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

Solicitation

NUMBER	PAGE
DEFK13010	1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
TARA LYLE
304-558-2544

VEND

ZMM
ARCHITECTS & ENGINEERS
222 Lee Street, West • Charleston, West Virginia 25302
304.342.0159 office • 304.345.8144 fax
www.zmm.com

SHIP TO
DIV ENGINEERING & FACILITIES
ARMORY BOARD SECTION

1707 COONSKIN DRIVE
CHARLESTON, WV
25311-1099 304-341-6368

DATE PRINTED
05/22/2013

BID OPENING DATE: 05/30/2013 BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
				ADDENDUM NO. 1		
				SEE ATTACHED PAGES - TO CLARIFY BID OPENING DATE.		
				END OF ADDENDUM NO. 1		
0001	1	JB		906-00-00-001		
				SIOH SERVICES		
				****** THIS IS THE END OF RFQ DEFK13010 ****** TOTAL:		

05/30/13 11:09:41 AM
West Virginia Purchasing Division

SIGNATURE [signature] TELEPHONE 304.342.0159 DATE 30-MAY-2013

TITLE PRINCIPAL FEIN 55-0676608 ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO SOLICITATION, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

0000003

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DEFK13010

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[X]	Addendum No. 1	[ ]	Addendum No. 6
[ ]	Addendum No. 2	[ ]	Addendum No. 7
[ ]	Addendum No. 3	[ ]	Addendum No. 8
[ ]	Addendum No. 4	[ ]	Addendum No. 9
[ ]	Addendum No. 5	[ ]	Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

ZMM, INC.
Company

AQ RK
Authorized Signature

30-MAY-2013
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

CERTIFICATION AND SIGNATURE PAGE

By signing below, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

ZMM, INC.
(Company)

(Authorized Signature)

ADAM R. KRASON, AIA - PRINCIPAL
(Representative Name, Title)

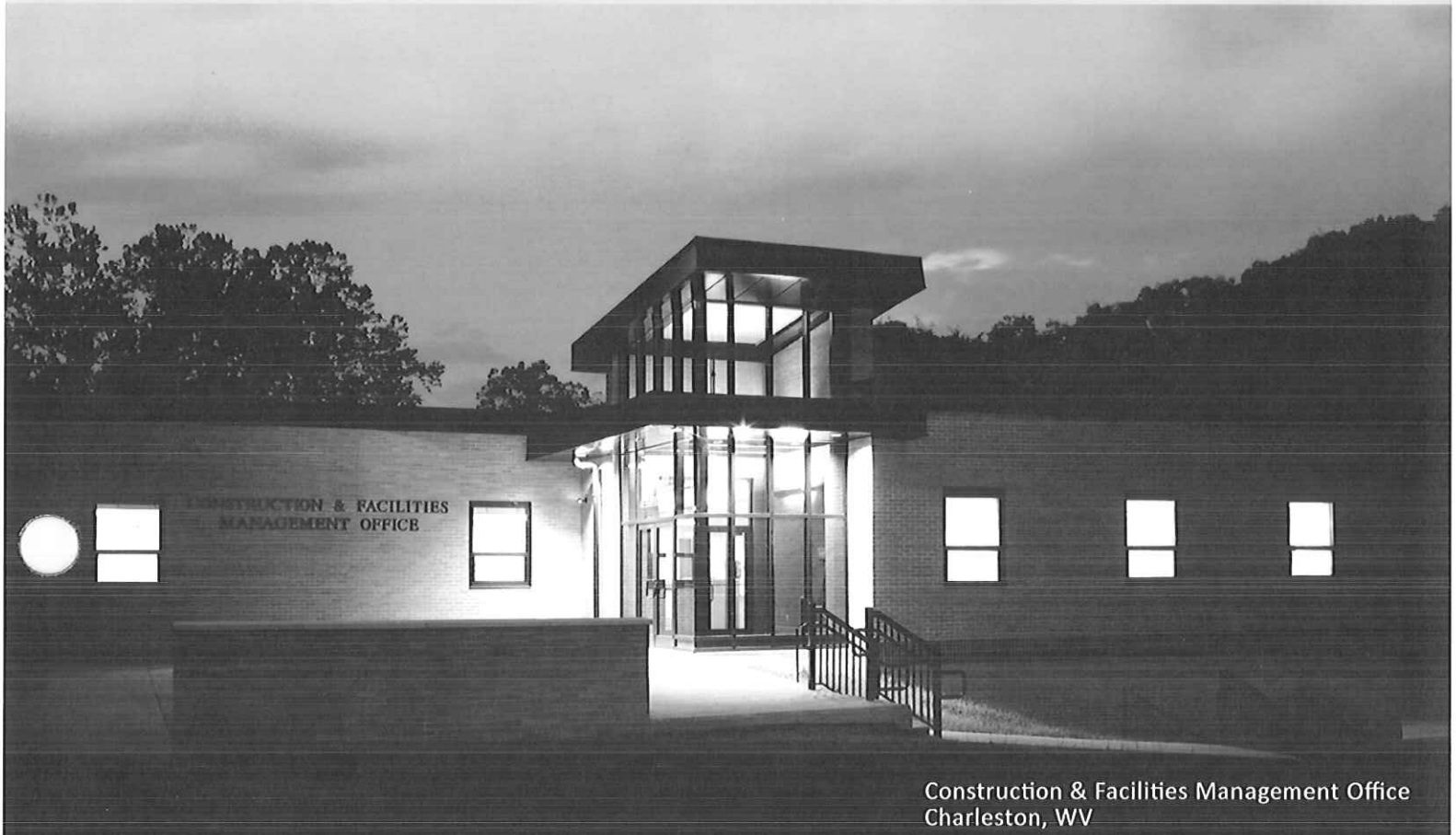
304.342.0159 304.345.8144
(Phone Number) (Fax Number)

30 MAY 2013
(Date)

Glen Jean AFRC
Glen Jean, WV

Regional Training Institute
Kingwood, WV

Wood County Justice Center
Parkersburg, WV



Construction & Facilities Management Office
Charleston, WV

Expression of Interest:

West Virginia Army National Guard MEDCOM Facility Build-Out Design DEFK#13010

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May 30, 2013

Ms. Tara Lyle, Senior Buyer
State of West Virginia Purchasing Division
2019 Washington Street, East
PO Box 50130
Charleston, West Virginia 25305-50130

Subject: Expression of Interest for Professional Design Services for a Medical Command Facility, Troop Medical Clinic
DEFK13010

Dear Ms. Lyle:

ZMM Architects and Engineers is pleased to submit the attached information to demonstrate our experience and our qualifications to provide professional design services for the Medical Command Facility, Troop Medical Clinic for the West Virginia Army National Guard. Established in 1959, ZMM is a Charleston based, full service A/E firm, and is noted for design excellence and client focus. ZMM is uniquely qualified to provide services on the MEDCOM Facility design for the following reasons:

- **Charleston Area Renovation Design Experience.**
  Our team has recent experience providing professional services on renovation projects throughout the Charleston area. Recent experience includes the CFMO Expansion for the West Virginia Army National Guard (WVARNG) and the Renovation of the 10th Floor for the State of West Virginia Office of Technology. Both projects were honored with WVAIA design awards. Additional renovation experience in the Kanawha Valley includes the renovation of Davis Hall for Bridgemont Community and Technical College, the renovation of a former auto dealership into the New Girl Scouts of Black Diamond Council Volunteer Resource Center, renovation of the Dow Headquarters Building in South Charleston, the renovation and additions to St. Albans High School, and the renovation of the Education Wing for Christ Church United Methodist.

- **WVARNG Experience.**
  The members of our proposed team have provided design services on multiple West Virginia Army National Guard (WVARNG) projects including the JITEC, the Regional Training Institute at Camp Dawson, the Jackson County AFRC, and Kingwood AFRC, the Glen Jean AFRC, the CFMO Expansion, the Tackett Family Readiness Center, the Morgantown Readiness Center, and the Logan-Mingo Readiness Center. Our knowledge of the WVARNG's standards, methods, and personnel will help ensure the success of the project.

- **Medical Design Experience.**
  ZMM has extensive experience providing design services on medical facilities. Our recent projects include an ICU Addition at CAMC Teays Valley Hospital, as well as the design of a new office for South Charleston Pediatrics. Additional medical design experience includes several school based and rural health clinics, as well as a clinic at the Glen Jean AFRC.

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www.zmm.com

We are confident that no other team can match our combination of local renovation, military facility, and medical facility design experience. Thank you for taking the time to review the attached expression of interest that includes information about our proposed project management, quality, and cost control plans, team qualifications, and relevant project experience. 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
www.zmm.com

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MEDCOM Facility Build-Out Design
DEFK#13010

ZMM
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Medical Command Facility

Troop Medical Facility Project Approach

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ZMM Architects and Engineers understands that the West Virginia Army National Guard is seeking the services of a qualified professional design firm to develop plans and specifications for the partial renovation of a facility (6,000-8,000 SF) in Charleston to accommodate a Medical Command Facility, Troop Medical Facility. As a full service architecture and engineering firm, ZMM maintains all services in-house to assist with this project. Our ability to provide comprehensive architecture and engineering services from our office in Charleston will help ensure that all of the design professionals, including architects, civil and structural engineers, as well as mechanical and electrical engineers have the access to the building required to develop well-coordinated design solutions. Below, please find our proposed renovation project approach, which includes project management, quality, and cost control plans.

Project Management Plan

ZMM Architects and Engineers proposes to provide services on the project with a team of design professionals that have worked together on a variety of WVARNG facilities throughout the State. The team will be led by Adam Krason, an architect and principal of the firm. Mr. Krason has led ZMM's effort on all of the recent work for the WVARNG, including the Jackson County AFRC, the Morgantown Readiness Center, the JITEC, the CFMO Expansion, the Tackett Family Readiness Center, and the Parkersburg Readiness Center. Other key team members will include:

Nathan Spencer, AIA	Project Architect
Steve Hedrick, PE	Structural Engineer
Scot Casdorph, PE	Electrical Engineer
Steve Cook, PE	Mechanical Engineer
Mike Abernethy	Lighting Designer
Mike Flowers	Plumbing Designer
Mark Epling, AIA	Specifications Writer
Jill Watkins, NCIDQ, LEED-AP	Interior Designer, Sustainability Coordinator

The entire team has successfully collaborated on multiple new construction and renovation projects for the WVARNG, and each team member is familiar with the standards, requirements, and processes that are utilized by the Guard.

ZMM Quality Control Plan

A copy of ZMM Architects and Engineers Quality Assurance Program is attached for your review. The program outlines the process that ZMM utilize to maintain the consistent high level of quality on all of our projects for the WVARNG.

ZMM Cost Control Plan

ZMM has recently completed a substantial number of renovation projects in the Charleston area. We maintain information regarding the cost of these projects, which will allow us to develop accurate projects for the cost of the proposed improvements. Recent Charleston area renovation projects include:

Davis Hall Renovation – Bridgemont Community & Technical College
Charleston Area Alliance Business Incubator Improvements
Girl Scouts of Black Diamond Council Volunteer Resource Center
Christ Church United Methodist Education Wing Renovation
CFMO Expansion – WVARNG
St. Albans High School
Dow Headquarters, South Charleston
State Office Building #5, 10th Floor Renovation
State Office Building 5, 6, & 7 – Roofing Replacement, Window Replacement, and Electrical Service Upgrades
WVRTP Building 740 HVAC Improvements

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In addition to our own historical data, ZMM will employ the services of an independent cost consultant to verify the anticipated cost of the project.

ZMM Renovation Project Approach
ZMM has developed a unique approach for renovation projects. The first step in a successful renovation project involves conducting a thorough examination of the existing facilities to identify both deficiencies and opportunities. The purpose of the investigation will be to determine the condition of the major building systems, and to identify both immediate and long term enhancements that will be required to fully improve the building.

ZMM recently provided services on several similar projects, including the renovation of the 5th Floor of the business incubator at the Charleston Area Alliance. Prior to the renovation, ZMM examined the building systems as well as the interior conditions and finishes on the other floors. Working with the Alliance, ZMM developed a strategy for both building systems and finishes that improved upon the existing conditions, while still complementing the overall aesthetic of the building. Many of the building system enhancements, including the use of LED lighting and a domestic solar hot water system, focused on improving the energy efficiency of the space. Additional relevant experience includes the Renovation of State Office Building #5, 10th Floor for the Office of Technology. The renovation of the 10th Floor set a new standard for efficiency from both an energy perspective and space utilization standpoint.

The examination process will begin with a review of all existing plans of the building, and, if required, the production of as-built plans for the facility. Once the base plans are completed, existing conditions are documented with photographs that are keyed to the plans. Additionally, all major mechanical and electrical equipment is identified on the plans, and the condition is noted in the assessment. The investigation is conducted by a team of building design professionals including Architects, Civil, Structural, Electrical, and Mechanical Engineers.

The team will focus the investigation on the following systems:

Life Safety and Egress (Coordinated with the State Fire Marshal)

Accessibility
Building Envelope
Interior Conditions and Finishes
Plumbing Systems
Electrical Service and Distribution, Emergency Power
Lighting
Mechanical Systems
Data/IT Infrastructure

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Once the investigation is complete, the team will conduct an analysis to develop a list of recommended improvements to implement your vision for MEDCOM Facility Build-Out. These recommendations will be developed with input from the West Virginia Army National Guard, so that the proposed improvements reflect your vision for the project. Simultaneous with the development of the condition assessment, ZMM will undertake a visioning and programming process with the WVARNG. The purpose of this process will be to develop a proposed scope for the project. As a final step, ZMM will prepare an estimate of the probable construction cost. The result of this detailed investigative, planning, and design process will be a report that will serve as the basis for future project decisions. This comprehensive approach ensures that all improvements are made in a manner that supports the overall vision of the facility, and will lead to a thorough and successful renovation project.

The efforts of ZMM's architects and engineers will continue through the construction phase until the final completion of the project. ZMM continues to focus on quality throughout the construction phase by utilizing a dedicated construction administrator to coordinate the design team's effort throughout the construction process. This approach will improve the communication and coordination between ZMM, the WVARNG, and the contractor, and will ultimately lead to an improved construction phase.

ZMM QUALITY ASSURANCE PROGRAM

Table of Contents

January 2, 2012 *(revised)*

Section 1

GOALS OF QUALITY ASSURANCE PROGRAM

Quality Assurance Is Our Key To Success

Knowing and understanding our clients expectations is our goal. *Clients do not care what we know until they know that we care.*

1. Goals of ZMM Quality Assurance Program:

    a. Improved Delivery of Services

    b. Produce Highest Quality of Work Possible

    c. Increase Productivity

    d. Develop and Nurture Stronger Client Loyalty

    e. Increase Repeat Clients

    f. Increase Employee Moral

    g. Stabilize Staff Tenure

    h. Enhance Profit Opportunities

    j. Increase Abilities of Staff Through Training

Section 2

Identifying Client Expectations and Project Requirements

1. Understand client expectations prior to entering agreement. This can be accomplished by reviewing the project and communication with the client prior to the execution of an agreement. Both parties must be frank and honest with respect to the scope of work and complexity anticipated.

