



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

State of West Virginia
 Centralized Expression of Interest
 Architect/Engr

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 WV PURCHASING DIVISION

Proc Folder: 853816			Reason for Modification:
Doc Description: EOI- Brushfork Armory HVAC Design			
Proc Type: Central Purchase Order			Version
Date Issued	Solicitation Closes	Solicitation No	
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BID RECEIVING LOCATION

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

VENDOR

Vendor Customer Code: 206059
 Vendor Name: ZMM, Inc. (dba ZMM Architects and Engineers)
 Address :
 Street : 222 Lee Street, West
 City : Charleston
 State : WV Country : USA Zip : 25302
 Principal Contact : Adam R. Krason, AIA, Principal
 Vendor Contact Phone: 304-342-0159 Extension: 234

FOR INFORMATION CONTACT THE BUYER
 Tara Lyle
 (304) 558-2544
 tara.l.yle@wv.gov

Vendor Signature X  FEIN# 55-0676608 DATE March 23, 2021

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

ARK, PRINCIPAL
(Name, Title)
Adam R. Krason, AIA, LEED AP, Principal
(Printed Name and Title)
222 Lee Street, West, Charleston, WV 25302
(Address)
304-342-0159 304-345-8144
(Phone Number) / (Fax Number)
ark@zmm.com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

ZMM, Inc. (dba ZMM Architects and Engineers)
(Company)

ARK ADAM R. KRASON, PRINCIPAL
(Authorized Signature) (Representative Name, Title)

Adam R. Krason, AIA, LEED AP, Principal
(Printed Name and Title of Authorized Representative)

March 23, 2021
(Date)

304-342-0159 304-345-8144
(Phone Number) (Fax Number)

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

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

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

DEFINITIONS:

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE:

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

Authorized Signature:  Date: March 23, 2021

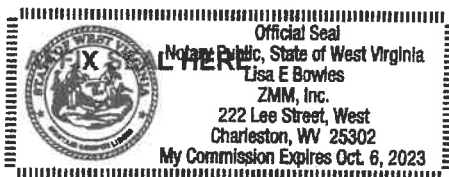
State of West Virginia

County of Kanawha, to-wit:

23rd

Taken, subscribed, and sworn to before me this 10-6 day of March, 2021

My Commission expires 10-6, 2023



NOTARY PUBLIC 



March 23, 2021

Ms. Tara Lyle, Buyer Supervisor
Department of Administration, Purchasing Division
2019 Washington Street, East
PO Box 50130
Charleston, West Virginia 25305-0130

**Subject: Brushfork Armory HVAC Design – Bluefield, WV
(CEOI ADJ2100000008)**

Ms. Lyle:

ZMM Architects and Engineers is pleased to submit the attached information to demonstrate our experience and our qualifications to provide professional architectural and engineering services for the Brushfork Armory HVAC Design project. Established in 1959, ZMM is a West Virginia based, full-service A/E firm, and is noted for design excellence and client focus. It is ZMM's understanding that the project involves improvements (replace and update) to the HVAC system at the Brushfork Armory. The project will employ energy efficient and maintenance friendly equipment.

With over sixty local employees ZMM provides an integrated design approach by delivering all building related design services including architecture, engineering (civil, structural, mechanical, and electrical), interior design, and construction administration in-house. ZMM's team includes twelve registered architects, eleven professional engineers, interior and lighting designers, and construction administrators. Our architects and engineers are highly qualified and have worked together to deliver projects with similar scope and complexity.

As noted above, our ability to provide comprehensive design services will be beneficial to the West Virginia Army National Guard as you undertake the Brushfork Armory HVAC Design project. Our experience with HVAC improvement projects has provided us with the insight that multiple disciplines may need to be involved in the project, including mechanical and electrical engineers – as well as an architect to ensure that the 'above ceiling' conditions meet the requirements of the current life safety code. Utilizing a full team of design professionals will help ensure the quality of the project and will help eliminate risk for the West Virginia Army National Guard.

Perhaps most importantly, the ZMM team has worked collaboratively with the WVARNG on a variety of renovation projects that included HVAC replacements, including:

MCA – South
Camp Dawson Building 202 Renovation
MCA – Jobs Challenge Facility
Camp Dawson Building 245 Renovation
Camp Dawson Building 246 Renovation
Camp Dawson Building 301 Renovation

We are hopeful that you observed our commitment to design quality, budget and schedule control, and client service demonstrated on these projects.

In addition to our experience providing design services for the WVARNG, ZMM has significant recent experience working on projects in Bluefield and Mercer County. Our team assisted Intuit/Alorica with the new Prosperity Hub in Bluefield and is currently working with the WVDNR to

Blacksburg
200 Country Club Drive SW
Plaza One, Building E
Blacksburg, Virginia 24060
540-552-2151

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222 Lee Street West
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Martinsburg, West Virginia 25405
304-342-0159

Ms. Tara Lyle, Buyer Supervisor

March 23, 2021

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improve the McKeever and Mountain Creek Lodges at Pipestem. Both projects included significant HVAC upgrades. ZMM also assisted Mercer County Schools (MCS) with the design of two new schools in the Bluefield area (Mountain Valley Elementary School and Bluefield Primary School). Additional experience with MCS included an HVAC Improvement project at Glenwood Elementary School in Princeton and planning for ten (10) additional HVAC projects that will utilize CARES Act ESSER funding.

Thank you for taking the time to review the attached expression of interest that includes information about our proposed approach for the Brushfork Armory HVAC project, as well as ZMM's qualifications, and relevant project experience. Additionally, please visit our website at www.zmm.com to see the full range of renovation projects that we have designed. We appreciate your consideration for this important endeavor and look forward to meeting with you to discuss the project in greater detail.

Respectfully submitted,

ZMM Architects and Engineers



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



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Brushfork Armory HVAC Design

Project Approach, Management Plan, Quality Control Plan, Cost Control Plan

Background and Project Understanding

It is ZMM's understanding that the project involves improvements (replace and update) to the HVAC system at the Brushfork Armory. The project will employ energy efficient and maintenance friendly equipment.

ZMM's ability to provide comprehensive design services will be beneficial to the West Virginia Army National Guard as you undertake the Brushfork Armory HVAC Design project. Our experience with HVAC improvement projects has provided us with the insight that multiple disciplines may need to be involved in the project, including mechanical and electrical engineers – as well as an architect to ensure that the 'above ceiling' conditions meet the requirements of the current life safety code. Utilizing a full team of design professionals will help ensure the quality of the project and will help eliminate risk for the West Virginia Army National Guard.



