



WATOOGA
State Park



Expression of Interest for A/E Services

West Virginia Division of Natural Resources
- State Park Model Cabin Renovation -
Watoga State Park & Cass Scenic Railroad State Park

December 1, 2015

DNR1600000009

ZMM
ARCHITECTS & ENGINEERS

12/01/15 12:46:26
WV Purchasing Division

12-1-15



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

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

Proc Folder: 159310

Doc Description: AE services for Model Cabin Project

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2015-10-26	2015-12-01 13:30:00	CEOI 0310 DNR1600000009	1

BID RECEIVING LOCATION

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

VENDOR

Vendor Name, Address and Telephone Number:

FOR INFORMATION CONTACT THE BUYER

Guy Nisbet
(304) 558-2596
guy.l.nisbet@wv.gov

Signature X

FEIN #

55-0676608

DATE

12-1-15

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

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 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 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: 12.1.15

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 1 day of December, 2015

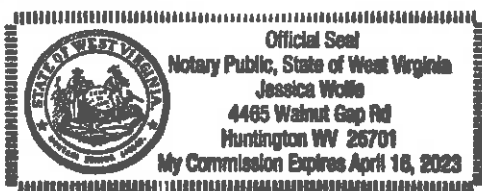
My Commission expires April 16, 2023.

AFFIX SEAL HERE

NOTARY PUBLIC

[Signature]

Purchasing Affidavit (Revised 08/01/2015)



CERTIFICATION AND SIGNATURE PAGE

By signing below, or submitting documentation through wvOASIS, 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, 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.
(Company)

[Handwritten Signature] VICE PRESIDENT
(Authorized Signature) (Representative Name, Title)

304.342.0159 phone, 304.345.8144 fax
(Phone Number) (Fax Number) (Date)



December 1, 2015

Mr. Guy Nisbet, Buyer Supervisor
Department of Administration, Purchasing Division
2019 Washington Street, East
Charleston, West Virginia 25305

Subject: West Virginia Division of Natural Resources – State Park Model Cabin Renovation Project (Watoga State Park, Cass Scenic Railroad State Park)

Dear Mr. Nisbet:

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 State Park Model Cabin Renovation Project (Watoga State Park Model Cabin Renovation Project and Cass Scenic Railroad State Park Company House Renovation). Established in 1959, ZMM is a Charleston based, full service A/E firm, and is noted for design excellence and client focus. Our integrated design approach makes ZMM unique among design firms in West Virginia, and will help to ensure the quality of the services that we will provide.

ZMM possesses the project background and knowledge, lodge and residential design experience, restoration and renovation design experience, WVDNR experience, and project approach to ensure the successful delivery of the model cabin and company house renovation for the West Virginia Division of Natural Resources. Our team's commitment to preserving these cultural and recreational resources, as well as our demonstrated success in providing design and construction phase services on complex renovation project throughout West Virginia makes us the right partner for the WVDNR for this engagement. Additional qualifications of our team include:

- **Experience.** ZMM has been providing design services throughout West Virginia for fifty-five years. This experience includes the design of various projects for the WVDNR, most recently on the proposed lodge at Beech Fork State Park. In addition to our experience working with the WVDNR, ZMM has provided design services on historic preservation and renovation projects throughout West Virginia on project including:

State Capitol Building Roof Replacement, State Capitol Complex
Houston Coal Company Store Restoration, Kimball, WV
Culture Center Relighting, State Capitol Complex
State Office Buildings 5, 6, & 7 – Various Improvements, State Capitol Complex
Prosperity Center (Renovation of Charleston Transit Company) for Goodwill of Kanawha Valley
Southside Elementary/Huntington Middle School (Historic Commack School Renovation)

405 Capitol Street (Daniel Boone Hotel Renovation)

- **Quality.** ZMM has a history of providing high quality design services on restoration and renovation projects. Recent award winning renovation experience includes the Renovation of the 10th Floor of State Office Building #5 for the Office of Technology, the CFMO Expansion for the West Virginia Army National Guard, renovation of Southside Elementary/Huntington Middle School for Cabell County Schools, as well as new Girl Scout of Black Diamond Council Volunteer Resource Center. All four projects were honored with statewide design awards by the American Institute of Architects West Virginia Chapter. *Additionally, ZMM's commitment to design quality has been recognized by the American Institute of Architects West Virginia Chapter with fourteen design awards in the last ten years – an achievement unrivaled in West Virginia.*
- **Commitment.** ZMM has a history of working to preserve historic structures in West Virginia. This has been demonstrated through our support of the West Virginia Courthouse Facilities Improvement Authority (WVCFIA), the West Virginia Humanities Council, and Charleston Main Streets - a program committed to historic preservation-based community revitalization. We are committed to working with the WVDNR to develop a strategy to maximize the improvements to the cabins and company houses – many of which are amazing recreational and cultural resource.

Thank you for taking the time to review the attached proposal which includes our recommended project approach, as well as information regarding the history, services, personnel, experience, and qualifications of ZMM Architects and Engineers. 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, and look forward to working with you on this exciting project. Please let me know if you have any questions or concerns regarding our proposal.

Respectfully submitted,

ZMM, Inc.



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

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- State Park Model Cabin Renovation Project -*

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Watoga State Park Model Cabin Renovation Project and Cass Scenic Railroad State Park Company House Renovation Project

Approach and Methodology for Meeting Goals and Objectives

Background/History

The Request for Expression of Interest indicates that the State of West Virginia Division of Natural Resources intends to develop plans to restore/renovate one of each of the following structures:

- Watoga State Park CCC Era Cabin
- Watoga State Park 'Modern' Cabin (1959)
- Watoga State Park Accessible Cabin (1999)
- Cass Scenic Railroad State Park Company House



Depending on the availability of funding, the restorations/renovations will be undertaken, and the plans may be utilized to restore other cabins as funding becomes available. Initially it is anticipated that up to fifteen (15) of the 'Modern' Cabins at Watoga State Park may be renovated.

The West Virginia DNR website states that Watoga has a total of thirty-four (34) cabins that were built over nearly sixty years. The first cabins that were built, referred to as the CCC era log cabins, are heated with only a wood burning fireplace, and a small electric heater in the bathrooms. These cabins are traditionally closed in the winter. The 'modern' cabins were constructed in 1959, are fully conditioned, and are open year round. The accessible cabins were constructed in 1999, and are also available year round. While the CCC era cabins are log structures, the 'modern' cabins are frame construction with wood paneling and also feature a stone fireplace.

The Company Houses at Cass Scenic Railroad State Park can accommodate 4-14 guests, and are also available year round. The Company Houses are original early 1900's houses from Cass, and were previously refurbished for use by the WVDNR as historic 'cabins' or lodging.

Qualifications

Due to the historic nature of nearly all of the structures noted above, including the 'Modern' 1959 era cabins, the project will involve both a restoration and renovation component. ZMM's recent experience working on other historic structures in West Virginia, as well as our experience designing the proposed lodge at Beech Fork State Park provides our team with the tools and ability to successfully deliver this project for the WVDNR. Our recent work on historic structures includes:

- Houston Coal Company Store Restoration, Kimball (McDowell County), WV
- 2nd Avenue Community Center, Charleston, WV
- State Capitol Building Roof Replacement
- Tucker County Courthouse Improvements/Annex, Parsons, WV
- Prosperity Center (Renovation of Charleston Transit Company) for Goodwill of Kanawha Valley
- West Virginia Culture Center Grand Hall Re-Lighting
- West Virginia Capitol Complex Buildings 5, 6, & 7 – Various Improvements
- Southside Elementary/Huntington Middle School (Cammack Renovation), Huntington, WV



ZMM Architects and Engineers has a history of working to preserve historic structures in West Virginia. This has been demonstrated through our support of the West Courthouse Facilities Improvement Authority (WVCFIA), the West Virginia Humanities Council, and Charleston Main Streets - a program committed to historic preservation-based community revitalization. We are committed to working with the WVDNR to develop a strategy to maximize the improvements to the cabins and company houses – many of which are an amazing cultural resource.

