI, "The West Virginia Capitol Building (Building 1) is currently heated by a centralized boiler plant located on the Capitol Complex in the penthouse of Building 5. This plant is served via underground steam distribution piping, namely steam supply 80 PSI, high pressure condensate, and low pressure condensate. Upon entering the building, through the foundation wall, steam pressure reduced by a 2/3 - 1/3 pressure reducing station. The system modulates on the basis of steam pressure and demand. Typical boiler plant operation is seasonal, beginning late October, operating through mid-April, or until outside temperatures become mild. Condensate management is accomplished in two ways, high pressure (end of mains and pressure reducing stations) and low pressure (point of use devices such as heaters and radiators). The condensate is flashed off to low pressure and then pumped back to a holding tank for repurpose. Building 1 utilizes steam as the primary heating source for the facility, employing heating components such as radiators, convectors, AHU coils, and steam to hot water heat exchangers."

The objective of the solicitation is to select an architecture and engineering firm to provide architectural, mechanical, and electrical engineering design services for the renovation of Building 1 at the WV Capitol Complex. This renovation will involve transitioning the existing steam heating systems to hydronic heating systems. The transition includes, but is not limited to, disconnecting from existing composed heating systems, demolishing existing steam components, repurposing limited steam radiators, installing new hydronic heating natural gas-fired boilers, flues, pump piping, heating hot water coils, HVAC controls, etc. The design services include an assessment of the existing heating systems with a written report with recommendations, the development of construction bidding documents, and construction administration. Included in the construction documents will be a detailed phasing plan for construction while the facility is occupied.

ZMM Architects and Engineers has extensive experience providing design services at the WV Capitol Complex. Our experience includes engineering services for the Capitol Food Court as well as various interior improvements and roofing (except for the Capitol Dome). Most recently, ZMM assisted with a project that mapped all the mechanical equipment in the building to assist with ongoing maintenance and improvements. We are confident that our experience with the mechanical systems in Building 1 will help lead to the successful implementation of the project.

The EOI contains the following goals and objectives:

Goal/Objective 2.1: *The Department of Administration, General Services Division is requesting a response from interested parties to provide schematic design, construction documents, and construction administration efforts for upgrading the existing steam heating system in Building 1, the WV State Capitol, to a hot water hydronic heating system. The vendor shall investigate the current heating system and building conditions and then prepare a written report with recommendations to the Agency regarding upgrades along with an estimated construction cost. Based upon recommendations from the investigative report, the Agency intends to replace the existing steam system with a modernized hot water hydronic boiler heating system. The assessment shall incorporate all related systems such as electrical equipment, pumps, fan coils, boilers, coil replacements, and building automation controls. The intent is to design a piping distribution system, with pumping redundancy, while incorporating best design practices of the piping system and application for future access of the service to be utilized year round for dehumidification control. Within their proposal, Vendor should provide documentation regarding their staff and/or team's qualification and experience on projects where HVAC systems and controls of this nature have been converted, from steam to hot water. Proposals should clearly indicate what role each staff/team member would serve on this project.*

Response: To meet this goal, ZMM would begin the project with an investigation to review all current documents related to the existing systems and verify the conditions of all associated equipment. With this information, ZMM would develop an assessment of the systems, including recommendations for equipment replacement/reuse, locations where a new hydronic boiler plant could be located, and hydronic pipe routing options for new systems. The assessment would include cost estimates established from the recommendations.

Based on the assessment, ZMM would evaluate alternatives with the Agency. One initial alternative would be to install a new hydronic heating hot water boiler plant in the mechanical space with the existing steam pressure-reducing station, which was the location of the original boiler plant for this facility. Then, new distribution piping would be routed through the basement level in parallel to the existing steam piping. With the new hydronic heating plant, distribution piping in place and the existing steam systems in use, the facility can be tackled in phases as space becomes available.

During the assessment stage, we would evaluate the existing flue pathway through the boiler for use, the routing options for the hydronic piping, and the associated costs.

ZMM has substantial and ongoing experience with design and construction administration of hydronic heating systems. Some of our recent projects include:

- WV Capitol Complex Buildings 5, 6, and 7
- CAMC Memorial Boiler Plant
- Mountain Challenge Academy South
- Richwood Middle School (Nicholas County Schools)

ZMM ARCHITECTS ENGINEERS

PROJECT APPROACH (CONT.)

Goal/Objective 2.2: *Vendor shall work with the Agency to advise on space requirements for designed areas such as boiler mechanical rooms, water treatment components, and freeze protection allocations. Building Information Modeling (BIM) is requested for detection and resolution of spatial conflicts among all disciplines for this project.*

Within their proposal, Vendors should demonstrate experience with 3-D modeling using examples of similar projects where BIM modeling has been utilized to assist and resolve conflicts in similar projects.

Response: ZMM utilizes BIM software (Revit) on our building projects. After reviewing the existing conditions and documentation, we develop a 3D model of the existing facility that includes architectural, mechanical, electrical, and plumbing systems and equipment. With existing conditions, we develop demolition and new work documentation while coordinating the impact of this work on the existing spaces, equipment, and serviceability of the equipment.
ZMM has substantial and ongoing experience utilizing BIM modeling. Recent projects include:

- WV Capitol Complex Buildings 5, 6, and 7 HVAC renovations - This project included the replacement of the front multi-zone section of the existing multi-zone units. ZMM modeled the existing system, including the multi-zone connections in 8-13 zones. The existing systems' spacing and connections were critical to reconnecting the new multi-zone systems. By using BIM modeling, we minimized the demolition and new work, allowing for reduced interruptions to normal operations and maximizing the project's cost-effectiveness.

- CAMC General Chiller Replacement - This project consisted of the replacement of two of four chillers serving the CAMC General Hospital. This chilled water plant had been renovated multiple times previously with limited documentation. The first phase of this project included the development of accurate flow diagrams and BIM modeling of the existing chiller plant. With this model, we could determine an approach to the replacement of half of the facility's capacity and its impact on the operations of the facility operations. Additional space was at a premium within this plant. ZMM used the BIM model to develop creative solutions to integrate new pumps into the system while locating them to maximize the plant's serviceability.



Goal/Objective 2.3: *This project will require coordination with the State Historic Preservation Office, the Capitol Building Commission, and the Department of Administration's GSD A/E Office. The Vendor is expected to have a member of the design team with documented historical preservation experience to coordinate with SHPO and CBC. The intent of this project is to retain the original look of the 1930's while upgrading to a modern, technologically advanced heating system that can modulate with the outdoor air temperatures and remain serviceable.*

Within their proposal, Vendors should demonstrate that they have a suitably experienced historic preservation consultant on their team. Projects documenting relevant experience should be ones in which HVAC systems have occurred.