Perhaps most importantly, the ZMM team has worked collaboratively with the WVARNG on a variety of renovation projects that included HVAC replacements, including:

MCA – South

Camp Dawson Building 202 Renovation

MCA – Jobs Challenge Facility

Camp Dawson Building 245 Renovation

Camp Dawson Building 246 Renovation

Camp Dawson Building 301 Renovation

In addition to our experience providing design services for the WVARNG, ZMM has significant recent experience working on projects in Bluefield and Mercer County. Our team assisted Intuit/Alorica with the new Prosperity Hub in Bluefield and is currently working with the WVDNR to improve the McKeever and Mountain Creek Lodges at Pipestem. Both projects included significant HVAC upgrades. ZMM also assisted Mercer County Schools (MCS) with the design of two new schools in the Bluefield area (Mountain Valley Elementary School and Bluefield Elementary School). Additional experience with MCS included an HVAC Improvement project at Glenwood Elementary School in Princeton and planning for ten (10) additional HVAC projects that will utilize CARES Act ESSER funding.

Brushfork Armory HVAC Design: Renovation Approach

Renovation projects require a unique approach, and ZMM has provided design services on renovation projects throughout West Virginia. The first phase in a successful renovation project involves conducting a thorough examination of the existing facilities. In this case our team would focus on improvements to the HVAC system and the impact the improvements will have on other building and life safety systems.

Once the first phase is completed, ZMM will develop plans, specifications, and bidding documents for the proposed HVAC improvements. Drawings, specifications, and estimates will be submitted for review at 35% (as noted above), and again at 65%, 95%, and 100%. Our recent experience working with the WVARNG will ensure that all documents meet your requirements and standards – saving the WVARNG additional effort and expediting the design phase of the project. Once the documents have been approved, ZMM will assist with the bidding and construction phases of the project, including participation in a pre-bid meeting, developing any required addenda, responding to RFI's, reviewing submittals, and conducting and preparing minutes of construction progress meetings. Our efforts will continue through substantial and final completion inspections and include an eleven-month warranty walk through. *Our goal throughout this process will be to act as part of the WVARNG team, with the objective of ensuring the seamless delivery of your project.*



Brushfork Armory HVAC Design: 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, including several projects that included replacements and updates to HVAC systems. The team will be led by Adam Krason (Principal), Nathan Spencer (Project Manager and Architect), and John Pruett (Mechanical Engineer). Mr. Krason, Mr. Spencer, and Mr. Pruett have led ZMM's effort on the recent work for the WVARNG at Camp Dawson, including the Building 202, 301, 245, and 246 Renovation projects. Other key team members may include:

Bob Doeffinger PE	Engineering Principal/Mechanical Engineer
James Lowry, PE	Mechanical Engineer
Steve Cook, PE	Electrical Engineer
Ian Haddox	Electrical Designer
Mike White, PE	Structural Engineer
Mike Flowers	Plumbing Designer
Mark Epling, AIA	Specifications Writer
Keith Gonzales	Construction Administrator
Amy Rhodes	Construction Administrative Assistant

ZMM's team has successfully collaborated on multiple 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

Quality control during the design phase begins with the selection of team members with experience working on projects that are similar to the current effort. ZMM Architects and Engineers staff possesses the WVARNG renovation design experience to ensure the success of the project. Quality control during the design phase will occur through regular, documented, project meetings between

the design team and the Guard. In addition to the regular design phase meetings more formal QA/QC will occur at the end of each design phase. A more detailed description of the design phase quality control plan is noted below:

1. Selecting the Project Team

ZMM's diverse staff ensures that each project team is made up of highly qualified members, each dedicated to the project's success. Project team members are selected based upon relevant experience, and ability to help achieve the client's vision.

2. Identifying Project Requirements

Project team members are fully integrated in each phase of the design process, ensuring a quality project from the commencement. The project requirements are included in a 'Basis of Design' that each member of the project team can access. The 'Basis of Design' helps guide important project decisions.

3. Identifying Client Expectations

Knowing and understanding our clients' expectations is our goal. This knowledge gives ZMM a baseline for exceeding expectations. We will commence the design effort with a planning session to help identify your vision for the project.

4. Ongoing Project Reviews

As part of the ongoing project reviews, we conduct quality assurance evaluations during each stage of the project:

Schematic Design Phase (35%)

Design Development Phase (65%)

Construction Documents Phase (95%)

Construction Administration Phase

ZMM has developed a series of QA/QC review documents that are completed during each phase, and include a programmatic review, technical review, and review of the project schedule and budget.

5. Post Project Review

At the completion of every project, ZMM staff members participate in a learning session to gain insight useful for future projects.

6. Staff Training, Assessment and Enhancement

Ongoing staff development and training is very important to ZMM and providing increased opportunities for learning and advancement leads to improved employee performance and more successful projects for our clients.

ZMM Cost Control Plan

As part of our effort to ensure our ability to meet the WVARNG's budget, ZMM will rely on both historic bidding data as well as independent estimates to verify the project budget. For this project ZMM would utilize Win Strock to provide the independent estimate. ZMM and Mr. Strock have successfully collaborated on multiple projects, including:

- Camp Dawson Building 202, 245, 246, and 301 Improvements
- Marshall County Readiness Center

- Logan-Mingo Readiness Center
- Parkersburg Readiness Center
- Williamstown Elementary School
- Building 5, 6, & 7 Improvements
- Beech Fork Lodge
- West Virginia State Police Information Services Center
- Edgewood Elementary School
- West Virginia State Lottery Headquarters Renovation
- Brooks Manor Addition and Renovation
- WVRTP Building 740 Improvements



ZMM has a history of working to successfully projects under challenging budget and schedule constraints for the WVARNG. We commit to working with you to meet the budget and schedule for the Brushfork Armory HVAC Design project.

ZMM History & Services



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 with our in-house team. Our integrated design approach makes ZMM unique among architecture/engineering firms, and helps to ensure the quality of our design solutions by providing more thoroughly coordinated construction documents.