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.

Prior to commencing the investigation, ZMM will review any documentation including plans, specifications, photographs, and reports that exist of the existing cabins and company houses. If required, ZMM will prepare as-built plans of the cabin and/or company house prior to the on-site investigation by the full A/E team.

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:

- Site Conditions, Site Cultural Resources, Landscaping
- Building Structure

- 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
- Special Systems
- Historic/Cultural Significance (Furniture, Finishes, etc.)

Once the investigation is complete, the team will conduct an analysis to develop a list of recommended improvements to the buildings. These recommendations will be developed with input from the WVDNR, so that the proposed improvements reflect the owner's vision for the project. Once the investigation effort is complete, the design team prepares an estimate of the probable construction cost. The result of the investigation will be a report that will serve as the basis for future project and design decisions. This comprehensive approach ensures that all improvements are made in a manner that supports the overall vision of the facility – and is the first step to delivering a project on budget – by clearly defining the scope and project expectations.

Project Communication

During the design phase Adam Krason and Joe Sinclair would serve as the primary contacts for the design team. All of these key team members as well as all primary WVDNR contacts would be included on all communication to facilitate an open discussion throughout the project – in a manner that allows the DNR to remain actively involved in all design decisions. All correspondence will be copied to this core group. As the project progresses regular bi-weekly meetings will be held to review investigation/design progress, outstanding issues, as well as any regulatory or budget concerns. Meeting minutes will be produced to document discussion items, decisions, and responsibility for follow-up. ZMM's recent experience working with the WVDNR on the proposed Lodge at Beech Fork will help facilitate this open communication.

During the construction phase Glenn Savage will coordinate the effort of the design team. All submittals, pay applications, and RFI's will be logged and tracked by Lee Turley. Ms. Turley will update the entire project team (WVDNR, ZMM, and Contractor) weekly regarding outstanding items.

Budget Control

ZMM has been providing professional design services in West Virginia for fifty-five years. Over this time we have developed a thorough understanding of the various construction markets and associated bidding regions that exist throughout West Virginia. Our team for this project will include Win Strock, a former contractor that regularly provides independent estimates to ZMM. Mr. Strock and ZMM have successfully collaborated on the following projects:

- Beech Fork Lodge
- Brooks Manor Addition and Renovations
- Edgewood Elementary School
- Ripley Readiness Center
- Logan-Mingo Readiness Center
- Morgantown Readiness Center
- State Police Information Services Center
- State Office Building 5 & 6 Renovations



The design team, with the assistance of Mr. Strock will evaluate the projected cost at the end of each phase, confirming the estimate with recent experience and historical bidding data. Recent experience demonstrating our ability to control the project budget includes:

- Ceredo-Kenova Elementary School, Wayne County BOE
Bid 08/2015 - \$3M Under Budget
- Goodwill Prosperity Center, Goodwill Industries of Kanawha Valley
ZMM Estimate \$1.19M, Construction Cost was Under \$900K
- Glenwood School HVAC Replacement, Mercer County BOE
ZMM Estimate \$1.36M, Construction Cost of \$1M, 0.0% Change Orders
- Kenna Elementary School, Jackson County BOE
Project was Under Budget, 0.2% Change Orders
- Huntington East Middle School, Cabell County BOE
Project was \$1.2M Under Budget (\$23M), 1.7% Change Orders



Construction Duration

Nearly every project that ZMM is engaged to perform design services for has a 'hard' deadline for completion, many times tied to the start of an academic year, or to the availability or expiration of project funding. ZMM consistently delivers on projects with challenging schedule constraints. ZMM will insure that this project will be completed in the agreed construction period utilizing the following methods:

- ZMM has developed Division 1 documents that tie the receipt of all deliverables required to administer the construction phase of the project to payment applications. ZMM will reject any payment application that is not accompanied by all required information including submittal schedules and logs, RFI logs, updated project schedules, etc.
- ZMM monitors all construction phase submittals and correspondence to verify that we are returning information at a pace that will help expedite project completion. ZMM management reviews the status of all RFI's and submittals weekly. ZMM will also staff the construction phase with staff that will be able to provide immediate answers at the project site to expedite the work.
- ZMM will work with the WVDNR to develop a realistic construction schedule that includes anticipated weather days. This schedule will be included in the specifications, and reviewed at the pre-bid meeting to reinforce the critical nature of meeting the schedule, and the intent of enforcing liquidated damages.

Experience with Each Required Discipline



As a full service design firm, ZMM Architects and Engineers employs all of the necessary staff to complete this project in-house. Our team is comprised of some of the leading professionals in West Virginia, and is experienced in each discipline noted below. Project experience and resumes demonstrating this expertise are contained in the attached proposal. *Additionally, the quality of ZMM's*

design effort has been recognized by the American Institute of Architects West Virginia Chapter, fourteen design awards in the last ten years – an achievement unrivaled in West Virginia.

Project Management	ZMM
QA/QC	ZMM
Civil Engineering	ZMM
Structural Engineering	ZMM
Architecture	ZMM
Interior Design	ZMM
Mechanical Engineering	ZMM
Electrical Engineering	ZMM
Estimating	Win Strock
Construction Phase	ZMM

Summary

ZMM possesses the project background and knowledge, lodge/residential design experience, restoration and renovation design experience, WVDNR experience, and the approach to ensure the successful delivery of the model cabin and company house renovation project at Watoga State Park and Cass Scenic Railroad State Park for the West Virginia Division of Natural Resources. Our team's commitment to preserving these cultural and recreational resources, as well as our demonstrated success in providing service on complex renovation project throughout West Virginia makes us the right partner for the WVDNR for this engagement.





LOCATION:
222 Lee Street, West
Charleston, WV

CONTACT:
Phone 304.342.0159
Fax 304.345.8144
www.zmm.com

History of ZMM



ZMM was founded in 1959 in Charleston, West Virginia by Ray Zando, Ken Martin, and Monty Milstead. Since the inception of the firm, ZMM has been dedicated to providing an integrated approach to building design for our clients. ZMM delivers this integrated approach by providing all building related design services, including architecture, engineering (civil, structural, mechanical, and electrical), interior design, and construction administration from our office in Charleston. Our integrated design approach makes ZMM unique among architectural firms in West Virginia, and helps to ensure the quality of our design solutions by providing more thoroughly coordinated construction documents.

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

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



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

Advantages of an integrated Design Approach:

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

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

Services

Pre-Design

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

Design

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

Post Design

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



Award Winning Design



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



Additional Award Winning Design



AIA West Virginia Chapter: Honor Award
Excellence in Architecture
Joint Interagency Training & Education Center
Kingwood, West Virginia

AIA West Virginia Chapter: Merit Award
Excellence in Architecture in Interiors
WV State Office Building #5, 10th Floor Renovation
Charleston, West Virginia

2010

AIA West Virginia Chapter: Honor Award
Excellence in Architecture
Hacker Valley PK-8 School
Hacker Valley, West Virginia

2009

AIA West Virginia Chapter: Merit Award
Excellence in Architecture
Construction & Facilities Management Office (CFMO)
Charleston, West Virginia

2008

AIA West Virginia Chapter: Honor Award
Excellence in Architecture
Erma Byrd Center
Beaver, West Virginia

2007

AIA West Virginia Chapter: Honor Award
Excellence in Architecture
Lincoln County High School
Hamlin, West Virginia

2006

AIA West Virginia Chapter: Merit Award
Excellence in Architecture
Gene Spadaro Juvenile Center
Mt. Hope, West Virginia



Adam R. Krason, AIA, NCARB, LEED AP



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

Beech Fork Lodge and Conference Center, Wayne, WV

Mr. Krason is the Project Manager on new lodge at Beech Fork State Park. The concept development for a 75-room lodge located on the banks of Beech Fork Lake is designed to benefit a variety of visitors. The form of the building was influenced by

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 - 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

the site configuration as well as the functions contained within it. The floor plan is arranged in a way to separate the guestrooms and other guest-only facilities from the more public functions of the building such as the restaurant, pub, gift shop and meeting room. This allows visitors who may not be staying at the lodge to use these areas without encroaching on the privacy of lodge guests. All of the guestrooms are arranged to have access to views of the lake. Those views are also shared by the restaurant, meeting room and the recreation areas.

