Purchasing Divison
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Expression of Interest
02 — Architect/Engr

Proc Folder: 436931

Doc Description: A/E SERVICES FOR BUILDING STUDY

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2018-03-28	2018-05-03 13:30:00	CEOI 0705 LOT1800000001	1

BID RECEIVING LOCATION

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

VENDOR

Vendor Name, Address and Telephone Number:

ZMM, Inc., Architects and Engineers
222 Lee Street, West
Charleston, WV 25302
304-342-0159

RECEIVED
2018 MAY -3 AM 11:00
WV PURCHASING DIVISION

FOR INFORMATION CONTACT THE BUYER

Michelle L Childers
(304) 558-2063
michelle.l.childers@wv.gov

Signature X [signature] **FEIN #** 55-0676608 **DATE** May 2, 2018

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

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: ZMM, Inc., Architects and Engineers

Authorized Signature: _____ Date: May 2, 2018

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 2nd day of May, 2018.

My Commission expires 10-6, 2018.

AFFIX SEAL HERE

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Lisa E. Bowles
ZMM, Inc.
222 Lee St., W.
Charleston, WV 25302
My Commission Expires October 6, 2018

NOTARY PUBLIC Lisa E. Bowles

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.

ARK, PRINCIPAL

(Name, Title)
Adam R. Krason, AIA, LEED AP, Principal

(Printed Name and Title)
222 Lee Street, West, Charleston, WV 25302

(Address)
304-342-0159 304-345-8144

(Phone Number) / (Fax Number)
ark@zmm.com

(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation 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 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 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.

ZMM, Inc., Architects and Engineers

(Company)

ADAM R. KRASON, PRINCIPAL

(Authorized Signature) (Representative Name, Title)

Adam R. Krason, AIA, LEED AP, Principal

(Printed Name and Title of Authorized Representative)

May 2, 2018

(Date)

304-342-0159 304-345-8144

(Phone Number) (Fax Number)

West Virginia Ethics Commission

Disclosure of Interested Parties to Contracts

(Required by *W. Va. Code* § 6D-1-2)

Contracting Business Entity: ZMM, Inc. **Address:** 222 Lee Street, West Charleston, WV 25302

Authorized Agent: Adam R. Krason **Address:** Same as Above

Contract Number: LOT1800000001 **Contract Description:** A/E Services for Building Study

Governmental agency awarding contract: The West Virginia Lottery Commission

☐ **Check here if this is a Supplemental Disclosure**

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below *(attach additional pages if necessary)*:

1. **Subcontractors or other entities performing work or service under the Contract**
   ☒ Check here if none, otherwise list entity/individual names below.

2. **Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)**
   ☐ Check here if none, otherwise list entity/individual names below.
   ZMM, Inc. - Robert Doeffinger
   ZMM, Inc. - David E. Ferguson
   ZMM, Inc. - Adam R. Krason

3. **Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)**
   ☒ Check here if none, otherwise list entity/individual names below.

Signature: ARK **Date Signed:** May 2, 2018

Notary Verification

State of West Virginia, County of Kanawha:

I, ADAM R. KRASON, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this 2nd day of May, 2018.

Lisa E. Bowles
Notary Public's Signature

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Lisa E. Bowles
ZMM, Inc.
222 Lee St., W.
Charleston, WV 25302
My Commission Expires October 6, 2018

To be completed by State Agency:

Date Received by State Agency: _____

Date submitted to Ethics Commission: _____

Governmental agency submitting Disclosure: _____

Revised October 7, 2017

ZMM
ARCHITECTS
ENGINEERS

May 3, 2018

Michelle Childers, Senior Buyer
State of West Virginia – Purchasing Division
2019 Washington Street East
Charleston, WV 25305

Subject: Expression of Interest for WV Lottery Building Envelope Study
CEOI – LOT1800000001

Dear Ms. Childers:

ZMM Architects and Engineers is pleased to submit the attached information to demonstrate our experience and our qualifications to provide professional architecture and engineering services for the WV Lottery Building Envelope Study. Established in 1959, ZMM is a Charleston based, multidisciplinary A/E firm, and is noted for design excellence and client focus. Our integrated design approach makes ZMM unique among design firms of our size, and our ability to provide comprehensive design services has made us a trusted resource for complex renovation projects throughout West Virginia. For this engagement our in-house A/E team will be supplemented with the specialized expertise of forensic engineer Greg Boso, PE. ZMM and Mr. Boso have previously collaborated on other investigative and building repair efforts.

It is ZMM's understanding that during times of severe cold weather office temperatures in some areas of the WV Lottery Building are in the 55-65 degree range, and that during a severe cold weather event in January 2018 an above ceiling fire sprinkler pipe froze and burst – causing significant water damage on four floors. ZMM has identified several potential reasons that the WV Lottery Building is experiencing these issues. They include:

- The inability of the current variable refrigerant HVAC system to maintain temperature in severe cold weather conditions (due to the condition of the building envelope and the stack effect identified below).
- Failure of the caulking between the existing pre-cast panels.
- A stack or chimney effect being created by an existing mechanical chase.

The problems that have been identified may be caused by a combination of issues related to the building envelope, building configuration, and HVAC and HVAC control systems. ZMM's ability to deliver comprehensive design (A/E) services provides us the expertise to investigate and address each of these concerns. ZMM's detailed approach to this project is contained in Section 1 of this Expression of Interest.

We are confident that ZMM Architects and Engineers remains the most qualified firm to provide professional design services for the WV Lottery on this project for the following reasons:

222 Lee Street, West ▪ Charleston, West Virginia 25302
304.342.0159 office ▪ 304.345.8144 fax
zmm.com

- **Experience.** ZMM has renovated buildings throughout the region. Our experience includes a recent project at the WV Lottery Building where ZMM assisted with interior renovations, parking garage upgrades, and a roofing replacement. ZMM also has a history of providing services on improvement projects to our state's landmark buildings including the West Virginia State Capitol, the Culture Center, the Charleston Civic Center, State Office Buildings 5, 6, & 7, the Greenbrier, and the Clay Center. Many of these projects have included building envelope improvements, including State Office Building 5, 6, & 7 where ZMM provided design services to remove and replace all of the caulk located between the limestone and precast panels.

- **Quality.** ZMM has a history of providing high quality design services on renovation projects. Recent experience includes the Charleston EDGE Project, the Explorer Academy and Southside Elementary Schools (Cabell County Schools), Renovation of the Education Wing at Christ Church United Methodist, the Girl Scouts of Black Diamond Council Headquarters, Renovation of the 10th Floor of State Office Building #5, and the CFMO Expansion for the West Virginia Army National Guard. All seven projects were honored with statewide design awards. *In fact, ZMM's commitment to design quality has been recognized by the American Institute of Architects West Virginia Chapter with sixteen design awards in the last decade – an achievement unrivaled in West Virginia.*

- **Proximity.** All of the design professionals providing services for this engagement will be located out of our office on Charleston's West Side – which is ½ mile from the WV Lottery Building. With over thirty-five local employees ZMM provides an integrated design approach by delivering all building related design services including architecture, engineering (structural, mechanical, and electrical), interior design, and construction administration in-house. ZMM's team includes seven registered architects, nine professional engineers (civil, structural, mechanical, and electrical), interior and lighting designers, and construction administrators. Our architects and engineers are highly qualified, and have worked together to deliver projects with similar scope and complexity.

Thank you for taking the time to review the attached expression of interest, which has been formatted as requested. Additionally, please visit our website at www.zmm.com to see the full range of projects that we have designed, and to learn about working with ZMM from a client's perspective. We appreciate your consideration for this important assignment.

Respectfully submitted,
ZMM, Inc.

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

222 Lee Street, West ▪ Charleston, West Virginia 25302
304.342.0159 office ▪ 304.345.8144 fax
zmm.com

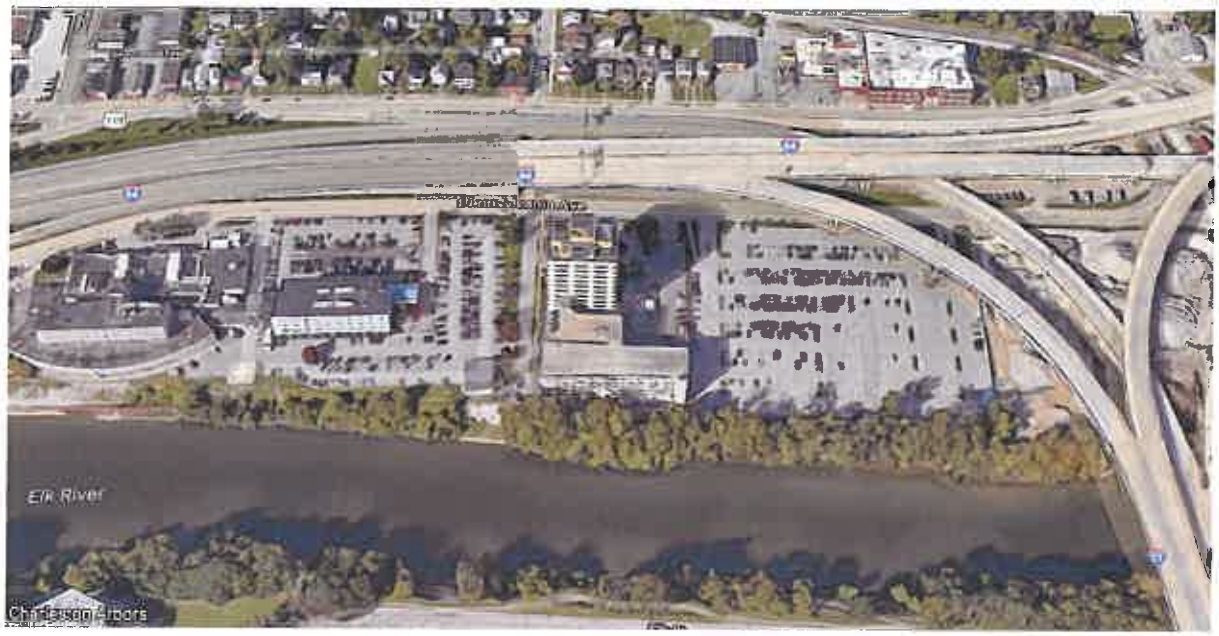
Table of Contents

ZMM ARCHITECTS ENGINEERS

WV Lottery Building Envelope Study: Approach and Methodology for Meeting Goals and Objectives

Building History/Recent Upgrades

ZMM Architects and Engineers recently assisted the West Virginia Lottery with renovations to the 7th, 8th, and 9th floors of the building located at 900 Pennsylvania Avenue. Additional improvements were undertaken to improve the roof, railings, and the structural tie-offs utilized for window washing – which will also be used to address the current building envelope upgrades. Renovations were also completed at the parking structure. These included the rehabilitation of spandrel panels, bearing pads, lighting upgrades, and the creation of additional storage areas.



Air Infiltration and Office Temperature Concerns

During times of severe cold weather office temperatures in some areas of the building are in the 55-65 degree range, and during a severe cold weather event in January 2018 an above ceiling fire sprinkler pipe froze and burst – causing significant water damage on four floors. There are several potential reasons that the WV Lottery Building is experiencing these issues. These include:

- During the first phase of the interior renovations (completed by others) the decision was made to switch the mechanical system to a VRF system. VRF systems are essentially heat pumps, and they are less effective when the temperature is below 20 ℉. This issue may be exacerbated by the fact that the WV Lottery Building is an existing structure, with a less efficient building envelope. When ZMM has encountered issues with VRF systems maintaining temperature in the past, we have attempted to resolve them through changes to HVAC control system, or by using the dedicated outdoor air system (DOAS) to provide additional supplemental heating in severe weather conditions.

- Another likely reason for the problems identified is failure of the caulking between the existing pre-cast panels. Since the panels occur between the windows (i.e. above the ceiling where the issue arose), it is possible that failure of the caulking is allowing for cold air to infiltrate the building. ZMM recently provided design services for a project to clean and re-caulk State Office Buildings 5, 6, & 7. This project also occurred after the building was damaged during an extreme cold weather related event. More information about this similar project is noted below.

- A final issue that warrants investigation is the potential that a stack or chimney effect is being created by an existing mechanical chase and the elevator shafts. This can occur when air is introduced at a

lower level, either through failed caulk joints or even the exterior doors. This issue can be resolved by making sure that the airflow around the elevator shaft is separated from the areas where air may be introduced.

Approach

ZMM would recommend that the project commence with an investigation of the structure by a team of architects and engineers. The team would evaluate the adequacy of the existing HVAC system in extreme cold weather conditions, investigate the condition of the current caulking, and determine if there are any other ways that cold air could be infiltrating the building. Based upon the results of the investigation ZMM will recommend improvements required to achieve a high-performance building envelope, while also investigating mechanical system improvements that will improve the efficiency of the existing system while also resolving the concerns related to building occupant safety and comfort.

