



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: 581555

Doc Description: East Campus Assessment and Metal Building Design

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2019-05-21	2019-06-12 13:30:00	CEOI 0211 GSD1900000011	1

**BID RECEIVING LOCATION**

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

RECEIVED

2019 JUN 12 AM 11:50

**VENDOR**

**Vendor Name, Address and Telephone Number:**

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

WV PURCHASING  
 DIVISION

**FOR INFORMATION CONTACT THE BUYER**

Melissa Pettrey  
 (304) 558-0094  
 melissa.k.pettrey@wv.gov

Signature X

FEIN # 55-0676608

DATE 6-11-2019

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



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: 581555

Doc Description: Addendum No. 1 East Campus Assessment and Metal Building

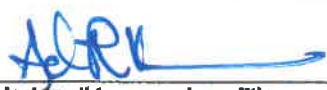
Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2019-06-06	2019-06-12 13:30:00	CEOI 0211 GSD1900000011	2

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

**VENDOR**  
 Vendor Name, Address and Telephone Number:  
 ZMM, Inc. (dba ZMM Architects and Engineers)  
 222 Lee Street, West  
 Charleston, WV 25302  
 (304) 342-0159

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

Signature X  FEIN # 55-0676608 DATE 6-11-2019

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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: 581555

Doc Description: Addendum No. 2 East Campus Assessment and Metal Building

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2019-06-06	2019-06-12 13:30:00	CEOI 0211 GSD1900000011	3

**BID RECEIVING LOCATION**

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

WV 25305

**VENDOR**

Vendor Name, Address and Telephone Number:

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

**FOR INFORMATION CONTACT THE BUYER**

Melissa Pettrey  
 (304) 558-0094  
 melissa.k.pettrey@wv.gov

Signature X

FEIN #

55-0676608

DATE

6-11-2019

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

STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

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

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

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

**DEFINITIONS:**

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

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

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

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

**WITNESS THE FOLLOWING SIGNATURE:**

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

Authorized Signature: [Signature] Date: 6-11-2019

State of West Virginia

County of Kanawha, to-wit

Taken, subscribed, and sworn to before me this 11th day of June, 2019.

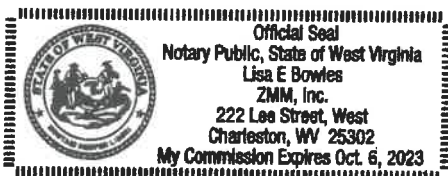
My Commission expires 10-6, 2023.

**AFFIX SEAL HERE**

**NOTARY PUBLIC**

[Signature: Lisa E. Bowles]

*Purchasing Affidavit (Revised 01/19/2018)*



**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.: GSD1900000011**

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

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

Addendum Numbers Received:

*(Check the box next to each addendum received)*

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input checked="" type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3            | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4            | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5            | <input type="checkbox"/> Addendum No. 10 |

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

ZMM, Inc. (dba ZMM Architects and Engineers)

Company



Authorized Signature

6-11-2019

Date

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

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

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

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

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

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

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

6-11-2019  
(Date)

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



June 11, 2019

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

**Subject: East Campus Assessment and Metal Building Design  
CEOI 0211 GSD 1900000011**

Dear Ms. Pettrey:

ZMM Architects and Engineers is pleased to submit the attached information to demonstrate our experience and our qualifications to provide professional architecture and engineering services for the East Campus Assessment and Metal Building design. 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 of our size, and our ability to provide comprehensive design services has made us a trusted resource for complex planning and design projects throughout West Virginia.

For this engagement our in-house A/E team will be supplemented with the specialized expertise of GAI Consultants, Inc. GAI Consultants is an employee-owned engineering, planning, and environmental consulting firm providing award-winning solutions and local expertise to worldwide clients in the energy, transportation, development, government, and industrial markets. GAI will be responsible for survey, environmental assessment and analysis, geotechnical investigation, as well as site master planning and site civil design. ZMM and GAI have recently collaborated on a variety of local projects including the Charleston Coliseum and Convention Center and the Charleston West Side Community Renewal Plan.

- **Experience.** ZMM and GAI have experience providing design services for projects on the State of West Virginia Capitol Campus. This experience includes Improvements to State Office Buildings 5, 6 & 7 (ZMM), Roof Replacement at the Capitol Building (ZMM), engineering services for the Capitol Food Court (ZMM), an HVAC assessment of the Capitol Building (ZMM), the Gift Shop and Grand Hall Relighting at the Culture Center (ZMM), and a Capitol Campus Security Master Plan (GAI). Many of these projects included both site and building assessments. Additionally, ZMM has recently provided design services for the General Services Division for a similar multi-facility metal building project – the Surplus Property project in Dunbar.

ZMM's additional experience providing design services on multi-facility complexes includes the West Virginia Regional Technology Park in South Charleston, the Charleston Job Corps Center, Campus Master Plans (WVSU, BridgeValley CTC, Southern WV CTC, and New River CTC), as well as the Joint Interagency Training and Education Center at Camp Dawson.

- **Quality.** ZMM has a history of providing high quality design services on projects throughout the Charleston area. Recent experience includes the Renovation of the Charleston Coliseum and Convention Center, Edgewood Elementary School, the 10<sup>th</sup> Floor of State Office Building #5 for the Office of Technology, the CFMO Expansion for the West Virginia Army National Guard, the renovation of the Education Wing for Christ Church United Methodist, the new Headquarters for both the West Virginia Housing Development Fund and the Girl Scouts of

Black Diamond Council, as well as the renovation and additions to St. Albans High School. All eight projects were recognized with statewide or national design and planning awards. *In fact, ZMM's commitment to design quality has been recognized by the American Institute of Architects West Virginia Chapter with eighteen design awards in the last decade – an achievement unrivaled in West Virginia.*

- **Proximity.** The ZMM/GAI team includes over sixty-five Charleston based employees. Many of the design professionals providing services on this project will be located out of our offices on Charleston's historic West Side and Downtown. Our ability to provide integrated design services, as well as our ability to have regular access to the East Campus site and facilities due to our location, will lead to an improved design and construction process for the General Services Division.

Thank you for taking the time to review the attached expression of interest which includes our recommended project approach, as well as information regarding the history, services, personnel, experience, and qualifications of ZMM Architects and Engineers and GAI Consultants. Additionally, please visit our websites at [www.zmm.com](http://www.zmm.com) and [www.gaiconsultants.com](http://www.gaiconsultants.com) to see the full range of projects that we have designed, and to learn about working with our team from a client's perspective. We appreciate your consideration for this important assignment.

Respectfully submitted,

**ZMM, Inc.**



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





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Cover Letter  
Table of Contents

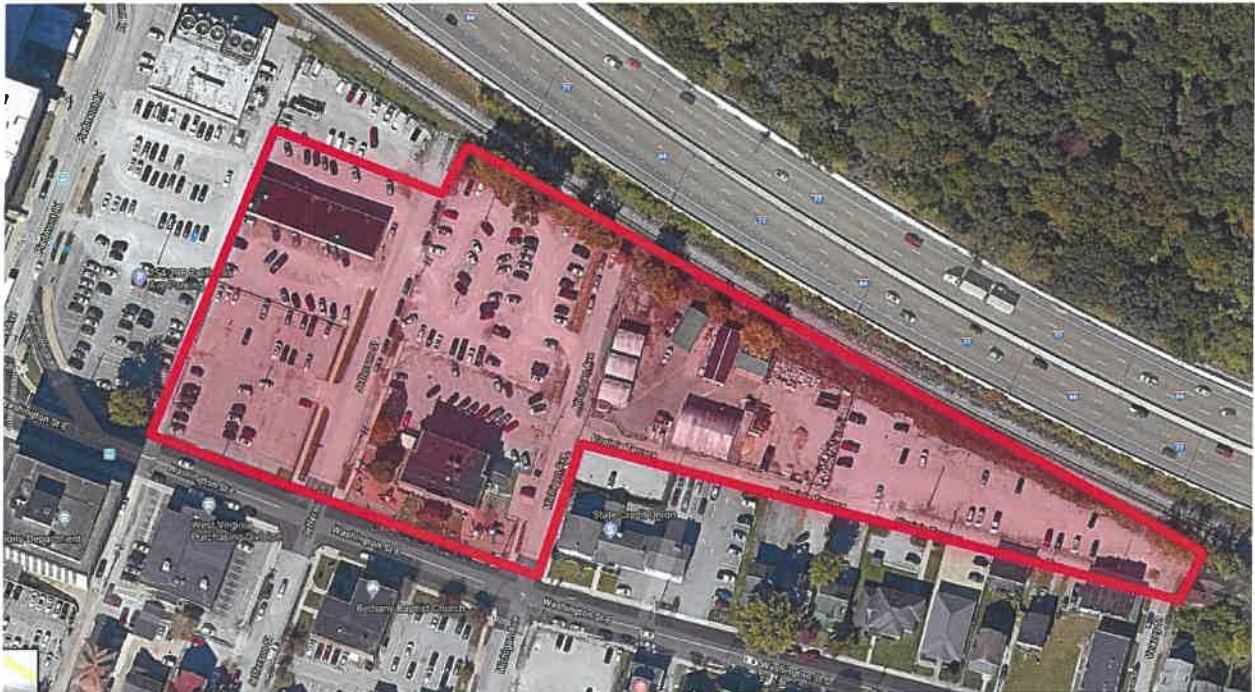
1. Project Understanding and Approach
2. Firm Profiles
  - ZMM History and Services
  - GAI Consultants
3. Qualifications
  - Team Resumes and Certifications
4. Project Experience
5. References