Charleston Civic Center, Charleston, WV

Mr. Krason is serving as Principal-in-Charge of the expansion and renovation to the Charleston Civic Center. The \$75M, 283,000 SF design-build project is being completed as a collaboration with tvsdesign and BBL Carlton. Mr. Krason is responsible for the overall management of the design team, coordination with the client, and also has input critical project management decisions. The design commenced in the spring of 2015, and construction is scheduled for completion in 2018.

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

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

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

Girl Scouts of Black Diamond Council, Charleston, WV Mr. Krason is the Project Manager on the new Volunteer Resource Center and Girl Zone/Urban Camp in Charleston, WV. The 18,000 SF project will completely renovate an old car dealership into administrative offices, a community gathering space, and a small hotel (Urban Camp) for Girl Scouts visiting the Charleston area. This new main building will bring all the operations of the Girl Scouts of the Black Diamond Council under one roof.

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.

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.

Bridgemont Community and Technical College - Davis Hall Renovation, 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.

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

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

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

Robert Doeffinger, PE



Role

Mechanical 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 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

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.

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, Bridgmont Community and Technical College
- City of Pt. Pleasant, WV – 2nd Ward Councilman for 20 years

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.

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 remediating several life safety deficiencies, as well as improvements to the building envelope.

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

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

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.

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.

**Role**

Architect

Professional Registrations

Registered Architect (WV)

LEED Accredited Professional

Mr. Walker is responsible for overseeing the planning, design, and construction of a variety of types of building projects to meet the needs of the clients. Mr. Walker works with other in-house engineers and design professionals throughout the building process to provide a thoroughly integrated product. Mr. Walker also coordinates with various consultants, code officials, and government agencies to provide a quality building.

Mr. Walker has broad experience in scopes of both new and renovation projects throughout his years at ZMM.

Project Experience**Cacapon Resort and Lodge, Berkley Springs, WV**

Mr. Walker was the Architect on the various lodge renovations. The project included a conference room addition inside the main lodge, as well as the spa, elevators and kitchen renovations.

Cedar Lakes Conference Center, Ripley, WV

Mr. Walker has worked on several renovation projects at Cedar Lakes including the reroofing project which was completed in 2006. This project included new metal roofing to 11 buildings.

The Retreat at Glade Springs Resort, Daniels, WV

Mr. Walker was responsible for the design of a variety of townhouses assembled into a multi-unit building that fit into the hilly terrain of the site.

Blackwater Falls and Cacapon WV State Parks, Davls, WV

Mr. Walker was responsible for the design of additions to the existing historical lodge building for the two state parks. Mr. Walker incorporated new meeting rooms, elevator, pool and health spas into the existing lodge building and incorporated various renovations to existing buildings to make the buildings more usable for large groups.

Tackett Family Readiness Center (WVARNG), Charleston, WV

Mr. Walker was responsible for the design of a two story building set on a sloped hillside. The new facility will provide a variety of offices and public spaces including a chapel, multi-purpose area, a lobby, and a lounge.

Education

Bachelor of Science Architecture, 1973
The University of Cincinnati

Employment History

1979 - Present, Project Architect, ZMM
1977 - 1979, Designer, ZMM
1977, Designer, Holderby Engineering
1973 - 1976, City Planning, American Peace Corps, Iran

Civic Affiliations

- American Institute of Architects, Member
- West Virginia Society of Architects, Member
- Charleston Salvation Army advisory board 1990 – Present
- Advisory Board Chairman 1997 - 1998

Alderson Federal Prison Camp - New Housing Units Mr. Walker was responsible for the design of two new 500 bed housing units. These units were constructed on the historical site of the first federal prison for women. The prison was in operation during the new construction of both housing units.

WV State Capitol Complex, Charleston, WV

Mr. Walker has worked on several renovation projects on the State Capitol Complex including: roof replacements, culture center gift shop, window replacements to buildings 5, 6, & 7, door and security project, and renovations to building #5, 10th floor - Office of Technology.

Barboursville Middle School, Barboursville, WV Mr. Walker was part of the design team that was responsible for designing a replacement building for the existing middle school. The design required that the new school building be built where the existing building was occupied on the same size. An existing large gymnasium was renovated and incorporated into the next education complex.

Braxton County Memorial Hospital, Gassaway, WV Mr. Walker has worked on a variety of additions and renovations projects at the hospital. The renovations and additions were completed on the emergency room floor, medical surgical, radiology, laboratory, and outpatient areas while the hospitals departments were kept in operation.

Awards and Acknowledgements:

Design Award Received from the Corps of Engineers for: The Stonewall Jackson State Park Facilities.

Mr. Walker received recognition in the *Charleston Gazette* Newspaper for his own home residence, which incorporated "passive solar" and other "Green" Design principals.



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, as well as serving on the Board of Directors.

Project Experience

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 received LEED Silver 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.

Joint Interagency Training and Education Center

(WVARNG) 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

Education

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

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

Employment History

2013 - Present, Board of Directors, ZMM
2007 - Present, Structural Engineer,
ZMM
2003 - 2007, Structural Engineer, McCall
Engineering, Inc.

Civic Affiliations

- American Institute of Steel
Construction, Member

with the additional requirements of the Department of Defense for blast and progressive collapse resistance. The project won LEED Gold Certification.

Edgewood Elementary School, Charleston, WV Mr. Hedrick was involved with the 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.

Kenna Elementary School, Kenna, WV

Mr. Hedrick was responsible for the structural design for the new Kenna Elementary School. The new school will serve approximately 375 students in grades Pre-Kindergarten through 5th Grade. The new facility replaces the existing school that was falling into disrepair and lacked the essential spaces for a thriving 21st Century learning environment. The site includes a separate bus drop-off area and parent drop-off area. There is also a designated Pre-K drop-off. A fenced Pre-K/K play area is provided, as well as a play area for the Grades 1-5. Several playing fields will be located on site as well.

Charleston Civic Center, Charleston, WV

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

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.

Bridgemont Community and Technical College (Davis Hall, Building 704), Montgomery, WV

Mr. Hedrick was 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 and Technical College, Williamson, WV Mr. Hedrick was 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.

Jackson County Armed Forces Reserve Center, (WVARNG) 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.

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.



Role
Electrical Engineer

Professional Registrations
Professional Engineer (WV, OH *pending*)

Mr. Casdorff 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. Casdorff 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. Casdorff 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

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

Craigsville Elementary School, Craigsville, WV

Mr. Casdorff was responsible for the electrical design of the new elementary school. The project is consolidating Beaver Elementary School and Craigsville Elementary School into a new 375-student school. The school houses 3 Pre-Kindergartens, 3 Kindergartens, 2 first grade, 12 1st-5th grade classrooms, activity room, cafeteria, kitchen, media center, and administration spaces.

Lincoln County High School, Hamlin, WV Mr. Casdorff was responsible for the electrical power distribution throughout the 216,000 SF facility containing high school classes, vocational

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

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. Casdorff was responsible for the electrical design of the new 96,000 SF facility housing 700 middle school students grades 6 through 8.

Fort Gay PK-8 School, Fort Gay, WV

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

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

Joint Interagency Education and Training Center (WVARNG), Kingwood, WV Mr. Casdorff 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 won LEED Gold Certification.

West Virginia Research, Education, and Technology – Building 704, South Charleston, WV

Mr. Casdorff is the electrical engineer for building 704 and responsible for electrical power and lighting distribution. Building 704 had previously been utilized as a campus maintenance facility by Union Carbide and DOW Chemical. Bridgemont began utilizing the facilities for instruction in the Spring of 2011.

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

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

Glen Jean Armed Forces Reserve Center, (WVARNG), Glen Jean, WV Mr. Casdorff 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.