PROJECT APPROACH (CONT.)

Response: ZMM has extensive experience working throughout the WV Capitol Complex on projects that require the approval of the State Historic Preservation Office (SHPO) and the Capitol Building Commission (CBC). That work includes a variety of improvements to Buildings 5, 6, and 7, including the addition of an electrical enclosure. ZMM has also assisted with the reroofing of the WV Capitol Complex Building and provided engineering services for the implementation of the Capitol Food Court. Both projects, notably the copper gutter replacement, required approval of the CBC. Additionally, the relighting of the Culture Center Grand Hall, design of the Gift Shop, and the recently constructed Guard Shack located at the WV Capitol Complex entrance near the Governor's Mansion required approval of the CBC.

ZMM has significant experience providing design services on historical structures. Our team for this engagement will include historic preservation consultant Mr. Mike Gioulis who has nearly 50 years of experience in historic preservation in the mountain state and has served as Historical Architect for the West Virginia Division of Culture and History and as Assistant Director of the Historic Preservation Unit. We have partnered on a variety of projects including the rehabilitation of the historic Houston Company Store for the McDowell County EDA, the replacement of roofing and copper gutters on the WV State Capitol Building, and restoration projects for the Historic Keith Albee Theater in Huntington and the Coal Heritage Discovery Center in Mount Hope. We are confident that Mr. Gioulis' extensive background in historic preservation in the State of West Virginia will be an added benefit to the success of the project.

Goal/Objective 2.4: *The project of converting the heating system for the Main Capitol (including the Main Building and its East and West Wings), will be required to be conducted while the facility remains occupied, operational and sufficiently heated. The project will also need to be phased to accommodate the current steam heating "season" (October to April). This will require creative construction phasing, as it is anticipated that the project of converting the entire facility will take place over multiple years.*

Within their proposal, Vendors should demonstrate their experience in administering projects for occupied renovation where phasing of construction needed to occur. Vendors should also propose how they would approach phasing based on the aforementioned circumstances.

Response: ZMM has extensive experience administering projects while maintaining facility operations. These projects require the implementation of phased construction tailored to the needs of the clients and their facilities. Some of our recent related projects include:

- WV Capitol Complex Buildings 5, 6, and 7 HVAC renovations – This project included converting Buildings 5 and 7 to heating hot water, renovating the multi-zone Air Handling Units (AHUs), and replacing existing steam coils. The work on the AHUs was spread across 12 units that served the various areas and buildings. This work was constructed in approximately 6 phases, allowing for the facility to be occupied during construction with minimal interruption to normal operations.

- CAMC General Chiller Replacement – This project included replacing the existing 450-ton chillers with new 600-ton chillers. This facility is the regional trauma center, and it had to remain occupied with no interruptions to its operations. The project included 4 phases and the implementation of a temporary chiller to maintain the facility operational. The project was completed with no interruptions to the facility's normal operations.

- Richwood Elementary/Middle School – This project included an addition to the existing facility, doubling the total area of the school. Construction was phased for the school to maintain operations throughout construction.

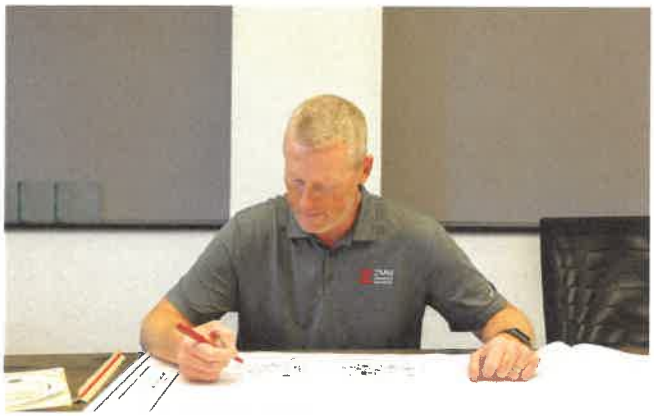
- Expansion of the Charleston Civic Center (now the Charleston Coliseum and Convention Center) – The $100M expansion project, which included the replacement of the central plant, and upgrades to all mechanical, electrical, and plumbing systems, has been implemented utilizing a phased approach. One of the project constraints was that this critical public facility remain operational throughout the construction process. The project was completed on time in October of 2018, and the Charleston Coliseum and Convention Center was able to maintain operations throughout the process.

PROJECT APPROACH (CONT.)

Phasing Approach: WV Capitol Complex Building 1 currently houses multiple agencies, offices, and courts. They operate on various schedules that will need to be coordinated throughout the design and construction process to minimize the impact of the project on normal operations. To meet this challenge, we anticipate that the existing heating systems will need to remain active throughout this project until all phases have been completed. To accomplish this during the first phase of work and during the cooling season, we recommend installing new isolation valves and bypass piping in the existing steam systems to allow for phased demolition of the existing heating system while maintaining the existing system activity during the heating season. Concurrently, we recommend the construction of a new hydronic heating hot water boiler plant, including pumps, boilers, controls, etc. In addition to the new heating plant, this phase would include routing the main hydronic piping through the facility with isolation valves and take-offs for future phases. Providing the infrastructure in this phase will allow us to integrate additional phases and areas of the facility as required to minimize the impact on the occupants.

Our phased approach to ensuring a successful renovation of an operational facility include:

- Ensuring coordination and continuity of building utilities.
- Ensuring continuity of building systems (Mechanical, Electrical, Life Safety).
- Coordination with authority having jurisdiction (Fire Inspector, Code Officials).
- Ensuring continued safe and adequate egress throughout the construction phase.
- Ensuring reasonable access to the facility throughout the construction phase.
- Developing a clear, well-defined phasing plan.
- Developing clear, well-defined temporary signage.
- Developing a schedule that recognizes important events and milestones.
- Developing strong communication between the on-site construction team and the owner.
- Developing contingency plans to deal with challenges that may occur.



If selected for this project, ZMM will utilize the experience we have developed renovating operational facilities to ensure that the WV Capitol Complex Building 1 project is completed in a manner that not only allows continued operation, but also attempts to minimize the impact of the ongoing operations at the facility.