Once the investigation is complete, ZMM will determine both short-term and long-term strategies to improve the building envelope to prevent future emergency events. Once the WV Lottery has had the opportunity to review and approve the recommendations, ZMM will develop construction and bidding documents to implement the improvements to correct the issues that have been identified. Our team will also provide construction administrative services to ensure that the improvements are implemented properly, and in a timely manner.

Similar Project Experience and Approach

More than 40 years ago, ZMM (as Zando, Martin & Milstead) designed the original West Virginia State Office Buildings 5, 6, and 7. Over the last several years, ZMM has been assisting the State of West Virginia General Services with various improvements to the buildings. The improvements commenced with an overall building assessment that examined the condition of the buildings, as well as cost and phasing options for implementing various upgrades. One of the upgrades was the clean and re-caulk the exterior panels as noted below. As with the Lottery Building the re-caulking was undertaken in response to a severe cold weather event that caused an HVAC riser to burst and damage the building.

ZMM provided design services to remove and replace all of the caulk located between the limestone and precast panels on the exterior of Buildings 5, 6, and 7. The project also included cleaning of the building's exterior along with some repair work. The project was coordinated with the Capitol Building Commission.

ZMM ARCHITECTS ENGINEERS

The existing caulk was original to the building (1970) and had faded in color, lost its elastic qualities, shrunk, cracked and was ineffective in keeping water out of the building. A caulking test was completed to investigate the best practice for replacing the caulk joints. A color was selected to best blend with the adjacent panel materials not the existing faded caulk color. After the bidding process the selected contractor was required to provide additional mock up samples with several of the closest caulk colors before the final caulk colors were approved.

In addition to the re-caulking ZMM specified that the exterior of Buildings 5, 6 & 7 be cleaned, by first soaking the exterior with water for 24 hours, and then washing with mild detergent and a mild pressure spray. This work was been completed, but gray stains were still prevalent on the precast exposed aggregate panels at the base of the buildings, even with increasing the pressure of the spray. The General Services Division requested an investigation of additional cleaning methods on the lower aggregate panels to improve the appearance of the building. These cleaning methods were requested to not adversely affect the building or its occupants.

Two additional methods were tried on sample panels as follows:

1. The first method was using a concrete cleaner applied to aggregate panels and then sprayed clean with a medium pressure spray. This method exhibited slight additional cleaning of the cement back ground bud did not appear to have any effect on the stone aggregate.

2. The second method was using some additional sand mixed into the water pressure sprayer to clean the aggregate panels. This method exhibited additional cleaning of both the concrete background and the stone aggregate.

General Services reviewed both cleaning methods and requested that additional sand mixed with the water pressure spray be completed on the bottom aggregate panels only. Other building elements were protected during the cleaning process and the water pressure used was the lowest possible to get effective cleaning.

Why is ZMM Architects and Engineers the right team to assist the WV Lottery with the Building Envelopes Study project?

ZMM's ability to provide comprehensive design (A/E) services makes our team uniquely qualified to perform on complex renovation projects. The problems that have been identified may be caused by a combination of issues related to the building envelope, building configuration, and HVAC and HVAC control systems. ZMM has the expertise to investigate and address each of these concerns. Additionally, ZMM's previous experience investigating, assessing, and providing design services on the WV Lottery Building will prove beneficial as we work to complete the proposed investigative and design effort. Perhaps most importantly, the proposed ZMM team recently assisted the WV Lottery on the interior renovation, parking garage, and roofing project. ZMM is hopeful that you observed our commitment to design quality, budget and schedule control, and client service demonstrated during this previous collaboration.

ZMM
ARCHITECTS
ENGINEERS

Firm Profile

ZMM
ARCHITECTS
ENGINEERS

LOCATION:
222 Lee Street, West
Charleston, WV

CONTACT:
Phone 304.342.0159
Fax 304.345.8144
www.zmm.com

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 from our office in Charleston. Our integrated design approach makes ZMM unique among architectural firms in West Virginia, and helps to ensure the quality of our design solutions by providing more thoroughly coordinated construction documents.

Over the last decade, ZMM has become a leader in sustainable or 'green' design in West Virginia. In addition to participating in sustainable design and construction seminars throughout the State (Beckley, Fayette County, Morgantown, Charleston, and Parkersburg), ZMM designed one of the first sustainable educational facilities in West Virginia (Lincoln County High School). ZMM's unique design approach has proven invaluable on projects that employ sustainable design principles, which often require a more integrated approach to building design.

As ZMM enters our second half-century providing professional design services in West Virginia, we remain committed to the ideal of providing high quality, client focused, design solutions that meet budget and schedule requirements. This commitment to quality has been recognized through both State and National design awards, as well as through the long-term client relationships that we have developed.

ZMM ARCHITECTS ENGINEERS

ZMM has been dedicated to the integrated approach to building design which is unique to architectural firms of our size. Our past successful experience demonstrates that providing multi-disciplined services within one organization results in a fully coordinated project. ZMM has the qualified professionals available to provide services throughout the duration of a project from the initial planning phases through post-occupancy evaluations and beyond.

Advantages of an integrated Design Approach:

- The Owner has a Single Point of Design Responsibility
- Improved Design Schedule
- Improved Coordination of Documents
- Improved Construction Phase Services
- Well Coordinated Documents Lead to Better Bids for the Owner

Additionally, ZMM is constantly working to improve the services we offer by addressing emerging and evolving trends that impact the design and construction market. ZMM has seven LEED accredited Professionals on staff to address the needs of our clients who are interested in designing buildings that meet the US Green Building Council's standards. This continues ZMM's active implementation of sustainable design principles on our projects.

Services

Pre-Design

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

Design

Architectural Design
Sustainable Design
Interior Design
Landscape Architecture
Civil Engineering
Structural Engineering
Engineering (MEP)
Energy Consumption Analysis
Net Zero Design

Post Design

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

History of G.L. Boso & Associates

G. L. Boso & associates, inc.
Consulting Engineering

LOCATION:
322 Turnpike Road
Summersville, WV 26651

CONTACT:
Phone 304.872.2911
Fax 304.872.2945

History

Established in 1994 by Gregory L. Boso, P.E., G. L. Boso & Associates, Inc. opened in Summersville, WV, emphasizing the collaborative spirit in service to their clients' varying needs. G. L. Boso & Associates continues to integrally unite design professionals who excel in their respective fields in order for the challenges and tasks of each assignment to be capably and professionally developed as well as completed. Throughout our history, we have provided a range of services to our clients from site design, building renovation, roofing replacement, and energy conservation improvements to complete design professional services for industrial and commercial facility construction from our Summersville office. For building projects, our synergistic design approach directly translates into clearly defined construction documents that result in successful project construction.

During the last decade, G. L. Boso & Associates, Inc. has been directly involved in over 90 litigation matters, with our professional engineer giving expert testimony in construction disputes. Our services encompass not only West Virginia, but Kentucky and Virginia as well. During our assistance to the legal teams in both plaintiff and defense cases, the legal documents as well as client testimony and interaction have given us a unique understanding of the impacts of construction on clients' lives. G. L. Boso & Associates' commitment to quality and professionalism has resulted in long-term and lasting relationships with our clients.

Services

Our building approach integrates complete engineering services (structural, civil, electrical, mechanical, and construction) with architecture in collaboration with our client's specific needs. All repercussions on the immediate and surrounding environment are taken into consideration as well. Understanding today's construction techniques and related construction costs allows us to integrate good design principles and conventional components with contemporary technologies resulting in high quality, client focused projects meeting scheduling and budgeting requirements, with the least amount of disturbance to the environment.

By merging the disciplines of our associated and highly qualified professionals, a single individual, as your project manager, is appointed to orchestrate each project, and will intently focus his/her energies on the project's success. The project manager is directly responsible to our client. Through this approach, G. L. Boso & Associates, Inc. has successfully completed: residential and educational site developments; commercial, industrial and military buildings; and public works projects.

- Structural building and foundation engineering
- Roofing system design and evaluation
- Construction administration services
- Resident project representation during construction
- Storm water management
- Transportation planning and design
- Water and wastewater facilities
- Commercial and industrial site development
- Residential community planning and design
- Investigative/Forensic engineering

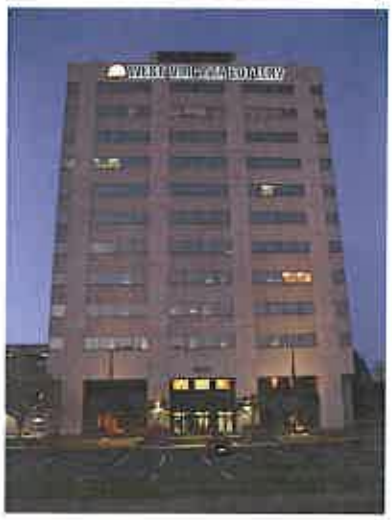
West Virginia Lottery Headquarters

Office Building and Parking Garage

ZMM ARCHITECTS ENGINEERS

LOCATION:
Charleston, WV

CONTACT:
John Myers
Cabinet Secretary for Administration
900 Pennsylvania Ave
Charleston, WV 25302
304.558.0500



The project is an extensive renovation of an existing 13-story office building and 7-story parking garage in downtown Charleston, WV. The building is currently owned and operated by the WV Lottery but also houses many other state government agencies.

Major renovations within the office building consist of the demolition and renovation of three existing tenant floors, the relocation of the existing fitness center and replacement of the existing roof. The West Virginia Division of Insurance is being relocated from their existing, outdated office space to floors 7, 8 & 9. Off the newly renovated elevator lobbies on each floor is a reception area which leads to an interior space primarily constructed of enclosed offices to better suit current department requirements. To provide contiguous floor space for the Division of Insurance an existing tenant space on the 6th floor is being demolished and renovated into the new fitness center located across from the existing Café. Construction on the roof includes the removal and replacement of the existing roof insulation and membrane and the installation of new roof davits and stainless steel guardrail meeting current OSHA requirements.

The existing precast concrete parking deck will be undergoing a widespread renovation including structural repairs and restoration, major electrical upgrades and an addition to the existing storage warehouse. After vast investigative work it was determined that bearing pads need to be replaced under the existing concrete double-tee framing members, concrete structure and topping slabs needed repair and concrete spandrel panels required epoxy injection to repair extensive cracking. Horizontal driving surfaces are receiving new waterproofing, sealant joint replacement and restriping. The circulation connector between the office building and the parking deck is in structural repair also, requiring partial demolition and reconstruction of the existing steel deck and concrete floor slabs. Electrical improvements will consist of new LED lighting throughout and additional pole fixtures on the top level along with power and life-safety upgrades. The one-story storage warehouse located underneath the existing parking deck is being increased by approximately 1,800 sf. The addition will consist of masonry exterior walls clad in EIFS with a sloped steel-framed roof and single-ply membrane system.

State Office Buildings 5,6, & 7

ZMM ARCHITECTS ENGINEERS

LOCATION:
Charleston, WV

COMPLETION:
On-Going

CONTACT:
Greg Melton
Director of General Services
Capitol Complex Building
Building 1, Room MB-60
1900 Kanawha Blvd., E.
Charleston, WV 25305
304.558.2317

More than forty (40) years ago, ZMM (as Zando, Martin, and Milstead) designed the original State Office Buildings 5, 6, & 7. Over the last several years, ZMM has been assisting the State of West Virginia General Services with various improvements to the buildings. These improvements have ranged from substantial renovations to maintenance and repair type projects, and include:

Roof Replacement
ZMM assisted the General Services Division with a roof replacement for all three buildings. The roof replacement utilized a white EPDM roofing material, with consideration being given to sustainability. The existing ballast, roof membrane, and rigid insulation were also salvaged as part of the roof replacement project. Several unused mechanical penthouses, antenas, and other abandoned equipment was also removed.

Electrical Courtyard Improvements
ZMM assisted the General Services Division with a project to expand the electrical courtyard adjacent to Building 7, and simultaneously improve the electrical service entry to buildings 5, 6, & 7. This project required both historical (matching the existing granite panels), as well as very technical electrical engineering design considerations.

Door and Window Replacement
ZMM has assisted with two separate projects, one to replace the windows in Buildings 5 & 6, and the second the replace the doors at the entries to Buildings 5, 6, & 7. These projects included building envelope and security considerations. The projects were designed and staged to minimize disturbance to the buildings occupants.