Oak Hill Elementary, Fayetteville, WV
Valley High School, Smithers, WV
Divide Elementary School, Lookout, WV

Mary Jo Cleland, PE



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 (BrideValley) 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.

General Services Division – Surplus Property, Dunbar, WV

Ms. Cleland is currently the Civil Engineer on the Surplus Property. This property consists of a new 20,000 SF metal building storage facility inclusive of 5,000 SF of new

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

administrative offices. The new building will replace the existing structures currently located in the floodplain, and will address several site issues including proper drainage, traffic flow, and correct floor elevations in regard to current floodplain requirements. The demolition of the existing structures along with the new construction will be phased to maintain continuous operation of the facility.

Girl Scouts of Black Diamond Council, Charleston, WV

Ms. Cleland was the Civil Engineer on the new Volunteer Resource Center and Girl Zone/Urban Camp in Charleston, WV. The 18,000 SF project will completely renovate an old car dealership into administrative offices, a community gathering space, and a small hotel (Urban Camp) for Girl Scouts visiting the Charleston area. This new main building will bring all the operations of the Girl Scouts of the Black Diamond Council under one roof.

Tackett Family Readiness Center, Charleston WV

Ms. Cleland was responsible for site design for a two story building located on a hillside. Due to the existing slopes, 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.

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 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.

Edgewood Elementary School, Charleston, WV

Ms. Cleland was the Civil Engineer on the new Edgewood Elementary School. 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. 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.

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.

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.

LOCATION:
Wayne, WV

COMPLETION:
TBD

COST:
Est. \$34M

CONTACT:
Bradley Leslie, PE
Assistant Chief
WVDNR
State Parks Section
324 4th Avenue
So. Charleston, 25303
304.558.2764 x 51823



The goal of the lodge study was to help determine the feasibility for a new lodge at Beech Fork. This objective was achieved through the development of a concept for a 75-room lodge located on the banks of Beech Fork Lake in Wayne County, West Virginia, which is designed to benefit a variety of visitors. The form of the building was influenced by the site configuration as well as the functions contained within it.



The floor plan is arranged in a way to separate the guestrooms and other guest-only facilities from the more public functions of the building such as the restaurant, pub, gift shop and meeting room. This allows visitors who may not be staying at the lodge to use these areas without encroaching on the privacy of lodge guests. All of the guestrooms are arranged to have access to views of the lake. Those views are also shared by the restaurant, meeting room and the recreation areas.

The exterior of the building is designed to simulate the craftsman style to evoke a more relaxed, comfortable and informal feel for guests and visitors. The brick, stone, siding and roof materials are common to the area and offer low maintenance and durability to provide a long-lasting, attractive structure.



LOCATION:
Berkeley Springs, WV

SIZE:
7,600 SF New
8,100 SF Renovated

COMPLETION:
1998

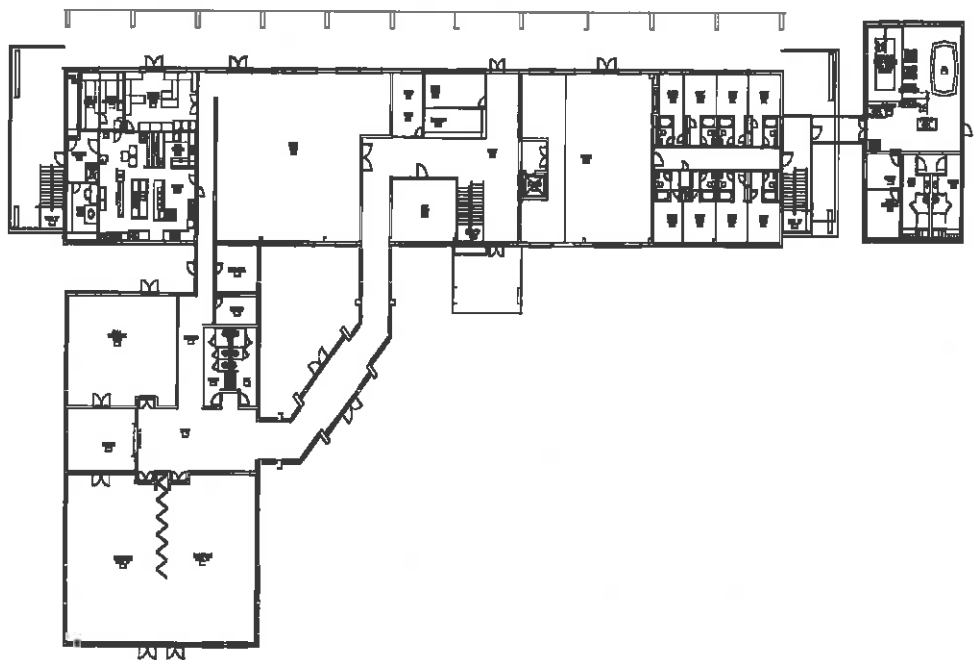
COST:
3,200,000



In 1998 ZMM completed an addition and renovation project to Cacapon State Park Lodge Building. This project included a new 7,600 SF conference center, providing a large 3,000 SF dividable conference room, a smaller 1,000SF conference room with connecting entrance lobby, toilets and storage facilities.

The existing kitchen facility was enlarged and renovated to provide banquet capabilities. An elevator was added to improve access to upstairs bedrooms and downstairs multi-use areas. The downstairs multi-use and meeting area were renovated along with the reception and office area.

Bid documents were prepared for a 2,500 SF health spa addition to the lodge building, but this portion of the project was not constructed. Other ZMM projects completed at Cacapon State Park include life safety compliance renovations to the WPA Old Inn building and a 4 bedroom cabin that is ADA accessible.



LOCATION:
Davis, WV

COMPLETION:
1998

COST:
\$2,600,000

SIZE:
10,400 SF Addition



ZMM completed an addition and renovation to the historic Blackwater Falls State Park lodge building. This project included a 5,400 SF conference center addition providing a large 3,000 SF dividable conference room, entrance, lobby, toilets, and storage facilities.

To meet the owner's intent of reducing the visual impact of the construction, ZMM utilized existing building roof lines and materials for the building addition, which compliments to the original lodge design.

A 5,000 SF spa addition was added to the North Western end of the building provide a swimming pool, large Jacuzzi and a glass walled exercise area with locker rooms/showers. Interior office areas were also renovated with upgrades to mechanical, electrical, and fire alarm systems.

The New Retreat at Glade Springs Resort

Multi-Unit Housing



LOCATION:
Daniels, WV

COMPLETION:
TBD

COST:
\$249,000 - \$269,000
(per unit cost)

CONTACT:
Mr. Doug Pauley
Encore Management Co.
1591 Washington Street, E
Charleston, WV 25311
304.343.3535



The New Retreat at Glade Springs is a gated community located in a wooded area near the 3rd hole of the Stonehaven Golf Course. Several townhouses had already been constructed on the site by a previous developer. The objective of the new developer was to provide a design that met his vision while also blending with the existing townhouses. Due to the wooded hillside site the new 2 and 3 bedroom units were designed to resemble a mountain lodge, while colors and material choices blended with the existing townhouses.

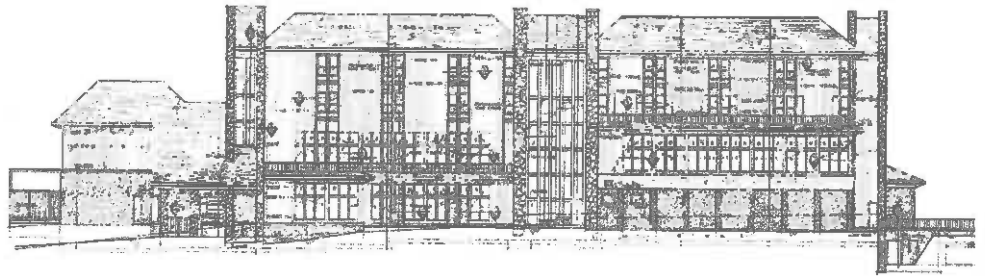
The material palette was selected to help define the lodge aesthetic and for ease of maintenance, and includes a stone veneer, prefinished composite siding and trim, as well as natural wood doors. The layout of the units was developed to provide end unit master suites with no second level, and a core that includes an open floor plan with a two story living room. Additional bedrooms and loft space are located on the upper level. Each unit has a distinct and well defined entry, while the overall grouping of townhomes resembles a mountain lodge.