Goal/Objective 2.5: *The Vendor will be required to produce construction documents and administer construction in compliance with State of West Virginia purchasing regulations. The Agency's procurements are generally governed by the WV State Purchasing Division, incorporate American Institute of Architects (AIA) general conditions, supplementally amended by the State to bring them into compliance with WV State Code.*

Within their proposal, Vendors should provide documentation of past projects in which they have adhered to standards such as these, and explain their approach to administering the construction of the project with the Agency.

PROJECT APPROACH (CONT.)

Response: ZMM has extensive experience with a variety of projects governed by the State of West Virginia Purchasing Regulations. We are experts at adhering to the State's policies and procedures. ZMM utilizes the American Institute of Architect (AIA) general conditions and supplementary conditions amended by the State of West Virginia per the State Code. State agencies that we work with that utilize state purchasing regulations include: the West Viginia Army National Guard, West Virginia Department of Administration (General Services Division), West Virginia Department of Education, West Virginia Department of Health, West Virginia Division of Natural Resources, West Virginia Lottery Commission, and West Virginia State Police.

During the construction phase, ZMM will provide additional resources to help manage a timely flow of information between all parties (Owner, Architect, and Contractor). The ZMM project manager will continue to serve as the primary representative of our team and will attend all construction progress meetings. Our team also employs in-house construction administrators to assist the project manager and construction phase administrative staff to track all incoming and outgoing information during the construction phase. This ensures that the design team is being responsive to project needs. This information, as well as the design progress noted above, is reviewed at weekly internal coordination meetings to verify that we are meeting all expectations and deadlines.

During project construction, the design team will continue to be engaged in assuring that the materials and systems being provided and installed comply with the design intent. Standard construction phase services include:

- Attend regularly construction progress meetings.
- Review and respond to shop drawings and submittals.
- Respond to RFI's generated during construction.
- Review and respond to change orders as needed.
- Participate as needed in weekly progress update conferences with owner.
- Make site visits to review construction progress and generate an inspection report for each visit.
- Assist with developing a punch-list of remaining work.
- Complete a substantial and final completion inspection.
- Assist as needed in the startup and project closeout process.

Why is ZMM the right team to assist the State of West Virginia General Services Division on the Building 1 Hydronic Heating Upgrades Project?

We are confident that ZMM possesses the best combination of investigative and design experience for this project at the West Virginia State Capitol Complex. With our expertise and experience in Hydronic Heating System design and complex design solutions on historic buildings, we will be able to exceed expectations and ensure success on this project. The approach to meeting the General Services Division's goals and objectives outlined above demonstrates the technical competence and skill we will bring to the project. We have an established track record of successful projects with the General Services Division. We believe that through this work, you have observed our commitment to design quality, budget and schedule control, and client service. We look forward to the opportunity to continue our work together.

3.

RELEVANT EXPERIENCE

ZMM / MIKE GIOULIS TEAM EXPERIENCE

Houston Company Store - McDowell County, WV

West Virginia State Capitol Roof - Charleston, WV

Keith Albee Performing arts Center Restoration - Huntington, WV

Staats Building Study for Educational Adaptive Reuse - Charleston, WV

Pocahontas County Courthouse - Pocahontas County, WV

Tucker County Courthouse Annex - Parsons, WV

Charleston EDGE - Parsons, WV

WV Children's Home - Elkins, WV

WV Crisis Center - Elkins, WV

ZMM ARCHITECTS ENGINEERS

MICHAEL GIOULIS HISTORIC PRESERVATION CONSULTANT, INC

HVAC RENOVATION EXPERIENCE

Charleston Coliseum & Convention Center (2015) – Replace entire MEP infrastructure three 1,000 ton chillers and cooling towers, three 8,000 mbh gas condensing boilers, approximately ten VAV AHU's, approximately 10 large single zone VAV AHU's.

Charleston Kanawha Health Department (2015) – Replace entire mechanical system to include air cooled chiller, gas fired make-up unit and zone fan coils with electric reheat, approximately 45,000 SF new DDC controls.

United Bank Building – Cooling Tower Replacement (2010) – Two 400 ton centrifugal chillers, rebuild two large VAV AHU's, installed free cooling plate frame heat exchangers (2015).

Kanawha County Public Library (2015) – Replaced two gas-fired boilers with new gas condensing boilers .

Building 5 Capital Complex (2008) – Replaced 10th floor office space air condition, replaced perimeter induction units with new steam chilled water air handling units, distributed VAV terminal units with modification to architectural fit out approximately 22,000 Sf. Installed new sprinkler service entrance for Buildings 5, 6, and 7.

Capitol Complex Building 5, 7th, 8th, & 9th Floors – Rebuild perimeter induction system and interior multi-zone distribution in addition to total architectural fit up, approximately 70,000 SF.

Capitol Complex Building 6, 3rd, 4th, & 5th Floors - Rebuild perimeter induction system and interior multi-zone distribution in addition to total architectural fit up, approximately 70,000 SF.

WV Lottery Headquarters Building (2014 - 2015) – Installed 40,000 SF of new variable refrigerant system, new make-up air system, comprehensive architectural services.

WV State Capitol Cafeteria – Installation of large catering and service kitchen, included steam make-up air system, 3 Class 1 kitchen hoods, Class 2 kitchen hoods, all plumbing system, sprinkler system including sprinkler service entrance for entire Capitol Buildings, comprehensive architectural services.

Old Kanawha Valley Bank Building (2003) - New cooling chiller.
(2015) - New cooling tower.

City Center East (2008) Chiller Replacement.

Tenant Fit-Up Numerous Office Buildings Charleston – BB&T Building, City Center East, United National Bank Building, Hunting National Bank Building to include VAV distribution, electrical and architectural services.

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HVAC RENOVATION EXPERIENCE (CONT.)