# Project Approach

## East Campus Assessment and Metal Building Design Project WV Capitol Complex - Charleston, WV

### Project Description

The Department of Administration General Services Division owns multiple parcels of land on the east side of the West Virginia State Capitol Campus. The property is generally located south of the railroad tracks, between the alley located behind the Central Chilled Water Plant and Veazey Street. The area extends to the south to Washington Street East in some locations (Public Employees Daycare), and Virginia Terrace for the portion to the farthest east. The property currently contains a variety of parking lots, trailers, sheds, and other small structures.



The intent of the project is to “provide planning and design services, cost estimating and construction documents to complete the programming and design for the construction of potential multiple” pre-engineered metal buildings “providing equipment storage, specialized offices” and warehouse facilities. The plan also includes maximizing the area for parking, and improving the aesthetics and functionality of these areas through rain gardens and landscape design. To accomplish this goal, a three phase approach has been identified. These phases include:

1. Site Investigation  
Survey, Geotechnical Analysis, and Environmental Assessment
2. Master Planning  
Site Circulation, Multiple Facilities, Paving, Drainage
3. Facility Design  
25,000 SF Warehouse, Additional Metal Buildings, Operational Through Construction

David Gilmore, GAI's Director of Landscape Architecture and Charleston Office Manager will coordinate this portion of the project. GAI's previous experience working on the Capitol Campus Security Master Plan will provide the familiarity to expedite the project for the General Services Division.



### Goal #2: Metal Building Design (+/- 25,000 SF)

ZMM Architects and Engineers has significant experience designing pre-engineered metal buildings for various State of West Virginia agencies. The most recent relevant project is the new State of West Virginia Surplus Property Division project in Dunbar. This project included multiple site improvements, including demolition, paving, and utilities, as well as multiple structures for exterior storage, warehousing, and offices. The project also required that the Surplus Property campus remain operational throughout the construction process. ZMM has also designed pre-engineered metal buildings for multiple local development authorities, boards of education, the West Virginia Army National Guard, the West Virginia DOH/DOT, the West Virginia Parkways Authority, and for the West Virginia Division of Natural Resources at the Tomblin Wildlife Management Area.

### Goal #3: Additional Facilities / Implementing Master Plan

Our team also has experience providing planning and design services on campuses that have multiple facilities. Local experience includes the development of master plans for West Virginia State University, as well as a variety of community and technical colleges (BridgeValley, Southern, and New River), and Camp Dawson (Preston County, WV). ZMM and GAI also recently collaborated on the Charleston Coliseum and Convention Center (CCCC) Expansion. One of the





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

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

**Knowledge of West Virginia Construction Market/Cost Control**

ZMM Architects and Engineers has been providing design services in West Virginia for 60 years. As an integrated architecture and engineering firm, ZMM regularly provides design and construction phase services on projects (located in West Virginia) exceeding more than \$100M annually. The depth of our local experience has provided us the opportunity to work with nearly every general contractor and major sub-contractor in the region. This experience has led ZMM to become a trusted resource in the local design and construction industry.

As part of our effort to ensure our ability to meet your budget, our team will rely on both historic bidding data as well as independent estimates. For this project ZMM would utilize Win Strock to provide the independent estimate. Mr. Strock is a retired contractor, and previously served as president of the Contractor's Association of WV (CAWV). ZMM and Mr. Strock have successfully collaborated on a number of projects, including:



- Smith Hall Renovation, Marshall University



LOCATION:  
222 Lee Street, West  
Charleston, WV

CONTACT:  
Phone 304.342.0159  
Fax 304.345.8144  
www.zmm.com



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

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

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

# Award Winning Design



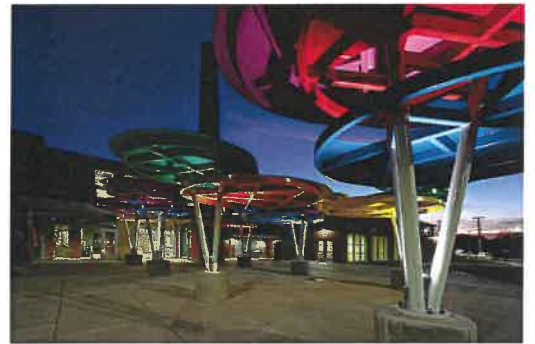
## **2019**

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



## **2018**

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



## **2017**

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



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

## **2016**

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



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



## **2015**

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

# FIRM OVERVIEW

## About GAI

### Streamlining Solutions

Transforming ideas into reality® since 1958, GAI is an employee-owned planning, engineering, and environmental consulting firm providing local expertise to worldwide clients in the energy, transportation, development, government, and industrial markets.

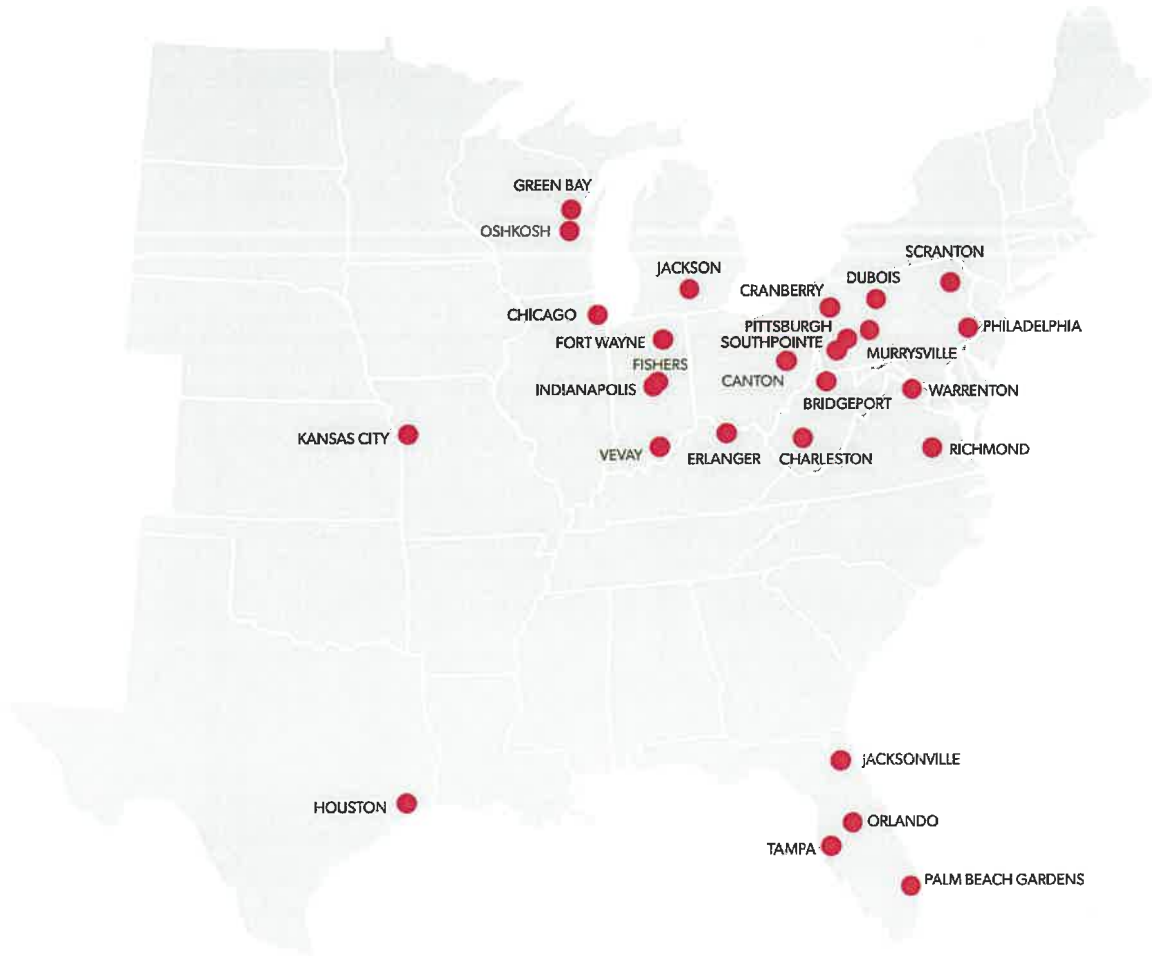
With an award-winning and respected professional reputation in landscape architecture, urban design, multiple engineering, environmental, and technical practice areas, GAI distinguishes itself by our solid reputation of providing excellent customer service along with innovative yet practical solutions.