State Office Buildings 5,6, & 7

Major Renovations
ZMM provided design services for the renovation of the 10th Floor of Building 5 for the Office of Technology - a project that was recognized with a design award from the West Virginia Chapter of the American Institute of Architects. The project focused on demonstrating the potential that exists in State Office Buildings 5 & 6 if the floors are renovated 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 also involved close coordination with the State Fire Marshal, the introduction of a new sprinkler service and fire pump into the building, demolition, construction management, and hazardous material abatement. The project was delivered considerably under the anticipated project budget. ZMM has also assisted on renovations to the 8th Floor of Building 6 for the Department of Education and the 2nd, 3rd & 4th Floors of Building 6 for the Department of Education and Division of Personnel. Work on the 8th Floor of Building 6 is the only additional renovation constructed to date. ZMM has recently been released to provide design services for Floor 7, 8 & 9 of Building 5 and the 7th Floor of Building 6.

Caulk Replacement
ZMM provided design services to remove and replace all of the caulk located between the limestone and precast panels on the exterior of Buildings 5, 6, & 7. The project also included cleaning of the building's exterior along with some repair work. The project was coordinated with the Capitol Building Commission, although to date, the construction for this improvement has not commenced.

Valve Replacement
ZMM assisted with a valve replacement project to isolate mechanical risers in Building 5 & 6. This technically intensive mechanical project will give the General Services Division greater control over the system, and will help isolate various risers in the event of significant system failures in the future.

Goodwill Prosperity Center

Historic Renovation

ZMM ARCHITECTS ENGINEERS

LOCATION:
Charleston, WV

SIZE:
10,200 SF

COMPLETION:
2015

COST:
$960,000

CONTACT:
Cheri Bever, President
Goodwill Industries
215 Virginia Street, W.
Charleston, WV 25302
304.346.0811

Goodwill's newly renovated Prosperity Center is located on Virginia Street (West) in Charleston. This facility will help prepare members of the community for the workforce, and will expand Goodwill's outreach opportunities. Inside the facility is several classrooms, a computer room, and a Career Center that is equipped with all the tools needed to prepare and apply for a job. A spacious and colorful lobby provides a relaxed atmosphere for visitors. Inside the center is a "Suited for Success" room where work-appropriate clothing will be available to those who need it.

The building, which was once the Charleston Transit Authority's bus garage, underwent a major exterior transformation. Layers of stucco were removed to open up the old garage bays, and glass was infilled into these openings to give the center a tremendous amount of natural light. The original brick was exposed, repointed, and painted. The improvements made to the exterior showcase the historic nature of the building while upholding the modern amenities needed for today.

WV State Capitol Roof Replacement

ZMM ARCHITECTS ENGINEERS

LOCATION:
Charleston, WV

COMPLETION:
TBA

The West Virginia State Capitol Building was constructed in 1924-1932 and is listed on the National Register. The scope of work includes replacement of the roof on connectors and roofs above as well as the base of the dome. This project started with an in-depth study of existing drawings and site conditions and a site visit to the Capitol to ascertain the actions necessary to provide the new roof system.

The investigation included:

- Review all Roofing Components for Integrity/Ability to Control Moisture Collection/Removal
- Conduct Destructive Testing (Multiple Roofing/Flashing Systems?)
- Hazardous Material Testing of Components (Paint, Mastic, Insulation, Caulking)
- Review all Points of Roof Access: Walkways, Walkway Pads, Stairs
- Work with GSD to Develop Recommendations for the Roofing System
- Consider Building Envelope Performance/Insulation Requirements

All the roof system components will need to be reviewed for their integrity and ability to control moisture collection and removal from the building's roof. The components that are to be reviewed will include parapet walls, railings, wall conditions, colonnades, roof penetrations, roof drains, roof equipment, and walking surfaces. Investigative holes will need to be cut into the existing membrane to identify conditions of insulation, roof deck and any remains of former roofing materials and flashing systems. Test of roofing materials will need to be made for any possible hazardous materials. Our ability to provide comprehensive design solutions will be advantageous as it relates to mechanical equipment curbs and structural supports.

A report will be prepared and presented showing findings and recommendations from the investigation of all the roof conditions. The report will include recommended option for the roof membrane material, discussion of repairs to roof components, as well as any required repairs to the roof deck. Also included in the report will be a preliminary cost estimate including cost differences for each proposed option. ZMM will provide construction observation services and will work with the owner's representative during the construction process. We will be responsible for reviewing all shop drawings and questions that occur during the project. ZMM will also participate in all progress meetings and make site visits on a regular basis. ZMM will remain available to assist the state throughout the warranty phase of the project.

Charleston Civic Center Expansion and Renovation

ZMM ARCHITECTS ENGINEERS

LOCATION:
Charleston, WV

SIZE:
283,000 SF

COMPLETION:
Est. 2018

COST:
$75M

CONTACT:
Mr. David Molgaard
City Manager
City of Charleston
501 Virginia Street, E.
Room 101
Charleston, WV 25301
304.348.8014

The Charleston Civic Center Expansion and Renovation is a transformational project for both the city of Charleston and West Virginia. Our team is building on the strong authentic character of Charleston to remake the Charleston Civic Center into a more efficient, more sustainable, more dynamic and a more iconic best-in-class destination.

The design of the expansion and renovation of the Charleston Civic Center is 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, trapping. This set the local character. With a foundation rich in resources, manufacturing added value to the raw materials with crafts like glass making and industries like chemicals and energy. This attracted a rich diversity of immigrants and a culture of craftsmanship that set the urban character. The economy is shifting from industry and service to information and technology. Again, the landscape and industry that shaped the region gives Charleston real advantages to exploit. The Creative Class, critical for the information and technology age, can live and work anywhere - what they want is access to the outdoors; real places with real character; and continuous education and entertainment.

Our design starts with an organizational concept inspired by this history. The Kanawha River is the social organizing link throughout the region, with settlement zones developing on whatever flatland the river provided --creating nodes of activities among the hills and valleys.

Charleston Civic Center Expansion and Renovation

The renovated Civic Center is a building that emerges from this iconic landscape, with the architecture and topography working together. The Civic Center will also have distinct active nodes to celebrate each activity; arena, convention, and banquet, and 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 is to create separate entries and identities for the arena and convention center. This will allow for simultaneous events and clarity of use. For the convention center to thrive, it needs a real ballroom assembly space. Located overlooking the Elk River, the new ballroom pre-function space will be the most dramatic feature of the center. Together, the three glass enclosed nodes --arena lobby, convention lobby, ballroom --define a unique Charleston event campus. As described above, the spaces that connect these nodes are inspired by the hills and cut rock faces that connect the towns along the Kanawha River. With the building emerging from the landscape and expressed as cut rock walls, the connecting areas are designed to be expressive and economical backdrops to the glass boxed nodes.

While the expansion will transform the southeast to the middle of the northern zone of the site, the existing building mass will still dominate a portion of the northern and eastern campus. The dominant expression along these existing facades is the landscaped berms. As we imagined the new building expression emerging from the landscape, a strategy developed to transform these berms to reflect, at the pedestrian level, the overall design theme. Above the level of the berms, the new concourse level windows will open up the facade and provide a much needed break in the massing. The upper part of the arena will be painted in two tones to match the new building, playing off the different faces. The north, south, east and west faces painted a lighter shade; and the northeast, southeast, southwest and northwest faces a darker shade. Dramatic exterior color-changing lighting on the northeast, southeast, southwest and northwest faces will then transform the look and feel of the center into a fun and festive landmark.

Charleston EDGE Complex

ZMM ARCHITECTS ENGINEERS

LOCATION:
Charleston, WV

SIZE:
41,250 SF

COMPLETION:
TBD

COST:
$10M

CONTACT:
Mr. David Molgaard
City Manager
City of Charleston
501 Virginia Street, E.
Room 101
Charleston, WV 25301
304.348.8014

AWARD:
2018 AIA Citation Award
West Virginia Chapter
Unbuilt Project

How does West Virginia attract and retain young talent? How do we keep our children and grandchildren in the State when the opportunities for them seem to be so much brighter in other areas? How do we stop the brain drain as our best and our brightest young professionals relocate to DC, Charlotte, and other urban areas? These questions have plagued West Virginians for years, and the proposed Charleston EDGE Complex will be one piece of the solution.

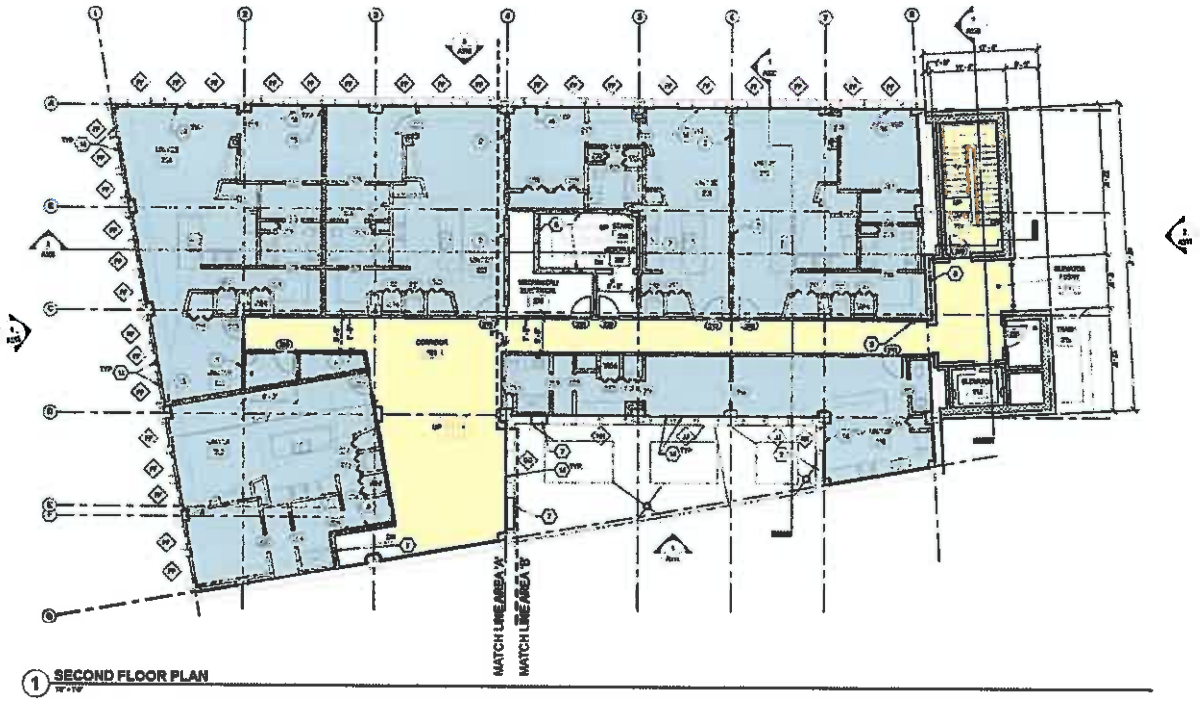
The proposed Charleston EDGE mixed use facility is unlike a traditional mixed-use development. While the facility may contain 30-40 residential units, with program space, and retail on the first level, the real purpose of EDGE is to provide a facility that will serve to provide housing and activity space for an innovative program that aims to attract and retain young talent to the Charleston community. EDGE will help to cultivate the young talent that participates in the program, and will serve as a sustainable economic development tool in our urban village district.

ZMM Architects and Engineers in association with Cooper Carry is currently assisting in the design and development of the Charleston EDGE Complex. The ZMM-Cooper Carry team conducted a visioning and design session where the design team obtained input from various community leaders and young professionals to investigate scenarios to optimize the potential development.

Charleston EDGE Complex

Following these meetings, ZMM has been developing several of the strategies to facilitate decision making by the project stakeholders. The current design solutions include a retail, lobby, and surface parking pedestal, with a variety of unit types occupying the upper levels.

The pedestal creates the opportunity for a raised amenity deck, with an adjacent club room and activity spaces. The advancements that Charleston has made to develop a vibrant downtown, create an active arts community, and engage young talent through organizations like Leadership Kanawha Valley and Generation Charleston have paid dividends for the business community – and Charleston EDGE is the next step in facilitating a bright future for the Charleston area.



1 SECOND FLOOR PLAN

West Virginia Housing Development Fund

ZMM ARCHITECTS ENGINEERS

LOCATION:
Charleston, WV

SIZE:
36,000 SF

COST:
$8.5M

COMPLETION:
2011

CONTACT:
Nancy Parsons,
Senior Director
5710 MacCorkle Ave, SE
Charleston, WV 25304
304.345.6475

AWARD:
2012 AIA Honor Award
West Virginia Chapter
Excellence in Architecture

New offices for the West Virginia Housing Development Fund (WVHDF) were developed in the Kanawha City neighborhood of Charleston on a former Brownfield site. The new building sits on two acres and houses private offices and open offices for over 100 employees, an educational training room for staff and clients, staff exercise room, executive library, and boardroom.