Additional HVAC Projects:

Pleasant Hill Elementary School - HVAC Replacement
Keyser Middle School - HVAC Replacement
Huntington Herald Dispatch - HVAC Study
Walker Machinery Main Office Renovation - HVAC
Walker Diamond Office - HVAC
Walker Machinery - HVAC Renovations
State of WV – Governor's Mansion Corrective HVAC Study
Camp Dawson Regional Training Institute - HVAC
Central Regional Jail – HVAC and Roof Replacement
King of Prussia, PA – HVAC Design (Multiple Projects)
Kanawha Valley Senior Services - HVAC
Tolsia High School - HVAC Renovations
Cabell County Schools – (Multiple HVAC Projects)
Cabell County Career & Technical Center - HVAC
Cabell County Explorer Academy - HVAC
Harrisville Elementary School - HVAC
Ritchie County HS/MS - Cooling Tower Replacement
Spring Hill Elementary School - HVAC
Roane-Jackson Career & Technical Center
Salt Rock Elementary School - HVAC Renovation
Wayne County Schools – New HVAC System Projects
Greenbrier County Schools – New HVAC System Projects
Huntington High School
Cabell-Midland High School

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ARCHITECTS
ENGINEERS

WV STATE OFFICE BUILDINGS 5, 6, & 7

LOCATION
CHARLESTON, WV

AWARDS
2011 AIA WV MERIT AWARD

Nearly 50 years ago, ZMM (as Zando, Martin & Milstead) designed the original West Virginia

For the last decade, ZMM has assisted the State of West Virginia General Services Division with various improvements to the buildings, which commenced with an assessment that examined the condition of the buildings, as well as cost and phasing options for various upgrades. Improvements undertaken have ranged from substantial renovations to maintenance and repair projects. ZMM provided design services for the renovation of the 10th Floor of Building 5 for the Office of Technology, which focused on demonstrating the potential for renovating the floors in a more contemporary manner that moves the open office spaces to the perimeter, and pulls the offices adjacent to the building core. The project was delivered considerably under the anticipated budget.

The next phase of renovation involved abatement, demolition, new construction, and updated life safety systems. ZMM assisted with roof replacement for all three buildings, utilizing white EPDM roofing material, with consideration being given to sustainability. ZMM also assisted with expanding the electrical courtyard, improving the electrical service entry, replacing windows and entry doors, providing design services to replace the caulk between the exterior limestone and precast panels, and a valve replacement project to isolate mechanical risers.

ZMM ARCHITECTS ENGINEERS

WEST VIRGINIA STATE CAPITOL

LOCATION
CHARLESTON, WV

COMPLETION
2007-2021

ZMM Architects & Engineers has completed a variety of improvement projects to the State of West Virginia Capitol Building.

The improvements included a renovation to the lower-level food court, a roofing replacement, toilet renovations, and various HVAC improvements – including a project to increase safety during the Covid-19 pandemic. The food court renovations included a full-service kitchen, self-serve area, and seating for 300 people. ZMM worked with a kitchen consultant and provided demolition drawings, base architectural, mechanical, and electrical drawings. The project also included the design of the first phase of a wet pipe sprinkler system. In addition, ZMM also provided the documents to replace the Capitol medium-voltage transformers. ZMM met a stringent timeline for a critical construction completion date.

ZMM replaced the roof of the Capitol Building, which included the main buildings, connectors, and base of the dome. All roof system components were reviewed for integrity and ability to control moisture collection and removal. The components included in the project were parapet walls, railings, wall conditions, colonnades, roof penetrations, roof drains, roof equipment, and walking surfaces. Additional projects included improvements to the Senate toilets, a report that mapped all of the mechanical equipment in Capitol Building, and various mechanical improvements to make portions of the Capitol more safe for occupants during the pandemic.

ZMM
ARCHITECTS
ENGINEERS

CHARLESTON COLISEUM & CONVENTION CENTER

LEED SILVER

LOCATION	SIZE	COMPLETION	COST	AWARDS
CHARLESTON, WV	283,000 SF	2018	$100M	2019 AIA WV HONOR AWARD, CITATION & PEOPLE'S CHOICE AWARD

The Charleston Coliseum & Convention Center expansion and renovation was a transformational project for both the city of Charleston and West Virginia.

Our team built on the strong authentic character of Charleston to remake the Charleston Convention Center into a more efficient, sustainable, dynamic, and iconic best-in-class destination.

The design of the expansion and renovation of the Charleston Convention Center was inspired by the story of West Virginia. Defined by a rugged landscape, the early history of the state was dominated by extractive industries: salt, coal, timber, and trapping. This set the local character. Our design started with an organizational concept inspired by this history. The Convention Center has distinct active nodes to celebrate each activity; arena, convention, and banquet. These nodes are connected like the hills and cut-rock faces that are seen throughout the state, as people work to connect to each other through the landscape. The first critical design objective was to create separate entries and identities for the arena and convention center. This allowed for simultaneous events and clarity of use. For the Convention Center to thrive, it needed a real ballroom assembly space. Located overlooking the Elk River, the ballroom pre-function space is the most dramatic feature of the center.

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ZMM ARCHITECTS ENGINEERS

WV REGIONAL TECHNOLOGY PARK

LOCATION	SIZE	COMPLETION
SO. CHARLESTON	VARIOUS	ONGOING

ZMM has provided Architectural and Engineering design services to multiple facilities located at the Regional Technology Park.

Building 704

ZMM is in charge of preparing a life safety analysis of the building as well as design services to improve the exterior façade of Building 704 at the WV Research, Education, and Technology Park. Building 704 had previously been utilized as a campus maintenance facility by Union Carbide and DOW Chemical.

Building 740

Steam Plant

When the Campus Steam Physical Plant for West Virginia Regional Technology Park was scheduled for closure in 2012, individual Steam. Boiler systems were required for each building. Building 740 was built in 1960 as a research facility for Union Carbide. It is still predominantly a laboratory building, with a 24/7 100% Outside Air HVAC System of approximately 175,000 cfm capacity.

Lobby Renovation

The lobby renovation will enhance the tenant experience with updated aesthetics to provide a welcoming environment upon entrance. The renovation will include a handicap lift to meet ADA requirements. The front space will also be reconfigured to convert a current work room into a conference room.

ZMM ARCHITECTS ENGINEERS

WV Regional Technology Park (cont.)

Building 770

The 122,180 SF 4-story laboratory building was constructed in 1959, consists of 44,880 SF of laboratories, 22,800 SF of laboratory office space, 8,200 SF of executive office space, and 46,300 SF of service and utility space. A 2,500 SF laboratory annex with 2-story walk-in fume hoods was constructed in 1995. The building has a steel frame structure with a brick and curtain wall veneer with one fume hood in each lab. A typical laboratory suite consists of labs and offices on a double loaded corridor. There are approximately 100 individual labs.

The building is served by two 500-ton centrifugal chillers and campus steam. The laboratory's exhaust system consists of individual exhaust utility sets per hood. The utility sets are located in the mechanical penthouse. The conditioned air delivery system to the laboratory consists of large 100% outdoor air chilled water, steam AHU's. Only the executive office area is served by a unit with return air. Electrical service is provided by a 2.4 KV line-up of double ended switchgear, transformed to 480 volts, the chillers are fed directly from the 2.4 KV switchgear, and metered separately.