2. We must assess our ability to meet or not meet the expectations of our perspective clients. Further, we must communicate any reservations relative to that ability or inability.

3. We must understand the risk of accepting a project whose scope or complexity exceeds the firms, and its consultants, abilities. There is also the risk of losing the job, which may be the best direction if the firm cannot produce the work on anticipated schedules or with the appropriate quality assurance. At the very least, the client must be advised and given the opportunity to decide what is best for the project.

4. In many cases the assessment of ability includes consultants to the firm. Consultants must be evaluated in the same way as ZMM. They work for us and it is our responsibility to make the determination of their ability. The client will look to us for resolution of any problems, not to the consultant.

5. If, during the project, the client places demands on the project that are above the expectations identified initially, these matters must be resolved immediately upon discovery. Further, if the client discovers that his expectations are not being fulfilled, these must also be resolved immediately. Open communications between the client, project manager and principals of the firm must be maintained. All project team members must understand that client concerns must be dealt with and cannot be hidden from upper management due to fear. All team members must learn (if they don't already know) how to identify client displeasure.

Section 3

Selecting Project Team

The quality of our end product (building design and client attitude) is directly proportional to the quality of our work process.

1. Selection of project manager is probably the most important decision to be made. Select the person that best meets the expectations of the project. Important factors in selection of all team members are:

    a. Level of technical capability verses complexity of project.

    b. Personality interface with clients team.

    c. Past experience under similar circumstances.

    d. Work habits and how they may affect project expectations.

    e. Experience with project type.

    f. Time availability.

2. The principals of the firm will select the team based on the above factors.

3. If during on-going assessment of project it is determined that a member of the team is not performing to the project expectations, the partner-in-charge will determine the reason and take the appropriate action in the best interest of the project.

Section 4

On-going Project Appraisal

Quality assurance is an office philosophy

1. At the following stages of every project a project appraisal will be completed:

   a. 80% schematic phase.

   b. 80% design development phase.

   c. 15% working drawing phase.

   d. 50% working drawing phase.

   e. 95% working drawing phase.

   f. 50% construction phase.

2. The above appraisals are not substitutions for necessary project meetings or design related review. The appraisals are to determine the following:

   a. Does the project meet all expectations of the client.

   b. Is the quality assurance program being adhered to.

   c. Are there communication problems.

   d. Are personnel adjustments indicated.

   e. Are office standards being utilized.

   f. Are there quality defects.

3. The persons involved in the appraisals will be as follows:

   a. Project manager.

   b. Principal-in-charge of project.

   c. Principal-in-charge of quality assurance.

d. Uninvolved staff member.

e. Engineering staff.

4. At 50% and 95% working drawing and 50% construction appraisals the field observation staff member assigned to project will be included.

5. The project manager will determine project stage percentages and, together with the principals-in-charge, schedule appraisal meetings.

6. A thorough review of all contract documents will be accomplished prior to or following the appraisal meetings, and/or individually by those involved.

7. The principal-in-charge of quality assurance will report findings of consistent deficiencies and achievements to the entire staff as he feels necessary.

Section 5

Post Project Review

1. The purpose of the post project review is as follows:

   a. Determine preventable deficiencies.

   b. Determine successful aspects of project.

   c. Determine client satisfaction / dissatisfaction.

   d. Determine staff performance.

   e. Evaluate contractor performance for future reference.

   f. Determine consultant performance.

   g. Review total cost of project relative to budget, and if budgets weren't met, why.

2. The same people involved in prior reviews (including field observation staff) will participate in post project review. The client will be encouraged to participate.

Section 6

Staff Training, Assessment, and Enhancement

1. It is the philosophy of this firm to train and enhance present staff. Annual evaluation of each staff member will determine deficiencies as well as outstanding performance. It is each employees responsibility to try to enhance insufficient performance problems. It is the firms duty to inform each employee of such deficiencies and to assist in that employees improvement.

2. Training of staff will include the following:

   a. Orient new employees to office standards and systems and assign employee to assist through training.

   b. Provide clearly defined filing system and reference library

   c. Provide consistent drafting procedures, formats and standards.

   d. Provide list developed from past experiences of problems and successes.

   e. Encourage continuing education for entire staff.

   f. Encourage professional registrations.

   g. Provide CADD training and new development upgrade.

   h. Conduct periodic, scheduled in-service meetings for project managers and upper level production staff. Meetings will be led by outside resource people such as industry expert, manufactures reps, contractors, or by internal staff and principals. Topics for discussion will be identified by ZMM staff as areas where additional information is needed for a majority of the staff involved. Topics may be as varied as insurance requirements, building hardware, masonry detailing or wood doors, and dissemination of information gained by staff at seminars and educational meetings.

   j. Distribute and maintain Masterspec green sheets for all production staff. Specification writers will keep all copies updated. Masterspec information will be reviewed by every project manager for each project.

   k. Distribute required reading to all production staff. Articles from professional publications, trade magazines, technical articles from vendors & manufac-

tures, etc.

3. Assessment of individual performance is accomplished in two ways. First, during project appraisals and, secondly, during annual employee evaluations. The employee will be advised of both satisfactory and unsatisfactory performance.

4. Enhancement of employee abilities is stressed and the firm will make appropriate attempts to this end such as:

   a. Establish goals for each employee.

   b. Reward employees for exemplary performance.

   c. Construction site visits for non-field related personnel.

History and Philosophy of ZMM

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
222 Lee Street, West
Charleston, WV

CONTACT:
Phone 304.342.0159
Fax 304.345.8144
www.zmm.com

History

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.

Community Support

In addition to our design efforts, ZMM is supportive of institutions and organizations that contribute to the cultural and educational landscape in West Virginia.

ZMM offers financial support to several community and state-wide institutions which reflect the superior quality that we strive to achieve on each of our projects. The following organizations also impact the educational environment through their support of local artisans, performances, broadcasts, and community service:

Kanawha County Public Library

ZMM ARCHITECTS & ENGINEERS PoPs

WEST VIRGINIA PUBLIC BROADCASTING

Professional Services

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 eight 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.

ZMM has maintained an average of 35 employees over the last five years. Our team has the expertise to provide the services below:

Pre-Design

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

Post Design

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

Design

Architectural Design
Sustainable Design
Interior Design
Landscape Architecture
Structural Engineering
Mechanical Engineering
Electrical Engineering
Civil Engineering
Lighting Design
Energy Consumption Analysis

Adam R. Krason, AIA, NCARB, LEED AP

ZMM ARCHITECTS & ENGINEERS

Role
Architect, Principal

Professional Registrations
Registered Architect (WV, OH, KY, VA)
LEED Accredited 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
West Virginia Army National Guard, Joint Interagency Education and Training Center, 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

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

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. The project is aiming for LEED Silver Certification.

Construction and Facilities Management Office Expansion, West Virginia Army National Guard, 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.

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 improvements, 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.

Judge Black Courthouse Annex, Wood County Commission, Parkersburg, WV. Mr. Krason was responsible for the programming and design of the adaptive reuse of a former commercial space and movie theaters into a modern courthouse annex. The Judge Black Annex included two independent circulation paths – a secure entry and lobby for access to the Family Court and Prosecuting Attorney, and public access to the Assessor and Sheriff's Tax Department. The facility also houses several large public meeting rooms.

WVU at Parkersburg , Parkersburg, WV
Mr. Krason was the project manager for the Downtown Center (W.T. Grant Building). ZMM provided preliminary design services and a construction cost estimate for improvements to the building façade. Services included the development of as-built drawings, conceptual elevations, renderings, and modeling. Working closely with West Virginia University at Parkersburg ensured that the design reflected a contemporary and unified aesthetic.

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 is currently participating on a design team that is developing 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 is currently working with students from Watts and Robbins Elementary Schools in Kanawha County, assisting them in an effort to actively participate in the design process.

Awards and Acknowledgements:
AIA Honor Award (2011): WVARNG Joint Interagency Training and Education Center (JITEC)
AIA Honor Award (2011): State Office Building #5, 10th Floor Renovation
AIA Merit Award (2009): WVARNG Construction and Facilities Management Office
Organizer: Making the Business Case for Sustainability Conference, University of Charleston (2010)
Speaker: West Virginia Sustainability Summit, Discover the Real West Virginia Foundation (2010)
Speaker: Sustainable Schools West Virginia Summit, WVU (2009)
Article: The West Side Needs Structural Help, Charleston Daily Mail, January 2005

Robert Doeffinger, PE

ZMM
ARCHITECTS & ENGINEERS

Role
Engineering Principal

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

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 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
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 aiming for LEED Silver Certification. The project is served by a 4 - pipe hot and chilled water system with an energy recovery ventilation system.

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

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

Bachelor of Science Mechanical Engineering, West Virginia University, 1973

Employment History
2010 - Present, President, ZMM
1976 - 2010, 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

Safety; Vertical Transportation; Mechanical; Electrical; Data; Façade; Structure; and Roofing. The analysis also included a study related to potential hazardous materials in the facility.

Bridgemont 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.

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.

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.

Building 770 Evaluation, South Charleston, WV.
Mr. Doeffinger has worked with MATRIC to conduct a detailed assessment of Building 770 to help establish a budget for required improvements to the facility. ZMM's services included an investigation, assessment of the building condition including the building envelope, life safety issues, and engineering systems, as well as the development of conceptual plans for the lab areas. ZMM's assessment also included a detailed review of the building's current and future energy use. The energy consumption information helped to validate the payback of the proposed improvements.

WVRTP Steam Plant Analysis, South Charleston, WV.
Mr. Doeffinger worked collaboratively with WVRTP staff and various consultants to develop an analysis of the efficiency of the Tech Park steam plant. Based upon the results of the analysis, the WVRTP decided to shutter the plant, resulting in a significant yearly savings.

Building 740 Steam Plant, South Charleston, WV.
Mr. Doeffinger is working with West Virginia Heating and Plumbing to develop a steam plant for Building 740. The steam plant will include new steam (convertible to hot water) boilers for the facility. The project also includes a new four bay block building to house the steam plant. The system designed by ZMM meets the current needs, and also plans for future improvements to the facility.

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.

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 Boulevard at 2412, Charleston, WV. Mr. Doeffinger was on the design team for the proposed Kanawha Boulevard Condominium project. The sixty unit project, located in the East End Historic District, included a design that increased in height as it stepped back from the Kanawha River, providing the opportunity for a series of outdoor living areas, while also respecting the massing of the adjacent residences in the Historic District.

Steve Cook, PE

ZMM
ARCHITECTS & ENGINEERS

Role
Senior Mechanical Engineer

Professional Registrations
Professional Engineer (WV)

Mr. Cook started his career in 1972 as a designer for an engineering firm in Charleston, West Virginia. He is a Professional Engineer registered in West Virginia and has designed and engineered multiple projects throughout the state.

Mr. Cook has had a full range of engineering design experience including: Plumbing, HVAC, Electrical, Fire Protection and Site Utilities. He has worked on Jails, K-12 Schools, Armories, Hospitals, Office Buildings, Churches, and a variety of other building types.

Other responsibilities include, Serving as a liaison between clients and utility companies, designs of sanitary and gas site utilities, review of plumbing, sprinkler systems, fire pumps and water pumps as well the equipment selection - air handling units, pumps, and boilers, site visits, observation reports and punch lists.

Project Experience
West Virginia Regional Jails: Mr. Cook was responsible for electrical design on 10 Regional Jails. The design included lighting, power distribution, emergency power systems, fire alarm and security. In 2009 he was project manager for HVAC renovation on four regional jails. This project included replacement of rooftop HVAC units and Building Automation Systems. Mr. Cook has also been responsible for site utility upgrades including sewer augers and on-site sewage treatment plants and lift stations.

Jackson County Armed Forces Reserve Center, Millwood, WV. Because of the variety of space types and occupancy patterns, Mr. Cook designed multiple roof mounted air handling units, to take advantage of unoccupied scheduling to save energy. The main shower /toilet area is served by a 100% outside air unit with a plate type heat exchanger for energy conservation. The large Drill Hall, which also serves the community with space for up to 2000 people, is served by two rooftop units. One will run during Drill weekends, the second will run only during public events. There are two high efficiency scroll type chillers with primary/secondary pumps to meet part

Education
Master of Arts in English and Humanity
Marshall University Graduate School, 2004

Bachelor of Arts in English and Humanity, West Virginia University, 1972

Employment History
1989 - Present, Senior Mechanical Engineer, ZMM
Present, Board of Directors, ZMM
1976 -1989, Project Manager, WV Firm
1972 -1976, Designer, WV Firm

Civic Associations
Professional Engineer (WV)
American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), Member

load conditions. The boilers are 95% efficient stainless steel condensing type with variable speed pumps.

West Virginia Regional Technology Park - Building 740, South Charleston, WV.
Mr. Cook worked as part of the Design-Build Team to survey the existing building; did preliminary location and layout for the proposed Boiler Building; designed layout and piping for steam boiler system; did electrical design for the proposed Boiler Building. Also did mechanical and electrical design for Buildings 742, 743, and 8736

Hacker Valley PK-8 School, Hacker Valley, WV. This project, located in rural Webster County adjacent to a trout stream, was built on a small site where municipal water and sewer were not available. Mr. Cook was responsible for designing a new Water treatment System for the existing domestic well, and a variable speed booster pump to deliver water to the school building. An onsite sewage treatment plant with outflow was not acceptable because of the trout stream, so he designed a "Green" peat bed underground injection system for the school's sewage disposal. The school also required fire protection, and Mr. Cook designed a 64,000 gallon storage tank with a diesel fire pump for distribution. He was also responsible for HVAC design.

Lincoln County High School, Hamlin, WV. Mr. Cook was responsible for HVAC design on this project, which included a 500 ton chilled water system with primary and secondary pumping. The chillers had a heat recovery feature which was used for reheat on VAV air systems. The gas boilers were condensing type with 95% efficiency and variable speed pumps. The school also had vocational shops for which he designed welding fume exhaust and dust collection systems. In addition to this, Mr. Cook was responsible for site utilities including coordination of a water line river crossing and an aerial sewer suspended from the bridge serving the school, which eliminated the requirement for a lift station.

Nathan Spencer, AIA

ZMM ARCHITECTS & ENGINEERS

Role
Architect

Professional Registrations
Registered Architect (WV)

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

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

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

Project Experience
West Virginia Army National Guard, Joint Interagency Education and Training Center, Camp Dawson, WV. Participated in the schematic design of the 180,000 SF addition to the Regional Training Institute at Camp Dawson. Mr. Spencer was also responsible for coordinating the production effort for the billeting (hotel) expansion, which increased the total billeting capacity at the JITEC to 600 rooms. The project is aiming for LEED Silver Certification.

Jackson County Armed Forces Reserve Center, Ripley, WV. Mr. Spencer participated in the schematic design of the 76,000 SF Reserve Center in Jackson County, West Virginia. Mr. Spencer was also responsible for coordinating the production effort for the project. Mr. Spencer also produced several 3d models throughout the design process. The project is aiming for LEED Silver Certification.