The result is a unique contemporary design that differentiates itself from other office buildings in the neighborhood. Glass and insulated metal panels surround three sides of the building in a subtle checkerboard pattern. Red brick grounds the educational side in tradition, yet the alternating pattern adds another subtle, modern touch.

The signature entry is defined by the two-story white brick wall projecting from the primary building envelope. The lobby on the first floor and the executive director's office on the second floor are the focal points of a common corridor housing an elevator, restrooms and mechanical/electrical spaces. The interior color scheme is based on a light gray and white background. Punches of color enhance the employees break room and accent the entrance to the executive office area.

A primary goal of the new building was to create light, bright and easily accessible spaces. Private offices are located in the center spine along the length of the building. Glass office fronts and glass doors offer in daylight from exterior glazing. The combination of glass panels and sliding doors marries employee's needs for daylight and visual privacy. A high ceiling in the open office area maximizes daylight, while sunshades on the exterior control it. The interior lighting has solar sensors and automatically dims according to the natural light levels.

The result of the attention to detail is a mitigated Brownfield site that allows for plenty employee parking spaces, plus easy access for clients; an energy efficient and day light-flooded building that has increased staff well being; a clean, sophisticated design both outside and inside; and a modern addition to the city streetscape.

Christ Church United Methodist

Educational Wing / Choir Rehearsal Renovation

ZMM ARCHITECTS ENGINEERS

LOCATION:
Charleston, WV

COST:
$4M

COMPLETION:
April 2013

CONTACT:
Rev. David Donathan,
Minister of Music & Arts
And Organist
1221 Quarrier Street
Charleston, WV 25301
304.342.0192 Ext. 210

AWARDS:
2016 AIA Merit Award
West Virginia Chapter
Achievement in
Architecture in Interior
Design

The education wing at historic Christ Church United Methodist was in need of modernization, both in infrastructure and aesthetics. ZMM's interdisciplinary team succeeded in meeting the challenges of creating the owner-requested "wow factor" in an existing building, and in coordinating construction that was phased while the building was continuously open to the public. ZMM coordinated asbestos abatement, multiple prime contracts and the owner's direct-pay items. Infrastructure design work included window replacement, new elevator, new variable refrigerant system and rooftop mechanical unit to serve the gymnasium, electrical panel and receptacle upgrades, emergency lighting and fire alarm systems.

The interior design reflects the church's various functions within the education wing, which include a daycare, classrooms, music and choir facilities, special teens area, and high quality decorative lighting in the Narthex. "The Growing Place" daycare features an expanded corridor with a winding path leading to each classroom. The classrooms are cheerful yet modern and functional, and there is a new kitchen and gathering space for parents and Sunday morning visitors. The expanded music and choir rooms were inspired by salvaged stained glass windows and provide higher levels of acoustics and storage. The lower level teen area, also known as the Wolfe-Omega Room, features hip, bright colors, kitchen, and special worship area.

Construction & Facilities Management Office

WVARNG

ZMM ARCHITECTS ENGINEERS

LOCATION:
Charleston, WV

SIZE:
19,935 SF

COST:
$3.5M

COMPLETION:
2008

CONTACT:
MAJ Dan Clevenger
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6539

AWARD:
2009 AIA Merit Award,
West Virginia Chapter,
Achievement in Architecture

The Construction and Facilities Management Office (CFMO) Expansion project will bring all of the operations of the CFMO together under one roof. The branches that will occupy this facility include: Director of Engineering, Environmental, Planning and Programming, Facility Operations & Maintenance, Business Management, Resource Management, and Design and Construction. This new facility is located slightly to the front, and adjacent to the existing facility, lending prominence to the new construction, and providing a new aesthetic to the entire complex.

This transitional space was designed to connect the two structures, while maintaining a connection to the outside through use of natural light, direct visual connections to the exterior, large volumes, irregular geometries, and the use of natural materials.

The entry design was coordinated with the Recruiting and Retention building to create an outdoor courtyard, along with new sidewalks, stairs and signage. The entry roof is sloped to provide a greater massing, while a lower canopy provides scale and protection from the elements. Large gathering and work spaces were located on the north elevation to take advantage of large expanses of glazing located to capture indirect light and views of Coonskin Park.

Wood County Justice Center

ZMM ARCHITECTS ENGINEERS

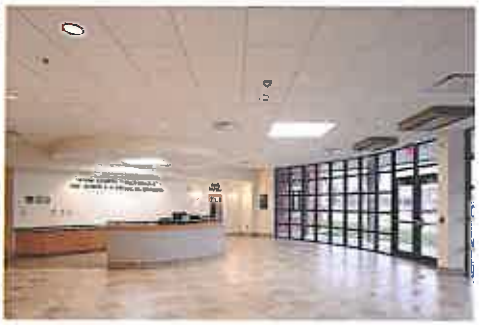
LOCATION:
Parkersburg, WV

SIZE:
32,000 SF

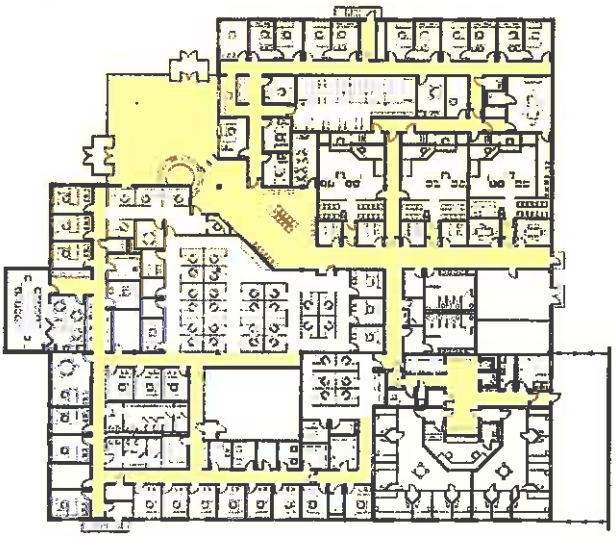
COMPLETION:
2011

PROJECT COST:
$5M

CONTACT:
Mr. Blair Couch
Commissioner
No. 1 Court Square
Suite 205
Parkersburg WV 26101
304.424.1984
dbc@woodcountywv.com



This project was an extensive renovation of a 15 year old, 32,000 square foot, single story office building located in downtown Parkersburg, West Virginia. The building was purchased by the Wood County commission with the purpose of bringing together 3 government functions that had outgrown the 3 separate buildings that they occupied.



The renovated building consists of offices and 3 Courtrooms for the County's Magistrate Court system, public service windows for document pick-up and payment of fines, offices for the Sheriff's Department and Home Confinement and a 12-hour Inmate Holding Center.

Due to the building's new use, the interior was completely demolished leaving only the shell. The building's main entrance was relocated and redesigned to provide a new, more prominent identity to the building and to align with the new parking area created by the demolition of the adjacent existing magistrate court building. The old HVAC system was removed and replaced with a more energy efficient system and new, energy efficient lighting was installed. The project was designed around the U.S. Green Building Council's New Construction and Major Renovation Guidelines and is LEED Silver Certified.

Girl Scouts of Black Diamond Council

Volunteer Resource Center and Girl Zone/Urban Camp

ZMM ARCHITECTS ENGINEERS

LOCATION:
Charleston, WV

SIZE:
27,928 SF

COST:
$5M

COMPLETION:
Fall 2013

CONTACT:
Beth Casey, CEO
GSBDC
321 Virginia Street, W.
Charleston, WV 25302
304.345.7722

AWARDS:
2014 AIA Merit Award
West Virginia Chapter
Achievement in Architecture in Interiors/Graphics

The New Girl Scouts of Black Diamond Council Volunteer Resource Center and Girl Zone/Urban Camp is located on the West Side of Charleston, WV. The 24,650 SF project completely renovates and upgrades the existing buildings at 321 Virginia Street. The buildings were built in the early and mid-1900's, and were used as a car dealership showroom and parts building until 2008. By the time the Girl Scouts took possession of the building, it had fallen into a state of disrepair. The facility required environmental remediation, and the entire roof structure was damaged and had to be removed.

The Girl Scouts of Black Diamond Council purchased the vacant buildings in 2011 with the intent of converting them into a girl-centered facility for members and a volunteer-enrichment center for program resources and training. The program for the facility includes administrative offices, community/meeting gathering spaces, as well as a small hotel (Urban Camp) for Girl Scouts visiting Charleston. The Girl Scouts undertook the effort to transform the facility, creating an architectural style that would appeal to girls and young women, while utilizing colors and materials that would not become dated.

The main building brings all of the operations of the Girl Scouts of Black Diamond Council together under one roof and on one level. This building includes a volunteer meeting room, employee office space, flexible conference spaces, and a retail shop. The Virginia Street façade of the existing facility was removed, and more contemporary elements are utilized to speak to each of the functions. The Girl Zone/ Urban Camp reflects a more residential/outdoor tone with the use of a wood veneer, while the retail store has floor to ceiling storefront.

Interior Before Pictures

The storefront is etched with images of girl scouts and scouting slogans. The storefront is backlit in the evening, allowing the entire façade to reflect the function of the building. The entry is accentuated with a more vertical element and signage, giving hierarchy to the various elements, while the office areas are recessed from the corner with smaller openings, and a masonry veneer. Each zone has a unique identity.

The adjacent Girl Zone/Urban Camp conveys the feeling of a hotel or hostel and offers a place that Girl Scouts can stay during a visit to Charleston. While the main entry to the building faces Virginia Street, the entry for the Girl Scouts will be at the rear of the building. A small addition was developed to create a "check-in" area similar to a hotel. Adjacent to the "check-in" area is a great room where troops can gather to cook, congregate, and socialize. The "hotel rooms" utilize a dormitory arrangement, while the finishes and furnishings will be more like a youth hostel than a camp. The rear of the Girl's Zone/Urban Camp will reflect a more traditional camp environment, and includes an outdoor dining area and a fire pit.

With the mixed-use functions of retail, office, and residential, this unique project will be a vibrant addition to the emergent West Side community. The modern aesthetic of the facility will appeal to Girl Scouts and reflect the one of the Girl Scout's Journeys – "It's Your World – Change It!"

Joint Interagency Training & Education Center

WVARNG

ZMM ARCHITECTS ENGINEERS

LOCATION:
Kingwood, WV

SIZE:
285,000 SF

COMPLETION:
2013

COST:
$78.4M

OWNER:
MAJ Dan Clevenger
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6446

AWARD:
2011 AIA Honor Award
West Virginia Chapter
Excellence in Architecture

ZMM Architects and Engineers, in association with AECOM, is providing architectural and engineering design services for the Joint Interagency Training and Education Center (JITEC), an Army National Guard campus-style facility for training and operational mission support. Sited on 30 acres at the northern end of Camp Dawson between the Cheat River and the foot of Brier Mountain, this 283,000-SF project includes the design of a new operations building; expansion of the billeting facility; renovation of the training facility; creation of a new base entry checkpoint and visitor center; and design for walkway connectors between all the facilities.

The project began with a review of the existing base master plan, followed by a revision of the master plan concept. JITEC is a training and educational facility – the vision behind the site design and updated master plan is that of a college campus atmosphere. The clients goal was to create a campus environment that integrates existing buildings with new ones, which was accomplished by using compatible, yet distinct building materials.

The new facilities are designed to meet all anti-terrorism/force protection criteria and are slated for LEED-NC Gold Certification from the U.S. Green Building Council. The new 82,000-SF operations building is prominently sited as the main focal point upon entering Camp Dawson through the secure access control point and visitor's center, also designed by AECOM. The building's exterior complements its West Virginia setting. The entire building front, composed of glass and pre-cast concrete walls, is open and inviting with glazing that reflects the surrounding trees and hills.

Joint Interagency Training & Education Center

Security requirements for the command center influenced the design of the attached, copper-clad "black box" that is an homage to the native rock stratification seen throughout the state.

The building consists of four distinct areas: the Joint Operations Center; a suite of secure training rooms; base headquarters and JITEC administrative offices; and a 6,000 SF server and telecommunications room.

Entry to the Joint Operations Center (JOC) is provided by a secure mantrap adjacent to a dedicated security office. Built to SCIF standards, the JOC contains a state of the art command center housing 48 permanent work stations in a theater-style configuration facing a large video wall, flanked by conference rooms and offices for both officers and support staff. Within the JOC is a secure area consisting of workstations, offices, and two divisible conference rooms with secure video conferencing capabilities. The secure area construction dictates a windowless environment, requiring proper lighting and creative use of materials to create an agreeable work atmosphere.