ZMM's services included the preparation of a preliminary site design, as well as full architectural, engineering, and interior and lighting design services for a variety of units that could be configured in various manners to fit the site conditions. ZMM also assisted the client in determining a base finish, plumbing, lighting fixture, and appliance package for the units. Construction of Phase I of the townhouse development began in fall 2011.



LOCATION:
Daniels, WV

COMPLETION:
Un-Built Project



In 1968 ZMM was selected to provide design services for a variety of facilities at Canaan Valley State Park. Many of the facilities remain actively utilized. A description of the various components can be found below.

Lodge Facility

An original design for a four-story lodge and convention facility containing 60 guest rooms, dining, and kitchen facilities, a conference facility seating 300, an indoor pool and support space, was not constructed. Funding restraints required the construction of a lodge of reduced scope.

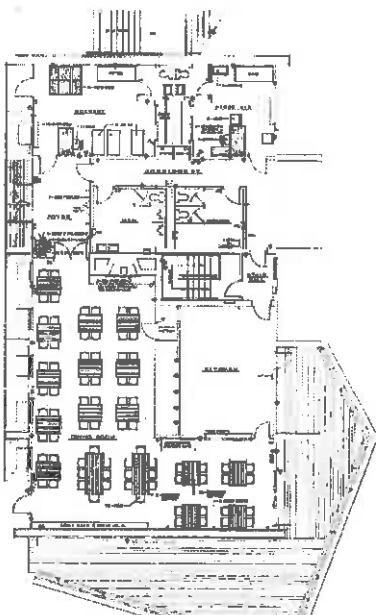
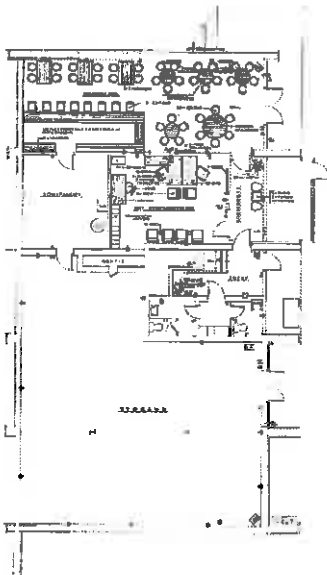
The original design concept utilized masonry bearing walls and a precast floor system with exterior materials of stone and wood to reflect the natural environment and concept of the park. Each guest room was designed to contain two double beds, bath, and toilets facilities.

Other Facilities

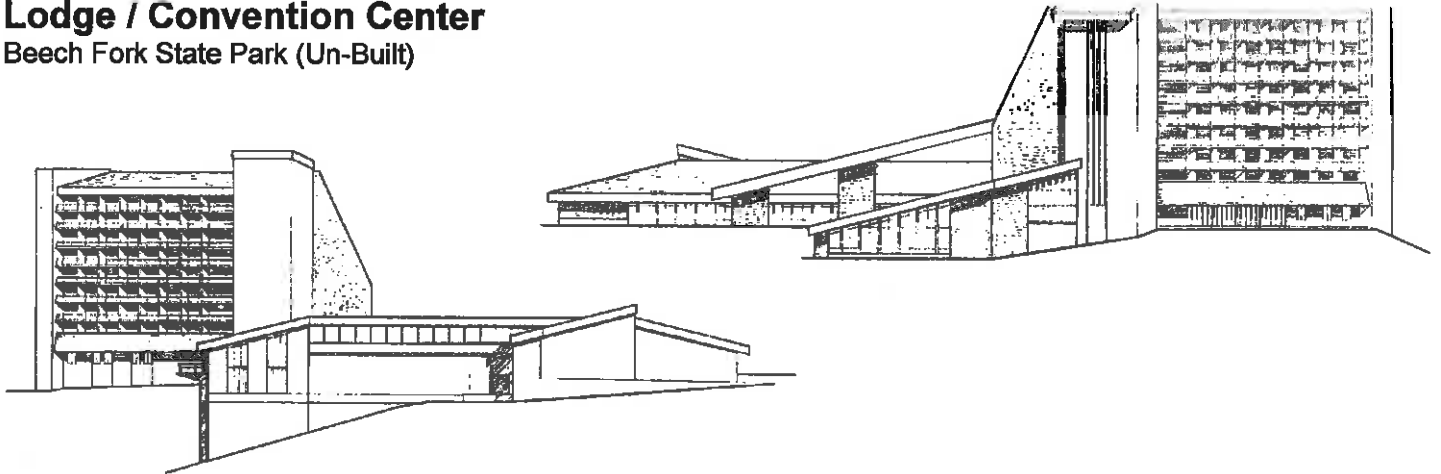
- New Park Cabins
- Golf Club House
- Ski Base Facility
- Park Headquarters Building

These one and two-story buildings were designed to withstand the harsh winter climate of Canaan Valley and are of wood frame and stone masonry construction. Exposed laminated wood beams are used in selected areas for aesthetic and structural purposes. Native materials, both for interior and exterior applications, have been used to help the buildings blend in with their surroundings.

Each building has its own, energy efficient, heating and cooling system, which on concert with the well insulated walls and roof keep overall energy costs to a minimum. The buildings were, each, situated on their respective sites to create a minimum of site disruption.



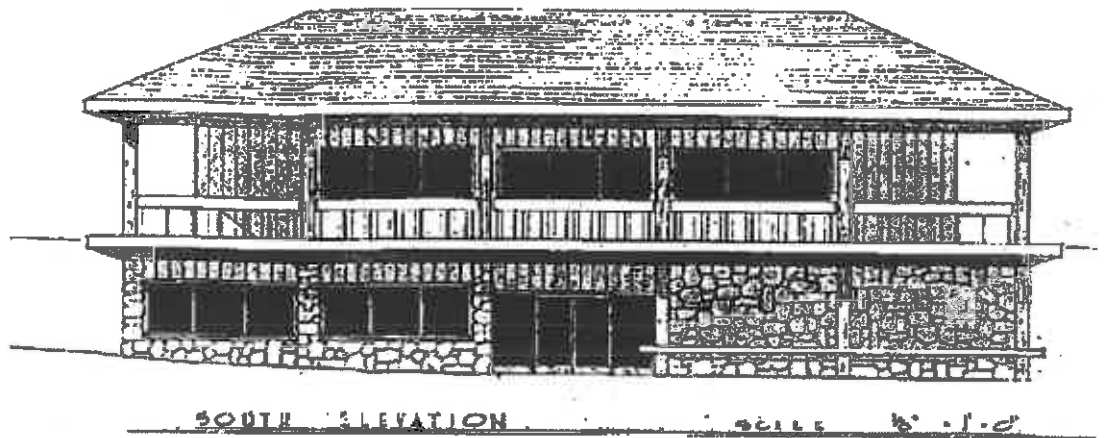
Lodge / Convention Center
Beech Fork State Park (Un-Built)



Miscellaneous Services:
Pipestem State Park
Hawks Nest State Park

Twin Falls State Park
Lodge and Convention Facility
Expansion Master Plan

- 25,000 SF Increasing Room Capacity from 20 to 50 Rooms
- The Expansion Increases the Dining, Kitchen, and Meeting Space for up to 200 People