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

The original partners transferred ownership of the firm to Robert Doeffinger, PE and Steve Branner in 1986. Mr. Doeffinger and Mr. Branner helped guide and expand the firm to its present size of 35 people. Over the past 20 years David Ferguson, AIA, and Adam Krason, AIA, LEED-AP joined in ownership of the firm. In 2020, Randy Jones also joined in ownership of the firm when ZMM acquired Blacksburg-based OWPR Architects & Engineers to create a regional design firm that employs more than 50 highly-skilled professionals.

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



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

Advantages of an integrated Design Approach:

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

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

SERVICES

Pre-Design

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

Design

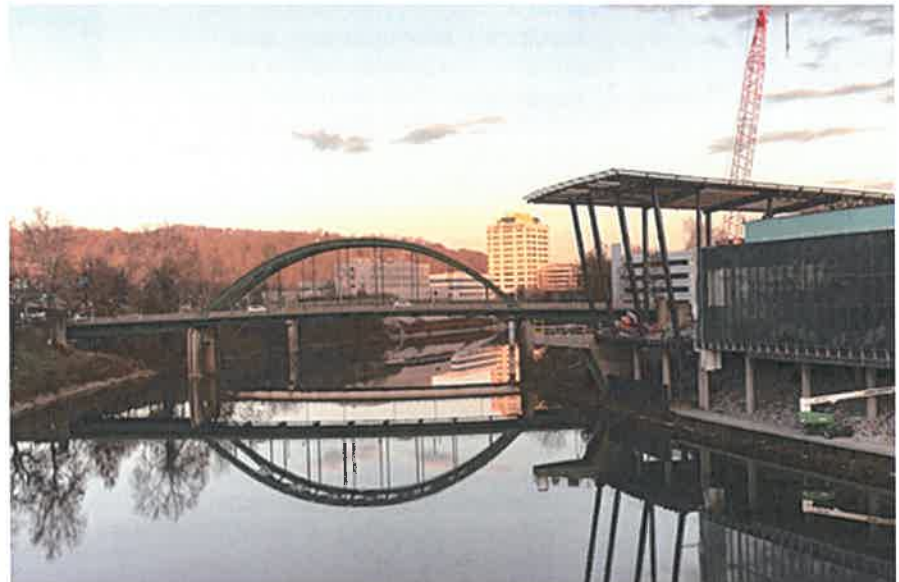
- Architectural Design
- Sustainable Design
- Interior Design
- Lighting Design
- Landscape Architecture

Engineering

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

Post Design

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



Award Winning Design



2020

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

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

2019

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

2018

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

2017

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

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

2016

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



Award Winning Design



AIA West Virginia Chapter: Merit Award
Achievement in Architecture
Gauley River Elementary School
Craigsville, West Virginia

2015

AIA West Virginia Chapter: Honor Award
Achievement in Architecture in Sustainable Design
Edgewood Elementary School
Charleston, West Virginia

AIA West Virginia Chapter: Merit Award
Achievement in Architecture
Kenna Pk-5 School
Kenna, West Virginia

2014

AIA West Virginia Chapter: Merit Award
Achievement in Architecture in Sustainable Design
Huntington East Middle School
Huntington, West Virginia

AIA West Virginia Chapter: Merit Award
Achievement in Architecture
Southern West Virginia Community & Technical College
Williamson, West Virginia

AIA West Virginia Chapter: Merit Award
Achievement in Architecture in Interiors/Graphics
Girl Scouts of Black Diamond Council
Charleston, West Virginia

2012

AIA West Virginia Chapter: Honor Award
Excellence in Architecture
West Virginia Housing Development Fund Building
Charleston, West Virginia

2011

AIA West Virginia Chapter: Honor Award
Excellence in Architecture in Historical Preservation
Southside Elementary/Huntington Middle School
Huntington, West Virginia



Adam R. Krason, AIA, LEED AP, ALEP



Role

Principal

Professional Registrations

Registered Architect (WV, OH, KY, VA, MD, NJ)

LEED Accredited Professional

Accredited Learning Environment Professional

NCARB (55,984)

Construction Specifications Institute (CSI)

Construction Documents Technician (CDT)

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

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

Project Experience

Charleston Coliseum & Convention Center, Charleston, WV

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

Education

Bachelor of Architecture, The Catholic University of America, 1998

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

Employment History

2007 - Present, Principal, ZMM

2007 - Present, Board of Directors, ZMM

2003 - Present, Architect, Project Manager, ZMM

1998 - 2003, Architect, Project Manager, Charleston Area Architectural Firm

Civic Affiliations

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

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

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

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

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

Morgantown Readiness Center (WVARNG), Morgantown, WV

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

Construction and Facilities Management Office Expansion (WVARNG), Charleston, WV

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

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

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

Wood County Justice Center, Parkersburg, WV

Mr. Krason was the Project Manager for this adaptive reuse project. The existing 32,000 SF building creates a new Magistrate Court and Sheriff's Department. The justice center is LEED Silver Certified.

Tucker County Courthouse Annex, Parsons, WV

Mr. Krason was the Project Architect 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.

Participated on the team that won the following awards and acknowledgements:

2020 WV AIA Merit Award Mountain Valley Elementary School, Green Valley, WV

2019 WV AIA Honor Award Charleston Coliseum & Convention Center, Charleston, WV

2018 WV AIA Citation Award Charleston EDGE, Charleston, WV

2017 WV AIA Merit Award Logan-Mingo Readiness Center, Holden, WV

2016 WV AIA Merit Award Christ Church United Methodist, Charleston, WV

2015 WV AIA Merit Award Edgewood Elementary School, Charleston, WV

2014 WV AIA Merit Award Girl Scouts of Black Diamond Council, Charleston, WV

2011 WV AIA Honor Award Joint Interagency Training and Education Center (JITEC), Kingwood, WV

Nathan Spencer, AIA



Role

Project 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

Logan-Mingo Readiness Center, Holden, WV

Mr. Spencer was the architect on the new Logan-Mingo Readiness Center. The exterior aesthetic of the facility was driven by the location within an industrial park on a reclaimed surface mined site. 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.

Jackson County AFRC, Millwood, 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.

Joint Interagency Education and Training Center (WARNG), Kingwood, WV

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

Mr. Spencer 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. This project received LEED Gold 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.

Bluefield Primary School, Bluefield, WV

Mr. Spencer was the architect for the new Bluefield Primary. The new school is the result of a consolidation of two local schools in the Bluefield area. The county wanted to bring in architectural elements from both of the former schools. This was accomplished by oval vaulted ceilings and circular windows throughout the building. The school will house Pre-k-2nd grade students. Keeping the Bluefield Beavers in mind, the school colors are found throughout the design with the addition of complimentary colors to create a colorful learning environment for the students. A large dry erase mural spans the length of the media center allowing students to express their imaginations.