Our work in the following disciplines provides innovative and cost-saving solutions for clients in municipal, as well as energy, transportation, water, government, real estate, and industry.

### Adding Value

- Municipal engineering and community development
- Real estate and economic advisory services
- Land development and landscape architecture
- Environmental engineering and studies
- Transportation planning and design
- Cultural resources management
- Geotechnical and structural engineering
- Transmission line engineering
- Surveying/GIS/GPS
- Mechanical and electrical engineering
- Construction management, inspection, and testing
- Water resources and wastewater management
- Utility management consulting
- LEED engineering and planning
- Design-build delivery system

# OFFICE LOCATIONS



## Office Locations

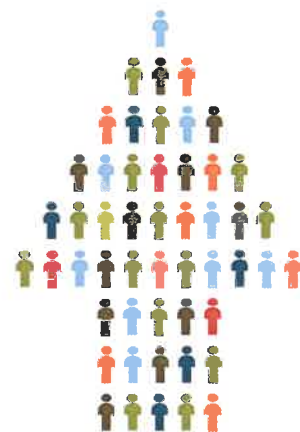
GAI was established in Pittsburgh, Pennsylvania, in 1958, and currently has 27 offices in 12 states. GAI's strategic locations in West Virginia places it within reach of multiple GAI offices that can provide capabilities, expertise, and support throughout the duration of the project.

The GAI office location and point of contact that will directly administer this contract is:

## GAI – Charleston, West Virginia

**Dave Gilmore, PLA, MBA** | Principal-in-Charge  
300 Summers Street, Suite 1100 | Charleston, WV 25301  
T 681.245.8867 | [d.gilmore@gaiconsultants.com](mailto:d.gilmore@gaiconsultants.com)

[www.gaiconsultants.com/communitysolutions](http://www.gaiconsultants.com/communitysolutions)



**900+**  
**EMPLOYEES**



## What We Do

Our work centers on finding resolution to place-based problems by implementing context-sensitive, sustainable solutions that are economically and fiscally beneficial and implementable. We engage diverse community groups to affect positive outcomes with shared benefits through integrated solutions. Consequently, our clients include governments, agencies, institutions, and developers who share an equal need to address complex and inter-related challenges. We work from planning to policy and concept to construction across the scales of region, city, and campus; neighborhood, street, and site.

As an art, our practice requires an understanding of the nuances of feasibility, political sensitivity, urban form, relationships, and character of place. But as a science, it involves street geometries and hydrologic flows, floor-area ratios, densities, market economics, and financing mechanisms. We are effective because we are sensitive and sophisticated about implementing complex ideas across the platform of inclusive participation, thoughtful design, funding and finance, public policy, and community partnerships for initiatives both large and small.

Master Planning + Urban Design

Landscape Architecture + Design

Economics + Real Estate Consulting

## Master Planning + Urban Design

CSG's master planning and urban design practice focuses on crafting plans that create livable places of lasting value for communities that require context-sensitive, sustainable solutions. We prioritize close collaboration with clients through an approach that emphasizes plans that reflect strong neighborhoods, livable transportation networks, interconnected park and open space systems, environmental sensitivity, and economic opportunities. Through work at the scale of city, neighborhood, and street, our plans create the framework for rich, interactive settings that bring people together in environments that facilitate meaningful experiences that enrich lives.

Our team draws upon expertise in multiple disciplines to balance physical, social, and economic needs and create urban places that enhance quality of life. We understand that each building, streetscape, transportation corridor, and park works toward creating an urban place that transcends the value of any individual element. Our planners and engineers work closely with clients to ensure that each piece of this urban fabric is deliberately designed with quality and respect for its role in the public realm.

With an eye toward implementation, we also understand the complex regulatory processes that must be navigated in order to gain approval for these great community plans. We draft clear plans and regulations designed to support community goals, preserve lifestyle choices, and create economic development and redevelopment opportunities, and we forge partnerships between stakeholders and local governments to achieve these positive outcomes.

## Landscape Architecture + Design

The Landscape Architecture Studio within CSG integrates an experienced team of professionals that strives to raise the standard of planning and design services to a new level with every project, producing sustainable, context-sensitive solutions that meet our clients' objectives. We listen to their concerns, their desires, and their needs; we gather a deep understanding of place and issues; we then deliver thoughtful and innovative solutions. The studio operates under a fundamental planning and design philosophy seeking to develop solutions that make a positive contribution to the economic and social values of a community or place. Whether the task is community master planning and place-making, streetscape and corridor design, sustainable stormwater strategies (LID), parks and open space design, or corporate and campus planning and design, we are committed to creating rich, diverse and sustainable places for people—beautiful works that allow people to connect to the environment and that respect the community's cultural, historical, and environmental heritage.

## Economics + Real Estate Consulting

CSG's economic and real estate consulting services draw from the advising team's experience, education, and a culture that integrates allied disciplines to enhance the appropriate solutions. The firm's approach draws upon its knowledge of growth management techniques in many state settings, local regulatory constraints, infrastructure systems and design, public finance, awareness of the needs in the private marketplace, preferred land use forms, aesthetics, emerging trends in development, and the linkages among infrastructure, economic development as well as the character of the built environment. This knowledge enables our clients to choose critically between alternatives and implement a strategy or master plan that is flexible, cost effective, sustainable, and marketable—attributes sought by both our public and private clientele.

## Geotechnical Engineering

Since 1958, GAI Consultants has been a leader in addressing the broad spectrum of engineering issues associated with the behavior of earth materials—soil, rock, mining refuse, coal combustion residuals (CCR), slag from steel-making processes, slurry, and others—that impact projects within the civil, mining, transportation, petroleum, natural gas, transmission, and power-generation economy sectors.

GAI's services encompass the entire breadth of geology and geotechnical engineering.

Our geotechnical engineers and geologists are highly proficient in the fundamentals of engineering, soil and rock mechanics, foundation and slope engineering, seismic analyses, underground and surface mining, mine fires, and mine subsidence.

Operating out of office locations throughout the U.S., these specialists bring with them a wealth of knowledge from years of academic training, research, and practical field experience—knowledge that is bolstered by expertise from GAI staff members in other disciplines such as structural engineering, groundwater engineering, and hydrologic/hydraulic engineering.

GAI's services encompass the entire breadth of geology and geotechnical engineering. Studies typically begin with subsurface characterization of the site and culminate in a report, often accompanied by the preparation of technical drawings and specifications, and monitoring during construction to verify project compliance with design specifications.



## > Civil/Site Engineering

Land development is an integration of site planning, civil engineering, and stormwater management—and GAI Consultants has engineers, planners, and environmental professionals dedicated to developing sites. Our project managers have 10 to 30+ years of experience in managing small to complex residential, commercial, industrial, institutional, and brownfield development projects.

**Assessing existing conditions with client's goals in mind means we maximize development potential.**

Development projects embody unique site layout, grading, roadway, and utility design characteristics; and every region has topography, property constraints, and infrastructure design challenges. This is why land development requires seasoned project managers skilled in determining the best use of a site—through planning, design, permitting, and construction.

GAI's design process starts with client meetings. We listen to our client's needs and aspirations, and discuss their envisioned master plan. We then analyze governing municipalities at all levels, and review ordinances for allowable use, site development requirements, and stormwater management ordinances to gain a solid understanding of the site specifics.