John XXII Pastoral Center

Wheeling/Charleston Catholic Diocese

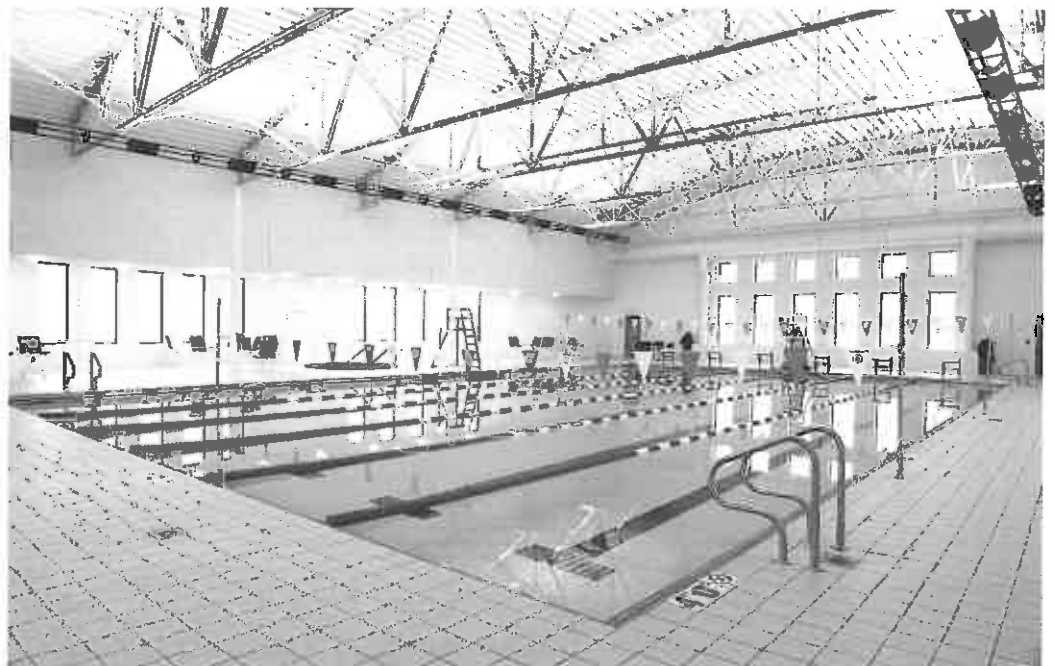
- 53,000 SF
- Dormitory Space for 60 Guests
- Food Service Facility
- Dining Room Seating for 300
- Meeting/seminar rooms and a chapel

Robert C. Byrd - Regional Training Center

- Indoor Swimming Pool
- Fitness Center
- Full Service Dining Hall & Snack Bar
- Auditorium
- Lodging
- "Break out" & Study Rooms

Charleston Family YMCA

- Indoor Tennis Courts
- Racquetball Courts
- Indoor Swimming Pool
- Exercise Rooms
- 130,000 SF - Two Story Facility

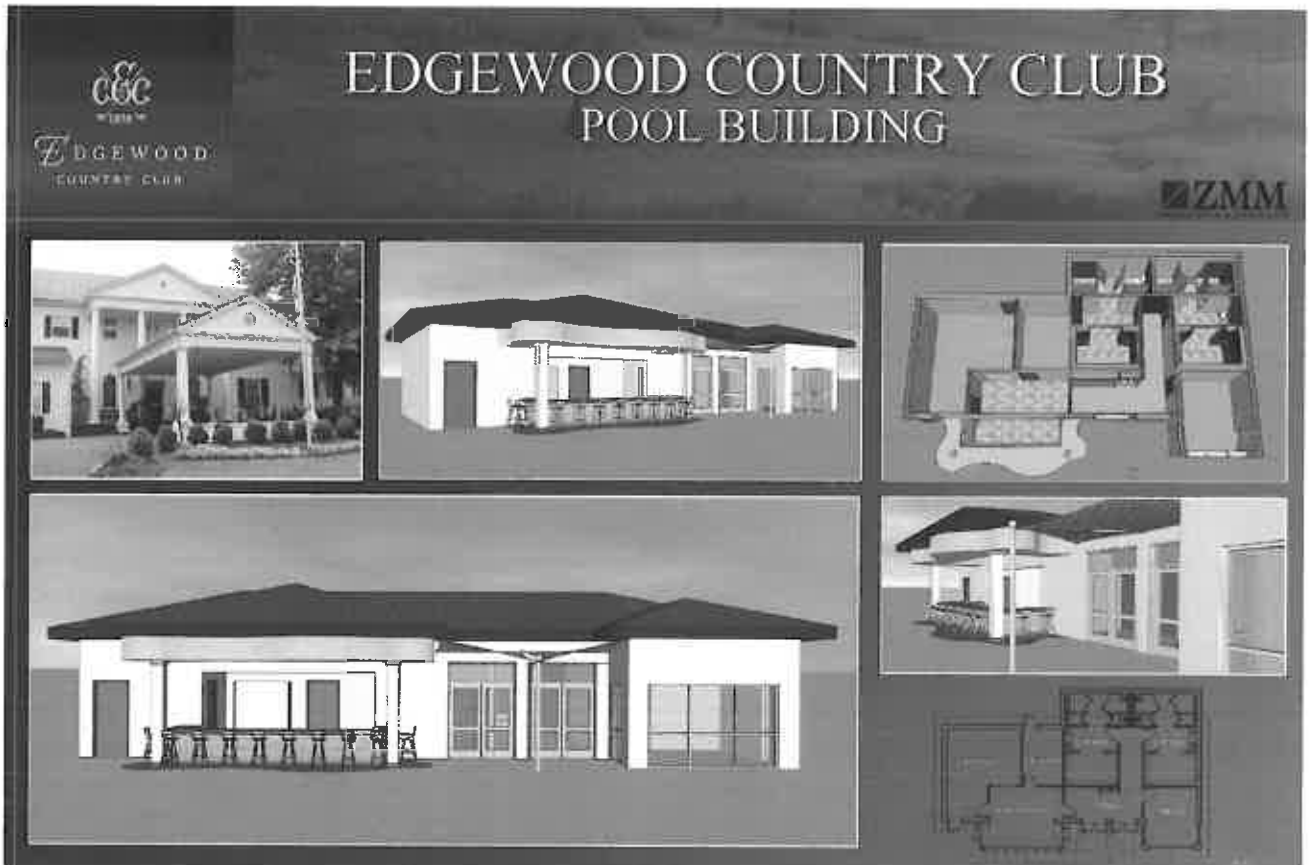
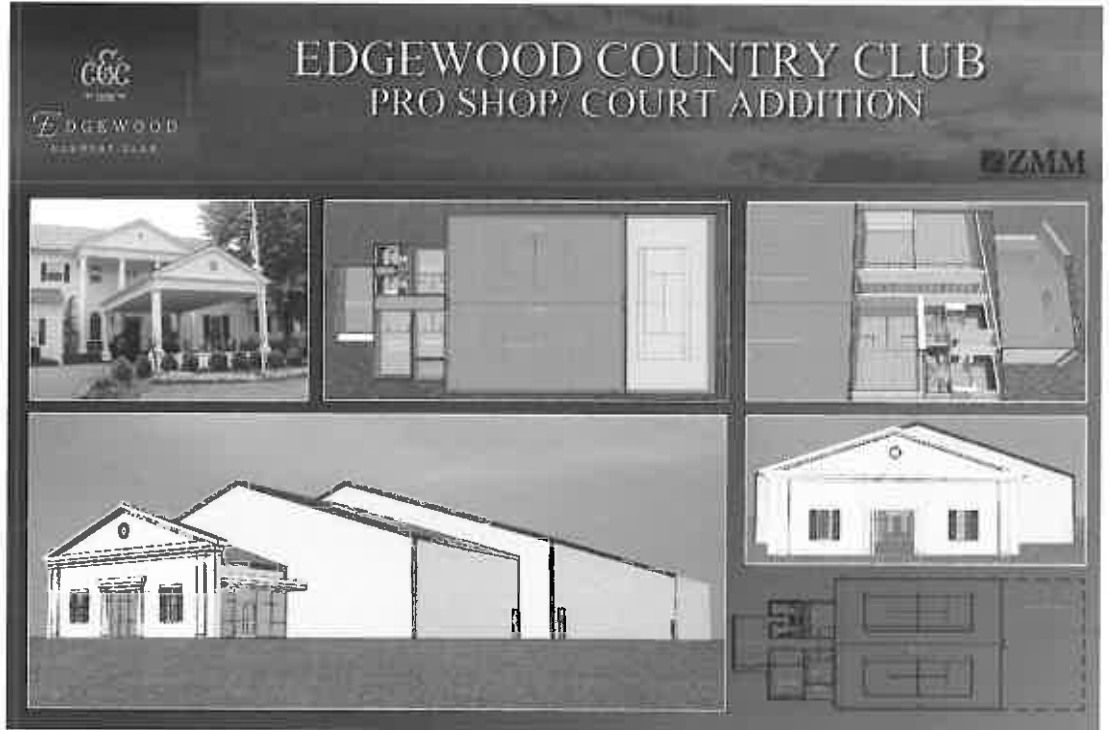