The 180,000-SF billeting (hotel) expansion more than triples the facility size and increases the total capacity from 189 guest rooms to 600 guest rooms and suites. Designed to relate to the existing architecture with similar scale, materials, textures, and massing, the addition also brings in new elements, such as iconic glazed building corner elements, to integrate the design of the new operations building. A new dedicated lobby with terrazzo tile flooring leads to a monumental stair with terrazzo treads, open risers, and a glass/stainless steel railing for access to the open lounge areas on the second and third floors.

The lobby's design provides a hotel atmosphere, underscored by the new Liberty Lounge, an upscale bar and restaurant area, with wood finishes salvaged from the gymnasium floor in the existing headquarters building. The new six "executive suites", are designed to the full amenities of corporate hotels.

State Office Building #5, 10th Floor

Office of Technology

ZMM ARCHITECTS ENGINEERS

LOCATION:
Charleston, WV

SIZE:
22,000SF

COST:
$3.7M

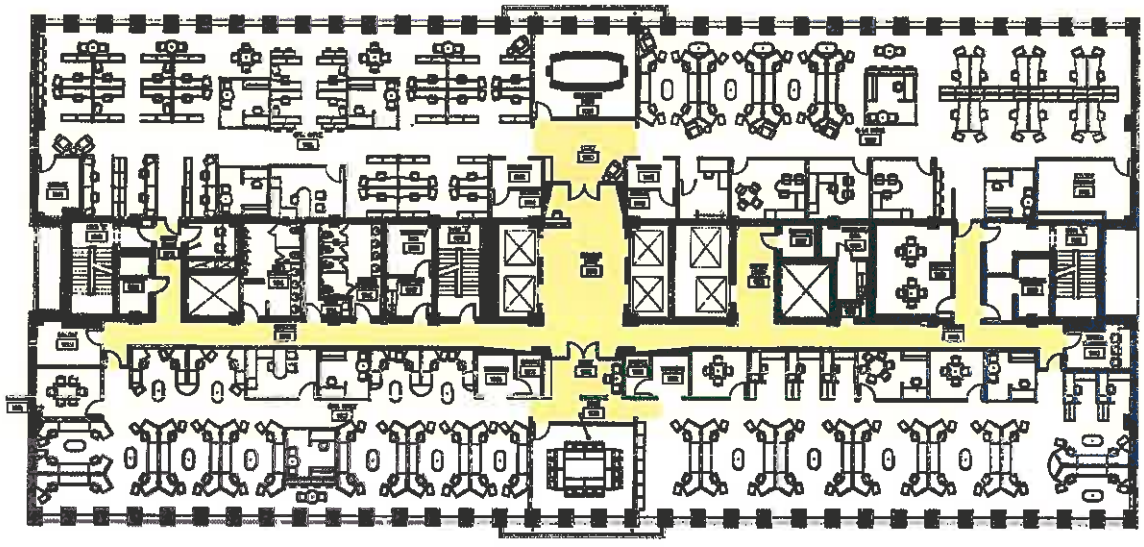
COMPLETION:
2010

CONTACT:
Ross Taylor
Cabinet Secretary
Department of Admin.
Building 1, Room E119
Charleston, WV 25305
304.558.4331

AWARD:
2011 AIA Merit Award
West Virginia Chapter
Achievement in Architecture Interiors

The renovation of the tenth floor of State Office Building #5 on the State of West Virginia Capitol Campus was recently completed for the Office of Technology. The renovation was designed to meet the United States Green Building Council's LEED for Commercial Interiors standard. To commence the project, ZMM conducted a detailed investigation of State Office Buildings 5, 6, & 7, which included recommendations for improvement of the facilities. The renovation of the 10th floor of Building #5 was the first major interior renovation project that responded to the recommendations. The renovation was technically intensive, and included demolition of the existing construction back to the building structure, as well as significant hazardous material abatement.

ZMM, working with the State of West Virginia General Services Division, the Real Estate Division, and the Office of Technology developed a strategy to renovate 22,000 SF of space to accommodate 137 employees. The design includes a mix of private and open office space, and responds to current workplace trends. The renovations include a low profile cable management system which maximizes the flexibility of the space. ZMM also developed the interior, furniture, fixture, and equipment design with significant coordination with the Office of Technology.



State Office Building #5, 10th Floor

To improve the opportunity for daylighting, office spaces have been "pulled-in" to the core of the building. This decision will allow for daylight to be introduced deep into the interior work areas, and will allow access to the daylight and views for all employees. The perimeter structural bays of the open office areas have a "coffered" ceiling. Ductwork for mechanical distribution is terminated at a bulkhead at the interior edge of the perimeter structural bay, allowing for more open volume and a more contemporary aesthetic.

The design of the 10th floor renovation also provided the opportunity to introduce a standard "transverse" core will be developed throughout State Office Buildings 5 & 6. The transverse core includes all of the major entry, meeting, and workroom functions. In addition to the office areas, the elevator lobby has been updated to create a consistent look and level of finish at the entry point to the Office of Technology.

Nicholas County Commission

Energy Efficiency Improvements

G BOSO & associates, inc.
Consulting Engineering

LOCATION:
Summersville, WV

COMPLETION:
2012

COST:
$122,600

CONTACT:
Dr. Yancy Short, President
Nicholas County Commission
700 Main Street
Summersville, WV 26651
304.872.7830

Grant procurement assistance and engineering design services were provided to the Nicholas County Commission to obtain a $122,600 Energy Efficiency Improvement Grant through the Region IV Planning and Development Council and WV Division of Energy and execute the improvement plan. Energy conservation improvements accomplished under the grant included replacement of the 50-ton chiller serving the Nicholas County Courthouse as well as replacing the domestic hot-water supply with a gas-fired, tankless water heater and recirculating system.

The water heating system's operation during normal periods of occupancy will improve energy efficiency and will reduce unnecessary water consumption. The new 52-ton scroll compressor, air-cooled water chiller required improvements to the building's 3-phase electrical system. Translating operating controllers were incorporated with the chiller's operating system anticipating future improvements to the courthouse that can take advantage of the automated controller system.

New Hydraulic Remanufacturing Facility

G BOSO & associates, inc.
Consulting Engineering

LOCATION:
Beaver, WV

SIZE:
40,000 SF

COST:
$2.68M

CONTACT:
Greg Skeens,
General Manager
Brake Supply Heavy Equip.
278 Commerce Drive
Beaver, WV 25813
304.252.6241

Complete engineering and architectural planning and design services were provided through the general contractor to Brake Supply Company for their new 40,000 square foot hydraulic remanufacturing facility constructed in the Raleigh County Memorial Airport Industrial Park, Beaver, WV. Services included complete site and facility planning as well as design of the site's grading, storm water management and transportation circulation.

Building programming and design included two top-running overhead cranes, as well as 4,000 square feet of administrative offices and staff support areas with light storage on the mezzanine above the staff support area in addition to the 36,000 square feet of industrial hydraulic machining and remanufacturing with parts storage.

Summersville Municipal Building

Roof Replacement

G BOSO & associates, inc.
Consulting Engineering

LOCATION:
Summersville, WV

COMPLETION:
2011

COST:
$75,603

CONTACT:
Robert Shafer, Mayor
City of Summersville
400 Board Street
Summersville, WV 26651
304.872.1211

Complete engineering design services assisted the City of Summersville to replace a leaking EPDM membrane covering the city's office building. Due to the leakage in an isolated region of the roof, partial tear-off of the insulating system was required prior to additional tapered insulation being applied to improve energy efficiency and promote precipitation water movement to interior roof drains.

A 15-year warranted, 60-mil EPDM roof was installed with applied walkway designation and edge warning strips to improve hazard notification to individuals working on the roof.

Gauley River Elementary School

Roof Replacement

G BOSO & associates, inc.
Consulting Engineering

LOCATION:
Craigsville, WV

COST:
$9.2M

CONTACT:
Keith Butcher, Superintendent
Nicholas County BOE
400 Old Main Drive
Summersville, WV 26651
304.872.3611

Resident Project Representation services to the Nicholas County Board of Education providing review of the new 47,800 square foot Gauley River Elementary School in Craigsville, WV. Responsibilities during full-time project review of this multi-prime construction project include: reviewing and documenting the construction; maintaining records of the work's progress; coordinating conflicts between elements of construction; conducting monthly site meetings; and serving as the Owner's site representative in conformance with the WV School Building Authority's "Clerk of the Works" guidelines. Complex soil issues at the site required detailed monitoring of initial site fill system's construction.

Adam R. Krason, AIA, LEED AP, ALEP

Role
Principal

Professional Registrations
Registered Architect (WV, OH, KY, VA, MD, NJ)
LEED Accredited Professional
Accredited Learning Environment Professional
NCARB (55,984)
Construction Specifications Institute (CSI)
Construction Documents Technician (CDT)

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 in West Virginia, participating in a variety of sustainable design seminars throughout the State, and serving on the West Virginia School Building Authority Green Schools Sub-Committee. Recently, Mr. Krason helped coordinate the "Making the Business Case for Sustainability" conference at the University of Charleston that included speakers from Armstrong Industries, American Electric Power, CB Richard Ellis, and Interface Raise. Mr. Krason also assisted Habitat for Humanity Kanawha and Putnam County develop a commercial recycling program to fill a void in the sustainable design infrastructure in West Virginia. Mr. Krason has noted that, "I became a LEED Accredited Professional because I believe that good design has value, and the ability to impact our daily lives. Sustainable design showcases the value of design through demonstrated improvements in the performance of the students and employees who occupy our buildings." In addition to his design and project management responsibilities, Mr. Krason serves on the Board of Directors and is responsible for business development at ZMM.

Project Experience
Charleston Civic Center, Charleston, WV
Mr. Krason is serving as principal-in-charge of the expansion and renovation to the Charleston Civic Center. The $75M, 283,000 SF design-build project is being completed as a

Education
Bachelor of Architecture, The Catholic University of America, 1998

Bachelor of Civil Engineering, The Catholic University of America, 1997

Employment History
2007 - Present, Principal, ZMM
2007 - Present, Board of Directors, ZMM
2003 - Present, Architect, Project Manager, ZMM
1998 - 2003, Architect, Project Manager, Charleston Area Architectural Firm

Civic Affiliations
- WV American Institute of Architects, President
- Habitat for Humanity Kanawha & Putnam County, Board of Directors 2011 - 2014
- WV Qualification Based Selections Council, President, 2012/2013
- Leadership WV 2010 - 2012
- Charleston Rotary
- West Side Main Street, Board of Directors 2008 - 2014
- City of Charleston Land Trust 2008 - 2014

collaboration with tvsdesign and BBL Carlton. Mr. Krason is responsible for the overall management of the design team, coordination with the client, and also has input critical project management decisions. The design commenced in the spring of 2015, and construction is scheduled for completion in 2018.

State Office Building #5, 10th Floor Renovation (Office of Technology), Charleston, WV
Mr. Krason led an architectural and engineering team that completed a detailed assessment of State Office Buildings 5, 6, & 7. Once the assessment was complete, ZMM had the opportunity to implement the proposed improvements on the 10th Floor of State Office Building #5 for the Office of Technology. The renovations, aiming for LEED-CI Certification, re-oriented the layout by drawing all private offices into the building core, providing access to daylight and views for all employees. The design also utilized acoustical ceiling clouds and bulkheads to maximize the acoustical performance, while also increasing the volume of the space.

Joint Interagency Training & Education Center (WVARNG), Kingwood, WV Mr. Krason was responsible for the preliminary programming, and participated in the schematic design of the 180,000 SF addition to the Regional Training Institute at Camp Dawson. Mr. Krason was also responsible for managing the production effort for the billeting (hotel) expansion, which increased the total billeting capacity at the JITEC to 600 rooms. This project received LEED Gold Certification.

Morgantown Readiness Center (WVARNG), Morgantown, WV
Mr. Krason was the project architect on the new Morgantown Readiness Center. This facility is a unique due to its location on an abandoned airport runway at the Morgantown Municipal Airport. The 54,000 SF Readiness Center occupies a 35-acre tract at the airport. This center supports traditional military functions including the 1-201st Field Artillery. A significant portion of the Morgantown Readiness Center supports the 249th Army Band. The Readiness Center contains a performance hall, pre-function spaces, as well as a variety of training and rehearsal areas.

Construction and Facilities Management Office Expansion (WVARNG), Charleston, WV
Mr. Krason was responsible for the programming, architectural design, and project management of the office expansion. The project included the renovation and addition to an existing pre-engineered metal building. The design, which was honored with a 2009 AIA Merit Award, focused the client's resources on a new entry and corridor that separated the existing office space from the addition.