Aside from minor renovations to enclose the monumental stairway in the lobby, the executive office suite improvements can be limited to ceilings, lighting, finishes, and improved data access. It may be desirable to replace that HVAC system although the existing system is serviceable. Major building improvements are required in the laboratory areas. Through our analysis of the life safety code and conversation with the state fire marshal, a two-hour fire rated wall is required to separate the laboratory from the exit corridor. The duct and pipe chases adjacent to the laboratories must also be reconstructed as two-hour fire rated shafts. Additionally, the labs must be reconfigured so that an occupant of the lab does not exit adjacent to the fume hood. This can be accomplished by either relocating or eliminating some of the fume hoods. To accomplish the required improvements to the labs, the Hauserman partitions including the chases, corridor, office ceiling and lighting as well as all existing ductwork will be demolished. Essentially, the lab wings will need to be reconstructed.

Typical modern laboratories maintain humidity control which means humidification during the heating season. As the building exists, condensation will occur on the interior face of the window and curtain wall system. If humidity control is desired, replacement of the curtain wall is necessary.

As presently configured, the laboratory constant volume exhaust and make-up air systems operate 24 hours a day. Maintaining the systems in their current condition will result in large energy consumption estimated at $13.25 per building SF annually. The steam and electric are metered at the building. The campus energy losses for each utility are added pro rata to the metered quantities. The annual energy charge based on 3 year data is between $1,300,000 and $1,600,000. It is very difficult to alter the existing air handling equipment to provide a system equivalent to a modern efficient laboratory system. The most effective way to improve energy efficiency in a large lab facility is to use a variable volume exhaust and make-up air system. The expense of treating the outdoor make-up air is reduced by providing exhaust and make-up air only for in-use fume hoods. To accomplish these improvements, a separate 100% outdoor air variable volume air handling system would be provided for the lab spaces and a separate variable volume system with supply and return air would be provided for the offices.

THE HOUSTON COAL COMPANY STORE

LOCATION	SIZE	COMPLETION	COST
KIMBALL, WV	7,100 SF	2015	$1.8M

ZMM Architects and Engineers, in association with Mike Gioulis, Historic Preservation Specialist, have been assisting the McDowell County Economic Development Authority with the restoration of the Houston Coal Company Store. The Company Store, located in Kimball, WV, is at the intersection of Route 52 and Carswell Hollow Road. It was constructed in 1923 and served as a coal company store until the 1940's. The building has since served as a dairy company, office and storage facility for a construction company, and currently sits vacant.

The 7,100 square foot facility includes a full basement, storage sheds, and a loading dock. The main portion of the building is 5,750 square feet, excluding the storage sheds and loading dock. The project team began by investigating all available historical documentation for the original facility. ZMM and Mr. Gioulis also visited the building site several times to assess the conditions of the architecture, structure, building systems, and surrounding cultural landscape

To ensure the accuracy of the proposed improvements, a building information model (BIM) was created for analysis and documentation. The model was created based upon measurements and documentation performed on-site by the project team. Once the documentation was complete, a proposed floor plan was developed that included office space for the McDowell County Economic Development Authority staff display areas for coal heritage artifacts, public restrooms, gift shop, and coffee shop. There is future plans to convert the outdoor storage sheds into an artisan's row.

ZMM ARCHITECTS ENGINEERS

MARSHALL UNIVERSITY
MULTIPLE PROJECTS

LOCATION	SIZE	COMPLETION
HUNTINGTON, WV	VARIOUS	ONGOING

ZMM has significant experience providing Architectural and Engineering services to Marshall University.

Smith Hall Renovation

This 22,000 SF renovation project was completed in 2017 and included interior finish and acoustical upgrades to improve the quality of the music practice rooms and additional performance areas. ZMM worked closely with Marshall University professors to determine the correct acoustics to meet the accreditation needs for the college. Taking inspiration from The Thundering Herd, the building was transformed with a mature palette and pops of green. Interior improvements included replacement of ceilings in areas that were affected by the HVAC replacement. Existing ceilings in the practice rooms received a sound blanket barrier and acoustical coating to improve the performance of the space. Paint, carpet and acoustical wall treatments were also installed.

Mechanical system improvements were implemented to correct issues of the aging HVAC system, which was a high-energy user. ZMM converted the system to VAV by installing terminal units with SCR electric reheat. A smaller electric coil provided enough electrical capacity to power the terminal reheat. ZMM retained the fan wall and chilled water coil and installed DDC controls. Dehumidification was provided by a gas-fired humidifier to maintain stable humidity. Additional projects at Smith Hall Include:

- Building Assessment
- Cooling Tower Replacement
- Underground Chilled Water Piping

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ZMM ARCHITECTS ENGINEERS

Marshall University (cont.)

- Retrofit AC Smith Hall Music Building - Dual Duct VAV Humidified Building

Drinko Library
- Mechanical and Electrical Assessment in 2022
- Cooling Tower

Morrow Library
- Underground Chilled Water Piping

IT/OT Security OP Center
- Development of the New Cyber Security Command Center

Sorrell Maintenance Building
- Air Conditioner Replacement

Applied Engineering Building
- Chiller Consulting

Pritchard Hall
- Chiller Replacement

ZMM ARCHITECTS ENGINEERS

WEST VIRGINIA LOTTERY HEADQUARTERS

LOCATION	SIZE	COMPLETION	COST
CHARLESTON, WV	42,082 SF	2016	$7.5M

This project is an extensive renovation of an existing 13-story office building and 7-story parking garage in downtown Charleston, WV.

Renovations within the office building consist of three existing tenant floors, relocation of the fitness center, and replacement of the roof. The WV Division of Insurance is being relocated to floors 7, 8, and 9. Off the renovated elevator lobbies on each floor is a reception area which leads to an interior space of enclosed offices. A tenant space on the sixth floor is being renovated into the new fitness center. Construction on the roof includes the replacement of insulation and membrane and the installation of new roof davits and stainless-steel guardrail.

The parking deck will be undergoing renovation, including structural repairs, electrical upgrades, and an addition to the storage warehouse. It was determined that bearing pads need to be replaced under the framing members, concrete structure and topping slabs needed repair, and spandrel panels required epoxy injection to repair cracking. Driving surfaces are receiving new waterproofing, sealant joint replacement, and restriping. The circulation connector required partial reconstruction of the steel deck and floor slabs. Electrical improvements will consist of new LED lighting and additional pole fixtures on the top level. The storage warehouse is being increased by 1,800 SF and will consist of masonry walls clad in EIFS with a sloped steel-framed roof and single-ply membrane system.