GAI evaluates existing site conditions, including topography, natural resources, wetlands and streams, drainage patterns, and existing or nearby utility and roadway infrastructure. We understand the importance of the early planning so the site layout is in continuity with existing conditions and meets the intended use of the client.

GAI's land development professionals are skilled in effectively utilizing existing conditions as much as possible to be cost effective, yet remaining compliant with current regulations, and ultimately achieving the client's goals for the project.

GAI designs sites that meet the LEED® Site/Civil requirements of our clients. Our site layouts





## Surveying

The survey teams at GAI Consultants—a dedicated and experienced group of skilled professionals that provide services ranging from boundary and topographic surveys to specialized surveys for archaeology projects. Our surveys cover any discipline in any market including transportation, development, energy, and industry.

**Providing valuable survey information accurately and early means clients and contractors avoid spending thousands of dollars in potentially damaging lost time and litigation liability.**

GAI field survey crews, working closely with in-house mapping specialists, have access to an extensive library of computerized mapping software including Terramodel, Arc-Info, GRASS, Microstation and AutoCAD.

Design Surveys—Design surveys are the foundation upon which designs are based. GAI

records boundary line locations, topography, physical features, on-site buildings and utilities, encroachments, and easements. Quality foundation design plans are produced from these details.

Topographic Surveys—GAI uses the latest technology in field equipment, recorders, and computer mapping for accurate topographic surveys that incorporate ground run, aerial, tree, utility location, wetland, floodplain and hydrographic surveying and mapping for CADD.

Construction Surveys—Conducted on site during the initial preparation stage of construction, these surveys provide information critical to establishing location and elevation. GAI saves clients and contractors thousands of dollars in potentially damaging lost time and litigation liability by providing this key information accurately and early.

Boundary Surveys—GAI’s boundary surveys identify land titles and ownership, and document real estate financing, appraisals and sales, insurance, as-built delineations, encroachment delineation, boundary



# Campus/Institution Planning and Design

Creating or improving an institution's campus isn't much different than creating or improving a city. Regardless of the size of the campus the elements are the same and so are most of the challenges. Finance, transportation and parking, safety and security, streetscapes and public places, aging infrastructure—all of these issues and dozens more face administrators every day. The economic consultants, planners, and landscape architects that make up the Community Solutions Group at GAI Consultants are focused on solving these issues.

**Decades of guiding clients through successful design, expansion, and upgrade projects means we create memorable campus experiences.**

Whether creating master plans, guiding expansions that make economic sense, or designing site-specific facilities that create

environments for social interaction, learning, and a spirit of community, institutional campuses require the mastery of real estate, planning, and design that the Community Solutions Group has achieved through decades of successfully creating and expanding campus environments nationwide.

GAI's Community Solutions Group works on long range planning and design projects for medical, office, educational, and institutional campus environments. Our work is designed to provide a thoughtful framework for land use, buildings, circulation, open space and environmental assets—geared to enhance current conditions and provide a strategy for future growth and value creation.

GAI's economists and planners provide the framework for campus projects while our designers create the plans that guide the development, reconstruction, and expansion of facilities. We follow a process that involves administrators, end-users, and local officials.



Planning | Urban Design  
Landscape Architecture  
Economics | Real Estate

**COMMUNITY  
SOLUTIONS  
GROUP**



# Streetscape Planning and Design

For decades urban environments evolved from poorly planned collections of roadways and structures into cities and towns, with far too little thought given to the spaces that connected them and the social consequences of ignoring them. Today, GAI Consultants finds itself in the forefront of urban planning and design concepts through the skills and commitment of our Community Solutions Group. This group of landscape architects, planners, designers, and economic and real estate professionals is dedicated to enriching the lives of those living and working in the cities we touch.

**Exceptional skill and creativity results in public places that satisfy community needs and concerns while exceeding expectations.**

The Community Solutions Group's planning experts provide a framework for substantive change to

occur—change that recognizes the importance of creating safe, attractive, and welcoming cities and towns that foster economic opportunity and a sense of community. Our landscape architects then build upon the opportunities presented by planning to physically transform spaces that were previously ignored or underutilized.

Community Solutions Group's professionals are highly experienced and understand that the spaces along our roadways are as important as any other public place. Our landscape architects and planners create dynamic streetscapes and urban environments that support and revitalize the economic success of local merchants and enhance avenues for social interaction.

Streetscapes, plazas, and urban "gathering places" designed by GAI succeed in part because we believe in public involvement during the design process. The participation of the community and those that will benefit from the project is a key element in the success of our award winning



Planning | Urban Design  
Landscape Architecture  
Economics | Real Estate



# Adam R. Krason, AIA, LEED AP, ALEP



**Role**  
Principal

## Professional Registrations

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

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

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

## Project Experience

### Charleston Civic Center, Charleston, WV

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

## Education

Bachelor of Architecture, The Catholic University of America, 1998

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

## Employment History

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

## Civic Affiliations

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

# The West Virginia Board of Architects

certifies that

ADAM R. KRASON

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

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

Certificate Number [REDACTED]

*The registration is in good standing until June 30, 2019.*



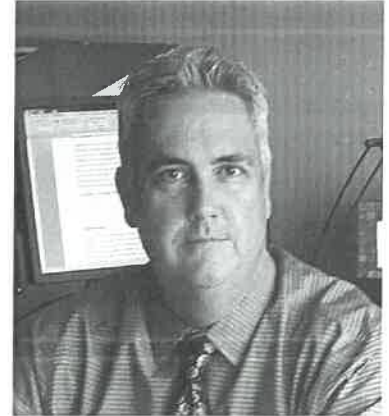
A handwritten signature in cursive script, reading "Emily Papadopoulos", written on a light-colored rectangular background.

Board Administrator



# DAVE GILMORE, PLA, MBA

Director, Landscape Architecture



Dave currently serves as the Director of Landscape Architecture services for GAI Consultant's Community Solutions Group. In this role, he coordinates projects and marketing activities for all of GAI's offices throughout the NE and Midwest region. In this capacity, Mr. Gilmore brings more than 27 years of experience on a diverse range of projects covering all aspects of landscape architectural design in both the public and private sector.

Throughout his career, Dave has been actively involved in a wide variety of challenging projects. His experience includes but is not limited to public outreach and programming, construction document and technical specification preparation, site analysis, schematic design, construction administration, master and land use design (campus, riverfronts, resorts, parks, recreational, residential, industrial, and commercial), streetscape and municipality improvements, landscape and hardscape design, and graphic presentation drawing.

Dave also remains active with the West Virginia University School of Landscape Architecture and has won multiple awards from the American Society of Landscape Architects for his work.

## EDUCATION

- MBA Point Park University
- BS Landscape Architecture, West Virginia University

## AFFILIATIONS

- American Society of Landscape Architects (ASLA)
- Council of Landscape Architectural Review Board (CLARB)
- West Virginia Chapter (WVASLA)
  - Past WVASLA State Licensing Board
  - Past President
  - Executive Committee Member
  - Chairman, Licensing and Sunset Review Committee
  - Judge, Senior Design Awards, West Virginia University

## AWARDS

- Haddad Riverfront Park – American Society of Landscape Architects, Award of Excellence
- National Youth Science Center Master Plan – PAAIA Honor Award
- National Youth Science Center Master Plan – American Society of Landscape Architects, Award of Merit

- Haddad Riverfront Park – WVAIA, Honor Award
- Florida Street Revitalization Master Plan – American Society of Landscape Architects, Award of Merit
- Dupont 'Hyper' Plaza – American Society of Landscape Architects, Award of Merit
- *WV Focus Magazine*, If You Build It They Will Come, July 2015
- Charleston Civic Center Design Competition, First Place
- Top of Rock Design Competition, First Place

## Highlighted Professional Experience

- **Haddad Riverfront Park, Charleston, WV.** Master planning, public participation services, design, construction and engineering solutions for the renovation of the Haddad Riverfront Park, which is a popular concert, festival and leisure site in downtown Charleston, West Virginia. Among the City of Charleston's project requirements were a retractable canopy to provide protection and visual interest, an overlook plaza and pavilion that extends Court Street to the Kanawha River, an extension of the lower wharf area, a new streetscape design along Kanawha Boulevard, and an event stage for concerts.
- **Putnam County Comprehensive Parks and Recreation Plan, WV.** Master planning services for county wide parks, recreation and open space plan for Putnam County, WV. The design team also focused on upgrading and providing additional park amenities for Valley Park, the crown jewel in the Putnam County Parks System. Enhancements include a new pool complex, community center, and sports complex that would enhance and create opportunities for park sponsored events and programs.
- **Charleston Civic Center, Charleston, WV.** Design Competition winner for a 100 million renovation to the Charleston Civic center. Design Highlights include a river trail, new streetscape and entrance features and a new riverfront park and boardwalk.