Bridgemont Community and Technical College - Davis Hall Renovation and Master Plan, Montgomery, WV Mr. Krason led an architectural and engineering investigation into the condition of Davis Hall to help Bridgemont Community and Technical College to develop a scope for the current renovation project, as well as a plan to undertake deferred maintenance at the facility. The project scope included remedying several life safety deficiencies, as well as improvements to the building envelope.

Edgewood Elementary School, Charleston, WV
Mr. Krason was the project manager on the new Kanawha County Elementary School on Charleston's West Side. The school is being designed as a 21st Century Learning Environment, with a focus on integrating technology into the delivery of the curriculum. Instructional areas will be located off of an open 'exploratorium' that is being designed to function like a children's museum, providing a variety of learning opportunities, and flexible educational spaces. The school will also visibly integrate sustainable design principles to serve as a teaching tool for the students. Mr. Krason worked with students from Watts and Robbins Elementary Schools in Kanawha County, assisting them in an effort to actively participate in the design process

Participated on the team that won the following awards and acknowledgements:
2017 WV AIA Merit Award Logan-Mingo Readiness Center, Holden, WV
2016 WV AIA Merit Award Christ Church United Methodist, Charleston, WV
2015 WV AIA Merit Award Edgewood Elementary School, Charleston, WV
2014 WV AIA Merit Award Girl Scouts of Black Diamond Council, Charleston, WV
2011 WV AIA Honor Award Joint Interagency Training and Education Center (JITEC), Kingwood, WV
2011 AIA Honor Award State Office Building #5, 10th Floor Renovation, Charleston, WV
2009 AIA Merit Award WVARNG Construction and Facilities Management Office, Charleston, WV

Gregory L. Boso, PE

G L Boso & associates, inc.
Consulting Engineering

Role
Consulting Engineer

Professional Registrations
Professional Engineer (WV, VA, KY, MN, IN, PA, OH)

Directs the operations of G. L. Boso & Associates, Inc., and is responsible for all consulting services provided by the firm. Prepares project budgets, develops project schedules and provides complete project administration. Building projects require resolution of engineering and architectural issues each having interrelated issues. In the past, has directed the engineering planning and design functions related to various building construction projects as well as primary and secondary schools. This involvement has been instrumental in the completion of:

- Appalachian Partnership Office Renovation, National Fish Hatchery, White Sulphur Springs, WV. Renovation of a turn of the 20th century, two-story home into a modernized office to serve this fisheries liaison arm of the US Fish and Wildlife Service; conducted in concert with Bluescope Construction of Kansas City, MO.

- Camden-on-Gauley Medical Center, Camden-on-Gauley, WV. Prepared facility design of the existing 10,500 SF medical center's renovations. Additional project responsibilities included scheduling and coordinating the construction to maintain facility operations during the renovation process.

- Brake Supply Company, Beaver, Raleigh County, WV. Delivered complete project management and direction of the design-build construction for the 40,000 SF hydraulic remanufacturing facility. Also provided the required engineering for site development, transportation circulation and parking, storm water management and foundation engineering on the 5 acre site within the Raleigh County Memorial Airport Industrial Park.

- Southridge Grand Prix Family Fun Center, Charleston WV. Provided project direction, design and site management of the design-build construction for the 63,750 SF entertainment center and executive office complex. Directly provided design engineering which included foundation system design utilizing a complex caisson foundation system, site preparation design, site and building utility service design as well as traffic circulation and parking design. Orchestrated the architectural design as well as the structural, mechanical, plumbing and electrical engineering services.

Education
BS, Civil Engineering, West Virginia Institute of Technology, Montgomery, WV, 1980

Employment History
1994 - Present, President, G L Boso & Associates, Inc
2002 - Present, President, Boso & Boso
1998 - 2002, VP, Boso & Boso
1990 - 1994, Project Manager, Environmental Design Group, Inc
1989 - 1990, Engineering Manager, Computects

Civic Affiliations
- National Society of Professional Engineers
- National Academy of Forensic Engineers
- International Code Council
- American Society of Civil Engineers

- WVANG CATS/CATM Building, Charleston, WV. Created and executed the complete project design and directed the construction of a 2,400 SF, pre-engineered metal building and associated finishes for this facility used to train the base Military Police. Project design conformed to the Air National Guard's building program guidelines.

- WVANG Hazardous Materials Pharmacy, Charleston, WV. Prepared the complete project design and directed the construction of a 2,400 SF building used to inventory and control hazardous materials used at the WV Air National Guard base.

- WV Department of Highways, Wyoming County Headquarters, Pineville, West Virginia. Provided complete building engineering design and construction administration services. Structural design included support for the clearspan roof truss system and a reserve equipment storage mezzanine above the administrative offices.

- Nicholas County Courthouse Elevator Installation Project, Summersville, West Virginia. Planned the design of renovations to the historic Nicholas County Courthouse to include a three-level elevator. Also assisted the county commission through construction by providing construction administration services.

- Western Greenbrier Junior High School, Rupert, West Virginia. Engineered the site development requirements including earthwork, storm water management, utilities and transportation systems. Design of the site access roadway was prepared in accordance with WVDOT requirements for incorporation into the state roadway system.

Additional Project Experience

- Gauley River Elementary School, Craigsville, West Virginia.
- Nicholas County Courthouse Chiller Replacement, Summersville, West Virginia.
- City of Summersville, Municipal Building Roof Replacement, Summersville, West Virginia.
- Nicholas County High School, Summersville, West Virginia.
- Summersville Junior High School, Summersville, West Virginia.
- Mountainview Elementary School, Morgantown, West Virginia.
- Cheat Lake Elementary School, Monongalia County, West Virginia.
- West Area Middle School, Westover, West Virginia.
- Cabell Midland High School, Ona, West Virginia.
- Ritchie County High/Middle School, Ellenboro, West Virginia.

Areas of Practice

- Building Construction
- Construction Administration/Observation
- Engineering and Construction Project Scheduling
- Project Estimating
- Construction Project Resident Engineering
- Residential, Commercial and Industrial Site Development Engineering and Construction
- Transportation Engineering
- Forensic Engineering
- Expert Testimony
- Building Code Administration and Enforcement
- Wastewater Collection, Pumping and Treatment
- Engineering and Construction
- Water Distribution, Storage and Treatment
- Engineering and Construction
- Storm Water and Flood Plain Management

Rodney Pauley, AIA

ZMM ARCHITECTS & ENGINEERS

Role
Project Manager

Professional Registrations
Registered Architect (WV)

Mr. Pauley is responsible for overseeing the daily design and production of the building, working in conjunction with in-house architectural, interiors and engineering staff to ensure the building not only meets the program requirements and budget, but meet the long-term needs of the owner. He also works directly with project principals to manage contracts, staffing and project deliverables. Mr. Pauley has a broad knowledge of building materials and services, building codes, and construction techniques, along with extensive experience in architectural detailing.

Mr. Pauley began his career in 1992 with an architectural firm in Atlanta, Georgia, and for the next 12 years rose to the Associate level by designing and managing a wide variety of project types including educational, retail, historic renovation, medical, and entertainment, specializing in office and speculative office design.

From 2005 through 2010, he worked at a number of Atlanta firms designing and managing office, high-rise condominium, and hotel projects. In 2010, Mr. Pauley moved back to Charleston, WV, to take a project management position with ZMM where he supervises the design and production of military, correctional and higher education projects.

Project Experience

WV Division of Juvenile Service – Davis Hall (unbuilt)
Mr. Pauley was the project manager on the design team that prepared construction documents for the renovation to an existing juvenile corrections campus for women. The project scope included the demolition of two buildings, the interior renovation of the 6,800 SF education building, and a major reconstruction to the 10,000 SF gymnasium which includes two major additions for dining and living facilities. An entrance and parking area will be reconfigured to provide additional spaces, a sally port and perimeter security fencing.

Morgantown Readiness Center, Morgantown, WV
Mr. Pauley was the project manager for the 58,000 square foot multi-use facility which includes assembly rooms, kitchen and dining facilities, military supply storage as well as locker rooms. The building is also designed to house the 249th Army Band

Education
Bachelor of Architecture, University of Tennessee, 1992

Associate of Science, West Virginia Institute of Technology, 1986

Employment History
2010 - Present, Project Manager, ZMM
2008 - 2010, Project Manager, GA Firm
2006 - 2008, Project Manager, GA Firm
2005 - 2006, Sr. Project Architect, GA Firm
Jan. 2005 - Aug. 2005, Project Architect, VA Firm

Civic Affiliations
- American Institute of Architects, Member

and their associated practice and support spaces. This area is highlighted by a 150-seat auditorium and state-of-the-art main rehearsal stage. This project is aiming for LEED Silver Certification.

Valley Health Systems, Wayne, WV
Mr. Pauley was the project manager on the new health clinic in Wayne, WV. ZMM prepared construction documents for a new, one-story medical building operated by Valley Health Systems of Huntington, WV. The building is 15,580SF on a 2-acre site including approximately 100 parking spaces. Valley Health Systems provides primary and preventative care to the medically underserved population of southern West Virginia. The new building will replace an existing undersized facility.

Charleston Civic Center, Charleston, WV
Mr. Pauley is serving as project manager on the expansion and renovation to the Charleston Civic Center. The $75M, 283,000 SF design-build project is being completed as a collaboration with tvsdesign and BBL Carlton. The design commenced in the spring of 2015, and construction is scheduled for completion in 2018.

Bridgemont Community and Technical College - Master Plan, Montgomery, WV
As part of an effort to provide overall Master Plan services to Bridgemont CTC, ZMM worked with various stakeholders to develop a Master Plan for Bridgemont's current and future facilities at the Tech Park. The Master Plan incorporated the need to develop a consistency between Bridgemont's Montgomery and South Charleston campuses, while also integrating the Bridgemont brand into the Park. The final design included planning for a new classroom and laboratory building adjacent to Building 704, across from the Advanced Technology Center. Signage, site circulation, parking, and campus amenities were also included in this planning process.

WVU Institute of Technology, Montgomery, WV
Mr. Pauley was the project manager responsible for owner coordination and construction document production for renovations to the Engineering Classroom Building at the WVU Institute of Technology campus in Montgomery, WV. The main project scope included various minor interior renovations to the existing 44,000 SF building in support of the Owner's replacement of the building's two elevators. Coordination was critical between ZMM, WVU, the owner's elevator supplier & installer and the WV Division of Labor.

WV Lottery Headquarters, Charleston, WV
Mr. Pauley is the project manager for a design team that is currently preparing construction documents for renovations to the existing WW Lottery Headquarters complex in Charleston, WV. Renovations to the existing 12-story office building include the demolition and reconstruction of three floors of tenant space and demolition and replacement of the existing roof along with various minor renovations throughout the office tower. The existing 5-story parking deck will undergo an extensive structural renovation, includes: replacing bearing pads, patch & repair of concrete members and the addition of waterproofing protection. The existing warehouse under the parking deck is being enlarged to provide additional storage space.

Beech Fork State Park, Lavalette, WV
Mr. Pauley was the project manager for new lodge and conference center at Beech Fork State Park. The facility will include guestrooms and other guest-only facilities in one area and public functions such as the restaurant, lounge, gift shop, and conference rooms in another area. All guestrooms offer a lake view, a 2-story atrium opens up each end of the lobby with curtain-wall glazing, and an indoor pool provides a transparent connection to the outdoors. A high-performance envelope was designed to eliminate thermal bridging and the potential for condensation.

Bridgemont Community and Technical College (Davis Hall, Building 704), Montgomery, WV Mr. Pauley is the project manager for a design team that is currently preparing construction documents for the renovation to an existing 7-story, 77,000 SF educational building. The project scope includes remedying several engineering and life safety deficiencies, as well as architectural improvements to the building envelope.

Robert Doeffinger, PE

Role
Engineering Principal

Professional Registrations
Professional Engineer (WV, VA, PA, OH, TN, KY, NY, NH, ME, NC, SC, FL, NJ, GA)

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 35 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.

Project Experience
Charleston Civic Center, Charleston, WV
Mr. Doeffinger is the mechanical project engineer on the expansion and renovation to the Charleston Civic Center project. The $75M, 283,000 SF design-build project is being completed as a collaboration with tvsdesign and BBL Carlton. The design commenced in the spring of 2015, and construction is scheduled for completion in 2018. The mechanical design is expected to reduce the energy requirements defined by ASHRAE 90.1-2013 by an estimated 25% and extensive water savings will be shown. The project includes a new chilled and hot water central plant with extensive replacement and upgrades to the facilities existing mechanical systems. Multiple phases of construction will allow the Civic Center to remain operational throughout the construction progress.