Mountain Valley Elementary School, Green Valley, WV

Mountain Valley opened its doors in the fall of 2019. The concept for the school was simple – fundamentals. Primary colors and geometric shapes create a fun and easy way to keep the students engaged and ready to learn, while sticking to the basics. A large wall in the media center allows for quiet areas to study or play with built in casework depicting the word “READ” allowing for shelving and seating within the oversized letters. The scheme continues throughout the school seen in the polished concrete floor pattern and 3D shapes protruding above the main entrance for a guaranteed jaw dropping design.

Edgewood Elementary School, Charleston, WV Mr. Spencer participated on the design team that developed the new Kanawha County Elementary School on Charleston’s West Side. The school was 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 integrates 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.

Cabell County Bus Transportation Complex, Huntington, WV Mr. Spencer was the project Architect on the Cabell County Transportation Complex is located on the site of the old Cox Landing Junior High School. Challenges on the project involved retrofitting the old school and site to accommodate the new use. The rear portion of the school was demolished to make room for the new maintenance portion of the building. The remaining front section of the school was renovated to include office space, storage areas, and a new staff development room. The new maintenance area includes a high-bay metal building with 14 back to back work-bays, three of which have hydraulic bus lifts. A hand wash bay and a state of the art automatic wash bay were also included in the project. Extensive sitework was also involved in the retrofit project including a fueling station, bus parking, a sediment pond, and an extensive rework of the existing site utilities.

Charleston Coliseum & Convention Center, Charleston, WV

Mr. Spencer served as project architect on the expansion and renovation to the Charleston Civic Center. The \$75M, 283,000 SF design-build project is being completed as a collaboration with tvsdesign and BBL Carlton. The design commenced in the spring of 2015, and construction was completed in 2018.

Robert Doeffinger, PE



Role

Engineering Principal

Professional Registrations

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

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

After graduate school in Architectural Engineering, Mr. Doeffinger joined ZMM. He has over 35 years design experience in mechanical and electrical systems for buildings. He has a broad range of engineering experience in education, industrial and manufacturing facilities, large retail, correctional and jails, office buildings, and military facilities.

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

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

Project Experience

Charleston Coliseum & Convention Center, Charleston, WV

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

Education

Master of Science Architectural Engineering, Pennsylvania State University, 1976

Bachelor of Science Mechanical Engineering, West Virginia University, 1973

Employment History

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

Civic Affiliations

- ASHRAE – Member of the Technical Committee Load Calculations Data and Procedures for 15 years, serving as chairman. Presently Chairman of the Research Subcommittee
- Advisory Board for the Department of Electrical Engineering Technology, Bridgemont Community and Technical College
- City of Pt. Pleasant, WV – 2nd Ward Councilman for 20 years

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

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

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

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

West Virginia Research, Education, and Technology – Building 704, South Charleston WV Mr. Doeffinger is the engineering principal-in-charge of preparing a life safety analysis of the building as well as design services to improve the exterior façade of Building 704 at the WV Research, Education, and Technology Park. Building 704 had previously been utilized as a campus maintenance facility by Union Carbide and DOW Chemical. Bridgemont began utilizing the facilities for instruction in the Spring of 2011.

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

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

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

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

John Pruett, PE, LEED AP



Role

Senior Mechanical Engineer

Professional Registrations

Professional Engineer (WV, VA, IN)

LEED Accredited Professional

Mr. Pruett is responsible for overseeing the design of the HVAC systems, ensuring that the HVAC systems not only meet the program requirements, but meet the long-term needs of the owner. He performs heating and cooling load calculations and recommends the type of systems to be incorporated into the building. He coordinates with the other disciplines in order to integrate the HVAC systems into the building. Mr. Pruett has participated on several LEED registered projects; one of his key contributions to these projects is conducting energy analyses and recommending energy use reduction alternatives.

Mr. Pruett began his career in engineering with a manufacturing company in 1994. In 1998, he made a career change and joined an engineering consulting firm as an HVAC design engineer. He has a broad range of experience in HVAC systems design, including K-12 schools, higher education facilities, office buildings, libraries, hotels, restaurants, a convention center and several natatoriums. Having served in the Marines for 14 years, Mr. Pruett also led a design team for a "virtual memorial" for the birthplace of the U.S. Marine Corps.

Project Experience

Wood County Justice Center, Parkersburg, WV Mr. Pruett was responsible for the HVAC systems design for the LEED Silver project comprised of the judicial courts, Sheriff's department and holding cell area. The project utilizes high-efficiency custom air handling units, including an energy recovery unit for the holding cell area, which has helped reduce energy consumption on the project by 18% compared to a baseline analysis.

Tucker County Courthouse Annex, Parsons, WV

Mr. Pruett was the Mechanical Engineer 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.

Education

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

Employment History

2010 - Present, Project Engineer, ZMM

2007 - 2009, Sr. Mechanical Engineer, IN

2003 - 2007, Mechanical Engineer, IN

1999-2003, Project Engineer, Fort Lauderdale, FL

Civic Affiliations

- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), Member
- United States Marine Corps – 14 Years

WARNG Projects

WARNG Camp Dawson Building
WARNG Camp Dawson Building 246
WARNG Camp Dawson Building 301
WARNG Camp Dawson Mail Facility
WARNG Marshall County Readiness (Design)
WARNG Camp Dawson Job Challenge Academy

Educational Experience

Huntington East Middle School, Huntington, WV Mr. Pruett was responsible for the HVAC systems design. This school features numerous sustainable features, including an air monitoring system for verifiable indoor air quality, variable refrigerant flow (VRF) systems for portions of the school that will operate year-round, preheating of the domestic hot water with the heating hot water return. Mr. Pruett also conducted an extensive energy analysis of the building and all of its systems to maximize the effect of each component, resulting in a projected reduction in energy consumption of 32% compared to a baseline analysis.

Edgewood Elementary School, Charleston, WV Mr. Pruett was the mechanical engineer on the new Kanawha County Elementary School on Charleston's West Side and responsible for the HVAC systems design. 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.