ZMM ARCHITECTS ENGINEERS

4.

TEAM QUALIFICATIONS

ADAM KRASON

AIA, LEED AP, ALEP

Principal

Mr. Krason has served in the capacity of Architect and Project Manager for a variety of projects at ZMM. This experience includes Military, Educational (K-12 and Higher Education), Office, Justice (Courthouses, Correctional, Justice Centers), and Multi-Unit Residential projects. Mr. Krason's responsibilities include programming, design, documentation, coordination of the architectural and engineering team, as well as construction administration. Mr. Krason began his career in 1998, working on a variety of educational, commercial office, and correctional projects throughout Ohio, West Virginia, and North Carolina.

Mr. Krason has been an advocate of sustainable design and energy efficiency and has participated and presented at sustainable design seminars throughout the region. Mr. Krason also serves on the Board of Directors and is responsible for firm management, business development, and corporate philanthropy at ZMM. In addition to his role at ZMM, Mr. Krason is actively engaged in the community, serving on a variety of statewide and local civic and non-profit boards.

EDUCATION

Bachelor of Architecture
The Catholic University of America, 1998

Bachelor of Civil Engineering
The Catholic University of America, 1997

LICENSURE

Virginia, West Virginia, Ohio, Kentucky, Maryland, North Carolina, New Jersey, and Pennsylvania

AFFILIATIONS

Association for Learning Environments

WV Board of Architects, President

American Institute of Architects, Stategic Council

Charleston Area Alliance, Board Vice Chair

Goodwill Industries of Kanawha Valley, Past Board Chair

Clay Center, Board of Directors

WV Symphony Orchestra, Board of Directors

Charleston Main Streets, Board of Directors

Charleston Municipal Planning Commission

Charleston Historic Landmarks Commission

PROJECT EXPERIENCE

Capital Sports Center Conceptual Design - Charleston, WV

Charleston Coliseum and Convention Center - Charleston, WV

Shawnee Sports Complex - Institute, WV

Claudia L. Workman Fish and Wildlife Education Center - Alum Creek, WV

BridgeValley Community and Technical College - Davis Hall and Master Plan - Montgomery, WV

Mountaineer Challenge Academy - South Renovations - Montgomery, WV

WVDNR Beech Fork State Park Cabins - Lavalette, WV

WVDNR Cooper's Rock Cabins- Morgantown, WV

Pipestem State Park Lodge Renovations - Pipestem, WV

The Clay Center for the Arts and Science (Multiple Projects) - Charleston, WV

Girl Scouts of Black Diamond Council - Charleston, WV

Goodwill Prosperity Center - Charleston, WV

Joint Interagency Training and Education Center (WVARNG) - Kingwood, WV

State Office Building #5, 10th Floor Renovation (Office of Technology) - Charleston, WV

MIKE GIOULIS

Historic Preservation Consultant

Mike started his own consulting practice in 1984 and works on a wide range of historic preservation projects for many types of clients. He is fully versant in interpreting standards for the rehabilitation of existing and historic buildings, and meets the Secretary of the Interior's professional qualifications for Architectural Historian as outlined in 36 CRF 61 through the West Virginia Division of Culture and History, State Historic Preservation Office. This certification assures that the Gioulis firm is qualified and has a background in the performance of historic preservation in accordance with specified standards.

Mike's expertise includes rehabilitation projects, master plans, building analyses, design guidelines, tax credit applications, Section 106 proceedings, National Register nominations, historic surveys, and grant applications and management. He has been the Design Consultant to the Main Street West Virginia Program since 1988. His Main Street services relating to design assistance programs for downtown structures have resulted in over 1,200 individual design projects, as well as numerous workshops, committee trainings, resource team visits and technical assistance responses. Multiple entities and individuals consult with Mike for his professional expertise in all phases of historic rehabilitation.

EDUCATION

Bachelor of Science in Architecture;
Bachelor of Science
University of New York, City College

Continuing Education
On-going workshops, conferences, and training related to advancements in historic preservation and tax incentives for historic rehabilitation

LICENSURE

Certified Architectural Historian

AFFILIATIONS

West Virginia Preservation Alliance

PUBLICATIONS

Articles and/or Contributions
Wonderful West Virginia
Goldenseal
WV Encyclopedia and E-Encyclopedia

Author/Co-Author
Historic Resource Surveys in WV
Tax Credits for Historic Properties
Courthouses of WV Documentary
Home Grown Video
Downtown Property Owner's Maintenance Manual

PROJECT EXPERIENCE

TAX CERTIFICATIONS Advise, review and prepare tax credit applications for multiple property types including large commercial buildings, schools, private residences, apartment buildings, hotels and individual commercial buildings.

GENERAL CONSULTING Additional consulting on rehabilitation efforts, historic preservation, adaptive reuse plans, storefront restorations, sensible but sensitive additions and renovations, streetscapes, downtown building revitalizations, paint analyses, street and building signage, design guidelines, retrofitting for ADA compliance and grant applications and oversight.

NATIONAL REGISTER NOMINATIONS Research, document, prepare and submit nominations for downtown historic districts, residential historic districts and individual commercial and residential properties.

HISTORIC RESOURCE SURVEYS Reconnaissance and intensive surveys to document existing resources in cities, towns, and counties; New Deal Era resources in Monongalia County; and CCC resources in selected WV state parks and forests.

SECTION 106 REPORTS Review and documentation for projects including federal, state, and municipal buildings; housing projects; commercial buildings; flood mitigation areas; mine sites; schools; refuse piles; railroad depots; coal company stores; and individual properties.

NATIONAL REGISTER NOMINATIONS Research, document, prepare and submit nominations for downtown historic districts, residential historic districts and individual commercial and residential properties.

Nathan Spencer

AIA

Project Architect

Mr. Spencer is responsible for coordinating the efforts of the design team in preparing thorough and clear design documents. He has experience in all phases of design working on a wide range of building types including; military, educational, office, justice, and residential.

He has worked on several projects that are currently pursuing LEED certification. In addition to production, Mr. Spencer, is also experienced in 3d modeling. He has worked on several preliminary concept study models as well as high quality renderings and 3d models later in the design process. Mr. Spencer is also experienced in high quality physical models.

Mr. Spencer began his career in architecture with ZMM in 2003, working as a summer intern. After graduating in 2003, he began working at ZMM full time.