Morgantown Readiness Center, Morgantown, WV. Mr. Spencer was a member of the production team for the 58,000 SF project, which housed the Army Band and associated performance spaces. Mr. Spencer also produced several 3d models throughout the design process. He also participated on all production work through all phases. The project is aiming for LEED Silver Certification.

Education
Bachelor of Architecture, University of Tennessee, 2007

Employment History
2009 - Present, Architect, ZMM
2007 - 2009, Intern Architect, ZMM
2003 - 2007, Summer Intern, ZMM

Civic Affiliations
- American Institute of Architects, Member

Judge Black Courthouse Annex, Wood County Commission, Parkersburg, WV. Mr. Spencer assisted with the design and programming of the adaptive reuse of a former commercial space and movie theaters into a modern courthouse annex. The Judge Black Annex included two independent circulation paths – a secure entry and lobby for access to the Family Court and Prosecuting Attorney, and public access to the Assessor and Sheriff's Tax Department. The facility also houses several large public meeting rooms.

Tucker County Courthouse Annex, Parsons, WV.
Mr. Spencer is the Project Architect for the Courthouse Annex renovation project. The Annex is a 4-story 21,000 Square Foot building that is adjacent to the Tucker County Courthouse. The annex will house spaces for the Circuit Court, Circuit Clerk, Family Court, Magistrate Court, Prosecuting Attorney, County Commission, County Clerk, Community Corrections, and Probation Office.

New Kanawha County Elementary School, Charleston, WV. Mr. Spencer is currently participating on a design team that is developing 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. A dental and health clinic is also on site for all enrolled students in the Kanawha County School District.

Highland Medical Facility, Charleston, WV. Mr. Spencer was responsible for coordinating the production effort for the 60,000+ SF mental health facility. Mr. Spencer also produced several 3-D models throughout the design process.

Rodney Pauley, AIA

ZMM
ARCHITECTS & ENGINEERS

Role
Project Manager

Professional Registrations
Registered Architect (WV, GA)

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
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 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.

WV Division of Juvenile Service (Davis Center Renovations), Davis, WV. Mr. Pauley is the project manager for a design team that is currently preparing construction documents for the renovation to an existing juvenile corrections campus for women. The project scope includes the demolition of two buildings, the interior renovation of the 6,800 SF

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. 2000, Project Architect, VA Firm

Civic Affiliations
- American Institute of Architects, Member

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.

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.

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.

Edgewood Elementary School, Charleston, WV. Mr. Pauley is the project manager for the design team that is currently developing a new 60,000 SF 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.

Other Project Experience
One Federal Place, Birmingham, AL. Mr. Pauley was the project architect responsible for design, construction documents and construction administration for the 12-story, 466,600 SF speculative office building with attached 5-story, 520-car parking deck. The base of the office tower and parking deck, which are located in the heart of downtown Birmingham, are faced in granite to match the surrounding buildings. The tower is faced with architectural precast concrete panels and an insulated glass curtainwall system. The entrance lobby is highlighted by custom wood paneling and a highly-detailed granite floor.

North Georgia Technical College for GA Department of Technical and Adult Education Clarkesville, GA. Mr. Pauley was the project manager for the a major campus renovation which included the demolition of an old automotive classroom building, the renovation of Mobley Hall, the existing administration building, and the construction of two new education buildings, the Visual Technology Center and the Transportation Center.

- Mobley Hall, the main campus entry building, was refaced with new brick veneer and a new gable roof with entry feature was constructed covered in standing seam metal roofing.
- The Visual Technology Center is a 2-story, 28,000 SF state-of-the-art, photography, media and print building that is sited adjacent to existing educational buildings to create a formal "quad" within the campus. It contains a commercial print lab, a large photography shooting room, digital production rooms, a video production studio and is highlighted by a 2-story media gallery with glass façade open to the quad.
- The Transportation Center is a 37,000 SF educational building that is highlighted by three, high-bay spaces with clerestory windows opening into pitched standing seam metal roofs. These bays contain educational space for conducting repair and maintenance for automobiles, boats, large trucks and commercial earth-moving equipment.

Stephen Hedrick, PE

ZMM
ARCHITECTS & ENGINEERS

Role
Structural Engineer

Professional Registrations
Professional Engineer (WV)

Mr. Hedrick is responsible for overseeing the design of the Structural systems, ensuring that the structural systems not only meet the building code requirements, but meet the long-term needs of the owner. He performs the analysis and design of the structural components to resist the loads from lateral and gravity forces. He coordinates with the other disciplines in order to integrate the Structural system into the building, working with the architects to determine the most economical way to construct the components of the building. Mr. Hedrick has participated on several LEED registered projects. Mr. Hedrick also oversees the work of other engineers and coordinates the office structural standards.

Mr. Hedrick began his career in structural engineering by designing large scale residential and light commercial structures for hurricane force winds. He has a broad range of experience in masonry, concrete, steel and timber design. In 2007, Mr. Hedrick moved back to Charleston, WV, to take a structural engineering position with ZMM where he supervises the design and production of the structural engineering projects.

Project Experience
Edgewood Elementary School, Charleston, WV. Mr. Hedrick is involved with structural design 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.

Huntington East Middle School, Huntington, WV. Mr. Hedrick was responsible for the overall structural design of the single story school building. The design included masonry wall, metal panel walls and storefront glazing in order to allow additional light for the LEED designed project.

Education
Master of Science, Civil Engineering, University of Tennessee, 2003

Bachelor of Civil Engineering, West Virginia Institute of Technology, 2001

Employment History
2007 - Present, Structural Engineer, ZMM
2003 - 2007, Structural Engineer, McCall Engineering, Inc.

Civic Affiliations
- American Institute of Steel Construction, Member

Bridgemont Community and Technical College (Davis Hall, Building 704), Montgomery, WV. Mr. Hedrick is responsible for the structural design for a design team that is currently preparing construction documents for the renovation to an existing 7-story, 77,215 SF educational building. The project scope includes remedying several engineering and life safety deficiencies, as well as architectural improvements to the building envelope.

Southern West Virginia Community College, Williamson, WV. Mr. Hedrick is responsible for the structural design of the new 22,000 SF Applied Technology Center. The building featured large, flexible teaching areas that can adapt as the curriculum changes for each program. The project is targeting LEED Silver Certification.

Joint Interagency Training and Education Center (JITEC), Kingwood, WV. Mr. Hedrick was responsible for the overall structural design of the three story billeting addition. The project met the requirements of the building code along with the additional requirements of the Department of Defense for blast and progressive collapse resistance.

Jackson County AFRC, Millwood, WV. Mr. Hedrick was responsible for the overall structural design of the single story armory type structure. The project included the design of light weight metal trusses and long-span steel joists in the drill hall.

Wood County Justice Center, Parkersburg, WV. Mr. Hedrick was responsible for the structural design for this adaptive reuse project in Parkersburg WV. The existing 32,000 SF building will create a new Magistrate Court and a Sheriff's Department. The project is targeting a LEED Certification.

Tucker County Courthouse Annex, Parsons, WV. Mr. Hedrick was responsible for the structural design for the courthouse annex addition in Parsons, WV. The Annex is a 4-story, 21,000 Square Foot building that is adjacent to the Tucker County Courthouse. The annex will house spaces for the Circuit Court, Circuit Clerk, Family Court, Magistrate Court, Prosecuting Attorney, County Commission, County Clerk, Community Corrections, and Probation Office.

West Virginia Housing Development Fund Building, Charleston, WV. Mr. Hedrick was responsible for the overall structural design of the two story steel frame and masonry building. The structure consisted of a composite concrete floor slab supported by steel beams and columns supported on a deep pile foundation.

Other Firm Experience:
Mr. Hedrick has researched and developed design criteria for structural insulated panels, prepared designs for earthquake and wind on FRP tanks. His role has also included supervising the work of design engineers in preparation of construction documents.

Scot Casdorph, PE

ZMM ARCHITECTS & ENGINEERS

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
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 underfloor wiring to accommodate any future modifications of the workspace with minimal disruption to the employees. The project is targeted for LEED Silver Certification.

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.

West Virginia Research, Education, and Technology – Building 704 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.

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

West Virginia Army National Guard, Joint Interagency Education and Training Center, Camp Dawson, 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. The project is targeted for LEED Silver Certification.

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.

Jackson County AFRC, Ripley, 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, 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.

J.M. Chick Buckbee Juvenile Center, Romney, WV. Mr. Casdorph was responsible for the electrical design of the maximum security juvenile detention center. The single story 26,000 SF facility houses intake, medical care, recreation, food service and offers educational programs to help rehabilitate young individuals.

Gene Spadaro Juvenile Center, Mt. Hope, WV. Mr. Casdorph was responsible for the electrical design of the minimum security juvenile detention center which offers a softer approach to rehabilitation relying more on the affection from the caregivers than the restraints of lockdown helping young individuals make better life decisions.

Lakin Correctional Facility for Women, Lakin, WV. Mr. Casdorph was responsible for the electrical design of a dormitory style expansion on site of an existing correctional facility built exclusively for women. The new 124 bed, 24,000SF dormitory style housing unit provides ample amenities and a culinary arts program for the inmate population. An additional 9,500 SF Correctional Industries building was located near the dormitory and offers a garment, sewing and embroidery factory and manufactures inmate clothing, linens and office chairs.

Mary Jo Cleland, PE

ZMM
ARCHITECTS & ENGINEERS

Role
Civil Engineer

Professional Registrations
Professional Engineer (WV)

Ms. Cleland is responsible for the site design for ZMM projects. She coordinates with the project architects and mechanical and electrical engineers to integrate the site layout with the building requirements. Ms. Cleland works with the client and the architect to plan the site circulation, parking, and green space. She is responsible for storm water management and utility layout. For sites with environmental concerns, Ms. Cleland coordinates with the appropriate agencies and assists in permit applications.

Ms. Cleland began her career as a 2nd Lieutenant in the US Air Force as a project engineer for aerospace projects. After serving four years in the Air Force, she moved back to West Virginia and began her career in civil engineering. She began assisting lead engineers at an environmental and engineering consultant firm with air quality permitting, utility extension projects, and site development projects. After gaining experience at the consultant firm, Ms. Cleland joined ZMM as the civil engineer for the firm. She has experience with urban and rural site, storm water management system, and site design.

Project Experience
Bridgemont Community and Technical College - Master Plan, Montgomery, WV.
Ms. Cleland is the Civil Engineer on the 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.

West Side Elementary School, Charleston, WV. Ms. Cleland was responsible for the site design and stormwater management for this site located within a city block. The site utilities were readily available and minimal grading was

Education
Bachelor of Science in Education, West Virginia State University, 2001

Bachelor of Science in Aerospace Engineering, United States Naval Academy, 1993

Employment History
2009 - Present, Civil Engineer, ZMM
2002 - 2009, Project Engineer, Potesta & Associates, Inc.
1993 - 1997, Aerospace Engineer, United States Air Force

Civic Affiliations
- National Society of Professional Engineers
- West Virginia Society of Professional Engineers

required for this site. The challenge was the stormwater management requirements. The pre-construction site conditions were a small school building and a large play field took up most of the site. The post- construction site conditions were the opposite creating a significant increase in stormwater runoff rate. A stormwater retention system was designed to infiltrate the majority of the stormwater and recharge the groundwater.

Harts PK-8 School, Harts, WV. Ms. Cleland was responsible for site design and permitting. The site was constrained by the Guyandotte River, State Route 10, and an unmarked cemetery in the middle of the site. The site was laid out to avoid disturbance of the cemetery and create a building pad and access roads to satisfy the client, State Fire Marshall, and vehicular circulation. The site preparation package included building pad grading, rough site grading, and storm water management. Ms. Cleland coordinated with the local utility agencies, WV Department of Transportation, the United States Army Corps of Engineers, the local floodplain manager, and the WV Department of Environmental Protection.

Wood County Justice Center, Parkersburg, WV. Ms. Cleland was responsible for site design for this adaptive reuse project in Parkersburg WV. The existing 32,000 SF building will create a new Magistrate Court and a Sheriff's Department. The project is LEED Silver Certified.

Family Readiness Center (WVARNG): Ms. Cleland was responsible for site design for a two story building located on a hillside. Due to the existing slopes, Ms. Cleland performed several analyses to determine the optimal finished floor elevations of the building. The building was set into the hillside to allow for on-grade access to both entrances. The access road was design with handicap parking at both entrances. The client wanted the building to have the least impact as practical for the site development. A large segmental block wall was utilized to limit disturbance of cut slopes.

Highland Medical Facility, Charleston, WV.
Ms. Cleland was responsible for the site development including utility extensions and relocations, stormwater drainage design, site pedestrian and traffic circulation, and parking area layout. Ms. Cleland also coordinated with the City Engineer to meet local requirements for stormwater management, zoning ordinances, and driveway layout. In addition to coordinating with the City, Ms. Cleland was responsible for permitting required by state agencies for site development.

Project Experience with Other Firms: Ms. Cleland assisted with site development projects, utility extensions, pump station design, outlet structure design, and wastewater treatment plant design prior to coming to ZMM. In the eastern panhandle of West Virginia, Ms. Cleland designed the site layout and utilities for a planned hill side community with phased development plans. She assisted on the site utilities and sanitary sewer extension project for a two schools in Southern West Virginia.

Ms. Cleland also has experience with environmental investigations and air quality permitting. She assisted industrial clients with preparation and assembly of air permit application to the West Virginia Department of Environmental Protection. Ms. Cleland coordinated with the agencies through to permit issuance.

Jill Watkins, NCIDQ, LEED AP BD&C

ZMM ARCHITECTS & ENGINEERS

Role
Interior Designer/Sustainability Coordinator

Professional Registrations
NCIDQ Certification
LEED Accredited Professional, Building Design & Construction

Ms. Watkins is ZMM's interior designer and sustainability coordinator. After earning a BS in Interior Design from the University of Tennessee, Ms. Watkins lived in Cleveland and Boston for 13 years before coming back home to Charleston in 2008. During that time she worked on a wide variety of commercial interiors projects, and nurtured a passion for sustainable design.

She was one of the founding members of the Cleveland Green Building Coalition; interior designer and sustainability coordinator for the Federal Courthouse in Youngstown Ohio, which was the first courthouse in the country and the first building in Ohio to become LEED Certified; she was interior designer and sustainability coordinator for Cubellis' corporate headquarters in Boston, which is now LEED for Commercial Interiors Gold Certified; Ms. Watkins led the green effort that has since become part of Procter & Gamble's green building standards; she was Chapter President of the International Interior Design Association in Ohio for 4 years; and is currently involved with all of ZMM's LEED projects and several green building outreach efforts on behalf of the firm.

Project Experience
Bridgemont Community and Technical College Davis Hall Renovation, Montgomery, WV. Ms. Watkins is responsible for the interior design efforts to the Davis Hall renovations. She is also responsible for interior finishes and furniture selections.

Huntington East Middle School, Huntington, WV.
Targeted for LEED for Schools 2009 Silver Certification.
As LEED Administrator, Ms. Watkins assisted in coordinating design decisions to maximize LEED points and overall operational savings for the client. She was also responsible for interior color selections and finish plans.