# Rodney Pauley, AIA



**Role**  
Project Manager

**Professional Registrations**  
Registered Architect (WV)

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

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

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

**Project Experience**  
**Charleston Civic Center, Charleston, WV**

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

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

**Education**

Bachelor of Architecture, University of Tennessee, 1992

Associate of Science, West Virginia Institute of Technology, 1986

**Employment History**

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

**Civic Affiliations**

- American Institute of Architects, Member

# The West Virginia Board of Architects

certifies that

**RODNEY ALLEN PAULEY**

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

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

Certificate Number [REDACTED]

*The registration is in good standing until June 30, 2019.*

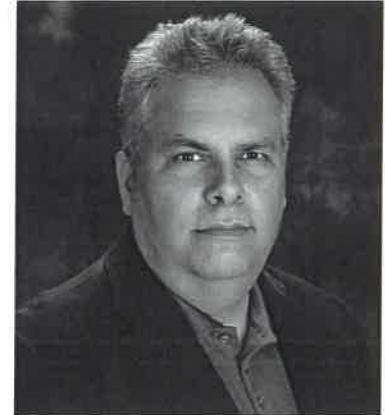


A handwritten signature in cursive script, reading "Emily Papadopoulos", written on a light-colored rectangular background.

Board Administrator

# JAMES GREENE, PE

Director, Engineering



Jim specializes in civil engineering projects, and has more than 30 years of experience. He has managed retail, residential, commercial, industrial and recreational site development projects. He has completed water and sewer line designs; stormwater management and erosion control design; federal, state and local permitting; conceptual site and utility plans; master plans, construction cost estimates; hydrologic and hydraulic studies; design of water quality infiltration trenches, dry wells and infiltration basins.

## EDUCATION

- BS Civil Engineering 1985, Pennsylvania State University

## REGISTRATIONS

- Professional Engineer:
  - Pennsylvania, No. [REDACTED]
  - West Virginia, No. [REDACTED]
  - Ohio, No. [REDACTED]

## Highlighted Professional Experience

- **Tamarack Lake, Meadville, PA.** Project Manager. Tamarack Lake is a 562 acre flood control lake. There are two high hazard dams associated with this lake. GAI is currently working with the Pennsylvania Department of General Services and the Pennsylvania Fish and Boating Commission to re-design the dams, concrete risers, outfall structures, auxiliary spillways, diversion dam and saddle dike. A significant geotechnical investigation was completed by GAI in 2014 involving a drilling program, lab testing, ground penetrating radar, in-situ testing, stability analyses and settlement calculations. GAI also completed a hydrologic and hydraulic study of the two dams utilizing HEC-RAS and HEC-HMS for a 5 square mile drainage area. Permit applications are on-going include PADEP Dam Safety, NPDES, USACOE and township stormwater management.
- **Clarion University of Pennsylvania Parking Lot Design, Clarion, PA.** Managed the design of a 200-space parking lot for student parking facility, including underground stormwater management facility.
- **The Highlands located in Triadelphia, WV.** Managed and designed master planning, conceptual site plans, earthwork analysis, final construction plans, permitting, utility design, stormwater management design of 14 basins, erosion and sedimentation control design, 3-D renderings, construction cost estimates, roadway design, surveying, bid phase services, and construction phase services for an 1,100-acre Commercial and Industrial Park. Total earthwork moved approximately 15M cubic yards.
- **West Hills Industrial Park Expansion, East Franklin Township, Armstrong County, PA.** The 200-acre project included roadway design, water, sanitary sewer and erosion and sedimentation control design. A stormwater management basin (134-acre drainage area) was also designed for controlling the future runoff of the site.
- **TECH 21 – R&D, Commercial and Residential Development, Marshall Township, PA.** Managed all phases of the 225-acre site development including grading plans, earthwork analysis, wetland investigation, construction cost estimates, and roadway design.

# Robert Doeffinger, PE



## Role

Engineering Principal

## Professional Registrations

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

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

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

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

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

## Project Experience

### Charleston Civic Center, Charleston, WV

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

## Education

Master of Science Architectural Engineering, Pennsylvania State University, 1976

Bachelor of Science Mechanical Engineering, West Virginia University, 1973

## Employment History

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

## Civic Affiliations

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

# ROBERT R. BEE, PE

## Senior Engineering Manager



Mr. Bee specializes in Project Management and structural engineering design for industrial and environmental facilities, power plants, commercial buildings and other structures. He is GAI's Technical Lead and Subject Matter Expert in structural engineering and the design of nuclear power plants. He provides analysis and design for major structural component within the plants, including structural steel design to AISC N690 and reinforced concrete design to ACI 318 and ACI 349, and reinforced concrete design to ACI 350 Code Requirements for Environmental Engineering Concrete Structures.

Mr. Bee's experience with structures and structural components includes: structural steel, reinforced concrete, masonry, steel decks, pre-stressed and post tensioned concrete, lateral load resisting systems (wind and seismic), shear walls, ridge frame building systems. He has experience with bridge and retaining wall structures, including pre-stressed AASHTO beams, flat slab, pile caps, piling, slab, and abutment.

Mr. Bee's experience with retaining wall structures includes: masonry, sheet piling, reinforced concrete, reinforced earth, and gravity walls. Additionally, he is well versed in structural computer analysis and design.

### EDUCATION

- BS, Structural Design and Engineering Technology, 1983, The Pennsylvania State University

### REGISTRATIONS

- Professional Engineer:
  - Pennsylvania, No. [REDACTED]

### CERTIFICATIONS / TRAINING

- ASFE Fundamentals of Professional Practice, 2003

### Professional Experience

Full Service Facilities Engineering Program, located at U.S. Government Facilities in the United States. Project Manager. GAI is providing facilities planning and design engineering services for building and campus, expansion, demolition and modification projects for this U.S. Government Facility. Work includes: permitting, environmental, planning, design, drafting, surveying, cost estimating, safety analysis and preparing construction specifications. Building sizes range from 1,000 sq. ft. to 50,000 sq. ft. Type of buildings include office/computer space, security, library, cafeteria, laboratory, and firing range. Projects include the following:

- **Pickling Building, located in Pennsylvania.** Senior Engineering Manager. GAI provided structural engineering services, including performing the Structural Existing Condition Evaluation of an existing 92,000 SF Pickling Building. Services included analysis of the existing building with respect to its required rehabilitation for reuse and the recommendation of the feasibility and practicality of the rehabilitation.
- **NRG Uptown District Energy Center, located in Pittsburgh, Pennsylvania (PA),** for NRG Energy. Lead Structural Engineer. GAI is providing engineering, permitting, construction monitoring, and scheduling support for the Uptown District Energy Center. The new Energy Center is a district heating and cooling facility that will deliver steam, chilled water, and backup power to the University of Pittsburgh Medical Center, Mercy Hospital, and future customers, in an inner-city environment with higher efficiency, lower carbon emissions, and lower capital and operating costs compared to multiple stand-alone systems. It will consist of a new two-story steel framed structure with an additional mezzanine level, reinforced masonry and reinforced concrete walls, and cast-in-place slab-on-grade, and suspended slabs on metal decking, all supported on a combination of drilled-pier deep foundations and grade beams.

# Samuel Butzer, PE, LEED AP BD+C



## Role

Mechanical Project Engineer

## Professional Registrations

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

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

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

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

## Project Experience

### Charleston Civic Center, Charleston, WV

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

## Education

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

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

## Employment History

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

## Civic Affiliations

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

# CHARLES STRALEY, PE, PLS

Engineering Manager/Geotechnical Engineer



Mr. Straley has over 30 years of experience in the fields of civil and geotechnical engineering. Mr. Straley specializes in civil engineering with an emphasis in geotechnical engineering, including all aspects of subsurface exploration, laboratory testing, foundation and embankment design, slope stability, materials and construction specification, construction administration, management and monitoring. Mr. Straley has a Master of Science Geotechnical Engineering from the University of Akron. He is a registered Professional Engineer (PE) in WV, KY, OH, and IN as well as a Professional Land Surveyor (PLS) in WV. Mr. Straley has extensive experience in geotechnical and foundation engineering throughout the State of WV. He has performed these services on projects as large as industrial/commercial developments to as small as residential plans.