Edgewood Country Club

Proposed Pro Shop, Court Addition, & Pool Building



LOCATION:
Charleston, WV



Joint Interagency Training & Education Center

WVARNG - Billeting (Hotel)



LOCATION:
Kingwood, WV

SIZE:
285,000 SF

COMPLETION:
2013

COST:
\$78.4M

OWNER:
MAJ Dan Clevenger
WVARNG
1707 Coonskin Drive
Charleston, WV 25311
304.561.6367

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



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

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

As the scale of the project includes several miles of roads, parking, and utility upgrades affecting the entire base, the project is being phased over a four-year construction period. Simultaneous construction of all of the new facilities, as well as phased construction in existing buildings, will minimize the disruption to current operations.

The new facilities are designed to meet all anti-terrorism/force protection criteria and are slated for LEED-NC silver 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. 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.



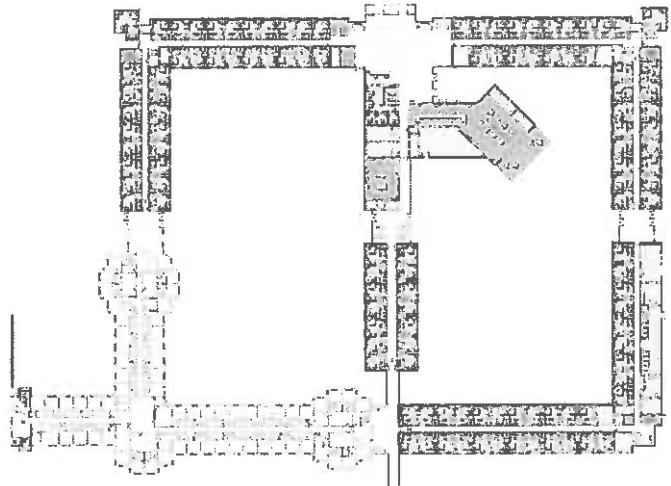
Joint Interagency Training & Education Center

WVARNG - Billeting (Hotel)



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.

Adjacent to the JOC are three large training rooms, capable of seating 70 persons each. Lining the front of each room are LCD video walls with large, open areas for workstations, desks, and office equipment, as well as space for private offices. These rooms function primarily as training areas; however, their close proximity to the JOC allows maximum flexibility in securing the entire area from the rest of the building by means of card access-only doors.



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.

Greystone on the Cheat

Multi-Unit Housing



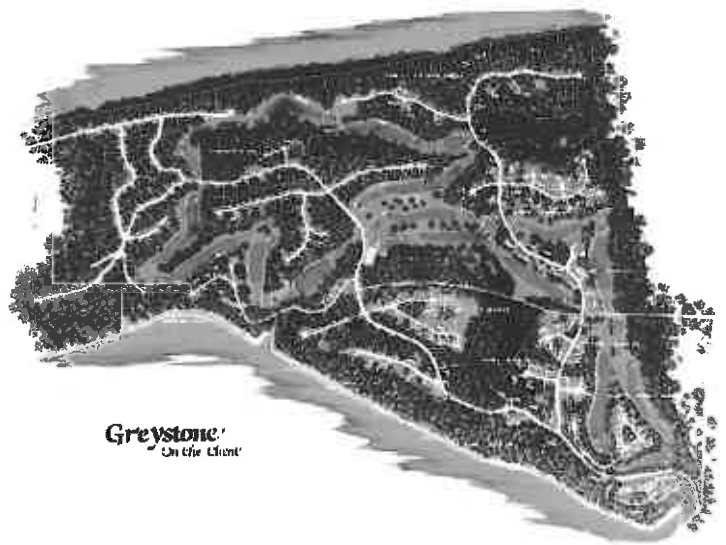
LOCATION:
Morgantown, WV

CONTACT:
2420 Cranberry Street
Morgantown, WV 26508
304.594.3840

Greystone on the Cheat is a 400 lot housing development located on Cheat Lake and Lakeview golf course outside of Morgantown, WV.

ZMM was responsible for the design of various lots, roads, utilities, covenants, and construction of the various phases of the 400+ acre site. ZMM also provided oversight of the design of the individual houses in the development.

Greystone on the Cheat has become one of the premier residential communities in the State of West Virginia.



Yeoman Residence

New Pool House



LOCATION:
Marietta, OH

SIZE:
600 SF

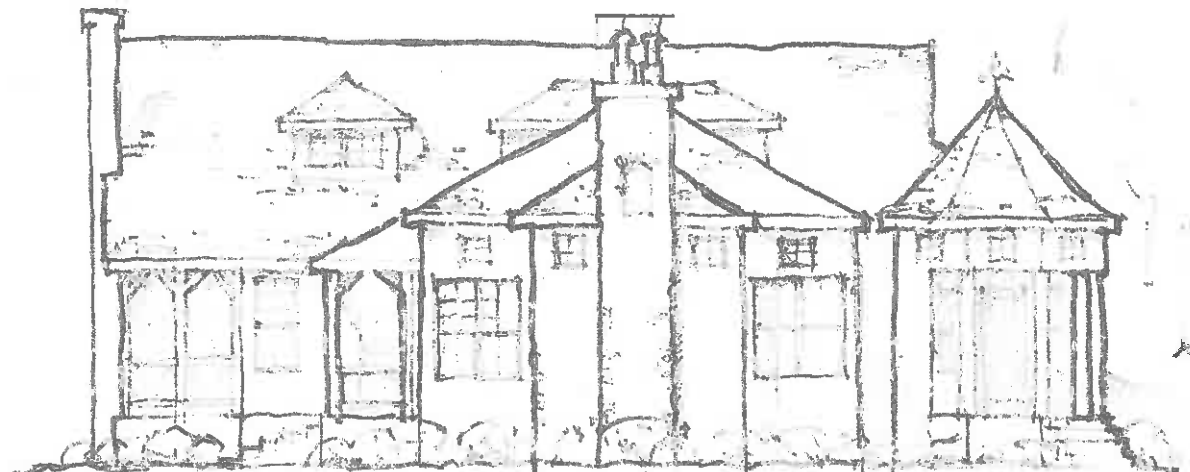
COST:
Est. \$45,000

COMPLETION:
July 2013

CLIENT:
Private Residence



An existing Rural Eastern Ohio residence was in need of a variety of additions and renovations. Phase one of the project included a pool house to provide amenities and screening for a new swimming pool. Phase two will be a large addition to the existing residence including a new great room and large dining area. Phase three will include the construction of a new garage featuring an office and work room overhead.



Southside Elementary & Huntington Middle School

Historic Renovation



LOCATION:
Huntington, WV

SIZE:
158,194 SF

COMPLETION:
2010

COST:
\$27M

CONTACT:
Mr. William Smith
Superintendent
2850 5th Avenue
Huntington, WV 25702
304.824.3033

AWARDS:
2011 AIA Honor Award
West Virginia Chapter
*Excellence in Architecture
Preservation*



The two schools that previously occupied the site of the New Southside Elementary School and Huntington Middle School were known as Cammack Elementary School and Cammack Middle School. The new facility houses a combined 1,014 Elementary and Middle School students. When the Cabell County Board of Education proposed a \$61M bond issue in 2006, the Huntington community expressed the importance of saving this neighborhood landmark.