Wood County Justice Center, Parkersburg, WV.
Wood County chose an existing building in downtown Parkersburg to renovate for its Magistrate Courts, Sheriff's Department and Holding Center, and Ms. Watkins was responsible for programming, space planning, coordination with consultants, researching multiple standards and codes, interior

Education
Bachelor of Science in Interior Design, The University of Tennessee, 1993

Employment History
2008 - Present, Interior Designer/Sustainability Coordinator, ZMM
2005 - 2007, Project Designer, Boston Architecture/Engineering Firm
1995 - 2005, Interior Designer, Various Cleveland Architecture/Engineering Firms

Civic Affiliations
- Bridgemont Sustainability Institute Advisory Council, Member
- FestivALL Steering Committee, Member

finish selections, reflected ceiling plans and furniture selections. This building is LEED-Silver certified.

West Virginia Housing Development Fund Office, Charleston, WV. Ms. Watkins was responsible for programming, interior elevations and details, lighting design, reflected ceiling plans and furniture and finish selections for this new 30,000 square foot office building.

West Virginia Army National Guard, Joint Interagency Training & Education Center, Camp Dawson, WV. Targeted for LEED for New Construction v2.2 Silver Certification.
For this multi-faceted and complex project, Ms. Watkins assisted in coordinating interior design for the entire project, and led the interiors effort for the Billeting (hotel) building. Jill also played a leadership role in the LEED process as co-LEED Administrator and was instrumental in the team achieving several LEED credits. She was responsible for interior finish selections, finish plans, reflected ceiling plans, interior elevations, custom casework design and interior details.

Tucker County Courthouse Annex, Parsons, WV.
Ms. Watkins is responsible for the interior design and finishes for the Courthouse Annex renovation project and responsible for the HVAC systems. The Annex is a 4-story, 21,000 Square Foot building that is adjacent to the Tucker County Courthouse. The annex will house spaces for the Circuit Court, Circuit Clerk, Family Court, Magistrate Court, Prosecuting Attorney, County Commission, County Clerk, Community Corrections, and Probation Office.

Jackson County Armed Forces Reserve Center, Millwood, WV.
Jill worked closely with ZMM architects and engineers to fully develop the interiors package. Primary focus occurs in the main lobby, where coordination of exterior and interior finishes, lighting, and ceiling design was critical. In the Assembly/Drill Hall, Jill coordinated the interior acoustic requirements with finishes and architectural elements to create a unique, flexible space for many types of uses.

Morgantown Readiness Center, Morgantown, WV.
Targeted for LEED for New Construction v2.2 Silver Certification.
Jill worked alongside ZMM architects and engineers to fully develop the interiors for this multi-functional building that houses offices and performance facilities for the band, as well as traditional readiness center functions. Design of the main gallery space was foremost, where coordination of durable interior finishes, lighting, and ceiling design was important. In the Drill Hall and Auditorium, Jill coordinated the interior acoustic requirements with finishes and architectural elements to create a stage area, performance space, and drill hall that will seamlessly function in a variety of ways. Jill is LEED Administrator for the project.

Other Firm Experience:
Procter & Gamble Gillette Corporate Headquarters, Boston, MA; to meet Boston Green Building Standards
Cubellis Corporate Headquarters, Boston, MA; LEED for Commercial Interiors Gold Certified
University of Akron Arts & Sciences Classroom Building, Akron, OH
University of Akron Student Affairs Building [programming], Akron, OH
Nathaniel R. Jones Federal Building and U.S. Courthouse, Youngstown, OH; LEED Certified
Beachwood Middle School, Beachwood, OH
Cleveland State University Library [schematic design], Cleveland, OH

Awards and Acknowledgements:
President, Ohio/Kentucky Chapter of the International Interior Design Association
Advisory Board Member, Cleveland Green Building Association
Vice President of Membership & Communication, Coalition of Interior Designers for Legislation in Ohio

Construction & Facilities Management Office

WVARNG

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Charleston, WV

SIZE:
19,935 SF

COST:
$3.5M

COMPLETION:
2008

CONTACT:
Lt. Colonel David Shafer
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.

Tackett Family Readiness Center

WVARNG

ZMM
ARCHITECTS & ENGINEERS

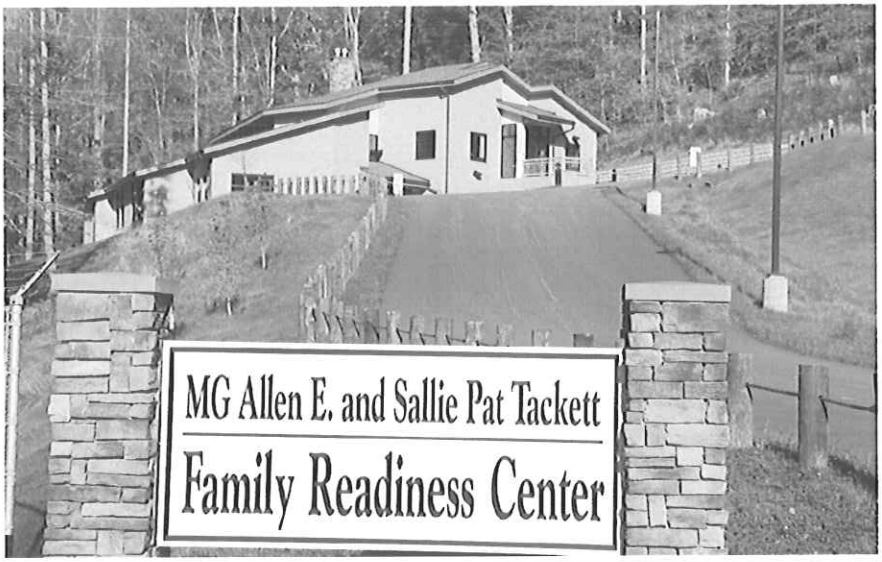
LOCATION:
Charleston, WV

SIZE:
7,400 SF

COMPLETION:
February 2011

COST:
$1.57M

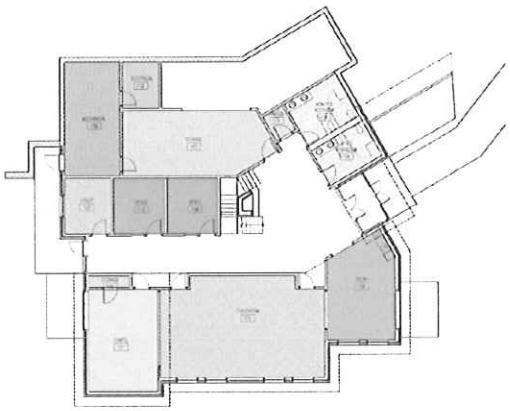
CONTACT:
LTC David Shafer
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6539



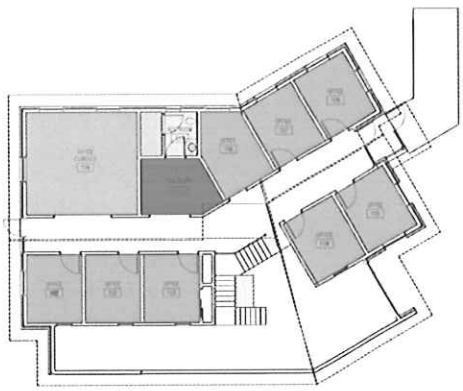
The Family Support Center is a two - story brick building with a sloped roof stepped into the wooded hillside adjacent to the Army National Guard facilities in Charleston, West Virginia.

The building is designed to provide for a multitude of military family assistance, guidance, education, training, and mentoring programs.

The support center contains 11 office spaces, a chapel, and a variety of classroom and meeting spaces for various programs. The building provides an abundance of natural light and a central fireplace to project a warm, comforting and supportive atmosphere.



Lower Level



Upper Level

Robert C. Byrd - Regional Training Institute

WVARNG

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Kingwood, WV

SIZE:
148,000 SF

COMPLETION:
2002

COST:
$21M

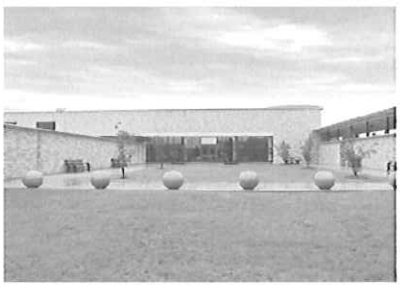
CONTACT:
LTC David Shafer
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6539

The Robert C. Byrd Regional Training Institute at Camp Dawson is a 148,000 SF facility designed to provide training, dormitory, dining, and recreational facilities for the West Virginia Army National Guard. The facility, which includes 183 private dormitory rooms in addition to a wide range of training spaces is designed to accommodate a variety of both military and civilian training functions.

The goal of the owner was to provide a campus within a building, with clear circulation and for various uses. ZMM accomplished this objective by employing a large cylindrical mass that marks the main entry where guests can coordinate both their housing and educational needs.

The Training Institute has a 400 Ton primary/secondary variable flow chiller water system, and an 8,800 MBH primary variable flow hot water system. The hot water system serves variable and constant value air handling units, fan coils, the swimming pool conditioner, and make up air units.

Additionally, the housing wing is joined to the recreational and educational components with a large gathering/transitional space that often serves as an informal meeting area. Due to the success of the project, and growing use of the facilities, ZMM is currently assisting the West Virginia Army National Guard with training and dormitory expansions.



Jackson County Armed Forces Reserve Center

WVARNG

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Millwood, WV

SIZE:
75,000 SF

COST:
$20M

COMPLETION:
Fall 2011

CONTACT:
LTC David Shafer
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6539

The new facility houses both the West Virginia Army National Guard (WVARNG) and the United States Army Reserves (USAR). The primary user for the WVARNG will be DET 1 821st Engineering Company, who will be supported by a FSC of the 1092nd. USAR occupants will include PLT AMMO 261 OD and PLT 1 (Postal) and PLT 6 (Postal) of the 44th Personnel Company. The facility also includes an expanded Drill Hall that can serve as a convention and meeting space, which is being funded by the Jackson County Commission, additional federal appropriations, and the State of West Virginia National Guard.

The relationship between the structures became crucial to the site layout. The new facility is centered on the existing house, increasing the exposure of the facility from Route 2 - the major route of vehicular travel that parallels the Ohio River. Once the aesthetic of the building was established, the massing of the new facility was defined by breaking-down the facility into smaller mass elements that more closely reflected the Georgian Style, and that of many Army posts, such as Fort Meyer in Northern Virginia. The larger programmatic elements such as the Drill Hall and the storage areas employ an aesthetic that more closely implies their function.

The layout of the facility includes a main entry with the USAR and WVARNG Recruiting, Family Support, and Administrative areas located on separate sides (USAR to the left, WVARNG to the right). A transverse wing on the left houses all functions that have the potential for public use, such as the Drill Hall and the Educational component, while all primary military spaces developed along a similar perpendicular wing on the right. This allows for separate entries to be developed for public functions, while the remainder of the facility can be secured. The layout also creates a large central courtyard or parade field that would be located at lower grade to define the edge facing the river. This edge is defined by a canopy that connects storage and locker areas to the expanded Drill Hall.

Morgantown Readiness Center

WVARNG

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Morgantown, WV

SIZE:
54,000 SF

COMPLETION:
Est. 2013

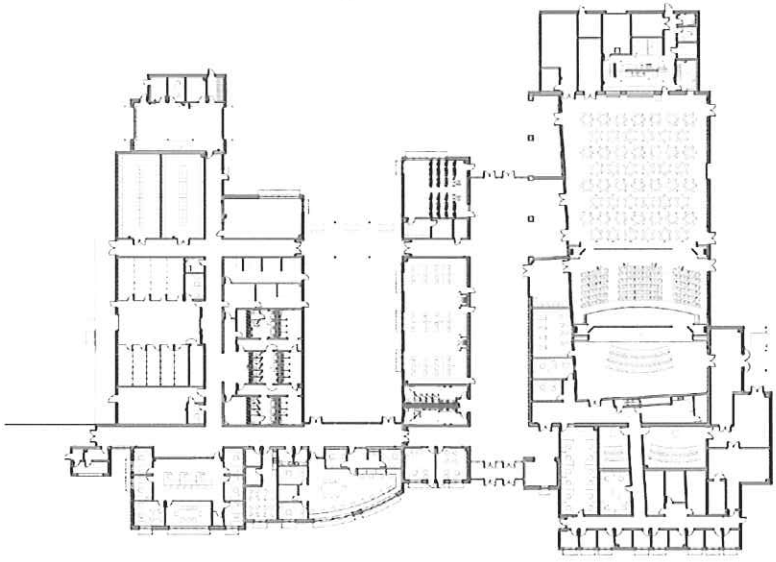
COST:
$ 18.5M

CONTACT:
Lt. Colonel David Shafer
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6539

ZMM provided professional design services for the design of the Morgantown Readiness Center in Monongalia County for the West Virginia Army National Guard. The 54,000 SF Readiness Center will occupy a 35-acre tract on a former runway at the Morgantown Municipal Airport.

The Morgantown Readiness Center will house the 249th Army Band, and includes private and group practice spaces, rehearsal rooms, instrument storage, and a performance stage and fixed auditorium. To provide maximum flexibility the auditorium can be expanded into the adjacent Drill Hall through the use of a series of moveable partitions. All band spaces have been designed to maximize their acoustical performance.

The exterior of the facility was designed to meet the WVARNG's objective of providing a gateway to Camp Dawson. The exterior material selections as well as the building's massing (with a vertical element at the entry) reflect architectural features common at Camp Dawson. The vertical tower also mimics the aesthetics of an airport tower.



Kingwood Armed Forces Reserve Center

WVARNG

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Camp Dawson, WV

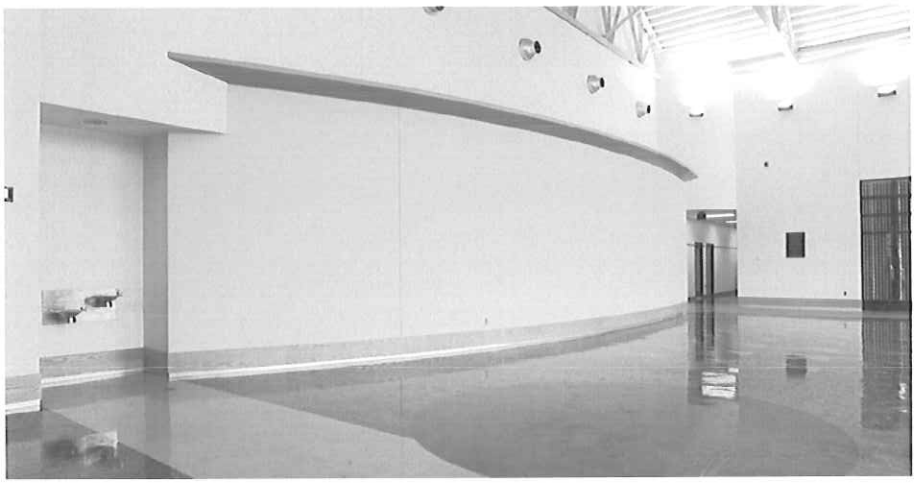
SIZE:
56,200 SF

COMPLETION:
2000

CONTACT:
LTC David Shafer
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6539

The Armed Forces Reserve Center will house five National Guard and Army Reserve Units and their support personnel. Its mission is twofold: first, to maintain readiness for its attached units and second, to serve as a resource to the surrounding community.