Education
Master of Science Architectural Engineering, Pennsylvania State University, 1976

Bachelor of Science Mechanical Engineering, West Virginia University, 1973

Employment History
2005 - Present, President, ZMM
1976 - 2005, Vice President and Engineering Principal, ZMM

Civic Affiliations
- ASHRAE – Member of the Technical Committee Load Calculations Data and Procedures for 15 years, serving as chairman. Presently Chairman of the Research Subcommittee
- 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

State Office Buildings #5, 10th Floor Charleston, WV Mr. Doeffinger was the Project Engineer for this renovation project The renovation of the tenth floor of State Office Building #5 on the State of West Virginia Capitol Campus was recently completed for the Office of Technology. The renovation was designed to meet the United States Green Building Council's LEED for Commercial Interiors standard. The renovations also include a low profile cable management system which maximizes the flexibility of the space. To commence the project, ZMM conducted a detailed investigation of State Office Buildings 5, 6, & 7, which included recommendations for improvement of the facilities. The renovation of the 10th floor of Building #5 was the first major interior renovation project that responded to the recommendations.

West Virginia Capitol Complex - Buildings #5, 6, & 7, Charleston, WV Mr. Doeffinger was the Project Engineer for the in-depth analysis of Buildings #5,6,& 7 at the State Capitol Campus. The study included the preparation of as-built plans, as well as an analysis of all building systems, including: Life Safety; Vertical Transportation; Mechanical; Electrical; Data; Façade; Structure; and Roofing. The analysis also included a study related to potential hazardous materials in the facility.

West Virginia Regional Jails, Mr. Doeffinger was the Project Engineer on ten West Virginia Regional Jails. In 2009 he was responsible for the HVAC renovation on four regional jails, including the replacement of rooftop HVAC units and Building Automation Systems.

West Virginia Army National Guard, Joint Interagency Training & Education Center, Camp Dawson, WV Mr. Doeffinger was responsible for the mechanical engineering design of the 600 room billeting expansion to the Regional Training Institute at Camp Dawson. The project is served by a 4 - pipe hot and chilled water system with an energy recovery ventilation system. This project received LEED Gold Certification.

West Virginia Research, Education, and Technology – Building 704, South Charleston WV Mr. Doeffinger is the engineering principal-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. Bridgemont began utilizing the facilities for instruction in the Spring of 2011.

West Virginia Regional Technology Park (WVRTP) - Building 740, South Charleston WV Mr. Doeffinger is the engineering principal-in-charge of the new Steam Plant for Building 740. This project involves designing and constructing the Interim Steam Heating System throughout Building 740.

Bridgemont (BridgeValley) Community and Technical College Davis Hall Renovation, Montgomery, WV Mr. Doeffinger led an architectural and engineering investigation into the condition of Davis Hall to help Bridgemont Community and Technical College to develop a scope for the current renovation project, as well as a plan to undertake deferred maintenance at the facility. The project scope included remedying several life safety deficiencies, as well as improvements to the building envelope.

NGK Oxygen Sensor and Spark Plug Plant, Sissonville, WV Mr. Doeffinger was in charge of engineering design of the 250,000 SF NGK facility. The most recent 130,000 SF expansion moved NGK's spark plug production for the west coast to West Virginia. For both the oxygen sensor plant and spark plug plant Mr. Doeffinger designed a cycle water system for the manufacturing equipment.

The Plaza at King of Prussia, Pittsburgh, PA One of the largest retail centers in the east. Mr. Doeffinger has performed engineering services for the past 20 years. The project consists of a 5,000 -ton chilled water plant and 1,500,000 cfm variable volume system for tenants and constant volume air system for common areas and an engineered smoke control system. The most recent project is a 2011, 100,000 square foot expansion of tenant spaces, a renovation of the food court, and a 1,250-ton chiller addition to the central chilled water plant.

Carly Chapman

Role
Interior Designer

Mrs. Chapman serves as the Interior Designer at ZMM. Mrs. Chapman takes pride in her work's originality and always strives to help the client's vision and intent come alive in the design process. Her experience at ZMM includes Education, Municipal, Residential, Healthcare, and Hospitality projects. In her past position she focused on both Corporate and Healthcare design. Mrs. Chapman's responsibilities include conducting design proposals and presentations, as well as producing design documents and specifications relating to all aspects of interior design.

Project Experience
Mrs. Chapman has served as the interior designer for a variety of projects. Projects range from renovations to new construction and is comprised of every industry. Her responsibilities include design concept, presentation, documentation, specification writing, and architectural drafting.

Fayette County Schools, PK-2 & New Collins Middle, Oak Hill, WV
These schools were designed as separate schools sharing the same site and are connected by a mechanical wing. This building called for a challenging design concept. The schools each had their own unique design theme, but were delicately connected in small aspects of color or architectural techniques, allowing the interiors to flow seamlessly.

Charleston Civic Center, Charleston, WV
Mrs. Chapman is currently assisting in the construction administration and interiors of the expansion and renovation to the Charleston Civic Center. The $75M, 283,000 SF design-build project is being completed as a collaboration with tvsdesign and BBL Carlton. Construction is scheduled for completion in 2018.

ARH Chemotherapy, Beckley, WV
This project was a renovation of a hospital wing to be redesigned for optimal health and wellness for patients undergoing chemotherapy treatment. Both aesthetics and general sanitary design requirements were crucial to making this project successful.

Valley Park Community Center, Hurricane, WV
The new community center will be replacing an existing structure that was recently demolished earlier this year. The

Education
Bachelor of Interior Design, University of Charleston, 2012

Employment History
2016 - Present, Interior Designer, ZMM
2012 - 2016, Project Manager/Interior Designer, Contemporary Galleries, Inc.
2003 - Present, Architect, Project Manager, ZMM
2010 - 2012, Interior Design Intern, ZMM

new building will house a commercial kitchen, administration wing, ballroom, and a locker room complex with administration quarters for the attached Wave Pool.

Charleston Edge, Charleston, WV
The Charleston Edge renovation focused on bringing life to an old existing structure in the heart of downtown Charleston. The concept of the design was to create contemporary living quarters for the young urbanites of the city, while also providing a communitive atmosphere by including a rooftop gathering space for locals to enjoy.

CAMC Post Op, Teays Valley, WV
This project was a renovation of a hospital wing to be redesigned for recovery of Post Operation patients. This project included patient rooms, nurse's stations, and designing the space for optimal health and wellbeing.

Clarksburg, Richmond, Huntington, Salem VA Hospitals
During previous employment, Mrs. Chapman was heavily involved with renovations to various VA hospitals. Renovations included redesign implementing DIRTT wall systems, renovations to nurse, admirative and patient areas, as well as common's areas.

Samuel Butzer, PE, LEED AP BD+C

Role
Mechanical Project Engineer

Professional Registrations
Professional Engineer (WV, WI, IL)
LEED Accredited Professional

Mr. Butzer is a registered Professional Engineer with design experience in HVAC, Piping (Mechanical, Industrial, Laboratory, Medical Gas), Fire Protection and Plumbing systems. He has been responsible for an extensive range of projects that include Hospitals, Civic Complexes, Laboratories, Medical and Dental Office Buildings, Retail, Military Installations, Churches, Restaurants, K-12 Schools, Higher Education Facilities, Pharmaceutical Manufacturing, Natatoriums and Historical Renovations.

Mr. Butzer began his career in engineering with a mechanical contractor located in Wisconsin. His collective engineering experience includes projects that were design-build, design-assist and plan & spec. His background in engineering and 3D BIM design and coordination has provided him with extensive experience in the "real world" of HVAC and piping constructability. That experience has forged him into a leader at the integration of all construction disciplines into a multitude of building types and space constraints.

Mr. Butzer's dedication to the community and his civic affiliations demonstrates a strong connection to the engineering principles of energy efficiency, sustainability, occupant comfort and health.

Project Experience
Harrisville Elementary School, Harrisville, WV
Mr. Butzer was responsible for designing the HVAC systems for the renovation and additions to the elementary school. Initial design development consisted of variable refrigerant flow (VRF) systems coupled with dedicated outdoor air (DOAS) systems for the Classrooms and Administration areas. Roof mounted air conditioning and exhaust equipment were provided for the new Cafeteria, Kitchen and existing Gymnasium. Budget and space constraints forced the design to evolve into individual, self-contained, interior air handling units for each Classroom. The units were able to meet ASHRAE 62.1 requirements for ventilation, the Acoustical Society of America's (ASA) requirement for sound, and every other standard such as individual classroom temperature and

Education
Bachelor of Science, Mechanical Engineering, University of Wisconsin at Madison, 2007

Associate of Science, Madison Area Technical College, Madison, WI, 2004

Employment History
2018 - Present, Board of Directors, ZMM
2013 - Present, Project Engineer, ZMM
2007 - 2013, Mechanical Engineer, WI
2005 - 2007, Mechanical Engineer Intern, UW-Madison FP&M

Civic Affiliations
- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), President of West Virginia State Chapter
- United States Green Building Council (USGBC), Board Member of West Virginia State Chapter
- Marshall University Engineering Advisory Board Member
- Kanawha City Community Association Board Member

dehumidification control as set forth by the School Building Authority (SBA).

Charleston Civic Center, Charleston, WV
Mr. Butzer is the Mechanical Project Engineer on the expansion and renovation to the Charleston Civic Center project. The $75M, 283,000 SF design-build project is being completed as a collaboration with tvsdesign and BBL Carlton. The design commenced in the spring of 2015, and construction is scheduled for completion in 2018. The mechanical design is expected to reduce the energy requirements defined by ASHRAE 90.1-2013 by an estimated 25% and extensive water savings will be shown. The project includes a new chilled and hot water central plant with extensive replacement and upgrades to the facilities existing mechanical systems. Multiple phases of construction will allow the Civic Center to remain operational throughout the construction progress.

Appalachian Regional Hospital, Beckley, WV
Mr. Butzer is the Mechanical Project Engineer currently working with the hospital on multiple renovations. The ICU and OR departments will undergo Mechanical and Architectural upgrades in a multiphase project while the hospital remains operational. The existing kitchen will receive a new make-up air unit, and fan coil units to improve pressure and air balance relationships within the hospital. A dedicated HVAC unit was provided for the endoscopy suite to improve thermal comfort and provide code-required ventilation, air-changes and humidity.

Glenwood Elementary School, Princeton, WV
Mr. Butzer was the Mechanical Project Engineer for this successful project that came in under budget, on-time and with zero change orders. The first phase was duct cleaning and sealing that improved indoor air quality and reduced system demand by 8 tons. The second phase was the HVAC improvements which replaced all existing constant volume, single compressor, multizone, air handling units (AHUs) with new variable speed, multi-compressor AHUs. VAV terminal units were installed to create separate zones for each classroom. A new building automation system was provided for system controls and to incorporate the facility into the existing county-wide controls network. All electric heating was abandoned to maximize use of the hot water heating system. Mechanical upgrades saved the school an estimated 18.5% in the electric usage and provided them with over $13,000 in rebates from the electric utility.

Nicholas County Courthouse, Summersville, WV
The Nicholas County Courthouse is a Historic building constructed in 1898 with an addition executed by the Works Progress Administration in 1940. The courthouse was added to the U.S. National Register of Historic Places in 1991. Mr. Butzer led a project team responsible for upgrading an existing 2-pipe fan coil system into a 4-pipe system to provide simultaneous heating and cooling and meet the climate and comfort needs of specific occupants. A new 4-pipe system, variable speed pumps and 3-way valves were provided in the basement to achieve integration of the new system into the existing. Construction had to be phased to allow installation of the new heating loop while the existing system remained in cooling operation; the new cooling loop would be installed once the building switched over to the new heating loop. Welding and soldering were not allowed so materials such as PEX, pressure-seal copper and mechanical joint steel piping were specified. A new Building Automation System with most of the communication occurring wirelessly was chosen to minimize disturbances to the historical architecture of the building.

Gestamp West Virginia, South Charleston, WV
Mr. Butzer led a design team that was tasked to provide a mechanical system to separate out, or divert hydraulic fluid collected along with chilled water released from immense, automobile component stamping machines. The design included an aboveground oil-water separator, density meters, 3-way valves, storage tanks and a controls system to monitor fluid flow and guarantee separation or storage of non-compliant sanitary discharges.

Scot Casdorph, PE

Role
Electrical Engineer

Professional Registrations
Professional Engineer (WV)

Mr. Casdorph serves as an Electrical Engineer with ZMM providing electrical design services for a vast number of projects consisting of commercial, educational, correctional, institutional, and military facilities.

Mr. Casdorph is responsible for many facets of the project pertaining to electrical design such as interior and exterior lighting, power distribution, data system design, security, fire alarm, low voltage control systems, equipment specifications and performs electrical assessments during construction prior to the project's substantial completion date. Mr. Casdorph has participated on several LEED registered projects using energy conserving methods and utilizing lighting control systems and other means to meet or exceed ASHRAE 90.1, LEED, and energy code requirements.