## REGISTRATIONS

- Professional Engineer:
  - West Virginia, [REDACTED]
  - Ohio, [REDACTED]
  - Kentucky, [REDACTED]
  - Indiana
- Professional Licensed Surveyor,
  - WV, No. [REDACTED]

## RELEVANT TRAINING/COURSES

- Leaders to Watch, GAI Consultants, Inc., 2011
- Advanced Project Management Training, GAI Consultants, Inc., 2009
- Troxler Certified
- 40-hour Health and Safety Training
- 8-hour Supervisor Health and Safety Training

## AFFILIATIONS

- National Society of Professional Engineers, Member
- Society of American Military Engineers, Member

## Highlighted Professional Experience

- Assisted and managed a wetland mitigation project, including determination of existing wetlands, acreage disturbed, and reconstruction of wetlands for the Mettiki Coal Corporation.
- Assisted in reevaluated a plug and dike design to optimize construction by minimizing the number, length, and cross-sectional area without compromising structural integrity or limiting storage capacity for Americoal Development Company.
- Assisted with drawdown field testing and well yields and/or recharge analysis for over 15 wells for Peabody Coal Company; Southern Ohio Coal Company; and Eighty-Four Mining.
- Assisted with the Nile Stone Slurry Impoundment for Old Ben Coal Company in Mingo County, WV. Design included grading channels, culverts, and roads.
- Assisted with identifying ground water and surface water monitoring points, including discussions with the regulatory agencies for deep mines for Hobet Mining Company; Cyprus Emerald; and Cyprus Cumberland in Boone County, West Virginia (WV) and Western Pennsylvania (PA).
- Assisted with the preparation of construction documents for an earthen dam for the Lake Chaweva Homeowners Association in Charleston, WV. Project included evaluation of existing drainage structures, storm water routing analysis, design of earth embankment, and design of a principle and emergency spillway.
- Assisted with the sampling of sludge ponds in Institute, WV for the Rhone Poulenc AG Company.
- Federal No. 2 Mine Project for the Eastern Associated Coal Corporation in Monongalia County, WV. Completed a permit revision application for additional area to be deep mined by long wall. The application included geology, hydrogeology and subsidence control plan sections of a surface mine application. A ground water inventory and water samples were collected and analyzed for structures above the area to be mined.



## Michael J. White, PE



### **Role**

Structural Engineer

### **Professional Registrations**

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

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

### **Project Experience**

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

### **Other Jobs from Past Employers:**

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

### **Education**

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

### **Employment History**

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

# JAMES YOST, PLA, ASLA

Senior Landscape Architect



James specializes in landscape architecture and urban planning. Mr. Yost has the strong ability to communicate project knowledge to the public and clientele to accomplish a collaborative design approach. His skills provide extensive knowledge of rendering and graphics tools, such as the Adobe Suite, SketchUp, Lumion, ArcMap, and AutoDesk softwares. By utilizing these programs, he can provide visual assistance in all areas of project development, such as project presentation, project funding, advertisements, proposal and qualification statement documentation, rendered master plans, and site-specific rendering.

James was recognized by the West Virginia American Society of Landscape Architects as one of three Honor Award recipients from his works completed while at West Virginia University in 2011 and continues to stay involved with the organization. He also remains a dedicated community volunteer in the Charleston area through participation with multiple non-profit entities and city-wide initiatives.

## EDUCATION

- BS Landscape Architecture, West Virginia University

## REGISTRATIONS

- Professional Landscape Architect:
  - West Virginia, No. [REDACTED]
  - Pennsylvania, No. [REDACTED]

## AFFILIATIONS

- American Society of Landscape Architects, Member 2009–Current
- West Virginia Chapter – American Society of Landscape Architects
  - Member, 2009–Current
  - Public Relations Chair, 2013–2015
- Religious Coalition for Community Renewal, Board Member – 2015–2018
- Charleston Main Streets: East End, Board of Advisors Member – Current
- East End Community Associations, Board Member – Current

## Highlighted Professional Experience

- **Port Authority of Allegheny County, Allegheny County, Pennsylvania.** As the project Landscape Architect, Mr. Yost helped to develop a series of master plan reports for the Port Authority's public transit stations. Each station presented an array of design opportunities ranging from public greenspace and green infrastructure design, transit-oriented development master planning, streetscape and road diet planning, as well as transit shelter access design, and community wayfinding design.
- **Highlawn Elementary School, Huntington, West Virginia.** As lead project Landscape Architect, Mr. Yost worked alongside Ed Tucker Architects as part of the site / civil team. Green infrastructure, compact site elements such as the parent and bus dropoff areas, as well as a courtyard style playground can all be found within this project. The new school is designed fit within the urban neighborhood of Highlawn, and will be completed in the Spring of 2021.
- **Sandy Hook Main Street Park, City of Sandy Hook, Sandy Hook, Kentucky.** Landscape Designer to develop a two-phase plan for the construction of a pocket park along Main Street in Sandy Hook, Kentucky. Turning an abandoned lot into an inviting public space. Phase one includes a small plaza space centered around a decorative clock adjoining a serpentine path leading through a new green space framing out a small amphitheater. Phase two allows for the connection to the larger existing park and room for more mature vegetation opening up for a large lawn space providing room for several outdoor activities.
- **Charleston Civic Center, Charleston, WV.** Design Competition winner for a 100 million renovation to the Charleston Civic center. Design Highlights include a river trail, new streetscape and entrance features and a new riverfront park and boardwalk.
- **Stonewall Jackson Resort Park Pathway Project, Roanoke, WV** Development of a new pedestrian pathway along the main park road from the intersection with the park office / marina road to a trail head parking area near the cabin area totaling over 1 mile in length. This phase of the project will allow pedestrians to safely hike along the main park road away from vehicular traffic.

## Scot Casdorph, PE



### **Role**

Electrical Engineer

### **Professional Registrations**

Professional Engineer (WV)

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

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

### **Project Experience**

#### **Charleston Civic Center, Charleston, WV**

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

#### **Joint Interagency Education and Training Center**

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

#### **Jackson County Armed Forces Reserve Center,**

**(WVARNG), Millwood, WV** Mr. Casdorph was responsible for the electrical design of the 76,000 SF single story military reserve center which serves both the West Virginia Army National Guard and the United States Army Reserves (USAR) units. The multi-use facility provides educational spaces for classrooms, distance learning, physical training and a weapons

### **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

# FaLena Perry, CDT



## Role

Construction Administrator

## Professional Registrations

EIT

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

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

## Project Experience

### Valley Park Community Center, Hurricane, WV

Mrs. Perry served as Construction Administrator on the new Community Center building and renovation at Valley Park. The \$15M construction project included a new community building, ball fields and a playground. Mrs. Perry was responsible for the administrative duties, performing on-site observations and tracking construction progress. Mrs. Perry collaborated with the client, design team and contractors to confirm that project guidelines are satisfactorily met. The facility reached completion in May 2018.

### Ravenswood Middle School, Ravenswood, WV

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

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

## Education

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

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

## Employment History

2017 - Present, Construction  
Administrator, ZMM

2009 - 2010, Design Engineer, Moment  
Engineers, Charleston, WV

2004 - 2008, Engineer, Project Manager,  
BFMJ Inc., Lexington, KY

2003 - 2004, Graduate Assistant,  
University of Kentucky College of  
Engineering

## Civic Affiliations

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



**Role**

Specifications Writer

**Professional Registrations**

Registered Architect (WV, OH,)  
LEED Accredited Professional  
NCARB Certification  
Construction Documents Technologist (CDT)

Mr. Epling is responsible for the creation and coordination of Project Manuals including specifications for all ZMM projects. The coordination duties include the incorporation of specifications from several design disciplines including structural, plumbing, HVAC, and electrical specifications.

Mr. Epling's duties also include determining the type and number of bid packages and resulting construction contracts for a particular project, and following through with the incorporation of the appropriate contract forms and contract conditions into the Project Manuals.

Mr. Epling began his career as a licensed Architect in October 1982 and has acquired experience in all aspects of the architectural practice working on a variety of building types including single-family homes, medical clinics, industrial facilities, theatre restoration, commercial-retail buildings, and college dormitory and elementary school remodeling.