Cabell County Schools

Barboursville Middle School - Additions and Renovations
Huntington East Middle School
Huntington High School - Controls system replacement for Explorer Academy
Cabell County Bus Garage
Southside Elementary/Huntington Middle School
Huntington High School – Cooling tower replacement
Cabell Midland High School - Cooling tower replacement
Martha Elementary School- Addition
Salt Rock Elementary Renovations
Cabell County Career & Technical Center – HVAC Replacement
Huntington High School Wrestling Room Addition
Milton PK - Additions and Renovations

Wayne County Schools

Spring Valley High School – HVAC Renovations

Fayette County Schools

New River Primary / Collins Middle School
Valley High School - Gym addition
Oak Hill High School – Renovations
Fayetteville PK-8 - Renovations
Midland Trail High School - Renovations
Valley PK-8 - Renovations
Meadow Bridge Elementary - Renovations
Divide Elementary - Additions and Renovations

Putnam County Schools

Hurricane High School - Renovations
Putnam Career & Technical Center – Welding Shop



Role

Mechanical Engineer

Professional Registrations

Professional Engineer (WV, PA, OH, MD)

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

- **Industrial**

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

- **Educational**

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

- **Commercial**

West Virginia Capitol Complex, West Virginia Parkways Authority

- **Health Care**

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

Project Experience

WV Army National Guard, Kenova Secured Area

Mr. Lowry was the Mechanical Project Engineer on the renovations of existing facility for the inclusion of a new sand alone secured area with the existing facility. Project conformed to all additional federal/military requirements for secured areas.

WV Army National Guard, Camp Dawson Secured Area

Mr. Lowry was the Mechanical Project Engineer on the renovations of existing facility for the inclusion of a new sand alone secured area with the existing facility. Project conformed to all secured area with the existing facility.

Wood County Technical Center , Parkersburg, WV

Mr. Lowry was the Mechanical Project Engineer for this project. This project consists of renovations to 80% of the existing facility and an addition of 8 classrooms, one welding shop,

Education

BS, Mechanical Engineering, West Virginia University Institute of Technology, Montgomery, WV, 2004

Employment History

April 2018 - Present, Mechanical Engineer, ZMM

2015 - 2018, Mechanical Engineer, Pickering Associates

Civic Affiliations

- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), President of West Virginia State Chapter

multipurpose room and administration areas. The renovations included conversion of admin space to classroom space, conversion of classroom space to pro-start kitchen space, conversions of existing welding shop to new broadcasting shop. Renovations to collision repair, auto mechanics and construction shops to bring them up to current codes and standards. Design of new HVAC system for all renovated areas, including specialized exhaust for the welding, painting, construction and pro-start kitchen areas. Design of new HVAC systems for the addition classrooms, multipurpose area and admin areas.

Mountain State Oral Sugary, Charleston, WV

Mr. Lowry was the Mechanical Project Engineer currently working with the developing contractor BBL Carlton renovations to the existing facility. The existing Office space will be converted to new patent care areas. We evaluated the applicable mechanical and plumbing codes and developed the plumbing construction drawings in conjunction with the Owner and BBL.

Project Experience with other firms

Cabell-Huntington Hospital, Huntington, WV

Mr. Lowry was responsible for the evaluation and design of the existing facility chilled water distributions systems, design of a new 4600-ton chilled water plant, Development of phased construction plan to construct the new plant and distributions piping for tie-into the existing systems to minimize down time on the existing chilled water systems.

Armstrong Flooring, Beverly, WV

Mr. Lowry was responsible for the evaluation and design of the existing and the connection to existing mechanical systems to serve a new addition to the manufacturing facility. The new addition will consist of storing flooring product, loading docks, and admin area. The new area was designed to be heated via the existing steam systems and provided with humidification to protect the product. The work was designed in a manor to allow for phase of the construction without interruption to the facilities operations.



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

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

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

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

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

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

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

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

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

HVAC Renovation Experience



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

City Center East (2008) Chiller Replacement.

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

Additional HVAC Projects:

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



Joint Interagency Training & Education Center

WVARNG



LOCATION:
Kingwood, WV

SIZE:
285,000 SF

COMPLETION:
2013

COST:
\$78.4M

OWNER:
Todd Reynolds
Deputy Branch Chief
1707 Coonskin Drive
Charleston, WV 25311
304.561.6568

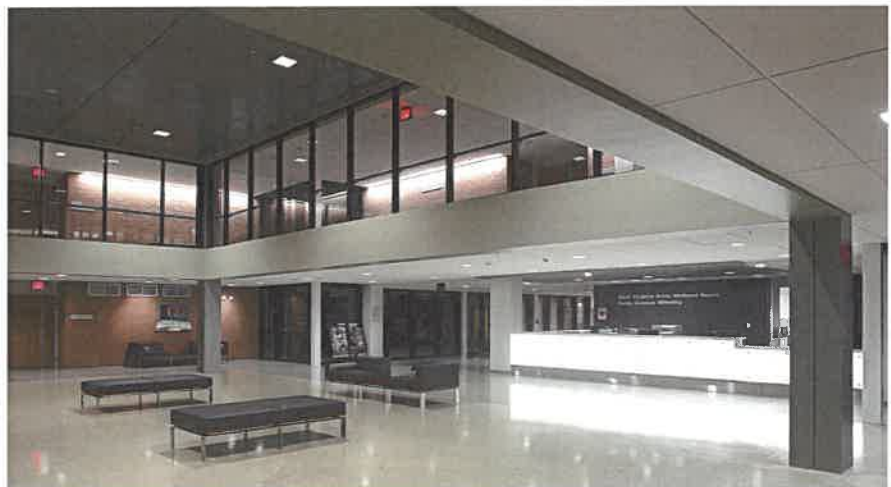
AWARD:
2011 AIA Honor Award
West Virginia Chapter
Excellence in Architecture



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

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

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



Joint Interagency Training & Education Center



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

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

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

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

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

Morgantown Readiness Center

WVARNG



LOCATION:
Morgantown, WV

SIZE:
54,000 SF

COMPLETION:
2013

COST:
\$18.5M

CONTACT:
Todd Reynolds
Deputy Branch Chief
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6568



The Morgantown Readiness Center is a unique military facility for several reasons. While the Readiness Center supports traditional military functions including the 1-201st Field Artillery, a significant portion of the Morgantown Readiness Center supports the 249th Army Band. To support the band, the Readiness Center contains a performance hall, pre-function spaces, as well as a variety of training and rehearsal areas.