The primary readiness mission for the center's attached units is accomplished by providing designated spaces for each unit as well as general educational and gathering spaces that can be shared among the units. The building's community mission is to provide a gathering space for social functions, a shelter-in-place in times of natural disaster, and a community education resource with distance learning network capabilities. It also includes kitchen and dining facilities and physical fitness areas.



LOGAN - MINGO READINESS CENTER

WVARNG

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Logan, WV

SIZE:
54,000 SF

COMPLETION:
2014

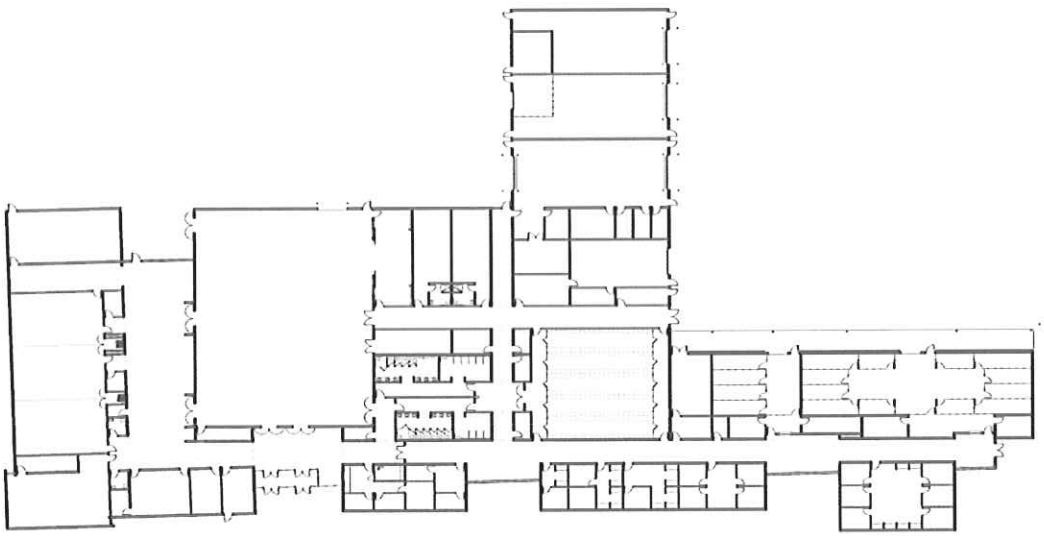
COST:
$12M

CONTACT:
LTC David Shafer
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6539

The design of the Logan-Mingo Readiness center was developed by examining both the program and building site, and developing strategies to design a facility that is functional, responds to site, security, and aesthetic parameters, while requiring minimal maintenance.

The building layout was developed by working closely with the end-users to determine the appropriate configuration of building spaces to maximize the efficiency of the operations, and to respond to the unique missions of the 150th Armored Reconnaissance Squadron and the 156th Military Police (LNO) Detachment. Clear separation of "public" and "private" areas within the facility, unique office configurations related to training requirements, and the addition of State Funded additional spaces.

The exterior (and in many cases the interior) aesthetic of the facility was driven by the location of the Readiness Center within an industrial park on a reclaimed surface mined site. The decision led to the use of reinforced cast-in-place retaining walls that became both a functional and visual focus. Similar pre-cast walls are used to anchor the facility at the Distance Learning Center, while a cast -in-place retaining wall serves as a part of the Anti-Terrorism/Force Protection design.



West Virginia Air National Guard Headquarters

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Charleston, WV

SIZE:
90,000 SF

COMPLETION:
1993

CONTACT:
Lt. Colonel David Shafer
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6539

The main façade upon approach to the Headquarters of the 130th Airlift Group includes an end-to-end expanse of ribbon windows interrupted by a vertical tower that includes a multi-story curtain wall system. The remainder of the façade is clad in masonry and insulated metal panels that emphasize the solid, secure nature of the facility.

The building contains administrative offices, conference rooms, computer rooms, a clinic, locker and shower rooms, as well as recruiting offices for Air Force personnel. Direct digital controlled HVAC systems save energy by reducing temperatures in areas occupied intermittently.

Wood County Justice Center

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Parkersburg, WV

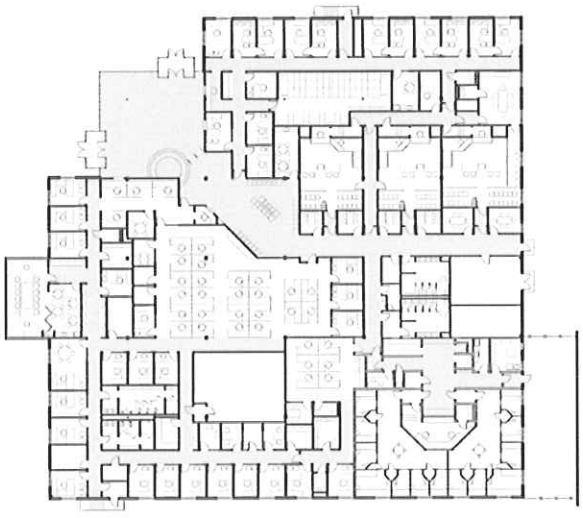
SIZE:
32,000 SF

COMPLETION:
2011

PROJECT COST:
$5M

CONTACT:
Mr. Blair Couch
Commissioner
No. 1 Court Square
Suite 205
Parkersburg WV 26101
304.424.1978

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 received LEED Silver Certification.

West Virginia Capitol Complex

Buildings# 5, 6, & 7

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Charleston, WV

SIZE:
500,000 SF

COMPLETION:
TBA

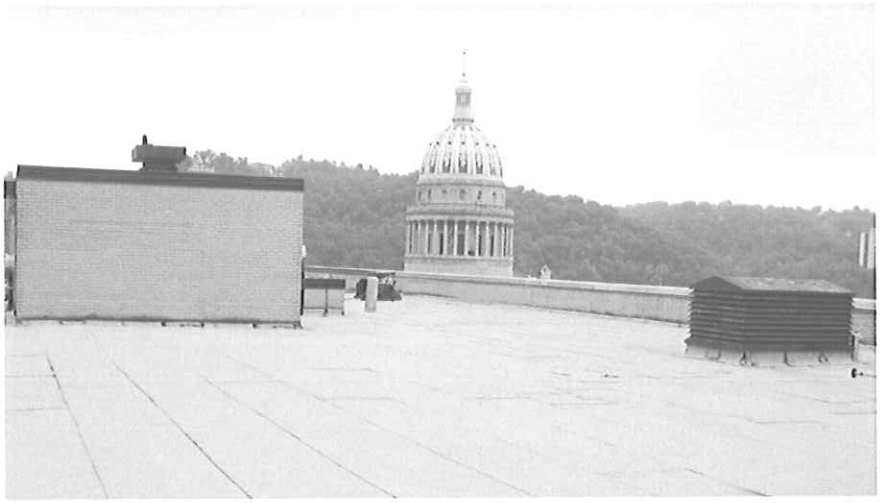
CONTACT:
Robert Krause
General Services Division
1900 Kanawha Blvd. East
Room MB-60
Charleston, WV 25305
304.558.0256

ZMM completed an in-depth analysis of Buildings 5, 6, and 7 on the 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.

Once the initial analysis is complete, ZMM will develop several options related to the rehabilitation of the existing facility. Prototypical floor plans are being designed currently as well as major infrastructure and utility upgrades. ZMM is also determining sustainable design principles that will be applicable as the renovations are undertaken.

ZMM also completed the following:

- Installation/Electrical Services for the Electrical Courtyard Installation
- Window Replacements and an Assessment for the State Office Buildings
- Complete Renovations to Building #5, 10th floor - Office of Technology.
- Renovation of State Office Building #6, 8th Floor
- Door/Security Project
- WV Culture Center gift shop renovation
- Roof Replacements
- Governor's Mansion - HVAC System Corrective Study



Tucker County Courthouse Annex

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Parsons, WV

SIZE:
21,000 SF

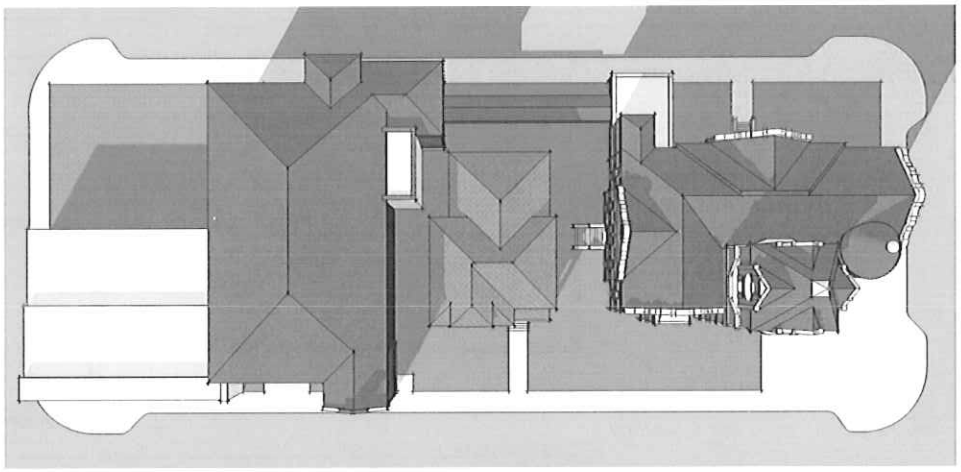
COST:
Est. $4M

COMPLETION:
Est. 2013

CONTACT:
Mr. Tom Carr,
Commissioner
213 1st Street
Parsons, WV 26287
304.478.2866

The Tucker County Courthouse Annex is 4-story, 21,000 square foot building located adjacent to the Tucker County Courthouse in Parsons, WV. The annex sits on the same lot as the courthouse with the original jailor's residence between the two. The location of the existing jailor's residence, which is listed on the National Register, created a challenging planning dilemma. ZMM explored three options for developing the Courthouse Annex. The first option, the original concept proposed by Tucker County, anticipated connecting the Annex at multiple levels via a connector.

The problem with this approach was that the jailor's residence appeared like a building stuck within a larger complex, as well as the cost of the connector structure. ZMM also explored the option of relocating the jailor's residence, an approach that proved not feasible as the location of the facility justifies it's historical quality. The final solution that was examined, and is currently being implemented, involved adding a separate elevator to the existing Tucker County Courthouse, and connecting the entry to the two facilities with an enclosed single level connector. This approach is the most efficient use of the County's resources, and also the best approach for the overall Courthouse site. Continued...

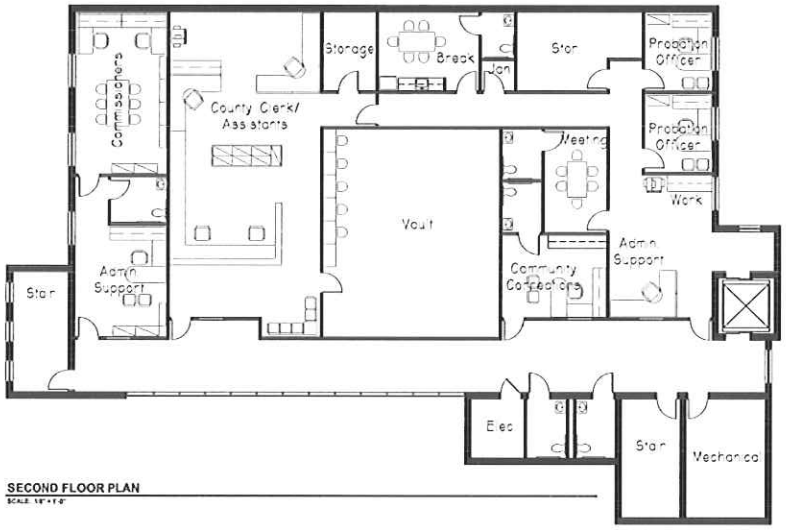


Tucker County Courthouse Annex

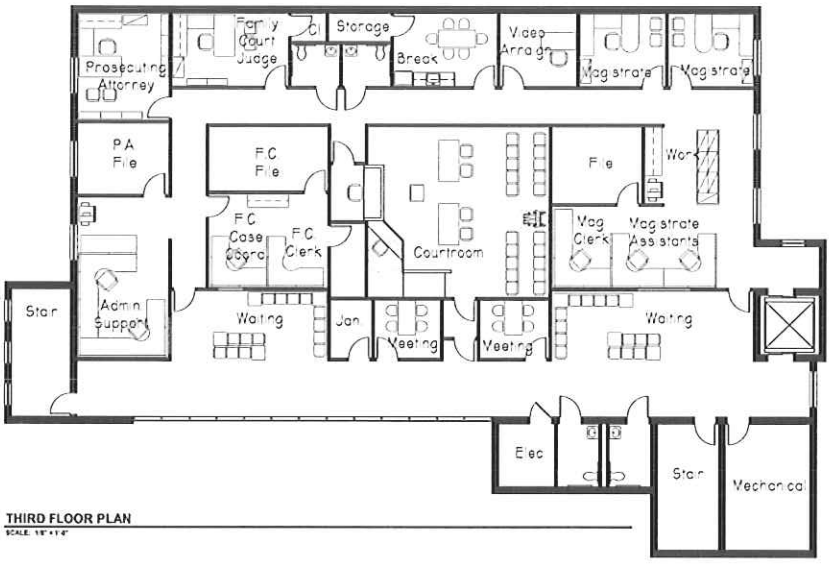
ZMM
ARCHITECTS & ENGINEERS

The annex will house spaces for the Circuit Court, Circuit Clerk, Family Court, Magistrate Court, Prosecuting Attorney, County Commission, County Clerk, Community Corrections, and Probation Office. The Tucker County Sheriff, currently housed in leased space, will occupy the space that is being vacated in the original Courthouse. The office and courtroom spaces occupy the upper three floors, with enclosed parking on the ground floor. The enclosed parking on the ground level will ensure that all occupied spaces are located outside of the floodplain.

The architecture of the annex is meant to complement the existing Romanesque and Flemish styles of the Courthouse and jailor's residence. The red brick, stone base, brick banding, arched openings, and sloped rooflines help to create a unified feel, while the wall of glass adjacent to the public corridor that overlooks the courthouse brings a touch of modernity to the campus and provides natural light to the interior of the building.