Project Experience

Charleston Civic Center, Charleston, WV
Mr. Casdorph is the electrical engineer on the expansion and renovation to the Charleston Civic Center project. The $75M, 283,000 SF design-build project is being completed as a collaboration with tvsdesign and BBL Carlton. The design commenced in the spring of 2015, and construction is scheduled for completion in 2018.

Southside Elementary and Huntington Middle School, Huntington, WV Mr. Casdorph was the electrical engineer on this 156,000 SF facility. This project encompasses all phases of construction; demolition, major renovation and new construction. The original historic 26,000 SF three story school building was preserved and the remaining less than adequate facility was strategically removed to accommodate the new addition. The existing facility was completely renovated and brought up to new construction standards to blend with the new addition. The project consisted of two distinct school facilities existing on the same piece of property. The new construction blends seamlessly with the older historic structure.

Gauley River Elementary School, Craigsville, WV
Mr. Casdorph was responsible for the electrical design of the new elementary school. The project is consolidating Beaver

Education
Bachelor of Science, West Virginia Institute of Technology, 1995

Employment History
2000 - Present, Electrical Engineer, ZMM
1995 - 2000 Electrical Controls Systems Manager, WV Engineering Firm

Elementary School and Craigsville Elementary School into a new 375-student school. The school houses 3 Pre-Kindergartens, 3 Kindergartens, 2 first grade, 12 1st-5th grade classrooms, activity room, cafeteria, kitchen, media center, and administration spaces.

Lincoln County High School, Hamlin, WV Mr. Casdorph was responsible for the electrical power distribution throughout the 216,000 SF facility containing high school classes, vocational education, technical community college classes and a community health clinic. The project was a 2007 AIA Honor Award Winner.

Milton Middle School, Milton, WV Mr. Casdorph was responsible for the electrical design of the new 96,000 SF facility housing 700 middle school students grades 6 through 8.

Fort Gay PK-8 School, Fort Gay, WV
Mr. Casdorph was the electrical engineer and was responsible for the electrical power distribution and design. The New Fort Gay PK-8 School replaces the existing facility that has been in disrepair and lacking the spaces and technology delivery system required for 21st century learning skills. The total enrollment for the school is 603 Students. The new grade configuration separates the Elementary students from the Middle School students, but still allows use of the common spaces within the building. They share the Dining Room, Gymnasium, Media Center and a Stage.

Southern WV Community & Technical College, Williamson WV Mr. Casdorph was responsible for the electrical power and lighting distribution design of this 22,000 SF higher education facility. This project is being designed to meet the USGBC LEED Silver.

Joint Interagency Education and Training Center (WVARNG), Kingwood, WV Mr. Casdorph was responsible for the electrical design of the 180,000 SF 3-story billeting/hotel expansion for the Army National Guard campus style facility for training and operational mission support. The expansion more than triples the facility size and increases the total capacity from 189 guest rooms to 600 guest rooms and suites. This project reached LEED Gold Certification.

West Virginia Research, Education, and Technology – Building 704, South Charleston, WV
Mr. Casdorph is the electrical engineer for building 704 and responsible for electrical power and lighting distribution. Building 704 had previously been utilized as a campus maintenance facility by Union Carbide and DOW Chemical. Bridgemont began utilizing the facilities for instruction in the Spring of 2011.

West Virginia Housing Development Fund Office, Charleston, WV Mr. Casdorph was responsible for the electrical design of the 37,000 SF office building which provides natural daylighting into its interior spaces coupled with an automatic dimming system and motorized shade controls. This 2-story administrative facility houses approximately 95 to 100 employees with a flexible open office floor plan utilizing modular under-floor wiring to accommodate any future modifications of the workspace with minimal disruption to the employees. The project is targeted for LEED Silver Certification.

Jackson County Armed Forces Reserve Center, (WVARNG), Millwood, WV Mr. Casdorph was responsible for the electrical design of the 76,000 SF single story military reserve center which serves both the West Virginia Army National Guard and the United States Army Reserves (USAR) units. The multi-use facility provides educational spaces for classrooms, distance learning, physical training and a weapons simulation center. The project is targeted for LEED Silver Certification.

Glen Jean Armed Forces Reserve Center, (WVARNG), Glen Jean, WV Mr. Casdorph was responsible for the electrical design of the 102,000 SF military training facility which houses the Armed Forces Reserve Center (AFRC), Military Entrance Processing Station (MEPS), and an Organizational Maintenance Shop (OMS). The AFRC contains the administrative and training space for the 77th Brigade Troop Command, the 1863rd Transportation Company, and the 150th Armored Regiment Company. The MEPS houses their administrative, medical, headquarters, testing and storage functions at the facility. A comprehensive 8,500 SF OMS vehicle maintenance shop provides space for six large service workbays for maintaining the military fleet.

Michael J. White, PE

Role
Structural Engineer

Professional Registrations
Professional Engineer (WV, KY, IN, TN, OH, SC)

Mr. White has more than 10 years of Civil/Structural design and engineering experience. Project experience includes new construction and renovation work involving the design and analysis of reinforced concrete, wood, structural steel, masonry and cold formed steel.

Project Experience
WVDNR Forks of Coal
Milton PK School
Midland Trail High School
Valley Park Community Center
Marshall County Readiness Center

Other Jobs from Past Employers:
Monongalia County Justice Center - Morgantown, WV
Lewis Co. Judicial Annex - Weston, WV
Charleston Correctional Work Release Center - Charleston, WV
Stevens Correctional Facility - Welch, WV
Marsh Fork Elementary School - Naoma, WV
WVANG Camp Dawson, Multi-Purpose Building - Kingwood, WV
BridgeValley Advanced Technology Center - South Charleston, WV
New River Community and Technical College Headquarters Building - Beaver, WV
Lewisburg Elementary School - Lewisburg, WV
Rainelle Elementary School - Rainelle, WV
Boone County Honors Academy Addition - Madison, WV
WVU Parkersburg Center for Early Learning - Parkersburg, WV
WVU Parkersburg Applied Technologies Center - Parkersburg, WV

Education
B.S., Civil Engineering, West Virginia University Institute of Technology, Montgomery, WV, 2006

Employment History
2016 - Present, Structural Engineer, ZMM
2016, Civil/Structural Lead, Jacobs Engineering Group
2013 - 2016, Structural Engineer, Chapman Technical Group
2010 - 2013, Structural Engineer/Project Manager, Moment Engineers
2007 - 2010, Structural Engineer/Project Manager, Advantage Group Engineers, Inc. (Cincinnati, OH)

Ronnie L. Burdette, EIT

Role
Structural Engineer, EIT

Mr. Burdette serves as a Structural Engineer at ZMM. His experience he has gained while at ZMM includes Educational (Additions/Renovation to existing structures and Construction of new structures), Municipal (Community Centers), and Residential projects. Mr. Burdette's responsibilities include design and analysis of structural systems and documentation of design results.

Project Experience
Mr. Burdette has served as Structural Engineer on a variety of projects. His responsibilities included analysis and design of multiple building materials (Steel, Timber, & Concrete) and production of structural drawing sets.

Fayette County Schools, PK-2 & New Collins Middle Schools, Oak Hill, WV
This project included two separate projects located on the same site. Both buildings were designed to be ICF and steel construction.

The New Valley Park Community Center, Hurricane, WV
This new community center replaced an existing one at the Valley Park Wave Pool. It was designed to be constructed from masonry, steel, and timber. The exterior design concept plays off the existing Commons Building which incorporates stone accents, wood siding and multi-sloped roofing around a floor plan that emphasizes the internal components. The Community Center entrance is highlighted by a large, exposed wood truss bearing on tall, battered stone columns. These wood beams are featured at all entrances and carry into the meeting room prefunction to provide a fully-exposed, open wood structure.

Charleston Edge, Charleston, WV
The Charleston Edge renovation project included many different structural materials. The existing building is brick and masonry construction. Construction plans included the design of a new roof-top addition that was supported by structural steel.

Multiple Residential Renovations and Additions
The majority of residential work in the area consists of timber and masonry construction. Mr. Burdette has been involved in residential projects that range from analysis of a 3-story

Education
Bachelor of Science in Civil Engineering, West Virginia University, 2015

Master of Business Administration, University of Charleston (WV), 2016

Employment History
January 2017 – Present, Structural EIT, ZMM
May 2016 – Dec 2016, Civil/Structural EIT, Jacobs Engineering
May 2015 – Dec 2015, Civil/Structural EIT, CDI Corporation

wooden deck to the design of a new addition to an existing timber and masonry house.

FaLena Perry

Role
Construction Administrator

Professional Registrations
EIT

Mrs. Perry describes her role with ZMM as Construction Administrator as an exciting and invigorating opportunity with new experiences every day. From varying jobsite conditions to the differing professionals she encounters on a daily basis, Mrs. Perry approaches construction administration with a fresh set of eyes and desire to help provide the best outcomes possible for each project.

Mrs. Perry has nearly six years experience working as a Structural Engineer with two of those being a Project Manager. Structural engineering experience includes projects ranging from everything including $135M university buildings down to residential homes and even historic restoration projects. Project variety includes Educational (K-12 and university), Commercial, Military, Office, Justice (Courthouses, Justice Centers, Police Department and Correctional), Multi-Use Residential, Civic (WWTP), Healthcare (Health Departments), Fitness (Gyms), Religious, Historic Restoration and an Arena. These projects are spread over Kentucky, West Virginia and Ohio.

Project Experience

Valley Park Community Center, Hurricane, WV
Mrs. Perry is serving as Construction Administrator of the new Community Center building and renovation at Valley Park. The $15M construction project includes a new community building, ball fields and a playground. Mrs. Perry is responsible for the administrative duties, performing on-site observations and tracking construction progress. Mrs. Perry collaborates with the client, design team and contractors to confirm that project guidelines are satisfactorily met. Substantial completion for the project is set for May of 2018.

Ravenswood Middle School, Ravenswood, WV
Mrs. Perry is serving as Construction Administrator of the high school addition that will house the two-story Ravenswood Middle School making this the 20th facility in WV that will combine both high school and middle school students. This project is limited with available space as it is to fit into the existing high school footprint.

Midland Trail High School, Fayetteville, WV Mrs. Perry is serving as Construction Administrator of the six room high school addition that will include a STEM lab as well as other

Education
Bachelor of Science, Civil Engineering, University of Kentucky, 2003

Masters of Science, Civil Engineering, University of Kentucky, 2005

Employment History
2017 - Present, Construction Administrator, ZMM
2009 - 2010, Design Engineer, Moment Engineers, Charleston, WV
2004 - 2008, Engineer, Project Manager, BFMJ Inc , Lexington, KY
2003 – 2004, Graduate Assistant, University of Kentucky College of Engineering

Civic Affiliations
- Project Coordinator, Forrest Burdette UMC, Family Life Center
- Sunday School Teacher for Young Professionals
- Cub Scout Den Leader Pack 236

classrooms. The large space planned for the STEM lab will encourage hands-on exploration, learning, and technology integration. This addition will address the under utilization of Midland Trail as well as Anstead Middle.

Project Experience Other Firms

University of Kentucky Biopharmacy Building, Lexington, KY
Mrs. Perry worked as team member in the design the new $134M College of Pharmacy Biopharmacy research building. The research facility builds on the state's initiative to address health challenges and disparities in KY. The building featured expansive auditorium style classrooms and a self-supporting stair, of which Mrs. Perry modeled and designed.

Kentucky Transportation Cabinet, DOH, District Five Office Building, Louisville, KY
Mrs. Perry acted as the Project Manager for this new office space for the Department of Highways. This project consisted of concrete and steel structural members. Mrs. Perry coordinated design efforts with a team of engineers, architects and the owner.

Moses Residence, Huntington, WV
Mrs. Perry was responsible for the structural design of the Moses Residence which includes ICF walls, timber, steel and concrete. This home is a zero net energy home and has platinum LEED certification.

References

David Molgaard, City Manager
City of Charleston
501 Virginia Street, E.
Room 101
Charleston, WV 25301
304.348.8014

Greg Melton, Director of General Services
Capitol Complex Building
Building 1, Room MB-60
1900 Kanawha Blvd., E.
Charleston, WV 25305
304.558.2317

MAJ Dan Clevenger
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6539

John Myers, Cabinet Secretary for Administration
WV Lottery Headquarters
900 Pennsylvania Ave
Charleston, WV 25302
304.558.0500

Beth Casey, CEO
GSBDC
321 Virginia Street, W.
Charleston, WV 25302
304.345.7722