To efficiently create the stage and performance area the design team utilized a variety of dual function spaces. The stage is actually a large rehearsal space with an adjacent elevated recording area. Two large operable partitions are used – one to separate the rehearsal area from the remainder of the stage and the auditorium – while the other separates the auditorium from the Drill Hall. This configuration allowed the design team to maximize the West Virginia Army National Guard's investment by utilizing federally authorized space to also function as a large performance area. Acoustically, this challenge was met by creating a Drill Hall with an irregular shape that was contained within a rectilinear sloped barrel arch form. The geometry was complimented by acoustically engineered interior surfaces and finishes to create a vibrant and rich auditorium.

The facility is also unique due to its location on an abandoned airport runway at the Morgantown Municipal Airport. The 54,000 SF Readiness Center occupies a 35 acre tract at the airport. Additionally, the Readiness Center is located approximately twenty (20) miles from Camp Dawson, a large State and Federal training campus. As troops will often be travelling to Camp Dawson through the Morgantown Readiness Center, the facility needed to function as a 'gateway.'

Morgantown Readiness Center

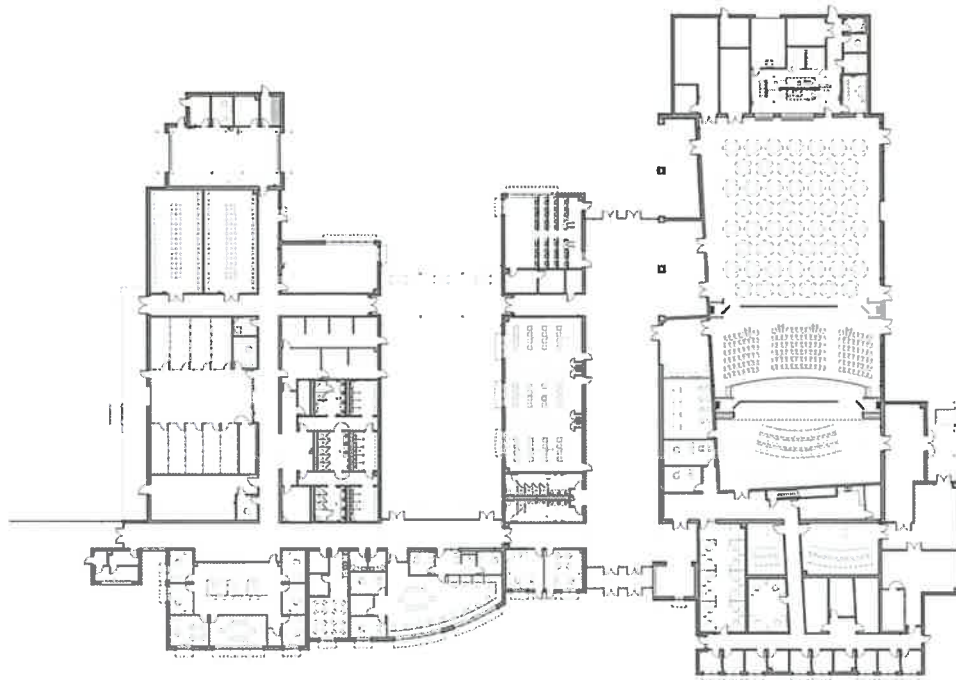
WVARNG



The creation of a 'gateway' facility was accomplished through exterior material choices (compatible with Camp Dawson), as well as the decision to utilize a tower-like feature to mark entry – a very prominent feature of the Regional Training Institute (RTI) at Camp Dawson. Where the RTI utilized a large cylindrical mass, the tower at the Morgantown Readiness Center respects the context of the former runway by reflecting the aesthetic of an airport control tower.

The Morgantown Readiness Center is also a sustainable building, and is in the process of pursuing LEED Certification from the USGBC. The 'U' shaped layout of the facility improves access to daylighting and views, while also limiting public access to the Guard's administrative and storage areas. Additional sustainable features include a reflective roof, the use of regional materials, and efficient lighting and HVAC systems.

While many features are addressed in the design of the Morgantown Readiness Center, the final result is a harmonious composition that reflects both its function and the environment, while deferring to its location on an abandoned runway.



Jackson County Armed Forces Reserve Center

WVARNG



LOCATION:
Millwood, WV

SIZE:
75,000 SF

COST:
\$20M

COMPLETION:
Fall 2011

CONTACT:
Todd Reynolds
Deputy Branch Chief
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6568



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.



Glen Jean Armed Forces Reserve Center

WVARNG



LOCATION:
Glen Jean, WV

SIZE:
110,000 SF

COST:
\$17M

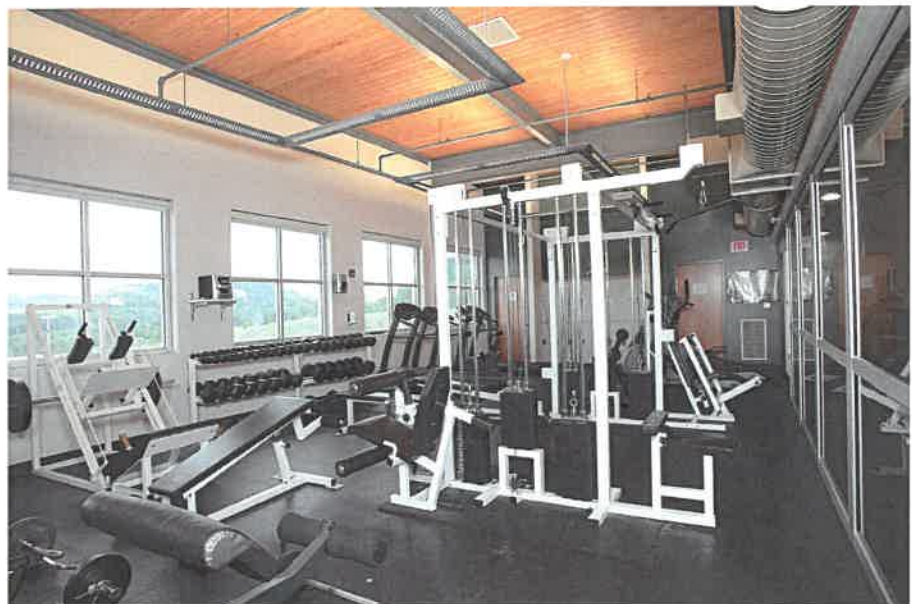
COMPLETION:
2004

CONTACT:
Todd Reynolds
Deputy Branch Chief
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6568



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 to provide space for community functions.