EDUCATION

Bachelor of Architecture
University of Tennessee, 2007

LICENSURE

West Virginia

AFFILIATIONS

WV Chapter, American Institute of Architects, Member

PROJECT EXPERIENCE

Highland Hospital - Charleston, WV

Charleston Coliseum & Convention Center - Charleston, WV

Shawnee Sports Center - Institute, WV

Logan-Mingo Readiness Center - Holden, WV

Jackson County AFRC - Millwood, WV

Joint Interagency Training and Education Center (JITEC) - Kingwood, WV

Buckhannon Readiness Center - Buckhannon, WV

Parkersburg Readiness Center (not built) - Parkersburg, WV

Marshall Readiness Center - Moundsville, WV

Kenova AFRC SCIF Building - Kenova, WV

AASF #1 and #2 Hangar Additions

Mountaineer Challenge Academy South - Montgomery, WV

Morgantown Readiness Center - Morgantown, WV

Tucker County Courthouse Annex - Parsons, WV

Judge Black Courthouse Annex - Parkersburg, WV

Intuit Prosperity Hub - Bluefield, WV

ZMM ARCHITECTS ENGINEERS

Robert Doeffinger

PE

Principal

As ZMM's Principal Engineer, Mr. Doeffinger is in charge of the engineering disciplines, it is his responsibility to ensure that the mechanical and electrical engineering components of ZMM's design are coordinated and integrated into the final product.

After graduate school in Architectural Engineering, Mr. Doeffinger joined ZMM. He has over 45 years design experience in mechanical and electrical systems for buildings. He has a broad range of engineering experience in education, industrial and manufacturing facilities, large retail, correctional and jails, office buildings, and military facilities.

Mr. Doeffinger is responsible for new design and retrofit of chilled water systems for all building types including large regional shopping malls. He is involved daily with the firm's selection of appropriate systems for all building types and performs life-cycle cost analysis and energy studies.

Mr. Doeffinger is a member of the American Society of Heating, Ventilation and Air-Conditioning Engineers. He is the current national Chairman of the Technical Committee on Heating and Air-Conditioning Load Calculation. He is involved in writing the National Standard on the Method of Calculation, which will shape the nature of the future building energy use for the nation.

EDUCATION

Master of Science
The Pennsylvania State University, 1976

Bachelor of Science
West Virginia University, 1973

LICENSURE

WV, VA, PA, OH, TN, KY, NY, NH, ME, NC, SC, FL, NJ, GA

AFFILIATIONS

ASHRAE - Member of the Technical Committee Load Calculations Data and Procedures for 25 years, serving as chairman. Presently Chairman of the Research Subcommittee

2021 Industrial and Professional Advisory Council – College of Engineering at The Pennsylvania State University

2019 Marshall University Honorary Alumni Award of Distinction College of Engineering

Advisory Board for the Department of Electrical Engineering Technology, Bridgemont Community and Technical College

City of Pt. Pleasant, WV – 2nd Ward Councilman for 20 years

PROJECT EXPERIENCE

Charleston Coliseum & Convention Center - Charleston, WV

State Office Buildings #5, 10th Floor - Charleston, WV

WV Capitol Complex Buildings #5, #6, and #7 - Charleston, WV

Marshall University (Multiple Projects) - Huntington, WV

West Virginia Regional Technology Park - S. Charleston, WV

- Building 704
- Building 740
- Building 770

Joint Interagency Training and Education Center (JITEC) - Kingwood, WV

West Virginia Regional Jails

West Virginia Army National Guard Projects

BridgeValley Community and Technical College - Montgomery, WV

Appalachian Regional Hospital (Multiple Projects) - Beckley, WV

The Plaza at the King of Prussia - Philadelphia, PA

ZMM ARCHITECTS ENGINEERS

JAMES LOWRY

PE, BCxA

Mechanical Engineer

Mr. Lowry is a registered Professional Engineer with design experience in:

Industrial:
Bayer Material Science, West Virginia Higher Education Policy Commission, Kuraray America, Armstrong Flooring, Covestro Laboratories.

Educational:
Renovations, evaluations and additions at Marshall University, West Virginia University Institute of Technology, Mercer County Schools and various other Schools and Universities statewide.

Commercial:
West Virginia Capitol Complex, West Virginia Parkways Authority

Heath Care:
Renovations, evaluations and additions at Cabell Huntington Hospital, Charleston Area Medical Center, Charleston Surgical Center, West Virginia Department of Health & Human Resources, Huntington VA Hospital and other various healthcare facilities statewide.

EDUCATION

Bachelor of Science in Mechanical Engineering, West Virginia University Institute of Technology, 2004

LICENSURE

West Virginia, Pennsylvania, Ohio & Maryland

ASHRAE Building Commissioning BCxP Certified

AFFILIATIONS

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

PROJECT EXPERIENCE

WVARNG - WV
- Mountaineer Challenge Academy South Renovations
- Kenova SCIF
- Camp Dawson Building 202
- STF Building B

WV State Capitol Building #6 - Charleston, WV

Capitol Guard House - Charleston, WV

Charleston Fire Department Fitness Center Assessment - Charleston, WV

GSD ASHRAE Building Assessment - Charleston, WV

GSD Consulting Survey-Elect Media - HVAC - Charleston, WV

The Greenbrier Chiller and HVAC Projects - White Sulphur Springs, WV

Marshall University - Huntington, WV
- Drinko Library Mechanical and Electrical Study
- Replacement Multizone HVAC
- Prichard Hall Chiller Replacement
- Drinko/Science Building
- Smith Hall Cooling Tower Replacment

Charleston Area Medical Center (Memorial) 6th Floor Fit-out, Boilers, Laboratory Renovations - Charleston, WV

Charleston Area Medical Center (General) Chiller Plant One-Line, and Chiller Replacement - Charleston, WV

JOHN PRUETT

PE, LEED AP

Senior Mechanical Engineer

Mr. Pruett is responsible for overseeing the design of the HVAC systems, ensuring that the HVAC systems meet the program requirements, and long-term needs of the owner. He performs heating and cooling load calculations and recommends the type of systems to be incorporated into the building. Mr. Pruett coordinates with other disciplines ito integrate the HVAC systems into the building. Mr. Pruett has participated on several LEED registered projects; one of his key contributions to these projects is conducting energy analyses and recommending energy use reduction alternatives. Mr. Pruett began his engineering career with a manufacturing company in 1994. In 1998, he made a career change and joined an engineering consulting firm. He has a broad range of experience in HVAC systems design, including: government, education, office buildings, hotels, restaurants, a convention center and several natatoriums. Having served in the Marines for 14 years, Mr. Pruett also led a design team for a "virtual memorial" for the birthplace of the U.S. Marine Corps