SECOND FLOOR PLAN



THIRD FLOOR PLAN

State Office Building #5, 10th Floor

Office of Technology

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Charleston, WV

SIZE:
22,000SF

COST:
$3.7M

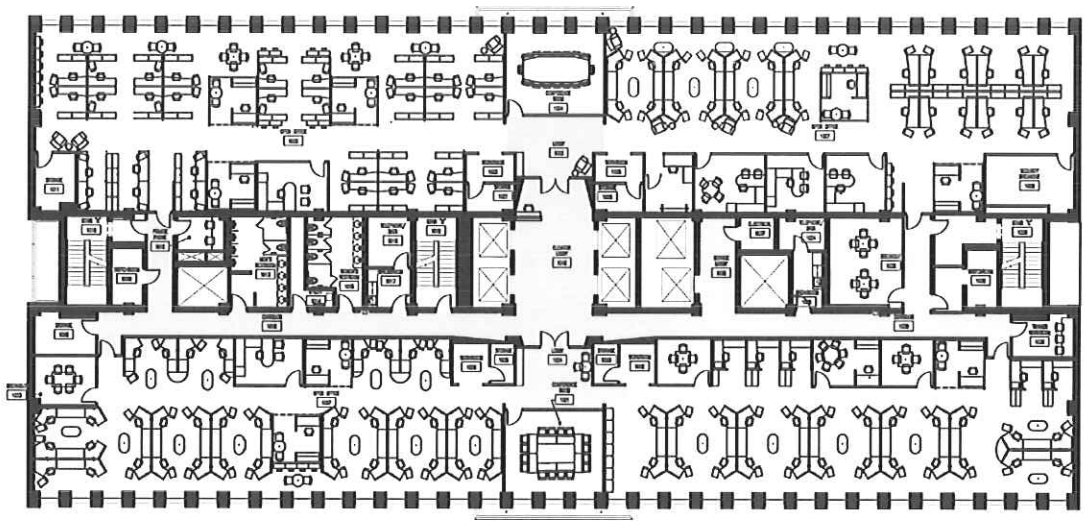
COMPLETION:
2010

CONTACT:
Mr. David Oliverio
Director
General Services Division
1900 Kanawha Blvd. E
Charleston, WV 25305
304.558.3517

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.
Continued...



State Office Building #5, 10th Floor

ZMM
ARCHITECTS & ENGINEERS

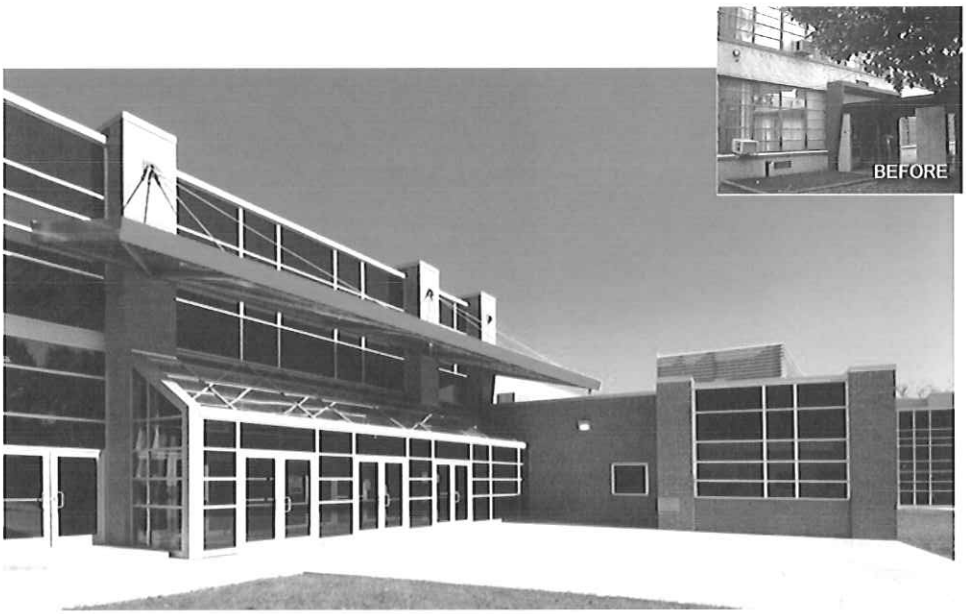
To improve the opportunity for daylighting, office spaces have been "pulled-in" to the core of the building. This decision will allow for daylight to be introduced deep into the interior work areas, and will allow access to the daylight and views for all employees. The perimeter structural bays of the 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.

St. Albans High School

Kanawha County Schools

ZMM
ARCHITECTS & ENGINEERS



LOCATION:
St. Albans, WV

SIZE:
216,500 SF

COMPLETION:
2003

COST:
$24M

CONTACT:
Dr. Ron Duerring
Superintendent
200 Elizabeth Street
Charleston, WV 25523
304.348.7732

AWARDS:
Impact on Learning Award
Effective Transformation

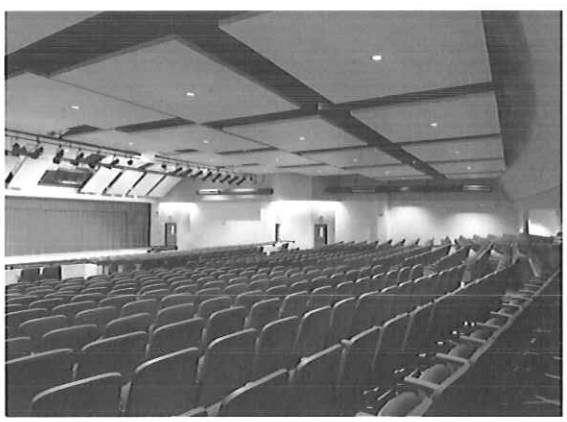
Education Design Showcase
Outstanding Building Design

American School & University
Outstanding Building Design

One outstanding feature of the completed renovation of St. Albans High School is its unique, inviting physical entryway and the aesthetically pleasing and functional commons/cafeteria area. The commons is a visual focal point of the school creating a natural flow from the front entrance, through the commons to the outside assembly/instructional area, it also serves as a connecting hub between the academic spaces and the physical education and auditorium areas.

Significant green space was retained and enhanced which providing an inviting and safe approach to the high school building. An outside amphitheater, located adjacent to the music and theater departments, provides ample space for music and drama productions as well as a gathering space for students. In response to the students need for more "outside living space" the rear dining plaza was created. It has a visual impact on the interior and provides a flexible learning environment for the students and educators.

The addition of an auxiliary gym, renovations to the auditorium complex, a new media center and other additions and improvements allow spaces for more extensive use by the community. Renovations to the auditorium resulted in a space that is educationally functional and is a source of pride for the students and the entire community. Continued...



St. Albans High School

ZMM
ARCHITECTS & ENGINEERS

Instructional spaces have been designed to be flexible, adaptable and accommodating for the more active, student oriented instructional programs and methods of the district. Classroom and other spaces are bright and welcoming for students and staff and appropriate space and equipment are provided to allow for the efficient and effective delivery of program objectives.

Responding to concerns from students, staff and the community, and due to the condition of existing science facilities, science wing was completely replaced with modern, functional and flexible space and equipment.

Provisions for new and emerging technologies were greatly enhanced throughout the building. The new media center is the central hub for technology and with the inclusion of an appropriate infrastructure, providing flexibility needed for the technology of the future. St. Albans High School was completed during the summer of 2003 and was occupied by the student body at the beginning of the 2003-2004 school year.

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:
Est. Fall 2013

CONTACT:
Susan Thompson, CEO
GSBDC
210 Hale Street
Charleston, WV 25301
304.345.7722

The New Girl Scouts of Black Diamond Council Volunteer Resource Center and Girl's Zone/Urban Camp will be located on the West Side of Charleston, WV. The 18,000 SF project will completely renovate and upgrade 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. 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 facility will include administrative offices, community/meeting gathering spaces, as well as a small hotel (or Urban Camp) for Girl Scouts visiting Charleston.

The main building will bring all of the operations of the Girl Scouts of Black Diamond Council together under one roof and on one level. This building will house a volunteer meeting room, employee office space, flexible conference spaces, and a retail shop. The Virginia Street façade of the existing facility will be removed, and more contemporary elements will be utilized to speak to each of the functions. The Girl's Zone/Urban Camp will reflect a residential tone with the use of a wood veneer, while the retail store will have floor to ceiling storefront. The storefront will be etched with scouting images, which will be lighted 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 vegetative planter to provide privacy.

Girl Scouts of Black Diamond Council

Volunteer Resource Center and Girl Zone/Urban Camp

ZMM
ARCHITECTS & ENGINEERS

The adjacent Girl's Zone/Urban Camp will have the feel of a hotel and will offer a place that visiting 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 hold meetings. The "hotel rooms" utilize a dormitory arrangement, while the finishes and furnishings will be more like a hotel room 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!"

Bridgemont Community and Technical College

Davis Hall Renovation

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Montgomery, WV

SIZE:
77,215 SF

COMPLETION:
Summer 2012

COST:
$4M

CONTACT:
Dr. Jo Harris, President
619 2nd Avenue
Montgomery, WV 25136
304.734.6600

ZMM was selected by Bridgemont Community and Technical College and the West Virginia Community and Technical College System to provide professional architectural and engineering design services for the Renovation of Davis Hall in Montgomery. Davis Hall is a 77,215 SF classroom and laboratory facility that was constructed in 1970 for WVU-Tech. The exterior of the facility consists of architectural pre-cast concrete panels and a curtain wall system. The interior includes an open two story atrium, a large auditorium, and five levels of office and classroom space that is constructed of demountable partitions.

Prior to commencing the design effort, ZMM completed a thorough assessment of the facility. The assessment revealed significant life safety concerns that had not been previously identified, including the use of non-plenum rated plastic insulated wiring throughout the return air plenums, mechanical units located above ceilings in exit stairs, and a lack of adequate fresh air for building occupants. As part of this initial assessment, ZMM assisted in developing a scope of work for the current project, as well as a long range plan for future improvements to Davis Hall.

The scope of the current project includes life safety upgrades (replace non-plenum rated wiring, new fire alarm system), improvements to the building envelope (curtain wall replacement and re-roofing), hazardous material abatement, mechanical improvements (boiler and chiller replacement, outdoor air ventilation system replacement), and interior improvements (replace ceilings and lighting, upgrade furnishings).

Judge Donald F. Black Courthouse Annex

Wood County

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Parkersburg, WV

SIZE:
36,828 SF

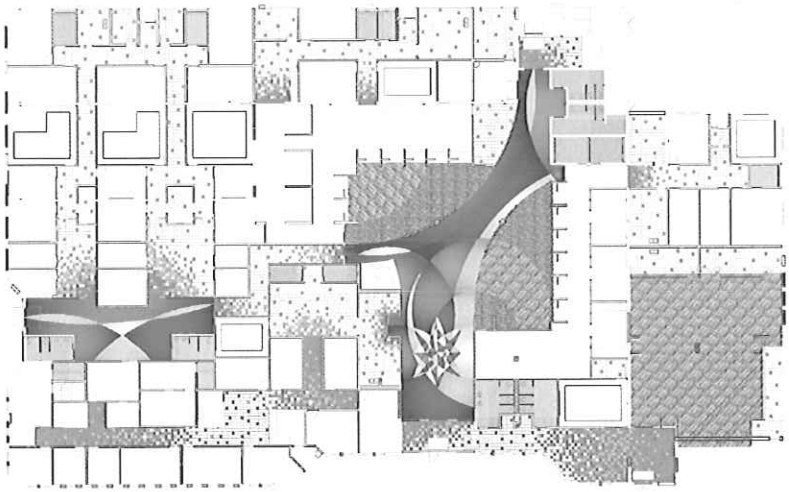
COST:
$3.5M

COMPLETION:
2005

CONTACT:
Mr. Blair Couch
Commissioner
No. 1 Court Square
Suite 205
Parkersburg WV 26101
304.424.1978

The Judge Black Annex project involved renovating an existing commercial building into county office and courtroom space for the Sheriff's Tax Office, Assessor's Office, Prosecuting Attorney's Office, and the Family Court. The design provided both secure and non-secure circulation, while taking advantage of the existing structural configuration to create large open volumes that lend the building prominence.

The interior design utilized rich colors and dramatic visual accents in public areas, with finishes selected for durability. Layered planes of varying colors accent the building's depth, and skylights provide daylight to county staff throughout the renovated office areas. Exterior improvements included the elimination of an existing storefront system as well as a change in the fenestration, to more closely match the existing courthouse and to change the character and typology of the existing facility.



ZMM
ARCHITECTS & ENGINEERS

Healthcare Experience

Healthcare Experience

So. Charleston Pediatrics Facility

Highland Medical Facility

St. Francis Hospital - Various Projects

Parkersburg Women's Center

CAMC Hospital - Cancer Treatment Center

CAMC Hospital - Patient Room Expansion

Webster County Memorial Hospital Addition

Braxton Memorial Hospital - Various Projects

Pleasant Valley Hospital Addition

Clinic Experience

West Elementary School - Health & Dental Clinic

Lincoln County High School - Health Clinic

Glen Jean Armed Forces Center - Health Clinic

St. Albans High School - Health Care Clinic Design

New River Elementary School - Health Clinic

Mount View Middle/High School - Health Clinic

Glen Jean Armed Forces Center

Healthcare / Rural Clinic Design

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Glen Jean, WV

SIZE:
110,000 SF

COST:
$17M

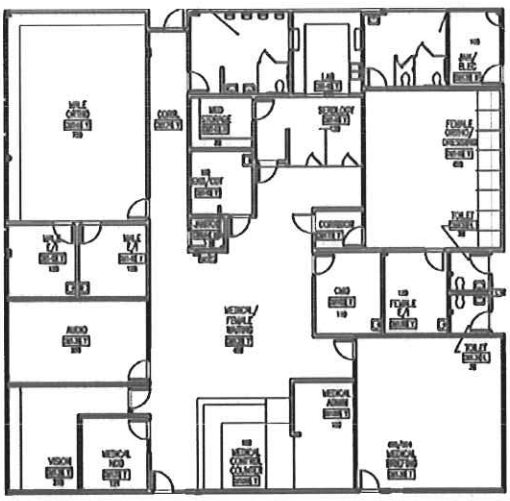
COMPLETION:
2004

CONTACT:
LTC David Shafer
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6539

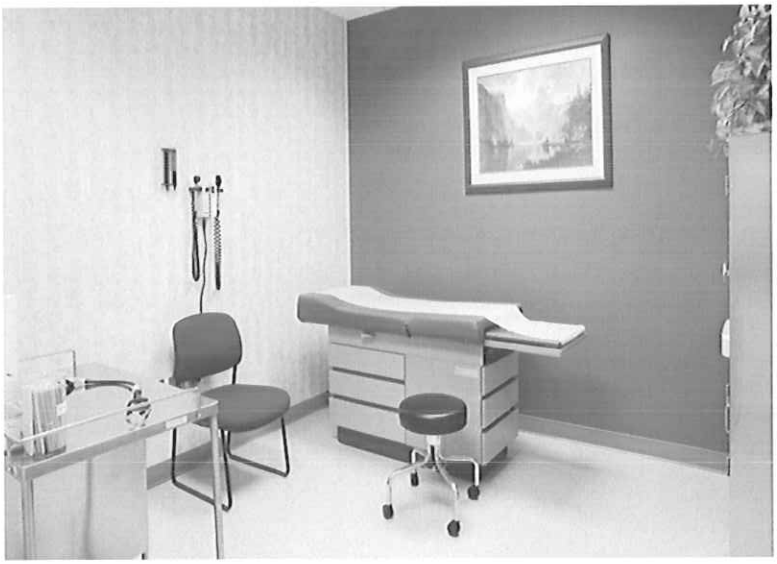
The Glen Jean Armed Forces Center contains three distinct military functions: a facility for routine maintenance of over-the-road and tracked military vehicles, an armory housing four West Virginia National Guard units and the Southern West Virginia Military Entrance Processing Station, where new recruits officially enter the military system.