Construction & Facilities Management Office Expansion

WVARNG



LOCATION:
Charleston, WV

SIZE:
19,935 SF

COST:
\$3.5M

COMPLETION:
2008

CONTACT:
Todd Reynolds
Deputy Branch Chief
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6568

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



The Construction and Facilities Management Office (CFMO) Expansion project brings all of the operations of the CFMO together under one roof. The branches that 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.



Logan-Mingo Readiness Center

WVARNG



LOCATION:
Holden, WV

SIZE:
54,000 SF

COMPLETION:
2015

COST:
\$12M

CONTACT:
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AWARD:
2017 AIA Merit Award,
West Virginia Chapter,
Achievement in Architecture
in Sustainable Design

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.

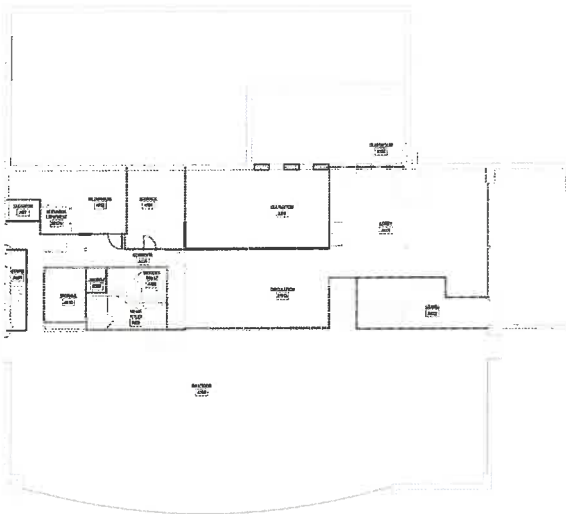


Additional WVARNG Projects

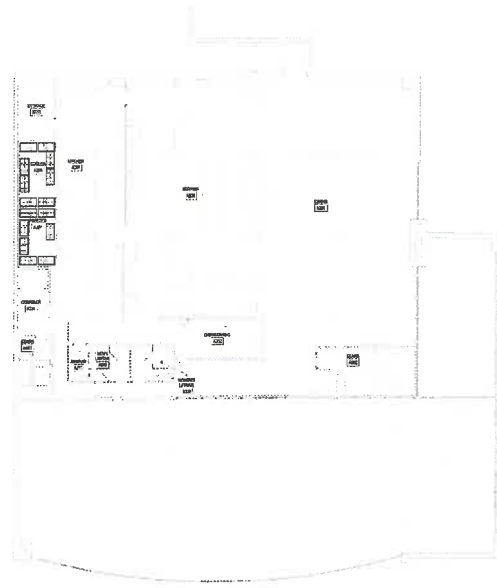


Mountaineer Challenge Academy - South Montgomery, WV

MCA – South involves the renovation of both Maclin Hall and the Tech Center at the old WVU Tech Campus in Montgomery to accommodate the expansion of the Mountaineer Challenge Academy. The Maclin Hall dormitory was renovated to include a new security system to reflect the new user's needs. The Tech Center received more extensive renovations including a new roof. The lower level of the Tech Center was renovated to have two new classroom spaces. The upper level was renovated into new classroom and office space. This floor will have three computer classrooms and one standard classroom. A new HVAC system, ceilings, finishes, and LED lighting are all a part of this renovation.



2007 MCA South - Tech Center - First Floor



2007 MCA South - Tech Center - Second Floor

Camp Dawson Mail Room Kingwood, WV

The Mail Room at Camp Dawson is a new 2,400 SF facility located at the entrance to Camp Dawson. The facility houses both the mail facility and the ID Center which serves all of the buildings on the campus. As part of this project, the exterior lighting along the perimeter fence will also be upgraded to meet current anti-terrorism/force protection guidelines. A new cable barrier and chain link fence will be installed around the facility to isolate it from the other buildings on campus.

Camp Dawson STF - Building 'B' Kingwood, WV

The STF Building 'B' at Camp Dawson is a new 7,250 SF facility designed in close collaboration with the Camp Dawson Special Forces unit to satisfy several of their current needs. The facility has a large storage room, a small training area, multiple interview rooms, and a multi-functional work room. The structure of the building will be a pre-engineered metal building.

Intuit Prosperity Hub



LOCATION:
Bluefield, WV

SIZE:
44,000 SF

COST:
\$4.4M

COMPLETION:
2020

CONTACT:
Robert Cone, Leader
Project Management
Organization

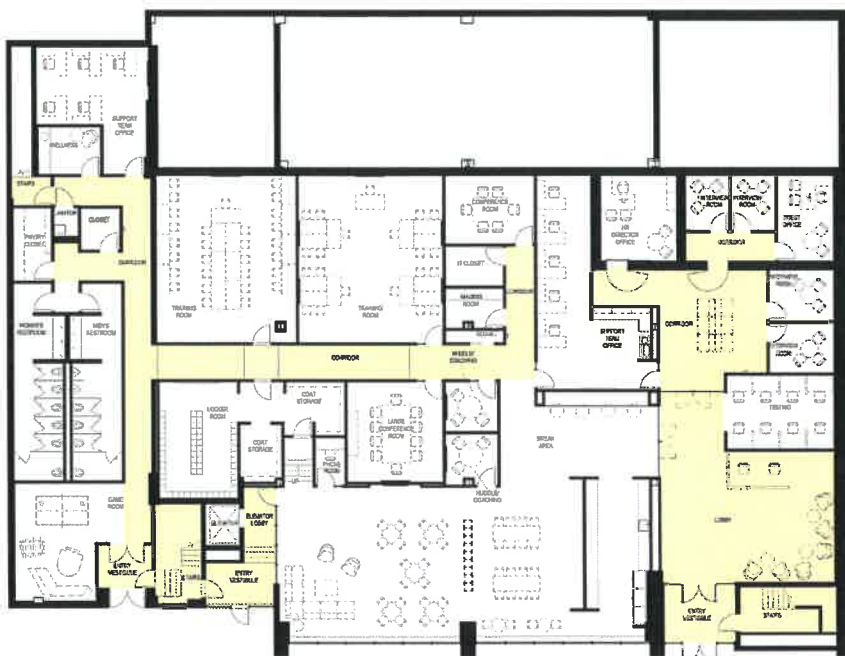


ZMM Architects & Engineers worked in collaboration with CBRE, Gensler, the City of Bluefield, and Pray Construction to assist Intuit with the development of its next "Prosperity Hub," which is located in Bluefield, WV. The company plans to create 300 jobs and locate them in downtown Bluefield in the former First National Bank building, located at 500 Federal Street. The former First National Bank of Bluefield Building (currently Summit Community Bank), was constructed in 1970. The building, located in the Bluefield Downtown Commercial Historic District, is comprised of two connecting structures and a parking garage. The two-story modern building with marble, aluminum, and glass veneer is situated on a sloping lot, allowing access to a parking deck on the upper level.