EDUCATION

Bachelor of Science
Purdue University, West Lafayette, IN, 1993

LICENSURE

West Virginia, Virginia, Indiana

LEED Accredited Professsional

AFFILIATIONS

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), Member

United States Marine Corps – 14 Years

PROJECT EXPERIENCE

WV Army National Guard - WV
- Camp Dawson Building 106
- Camp Dawson Building 245
- Camp Dawson Building 246
- Camp Dawson Building 301
- Camp Dawson Mail Facility
- Marshall County Readiness
- Camp Dawson Job Challenge Academy

WVDNR District 5 Headquarters - Alum Creek, WV

WV State Police Headquarters - So. Charleston, WV

Wood County Resiliency Center - Parkersburg, WV

WV State Capitol Renovations - Charleston, WV

General Services Division Surplus Property - Dunbar, WV

WV Housing Developemnt Fund Office Building - Charleston, WV

Tucker County Courthouse Renovations - Parsons, WV

Gilmer County Courthouse Renovations - Glenville, WV

St. Margaret's Judicial Center 3rd Floor Renovations - Martinsburg, WV

Jackson County Maintenance and Transportation - Ripley, WV

Jackson County EMS Building - Ripley, WV

FRANKIE KANTSIOS

PE

Electrical Engineer

As an electrical engineer, Mr. Kantsios is consistently motivated to adapt to the team's needs in assessing and finalizing the project on time. He is an experienced professional with a proven record of managing projects from concept to completion while staying versatile to the specific project at hand. By carrying out engineering and design services for a diverse field of projects since 2013, Mr. Kantsios has expanded his knowledge and understanding of the industry; providing him with the means to meet the clients' needs for each individual program. He has been actively involved in the design of a wide array of new structures and renovations to include K-12 educational buildings, higher education buildings, healthcare facilities, office buildings, banks, restaurants, hotels, automotive dealerships and service centers, apartment complexes and dorms, industrial facilities and warehouses, and athletic facilities. Whether working independently or in conjunction with other architects, engineers, and contractors, Mr. Kantsios excels at creating effective solutions and developing opportunities that further establish organizational goals.

EDUCATION

Bachelor of Science
Old Dominion University, 2019

Associate of Applied Science
New River Community College, 2016

LICENSURE

West Virginia, Virginia

PROJECT EXPERIENCE

Carilion New River Valley Medical Center - VA
- Cardiology Expansion
- Infusion Clinic Alterations

HCA Healthcare - VA
- LewisGale Hospital Montgomery - 3rd Floor Graduate Medical Education Center

InnovAge PACE - VA
- New Richmond Facility
- New Roanoke Facility
- Roanoke Facility Study

Bath Community Hospital - VA
- New Pharmacy Building*

New Triumph Baptist Church - VA

Frederick County Sunny Side Voter Registrar's Office- VA
- A.S. Rhodes Elementary School Renovations

New River Community College - VA
- ADA Accessibility Improvements

City of Covington City Hall Renovations - VA*

Pulaski County Administration Building Renovation - VA*

**Previous Employer Experience*

TODD POFF, PE

PE

Structural Engineer

Mr. Poff started as a Civil Engineer. After working in that department for several years, he began moving over to the Structural Engineering Department; where his true interest, and most of his training lies.

As a Structural Engineer, it is Mr. Poff's responsibility to insure the safety of the structure's design, as well as any occupants inside those structures. As a member of the design team, Mr. Poff understands that the structural system of a building needs to have the least amount of impact possible on the architectural design and on the way clients use the buildings. It is that kind of teamwork, with all major design disciplines in-house, that allows ZMM to say with confidence we provide our clients with a building design that will not only meet their needs but will be a place they can enjoy for many years to come.

EDUCATION

Bachelor of Science
Virginia Polytechnic Institute & State University, 1987

LICENSURE

Virginia, West Virginia, North Carolina, Ohio

PROJECT EXPERIENCE

Roanoke County Public Libraries - VA
- Glenvar, Vinton & South County

Rappahannock Electric Maintenance Facility - Front Royal, VA

InnovAge Roanoke - VA

Kollmorgan Structural Analysis - Radford, VA

Truck Manufacturing Plant - Dublin, VA
- Multiple Crane Analysis/Relocation Projects
- Cab Trim Assembly Building

Collins UTC Aerospace Plant Structural Analysis - WV

ZMM ARCHITECTS ENGINEERS

5.

CLIENT REFERENCES

CLIENT REFERENCES

Matt Ballard, CEO/Executive Director
WV Regional Technology Park
1740 Union Carbide Drive
South Charleston, WV 25303
304.932.8598

Randy Vaughn, Associate Director
Facilities Planning and Management
Marshall University
1 John Marshall Dr.
Huntington, WV 25755
304.696.6481

Leslie Wellman, Treasurer
Mercer County Schools
304.487.1551

Mercer County Public Schools
1405 Honaker Avenue • Princeton, West Virginia 24740 • (304) 487-1551

March 25, 2021

RE: ZMM Architects & Engineers

To Whom It May Concern:

Mercer County Schools first worked with ZMM Architects and Engineers in 2014 on a large HVAC project at Glenwood School. Glenwood is the second largest school in our county and had battled heating and cooling problems for years. We consider the Glenwood project a glowing success. The design was developed within the budget we provided ZMM. We did not continually have to fight "scope creep". That is, the project was not designed to address each system deficiency or potential issue with no concern for the budget. ZMM designed a system that maximized the positive impact these upgrades had for faculty, staff and students using the funding we had available. Construction came in at budget, was completed around the school calendar and on time, and the systems work extremely well and cost effectively.

Since 2014, Mercer County has collaborated with ZMM on numerous projects. ZMM assisted us by preparing budgets and documentation for funding requests and preparing our most recent CEFP. Furthermore, they successfully designed and assisted us in overseeing the construction of two new elementary schools within the past three years. ZMM helped us comply with SBA requirements as well as other state and local requirements during construction.

It is without reservation that I recommend the services of ZMM Architects and Engineers. The staff is extremely helpful and responsive and has proven to be a partner in every sense of the word. We recently awarded a large six-school HVAC project to ZMM and hope to receive funding to begin our third elementary school with them as well. Mercer County Schools looks forward to working with ZMM on these projects and further building upon the successful relationship we have had to date.

Sincerely,

Leslie M. Wellman

Leslie M. Wellman, CPA
Director of Purchasing & Audit

Thank You

FOR REVIEWING THIS MATERIAL.

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