The new facilities were designed to blend with the architectural character of the existing facility. More than 70% of the existing building was demolished and the portion remaining was completely renovated. Two new stair towers provide a vertical architectural element that separates the existing structure from the new construction. The result is a cohesive design that blends the unique elements of the former Cammack School into a modern educational complex that exceeds the requirements of 21st century learning.



Southside Elementary & Huntington Middle School



Although the expanded facility houses both an elementary and a middle school, each have their own distinct entrance and administrative complex and the students remain physically separated on opposite sides of the facility. The new schools only share a kitchen, which has been located to serve separate dining facilities.

With the community's support of the bond, ZMM has designed a facility that maintains the historic character of the façade and auditorium, while replacing the remainder of the facility. The community has maintained a landmark, while developing new state of the art elementary and middle schools.

State Office Buildings 5,6, & 7



LOCATION:
Charleston, WV

COMPLETION:
On-Going

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



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

Roof Replacement

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

Electrical Courtyard Improvements

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

Door and Window Replacement

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

State Office Buildings 5,6, & 7

Major Renovations

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

Caulk Replacement

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

Valve Replacement

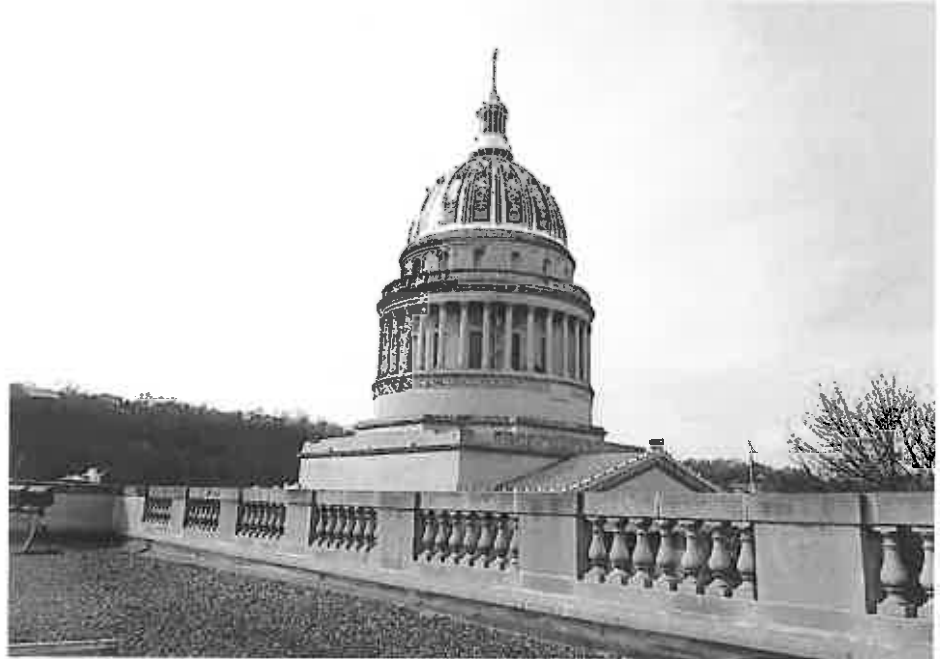
ZMM assisted with a valve replacement project to isolate mechanical risers in Building 5 & 6. This technically intensive mechanical project will give the General Services Division greater control over the system, and will help isolate various risers in the event of significant system failures in the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

WV State Capitol Roof Replacement



LOCATION:
Charleston, WV

COMPLETION:
TBA



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

The investigation included:

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

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

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

Cultural Center - Great Hall Lighting Wiring System



LOCATION:
Charleston, WV

COMPLETION:
2011

CONTACT:
Randal Reid Smith
Cultural Center Director
1900 Kanawha Blvd., E.
Capitol Complex, Building 9
Charleston, WV 25305
304.558.0220



ZMM completed the Great Hall Wiring System located at the Cultural Center on WV State Capitol Complex. The existing wiring and conduit system was approximately thirty-five years old and in need of drastic improvements. The existing conditions that were observed included the conduit and outlet boxes were mounted on the underside of the existing grating above the ceiling, the dimming circuits shared a common neutral, bad fixture connections and cables.

ZMM performed a complete survey and drawings of the existing conduit, wiring, and dimming systems. The circuiting requirements were confirmed and ZMM proposed new correction methods with a dimming equipment manufacturer.

The bidding documentation included the following:

- Drawings to indicate 141 dimmer circuits, conduit, and wiring to be removed back to the existing dimmer cabinet.
- Drawings to indicate new conduit and wiring requirements run above the existing grating with new twist-lock recap tacles for the lighting conditions.
- Drawings and details to indicate rewiring and cleaning methods to be used for 192 light fixtures.
- Specifications for all electrical work to be performed in accordance with National Electrical Code and all applicable codes.

Goodwill Prosperity Center

Historic Renovation



LOCATION:
Charleston, WV

SIZE:
10,200 SF

COMPLETION:
2015

COST:
\$960,000

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



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

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



The Houston Coal Company Store

Historic Renovation



LOCATION:
Kimball, WV

SIZE:
7,100 SF

COMPLETION:
Fall 2015

COST:
\$1.8M



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

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

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

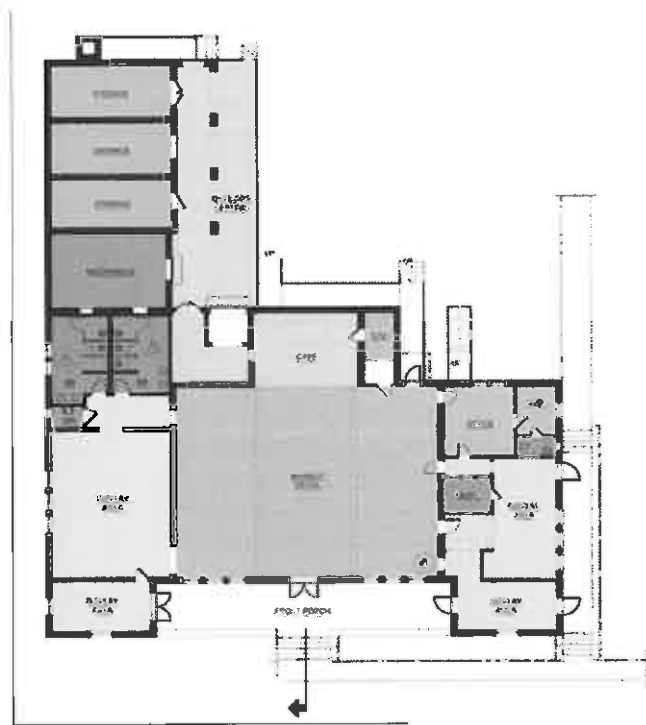
Based upon the investigative results of the facility's existing conditions and its proposed use, recommendations and a proposed cost estimate were created. All proposed improvements were developed based upon the Secretary of the Interior's Standards for Rehabilitation (Department of Interior regulations, 36 CFR 67), and were reviewed with the State Historic Preservation Office.

A final draft of the report was issued that prioritized the recommendations:

- Phase I – Building Shell Restoration (stabilize and restore)
- Phase II – Building Systems Integration (mechanical, plumbing, and electrical systems)
- Phase III – Interior Restoration and Reuse (Including the removal of construction not original and not historically significant to the building)

The Houston Coal Company Store

Based upon the availability of the initial funding, ZMM prepared bidding documents for Phase I. Once this documentation was complete, funding became available for the remaining phases of the work. The improvement package will bid in the summer of 2014, and all work will be completed by the fall of 2015.



Client References

*RFQ: West Virginia Division of Natural Resources
- State Park Model Cabin Renovation Project -*

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Assistant Chief WVDNR
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South Charleston, WV 25303
304.558.2764

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