CBRE is responsible for project management, while Intuit's national architectural partner, Gensler, is responsible for programming and for creating a schematic design for the tenant fit-up portion of the project. ZMM was responsible for all core and shell architectural and engineering work, as well as the fit-up portion of the project from design development through completion. ZMM's effort on the project commenced by conducting a detailed facilities assessment to assist CBRE and Intuit with the scope and budget development process. The purpose of the assessment was to determine the condition of the major building systems, and to identify both immediate and long-term enhancements required to fully improve the building.



Intuit Prosperity Hub



First Floor Plan



Second Floor Plan

Mountain Valley Elementary School

Mercer County Schools



LOCATION:
Green Valley, WV

SIZE:
47,400 SF

COST:
\$12.5M

COMPLETION:
2019

CONTACT:
Dr. Deborah S. Akers
Superintendent
1403 Honaker Avenue
Princeton, WV 24740
304.487.1551



The New Mountain Valley Elementary School located in Green Valley, WV serves approximately 400 students in grades Pre-Kindergarten through 5th Grade. The new facility will replace the existing Ceres Elementary School as well as house students from Glenwood PK-8 and Brushfork Elementary Schools to help eliminate overcrowding.

The new school includes a PE room, cafeteria, full commercial kitchen, media center, combined art/music classroom, and a computer classroom. The classrooms are arranged so the Pre-Kindergarten and Kindergarten classrooms are all on one side of the main entrance, segregated from the remainder of the classrooms. Grades 1-5 are on the opposite side of the entrance in a two-story arrangement. The shared spaces such as the media center, PE room, cafeteria, and administration suite are all located in the center of the building.

The exterior of the building is designed to have a 'lodge' look. To accomplish this, all of the classrooms, as well as the main entrance, have sloped metal roofs. The exterior materials are a combination of brick, metal panel, and stone veneer. The school is designed with ICF exterior walls and polished concrete floors throughout.

The site includes a separate bus loop and parent loop on the front of the building and an isolated service drive on the backside of the facility. A maintenance drive is also included to allow access to an existing cemetery on site.





Bluefield Primary School

Mercer County Schools

LOCATION:
Bluefield, WV

SIZE:
48,752 SF

COST:
\$12.5M

COMPLETION:
2020

CONTACT:
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The New Bluefield Primary School is the result of a consolidation of two local schools Whitethorn and Memorial in the Bluefield area. The County wanted to bring in architectural elements from both of the former schools to preserve some of the existing school's history. This was accomplished by oval vaulted ceilings and circular windows throughout the building and the use of red brick and tan stone.

The new school serves approximately 404 students in grades pre-kindergarten through second grade. The new school includes a gymnasium, full commercial kitchen with cafeteria, media center, with a music and art room.

Keeping the Bluefield Beavers in mind, the school colors are found throughout the design with the addition of complimentary colors to create a colorful learning environment for the students. Creating a flexible space where students can learn, innovate, and collaborate was the driving force behind the design in the new Media Center of Bluefield Elementary. The multipurpose space houses areas for reading, STEM activities and small class gatherings. Soft seating and varying flooring materials divide and define each area. A custom wall mural was developed to reflect the community and also serves as a writable surface for teachers and students.



Glenwood Elementary School

Mercer County Schools



LOCATION:
Princeton, WV

SCOPE:
Duct Cleaning / Sealing
HVAC

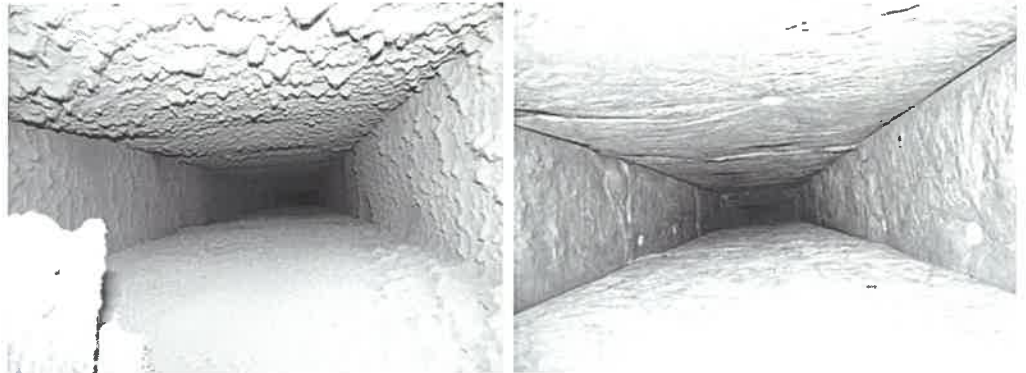
*Under Budget



First Phase – Duct Cleaning and Sealing:

All existing, internally lined supply and return ductwork was cleaned and then sealed with a non-toxic aerosol.

Pictures speak volumes for duct cleaning:



Sealant reduced duct leakage by 2,772 CFM or approximately 8 tons of cooling.

Second Phase – HVAC Improvements:

Replace all existing, constant volume, single compressor Air Handling Units (AHUs) with new variable volume, multiple variable speed compressor AHUs.

VAV terminal units were installed within the existing ductwork to provide a new thermal zone and independent zone control for every classroom and occupied space.

Existing AHUs were fixed ventilation 24/7, new AHUs will utilize Demand Control Ventilation (DCV) with space monitoring of CO₂ and outdoor air dampers to close off ventilation when building is unoccupied.

Install a new, condensing pony boiler to utilize the Hot Water system for VAV reheat and space heating to eliminate the use of existing duct-mounted electric heaters.

Install a new Building Automation System (ASI Controls) to facilitate proper control of all new HVAC systems and components.

Mercer County will receive AEP energy rebates for the expected reduction in electricity consumption.



References

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