The brick exterior walls are highlighted with limestone and metal trim accents. A large assembly hall, plus classroom and training space, enhance the ability of the armory building to provide training for military personnel, and additionally to provide space for community functions.

A health clinic was added to the facility that includes multiple exam rooms, a medical lab, vision exam room, administrative office area, a nurse station and medical storage space.



Clinic Floor Plan



Highland Hospital

Healthcare / Rural Clinic Design

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Charleston, WV

SIZE:
87,300 SF

COMPLETION:
2012

COST:
$26M

CONTACT:
Jim Strawn,
Director of Marketing &
Community Education
300 56th Street
Charleston, WV 25304
304.348.1417

ZMM has completed the design services for a five level, 87,3000SF, $26M addition to Highland Hospital in Charleston. The addition will include: administrative offices, training spaces, 165 patient beds, nurses stations, an out-patient treatment department, pharmacy, laundry, and building service spaces. A pedestrian bridge will connect the new facility to the existing hospital.

The new design complements the existing Highland Hospital, and was coordinated with a variety of community organizations, as well as the City of Charleston Planning Department. Site design features include a "pocket-park" that utilizes a permeable pavement system for the walkways, reducing the need for storm water detention.

The floor plan was designed to give direct visual control of the entire facility from the nurses station. In addition to the direct visual control, security, and safety are monitored through the use of state of the art security systems. The patient floors are designed to allow flexible segregation of patient types based on current patient classifications. Patient toilet room entrances are visible from the nurses stations. Additional security features include secure drywall ceilings in patient rooms, tamper proof sprinkler heads, security suspended ceilings in the corridors, and bolt-down furniture in the group meeting or "dayroom" area.

South Charleston Pediatrics

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Charleston, WV

SIZE:
14,000 SF

COMPLETION:
2014

COST:
$3M

CONTACT:
Jamie Ray, Office Manager
4607 MacCorkle Avenue
Suite 400 Medical Pavilion
So. Charleston, WV 25309
304.766.4400

The new medical facility for South Charleston Pediatrics is designed to create a contemporary focal point along the Kanawha River and enhance the riverfront district of downtown Charleston, WV. Located on a former industrial site, the new facility will give the current medical practice room for growth and provide them a centralized location in the region.

The building's orientation faces the street creating views across the Kanawha River and at downtown Charleston. The majority of the building's glass is positioned to prevent overheating from solar heat gain in the summer while the rest of the building envelope is designed for high performance and durability. Daylighting is utilized for natural light and overall sense of well-being, and a north-facing rooftop patio has been designed for outdoor summer events and views of the river.

The interior is divided into sick and well areas creating separation between patients. The heating and cooling systems are zoned throughout the building and provide adequate amounts of fresh air for the occupants. The high-efficiency lighting is combined with occupancy sensors for efficient use and reduced internal heat gain. Stormwater from the parking lot is directed to rain gardens for on-site infiltration with low-maintenance and indigenous landscaping.

Lincoln County Comprehensive High School

Southern West Virginia Community College

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Hamlin, WV

SIZE:
216,500 SF

COMPLETION:
August 2006

COST:
$32M

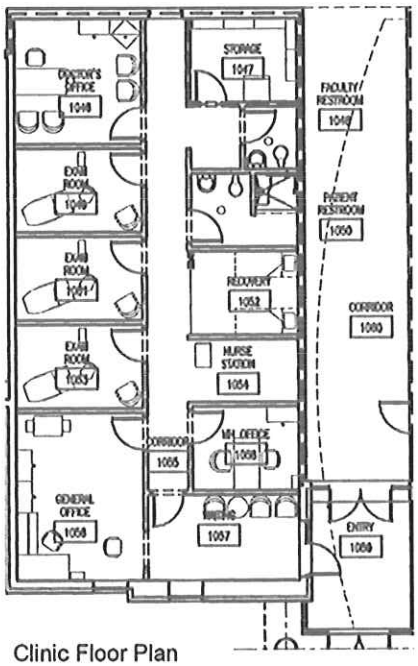
CONTACT:
Mr. David Roach
Superintendent
Loncoln County Schools
10 Marland Avenue
Hamlin, WV 25523
304.824.3033

AWARDS:

2007 AIA Honor Award
West Virginia Chapter
Excellence in Architecture

Education Design Showcase
Project of Distinction award

American School & University
Outstanding Building Design



Clinic Floor Plan

The new Lincoln County High School combines four existing high schools into one school. To formulate a more "comprehensive approach to this project the local school system added vocational school programs.

Along with the new vocational classrooms a new health occupations lab will operate in conjunction with the on-site doctors office. Students enrolled within that program will have the opportunity to "job shadow" within the clinic setting. The clinic will be open six days a week and twelve months a year.

In keeping with the new high school becoming the focal point of the community, a college wing was added to the facility. Southern West Virginia Community College will offer classes during the day and evening. Students will have the opportunity to take college classes during the day.

The building provides a unique learning opportunity for the students. Daylighing along with automatic lighting controls provide state of the art technology for students to see how sustainable design, energy conservation, and technology work together. This facility is one of the first educational buildings in the state of West Virginia to include sustainable building design features.

West Side Elementary School

Kanawha County Schools

ZMM
ARCHITECTS & ENGINEERS

LOCATION:
Charleston, WV

SIZE:
66,400 SF

COMPLETION:
2011

COST:
$14M

CONTACT:
Dr. Ronald Duerring
Superintendent
200 Elizabeth Street
Charleston, WV 25311
304.348.7732

This new Elementary School will for the west side of Charleston will serve 380 students from pre-Kindergarten through 5th grade. The new school includes a commons/cafeteria space with an area for student performances, an activity room for Physical Education, full kitchen, Media Center, art room and music room.

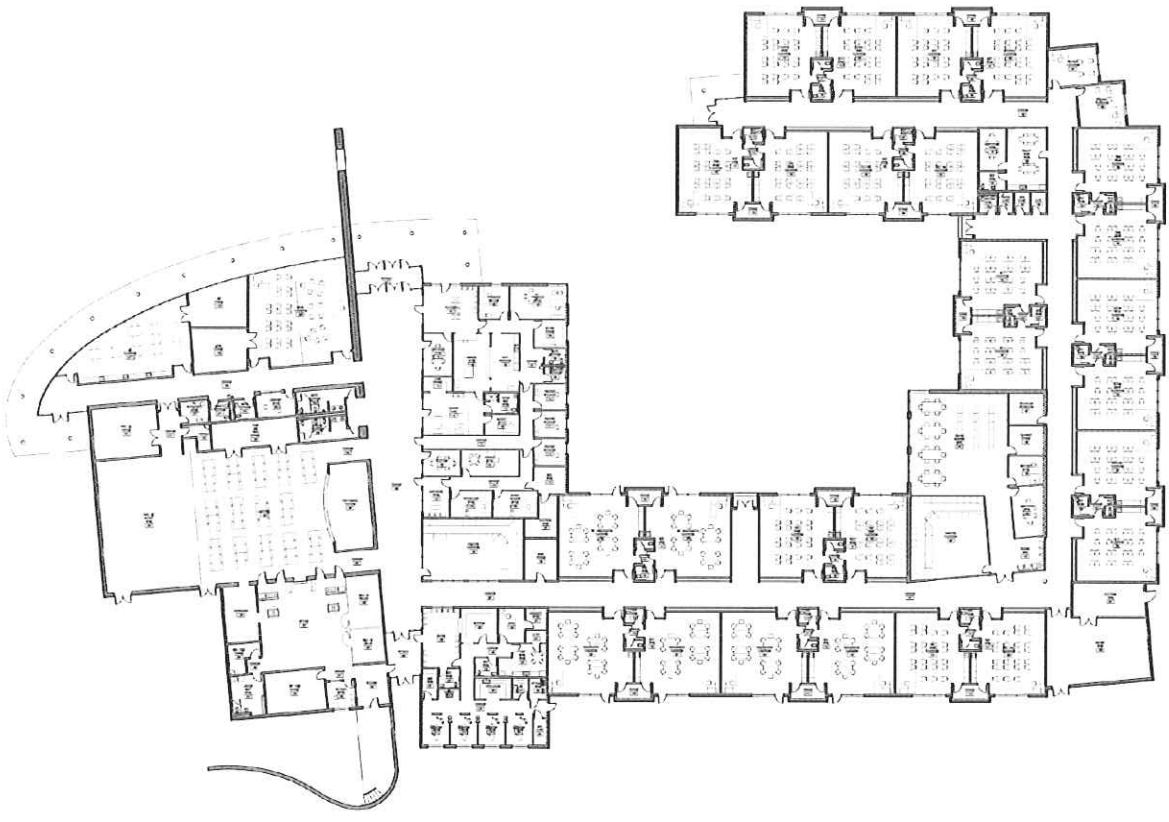
A unique feature of this school is a complete dental clinic dedicated to serving the students of other local county schools. Each classroom has large windows for natural light, which studies have shown increased student achievement and teacher morale and reduce absenteeism. Continued...

West Side Elementary School

Kanawha County Schools

ZMM
ARCHITECTS & ENGINEERS

Each classroom has its own restroom allowing teachers to have close supervision of the students. The new school will be a focal point in the community and will provide office space, meeting rooms and a computer classroom for adult education for neighborhood patrons.



ZMM
ARCHITECTS & ENGINEERS

Award Winning Design

2012

WV Housing Development Fund
2012 - Honor Award
"Excellence in Architecture"
AIA West Virginia Chapter

2011

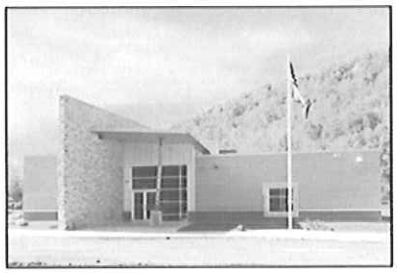
Southside Elementary/
Huntington Middle School
2011 - Honor Award
"Historical Preservation"
AIA West Virginia Chapter

2011

Joint Interagency Training
& Education Center (JITEC)
2011 - Honor Award
"Excellence in Architecture"
AIA West Virginia Chapter

2011

State Office Building #5, 10th Floor
Office of Technology
2011 - Merit Award
"Architecture in Interiors"
AIA West Virginia Chapter



2010

Hacker Valley Pk-8 School
2010 - Honor Award
"Excellence in Architecture"
AIA West Virginia Chapter

2009

Construction & Facilities
Management Office (CFMO)
2009 - Merit Award
"Excellence in Architecture"
AIA West Virginia Chapter

2008

Erma Byrd Center
2008 - Honor Award
"Excellence in Architecture"
AIA West Virginia Chapter

2007

Lincoln County High School
2007 - Honor Award
"Excellence in Architecture"
AIA West Virginia Chapter

2006

Gene Spadaro Juvenile Center
2006 - Merit Award
"Excellence in Architecture"
AIA West Virginia Chapter

Client Testimonials

ZMM
ARCHITECTS & ENGINEERS

Major General Alan Tackett
Retired Adjutant General – West Virginia National Guard

Description: Testimonial / ZMM Architects & Engineers

"When you look at the design work and the construction that was done on our facilities there is none better in the United States of America so why wouldn't we use local talent and local companies to do that. I don't think anybody could have done a better job for the West Virginia National Guard than what ZMM and our other people have done in constructing and building the National Guard into the 21st Century.

We've built nearly a billion dollars worth of facilities in the State of West Virginia and ZMM was one of our major Architects through all of that construction and not one project did we have problems with, or have anything bad to say and their all well built. Their all built to last for years and years and years, into the future. All will provide excellent facilities for men and women who are serving in the West Virginia National Guard for centuries to come. The facilities built were built in a way to where the communities get the maximum benefit from the tax payer's dollars that paid for those projects, and your design and set up has made those economic tools. When you look at the Armories that we've built, or the Armed Forces Reserve Centers, they have become economic tools for those communities and it was just fabulous the way we worked together as a team to make sure everything got done on time. The things that you all went out of your way to do to make sure that we got the kind of buildings that we wanted was far and above the call of duty.

I would recommend ZMM above any Architect that I have ever worked with. Your work, your dedication to your customer, and bringing a project in on time and in budget is probably the best I have ever seen."

Maestro Grant Cooper
Artistic Director and Conductor West Virginia Symphony Orchestra

Description: Partnership with the West Virginia Symphony / ZMM Architects & Engineers

"One of the joys of being in West Virginia is discovering the incredible commitment to quality that many institutions here have, and we have been able to partner with ZMM an incredible architectural and engineering firm based here in Charleston, which shares our commitment to quality. We believe that quality is the way to the future. It is the way that we see what is possible, with our people, with our resources, and indeed we are going to build together a brighter future for everybody by these partnerships."

Videos of testimonials are available at www.zmm.com.

WEST VIRGINIA ARMY NATIONAL GUARD
CONSTRUCTION & FACILITIES MANAGEMENT OFFICE
1707 Coonskin Drive
Charleston, West Virginia 25311-1085
Phone: 304-561-6339 Fax: 304-561-6458 DSN: 623-6339

15 April 2009

WV Higher Education Policy Commission
Chief Procurement Officer
Richard Donovan
1018 Kanawha Blvd. East
Suite 700
Charleston, WV 25301

Dear Mr. Donovan,

The AECOM/ZMM Team has been assisting the West Virginia Army National Guard with the design of a 285,000 SF addition to the Robert C. Byrd Regional Training Institute (RTI) at Camp Dawson, near Kingwood, West Virginia. The new JITEC (Joint Interagency Training and Education Center) will include highly flexible educational facilities that will serve a dual use in the case of a state wide or national emergency. These facilities will include sophisticated data systems, video walls, and also incorporate a high level of electronic security.

The AECOM/ZMM Team has exceeded our expectations, delivering a high level of local expertise, complimented by the knowledge base of a large design firm. The Team's commitment to design quality has been demonstrated through the development of a site strategy that evokes a campus, while maintaining all of the programmed spaces in one facility. The JITEC design balances the need to re-orient the campus while also complimenting the existing RTI. The technical ability of the AECOM/ZMM Team has also been demonstrated through the design of redundant power and HVAC systems, as well as through the examination of various building components to meet the requirements of LEED Silver.

The AECOM/ZMM Team has been very responsive and has done an excellent job of communicating the West Virginia Army National Guard's vision for this project. Additionally, the design team has provided these services within a compressed timeframe to meet our requirements. Please contact me if I can provide any additional information about our experience with the AECOM/ZMM Team.

MELVIN L. BURCH
Brigadier General
West Virginia Army National Guard
Assistant Adjutant General

CERTIFICATE OF *Authorization*

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

The West Virginia State Board of Registration for Professional Engineers having verified the person in responsible charge is registered in West Virginia as a professional engineer for the noted firm, hereby certifies

ZMM, INC.
C00689-00

Engineer in Responsible Charge: ROBERT DOEFFINGER - WV PE 009847

has complied with section §30-13-17 of the West Virginia Code governing the issuance of a Certificate of Authorization. The Board hereby notifies you of its certification with issuance of this Certification of Authorization for the period of:

July 1, 2012 – June 30, 2013

providing for the practice of engineering services in the State of West Virginia.

IF YOU ARE REQUIRED TO REGISTER WITH THE SECRETARY OF STATE'S OFFICE, PLEASE SUBMIT THIS CERTIFICATE WITH YOUR APPLICATION.

IN TESTIMONY WHEREOF, THE WEST VIRGINIA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS HAS ISSUED THIS COA UNDER ITS SEAL, AND SIGNED BY THE PRESIDENT OF SAID BOARD.

BOARD PRESIDENT

The West Virginia Board of Architects

certifies that

ADAM R. KRASON

is registered and authorized to practice
Architecture in the State of West Virginia.

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

Certificate Number 3498

The registration is in good standing until June 30, 2013.

Leslie C. Lewis

Board Administrator

THE CATHOLIC UNIVERSITY OF AMERICA

UPON THE RECOMMENDATION OF THE FACULTY OF

THE SCHOOL OF ARCHITECTURE AND PLANNING

WITH THE APPROVAL OF THE ACADEMIC SENATE
HAS CONFERRED UPON

ADAM R. KRASON

THE DEGREE OF

BACHELOR OF ARCHITECTURE

WITH ALL THE HONORS, RIGHTS AND PRIVILEGES PERTAINING THERETO.
GIVEN UNDER THE SEAL OF THE UNIVERSITY, BY VIRTUE OF THE
AUTHORITY VESTED IN THE BOARD OF TRUSTEES BY THE CONGRESS
OF THE UNITED STATES, AT WASHINGTON IN THE DISTRICT OF COLUMBIA
THIS SIXTEENTH DAY OF MAY, NINETEEN HUNDRED AND NINETY-EIGHT.

UPON THE RECOMMENDATION OF THE FACULTY OF

THE SCHOOL OF ENGINEERING

WITH THE APPROVAL OF THE ACADEMIC SENATE
HAS CONFERRED UPON

ADAM R. KRASON

THE DEGREE OF

BACHELOR OF CIVIL ENGINEERING

WITH ALL THE HONORS, RIGHTS AND PRIVILEGES PERTAINING THERETO.
GIVEN UNDER THE SEAL OF THE UNIVERSITY, BY VIRTUE OF THE
AUTHORITY VESTED IN THE BOARD OF TRUSTEES BY THE CONGRESS
OF THE UNITED STATES, AT WASHINGTON IN THE DISTRICT OF COLUMBIA
THIS SIXTEENTH DAY OF MAY, NINETEEN HUNDRED AND NINETY-EIGHT.

Brother Patrick Ellis, F.S.C.
PRESIDENT

Cardinal Law
CHAIRMAN OF THE BOARD OF TRUSTEES

William E. Kelly
DEAN

G. Kendell Rice
REGISTRAR

THE AMERICAN INSTITUTE OF ARCHITECTS

DECLARES THAT

Adam R. Krason

IS ADMITTED TO ASSOCIATE MEMBERSHIP HAVING BEEN FOUND ELIGIBLE

BY AUTHORITY OF THE BOARD OF DIRECTORS

AND IS ENTITLED TO EXERCISE AND ENJOY ALL THE RIGHTS AND PRIVILEGES

OF THIS CATEGORY OF MEMBERSHIP AS PRESCRIBED IN THE BYLAWS.

DATED MAY 13, 1999

PRESIDENT

SECRETARY

Your ACTIVE PE renewal fee has been received...

Your ACTIVE PE renewal fee has been received. Your pocket card indicating you are entitled to practice engineering in West Virginia until June 30, 2013 may be detached and used until that date unless invalidated as a result of Board audit of your renewal form or formal disciplinary action.

IMPORTANT REMINDERS:

1. Please include your WV ACTIVE PE license number on any correspondence to this office.
2. Please sign the back of this pocket card and carry the registration with you.
3. You are required to immediately notify the Board, in writing, of the following: loss or theft of license or seal, any name change, any address change, or any employment change.

ROBERT C DOEFFINGER JR
WV PE # 009847
ZMM, INC.
222 LEE STREET WEST
CHARLESTON, WV 25302

West Virginia State Board of Registration
for Professional Engineers
300 Capitol Street, Suite 910
Charleston, West Virginia 25301
304-558-3554 Phone
800-324-6170 Toll Free

THIS IS YOUR RENEWAL PAYMENT RECEIPT
(in addition to your secondary records of either a canceled check or credit card statement, as well as a confirmation email and printed confirmation page if renewing via our website)
PLEASE SAVE THIS FOR YOUR RECORDS

West Virginia State Board of Registration
for Professional Engineers

ROBERT C DOEFFINGER JR
WV PE # 009847

This is to certify that the above named PROFESSIONAL ENGINEER has met the requirements of the law, is duly registered and is entitled to practice engineering in the State of West Virginia.

EXPIRES JUNE 30, 2013

WEST VIRGINIA UNIVERSITY – MORGANT[illegible], W. VA.

STUDENT NO	DATE OF BIRTH DAY	YR.	STUDENT NAME AND ADDRESS		
233807377	28	50	DOEFFINGER, ROBERT CA[illegible], JR.	1405 KANAWHA ST	PT PLEA[illegible] T W VA
ENTRANCE DATE 08 MONTH	1968 YEAR		PARENT NAME AND ADDRESS ROBERT C DOEFFINGER	1405 KANAWHA ST	PT PLEASANT W VA

COURSE: NGR

MAJOR SUBJECT: M E

DEGREE CONFERRED: B. S. M. E., MAY 20, 1973.

ADMITTED FROM: PT PLEASANT H S; T PLEASANT W VA; 1968

A.C.T. STANDARD SCORES ENGL. 21 MATH 23 SOC. S. 23 NAT. S. 26 COMP. 23

SUBJECT NAME	SUBJECT NO.	COURSE TITLE	SEM. HRS.	GRD.	GRADE POINTS
233807377		FIRST SEMESTER 1968-69			
CHEM	15	FUNDAMENTALS CHEMISTRY	4	A	16
ENGL	1	COMPOSITION RHETORIC	3	C	6
MATH	14	PRE-CALCULUS MATHEMATICS	4	B	12
MIL S	1	MILITARY SCIENCE	2	A	8
G	1	ENGINEERING LECTURES	0	A	0
P E	1	GENERAL PROGRAM M	1	B	3
		14 45 3.2140	14		45
233807377		SECOND SEMESTER 1968-69			
CHEM	16	FUNDAMENTALS CHEMISTRY	4	A	16
ENGL	2	COMPOSITION RHETORIC	3	C	6
GEOG	240	GEOG OF USSR & ESTRN ERP	3	B	9
MATH	15	CALCULUS	4	B	12
M E	20	ENGINEERING GRAPHICS	3	B	9
P E	2	GENERAL PROGRAM M	1	B	3
		18 55 3.0555	18		55
233807377		FIRST SEMESTER 1969-70			
GEOG	118	GEO OF WESTERN EUROPE	3	B	9
HIST	53	MAKING MOD AM SINCE 186	3	B	9
MATH	16	CALCULUS	4	C	8
PHYS	11	GENERAL PHYSICS	4	W	0
C E	1	SURVEYING	2	B	6
I E	7	WELDING HEAT TREATMENT	1	B	3
		13 35 2.6923	13		35
233807377		SECOND SEMESTER 1969-70			
ENGL	6	AMERICAN LITERATURE	3	B	9
ENGL	35	TYPES OF LITERATURE	3	B	9
GEOG	109	ECONOMIC GEOGRAPHY	3	B	9
MATH	17	CALCULUS	4	B	12
PHYS	11	GENERAL PHYSICS	4	A	16
		17 55 3.2352	17		55
233807377		FIRST SEMSETER 1970 71			
ENGL	5	AMERICAN LITERATURE	3	B	9
MATH	140	DIFFERENTIAL EQUATIONS	3	B	9
PHYS	12	GENERAL PHYSICS	4	B	12
TAM	101	STATICS	3	B	9
		13 39 3.0000	13		39

SUBJECT NAME	SUBJECT NO	COURSE TITLE	SEM. HRS.	GRD.	GRADE POINTS
233807377		SECOND SEMESTER 1970-71			
ENGL	36	TYPES OF LITERATURE	3	C	6
PHYS	124	INTRO MODERN PHYSICS	4	A	16
TAM	102	MECHANICS MATERIALS I	3	B	9
TAM	104	DYNAMICS	3	B	9
		13 40 3.0769	13		40
233807377		FIRST SEMESTER 1971-72			
E E	105	ELECTRICAL FUNDAMENTAL I	4	C	8
M E	10	KINEMATICS OF MECHANISMS	3	C	6
M E	140	ENGR THERMODYNAMICS	3	B	9
M E	170	MECHANICAL ENGR ANALYSIS	3	B	9
		13 32 2.4615	13		32
233807377		SECOND SEMESTER 1971-72			
E E	106	ELECTRICAL FUNDMENTAL II	4	B	12
I E	100	MANUFACTURING PROCESSES	3	B	9
M E	112	DYNAMICS OF MACHINES	3	C	6
M E	141	ENGR THERMODYNAMICS	3	B	9
M E	180	MECH ENGR MEASUREMENTS	3	A	12
		16 48 3.0000	16		48
233807377		FIRST SEMESTER 1972-73		ENGR	
CH E	105	ENGR MATERIALS SCIENCE	3	A	12
M E	134	MECHANICAL ENGR DESIGN	3	B	9
M E	144	THERMODYNAMICS OF FLUIDS	3	B	9
M E	152	HEAT TRANSFER	3	B	9
M E	182	ENGR SYSTEMS LABORATORY	2	A	8
		14 47 3.3571	14		47
233807377		SECOND SEMESTER 1972-73		ENG	
B LAW	111	LEGAL ENVIRONMENT OF BUS	3	A	
I E	277	ENGINEERING ECONOMY	3	B	
M E	136	ENGR SYSTEMS DESIGN	3	A	12
M E	264	HEAT VENT AIR CONDITION	3	A	12
M E	282	ENGINEERING ACOUSTICS	3	B	[illegible]
		15 54 3.6000	15		[illegible]
		146 450 3.0823.1	146		450

COMMITTEE ACTION:

RECORDS OFFICE

THE PENNSYLVANIA STATE UNIVERSITY
UNIVERSITY PARK, PENNSYLVANIA

GRADUATE ACADEMIC RECORD

STUDENT NUMBER	LAST NAME	FIRST NAME	MIDDLE NAME
233-80-7377	DOEFFINGER	ROBERT	CARL JR.

DATE OF BIRTH	DATE OF ADMISSION	SEX	DEGREE SOUGHT	MAJOR
02/28/50	FALL 1973	M	M S	A E

HOME ADDRESS: W VA U

EARNED DEGREES: B S 05/73

COURSE	NO.	TITLE	CREDIT	GRADE
		FALL TERM 1973		
E	351	ENVIRON ENGR BLDGS	2.0	A
E	402	ARCHITECTURAL ENGR	3.0	B
E	545	SEMINAR	1.0	A
		WINTER TERM 1974		
E	430	ARCHITECTURAL ENGR	3.0	A
E	458	ADV ARCH ACSTCS	3.0	B
		SPRING TERM 1974		
E	542	PROBLEMS&RESEARCH	2.0	B
E	548	STRUCT DES DYN LDS	3.0	B
		SUMMER TERM 1974		
E	546	THIN CONC STR	3.0	A
MCH	509	PLATES & SHELLS	3.0	B
		FALL TERM 1974		
MCH	524A	MATH METHS IN ENGR	3.0	AU
E	513	CONVECTION	3.0	B
		WINTER TERM 1975		
E	542	PROBLEMS&RESEARCH	1.0	A
E	600	RESEARCH	4.0	R
		SPRING TERM 1975		
E	498	SOLAR ENGY BLD SYS	3.0	AU
E	600	RESEARCH	3.0	R
		SUMMER TERM 1975		
	600	RESEARCH	6.0	A

COURSE	NO.	TITLE	CREDIT	GRADE

SPECIAL ACTIONS AND NOTES

R 1976 M S CONFERRED

ISSUED TO STUDENT

GRADING SYMBOLS

PASSING GRADES: A. B. C.

FAILING GRADES: D. F.

GRADE POINTS

A = 4 B = 3 C = 2 D = 1 F = 0

AVERAGE COMPUTED ON BASIS OF EARNED GRADES IN 400 and 500 COURSES

1 CREDIT = 1 SEMESTER HOUR

OTHER SYMBOLS

AU = AUDIT
R = RESEARCH
DF = DEFERRED
P = PASSED (NO CREDIT)
NRC = NOT RESIDENT CREDIT
NDC = NOT DEGREE CREDIT - GRADES BELOW C AND COURSES BELOW 400 LEVEL
W = WITHDREW
WP = PASSING
WF = FAILING
WN = NO GRADE

TERM	MAJOR	CUMULATIVE CREDITS	CUMULATIVE GRADE PTS	CUMULATIVE AVERAGE	TOTAL CREDITS EARNED
LL 73	A E	4.0	13.0	3.25	4.0
NTER 74	A E	10.0	34.0	3.40	10.0
RING 74	A E	15.0	49.0	3.27	15.0
MMER 74	A E	21.0	70.0	3.33	21.0
LL 74	A E	24.0	79.0	3.29	24.0
NTER 75	A E	25.0	83.0	3.32	29.0
RING 75	A E	25.0	83.0	3.32	32.0
MMER 75	A E	31.0	107.0	3.45	38.0

THIS IS A TRUE AND CORRECT COPY OF THE OFFICIAL RECORD OF THE ABOVE NAMED STUDENT. WHEN SIGNED AND SEALED IT IS AN OFFICIAL TRANSCRIPT. STUDENT IN GOOD STANDING UNLESS STATED OTHERWISE

RECORDER

DATE

SEAL

WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION CERTIFICATE

ISSUED TO:
ZMM INC
222 LEE ST W
CHARLESTON, WV 25302-2225

BUSINESS REGISTRATION ACCOUNT NUMBER: **1040-0001**

This certificate is issued on: 08/21/2011

ROBERT C. DOEFFINGER, JR. REGISTERED 9847 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code

The person or organization identified on this certificate is registered to conduct business in the State of West Virginia at the location above.

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

atL006 v.4
L1625087104

STATE OF WEST VIRGINIA ADAM R. ERASON NO. 2498 REGISTERED ARCHITECT

STATE OF WEST VIRGINIA DAVID E. FERGUSON NO. 2893 REGISTERED ARCHITECT

000027

RFQ No. DEFK13010

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: 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 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.

Authorized Signature: [signature] Date: 29. MAY. 2013

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 29th day of May, 2013.

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