Mr. Epling began working at ZMM in February 1998 and has worked in preparation and coordination of working drawings, construction contract administration, and beginning in June of 2006, took on the role of specifications writer and has remained in that capacity.

**Project Experience**

Mr. Epling's recent project experience includes the preparation of Project Manuals for the following ZMM projects:

- Charleston Civic Center - Expansion and Renovation
- WV State Capitol Roof Replacement
- WV State Office Building #5, 6, & 7
- WV Housing Development Fund
- CFMO Expansion
- Houston Company Store
- Erma Byrd Center
- Joint Interagency Training & Educational Center (JITEC)
- Huntington East Middle School
- WV Army National Guard - Glen Jean AFRC

**Education**

Bachelor of Architecture;  
Virginia Polytechnic Institute and State University; 1977

**Employment History**

1998 - Present, Project Architect & Specifications Writer, ZMM  
1997 - 1998, Project Architect, OH Firm  
1982 - 1997, Architect, Self Employed, Located in OH  
1978 -1982, Intern Architect, OH Firm

**Civic Affiliations**

- American Institute of Architects, Member
- West Virginia Symphony Chorus, Member

# General Service Division - Surplus Property



LOCATION:  
Dunbar, WV

SIZE:  
4,718 SF Admin Space  
14,532 SF Surplus  
Storage  
19,250 SF Total

COMPLETION:  
Summer 2016

COST:  
\$4M

CONTACT:  
Mr. Michael Evans  
State of West Virginia  
Architect  
1900 Kanawha Blvd. E.  
Building 1, Room MB-60  
Charleston, WV 25305



This property consists of a new 20,000 SF metal building storage facility inclusive of 5,000 SF of new 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.



# The Cabell County Transportation Complex



LOCATION:  
Huntington, WV

SIZE:  
21,950 SF New

COMPLETION:  
2014

COST:  
\$7,482,285

CONTACT:  
Mr. Ryan Saxe  
Superintendent  
Cabell County Schools  
PO Box 446  
Huntington, WV 25709  
304.528.5030



The Cabell County Transportation Complex is located on the site of the old Cox Landing Junior High School. Challenges on the project involved retrofitting the old school and site to accommodate the new use. A small portion in the rear of the building was removed, storage rooms were added and a link to the new bus maintenance facility. The new high bay bus maintenance facility will accommodate fourteen buses.

This full service metal garage is outfitted with lifts and all services to make this a state of the art facility. Along with the new service building its home to an automatic bus wash bay and a separate hand washing facility. Site amenities include parking with charging locations for every bus along with parking for dormant buses on standby. There is also a fueling station for all bus traffic.

The existing school facility was renovated into the transportation administration area along with conferences rooms, driver break rooms and rest rooms for staff and drivers. The building also plays host to a new Staff Development room that is designed with technology and distance learning capability. This will accommodate all bus drivers at one time for training and safety seminars. Principals and teachers throughout the county can also use this for a staff training facility.



# Charleston Coliseum & Convention Center Expansion/Renovation



LOCATION:  
Charleston, WV

SIZE:  
283,000 SF

COMPLETION:  
Est. 2018

COST:  
\$75M

CONTACT:  
John Robertson, Director  
200 Civic Center Drive  
Charleston, WV 25301  
304.345.1500



The Charleston Coliseum and Convention Center (formerly named Charleston Civic Center) Expansion and Renovation is a transformational project for both the city of Charleston and West Virginia. Our team was influenced by the strong authentic character of Charleston to remake the Charleston Civic Center into a more efficient, more sustainable, more dynamic and a more iconic best-in-class destination.

The design of the expansion and renovation of the Charleston Coliseum & Convention Center is inspired by the story of West Virginia. Defined by a rugged landscape, the early history of the state was dominated by extractive industries – salt, coal, timber, trapping. This set the local character. With a foundation rich in resources, manufacturing added value to the raw materials with crafts like glass making and industries like chemicals and energy. This attracted a rich diversity of immigrants and a culture of craftsmanship that set the urban character. The economy is shifting from industry and service to information and technology. Again, the landscape and industry that shaped the region gives Charleston real advantages to exploit. The Creative Class, critical for the information and technology age, can live and work anywhere - what they want is access to the outdoors; real places with real character; and continuous education and entertainment.

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





# Valley Park Community Center

Putnam County Commission



**LOCATION:**  
Hurricane, WV

**COST:**  
\$8M

**SIZE:**  
31,360 SF

**COMPLETION:**  
2018

**CONTACT:**  
Jarrod Dean, Director  
1 Valley Park Drive  
Hurricane, WV  
304.562.0518



The new 31,360 SF Community Center building is the centerpiece of a multi-million dollar renovation to existing Valley Park in Hurricane, WV. Site work amenities being provided under a separate contract will include new baseball fields, soccer fields, tennis courts, playground space and additional parking. The project is being constructed for the Putnam County Parks and Recreation Commission with funds supplied by the Putnam County Commission.

The park's previous community building was torn down to make way for a larger, updated Community Center that includes 7,750 SF of conference space, commercial kitchen, offices for the Putnam County Parks and Recreation Commission and offices, locker-rooms and concessions for the existing Wave Pool.

The meeting rooms can accommodate individual events in three, separate rooms or can be expanded to provide 450 table-seated guests or 1,200 in a standing room only configuration. It will feature the latest technology in internet access, sound and lighting systems along with high-end interior finishes making it a perfect site for conferences and wedding receptions. The full service commercial kitchen will provide cooking and storage facilities for everything from small caterings to multi-day-day events. At the rear of the facility has a three-tiered concrete activity deck leading visitors to the Wave Pool.



# 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 Building #5, 10th Floor

Office of Technology



LOCATION:  
Charleston, WV

SIZE:  
22,000SF

COST:  
\$3.7M

COMPLETION:  
2010

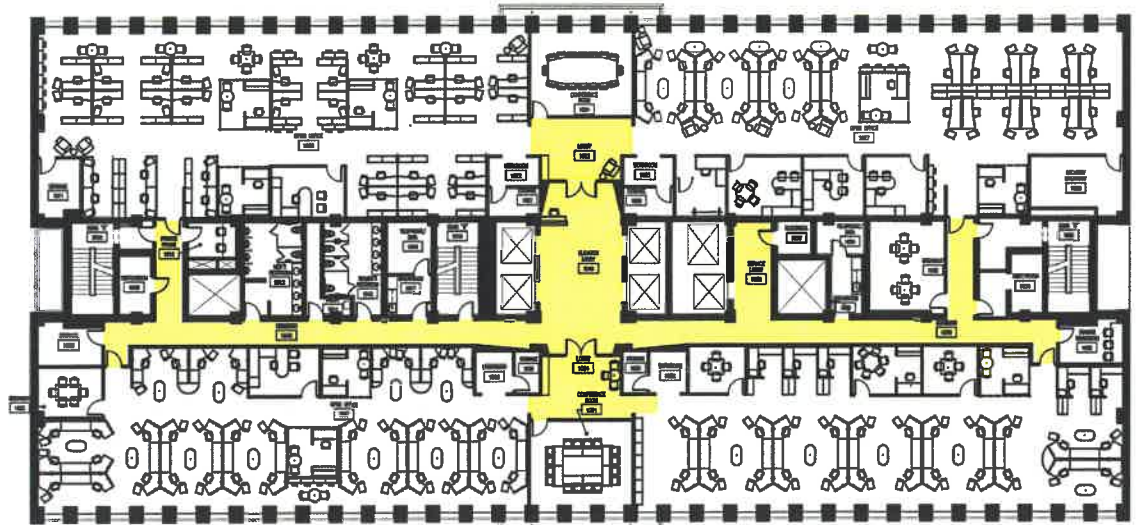
CONTACT:  
Greg Melton, Director of  
General Services  
Capitol Complex Building  
Building 1, Room MB-60  
1900 Kanawha Blvd., E.  
Charleston, WV 25305  
304.558.2317

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



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

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



# 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.



# Joint Interagency Training & Education Center

WVARNG



LOCATION:  
Kingwood, WV

SIZE:  
285,000 SF

COMPLETION:  
2013

COST:  
\$78.4M

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

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



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

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

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



# Southern WV Community & Technical College

Master Plan



Southern West Virginia Community and Technical College (Southern) began the campus master planning process in the Fall of 2013. The process commenced with visits by the design team to all of the campuses and sites:

- Logan Campus
- Williamson Campus
- Boone Campus/Lincoln Site
- Wyoming/McDowell Campus

Following these campus visits, ZMM conducted stakeholder meetings at each location. At the meetings stakeholders discussed positive attributes, challenges, and needs for each facility and campus. Following the stakeholder meetings, an Executive Steering Committee was convened to review the outcomes of the stakeholder meetings, and to assist in developing an overall strategy and framework for the plan. Based upon these meetings several themes emerged that helped guide the development of the Master Plan, including:

- Overall Southern's facilities are clean, organized, and well maintained. While there is some consistency on the interior of the facilities, there is little to no consistency between the exterior facilities or signage between campuses. Standards for signage, lighting, and exterior finishes for future projects should be considered.
- The master plan needs to be a realistic document that reflect the current status of the school. Local high school enrollment is declining; however, Southern projects flat enrollment. The declining high school enrollment will be offset with a focus on non-traditional students, and workforce retraining. Due to the projected flat enrollment, the Master Plan will not focus on the development of additional facilities, but rather focus on deferred maintenance, required upgrades, and maximizing the functionality of the existing buildings.
- Although a significant expansion of facilities is not envisioned, the Master Plan will include the potential development of a new facility on property that has already been acquired adjacent to US 119. This new facility will replace the Boone County Campus, which is currently located in a shared facility with the Boone County Career and Technical Center. The new facility would serve as a gateway to Southern's other facilities, and the location on US 119 will give the College the opportunity to draw additional students from the greater Charleston area. Due to the scope of the development of this new facility, the Master Plan includes a strategy to address improvements both with and without the new Boone County Campus.

# West Virginia State University

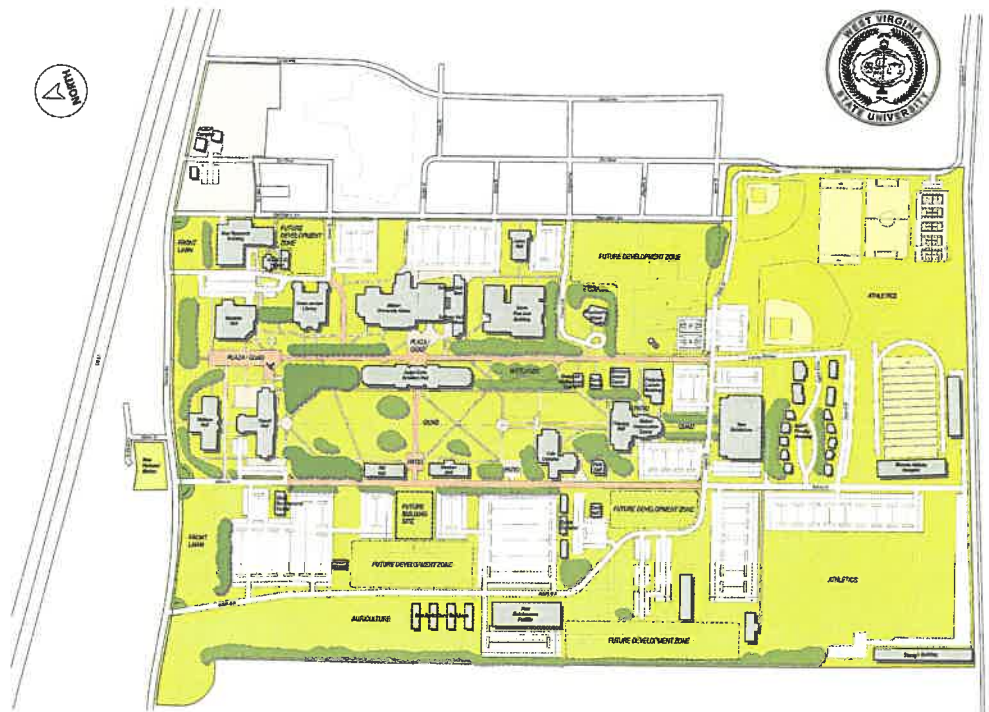
## Master Plan



LOCATION:  
Institute, WV

CONTACT:  
Dr. Brian Hemphill  
304.766.3112

OWNER:  
West Virginia State University  
5000 Fairlawn Ave  
Dunbar, WV 25112



ZMM Architects and Engineers, in conjunction with BSP and TERRADON, were selected in 2015 to develop a new ten year campus development plan for West Virginia State University's campus in Institute, WV. The project commenced with a review of all existing information available of the campus and targeted facilities. Following this review the ZMM/BSP team met with the executive committee to establish the overall direction of the master plan. Some of the goals included:

- Due to the recent construction on campus, focus on the maintenance and Rehabilitation of existing structures.
- Determine how to incorporate the recently acquired Rehabilitation Center property into the campus.
- Highlight unique/historical campus assets such as the Quad, Clock Tower, etc.
- Improve signage and both vehicular and pedestrian circulation.

With this direction the team commenced the effort with several meetings with various campus stakeholder groups including students, alumni, and faculty/ staff. The stakeholder meetings identified the following priorities:

- Improve the general classroom spaces.
- Provide additional spaces for collaboration and recreational activities.
- Improve/maintain historic structures and academic buildings throughout campus.

Following the stakeholder meetings, ZMM conducted building assessments of the major academic buildings, as well as the kitchen adjacent to the main dining area. This information was supplemented by a recent campus building inventory that had been conducted. The information gathered through these variety of activities was then synthesized into an overall campus development plan. The plan, which covers a ten year period projects the need for new construction, property acquisition, site improvement and building renovation, and includes a phased approach for the implementation of campus improvements. The document is supplemented with a visual master plan that reflect the implemented improvements.

# BridgeValley Community & Technical College

Master Plan



LOCATION:  
Montgomery, WV

COST:  
So. Charleston Campus  
\$11.25M Est.

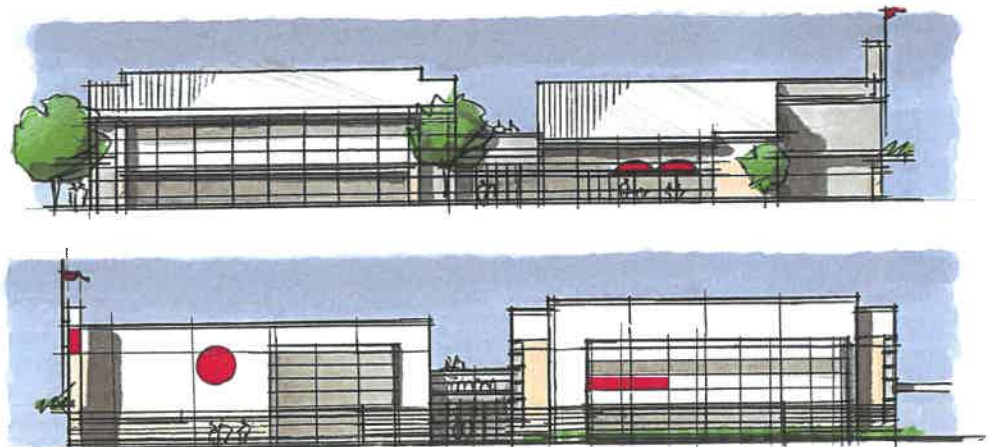
Montgomery Campus  
\$12.8M Est.

CONTACT:  
Dr. Jo Harris, Past President  
619 2nd Avenue  
Montgomery, WV 25136  
304.741.4116 cell



ZMM provided services to prepare a master plan for the Montgomery and South Charleston Campuses for Bridgemont Community and Technical College. The master plan is in response to the West Virginia Higher Education Policy Commission's standard process for a comprehensive assessment of facilities needs, costs, and priorities. This enables the HEPC to provide future funding to Bridgemont based on justified standards tied to legislative funding agendas. The final plan shall be appropriate to Bridgemont's size, mission, and enrollment and to the fiscal constraints within which it operates.

The master plan includes assessments of existing facility conditions on the Montgomery Campus and South Charleston Campus, including deferred maintenance, building code issues, and energy efficiency. An analysis was included identifies current and future space needs, parking requirements, current land use and future property acquisition, infrastructure development, sustainability, landscaping, and pedestrian circulation. The plan will also include project budgeting and a multi-year capital improvement plan. An assessment of the impact of projected enrollment and demographic changes on facilities will be provided along with a delineation of how the campuses will interact and support each other and improve efficiency.





# New River Community & Technical College

Master Plan



LOCATION:  
Summersville, WV

SIZE:  
43,000 SF

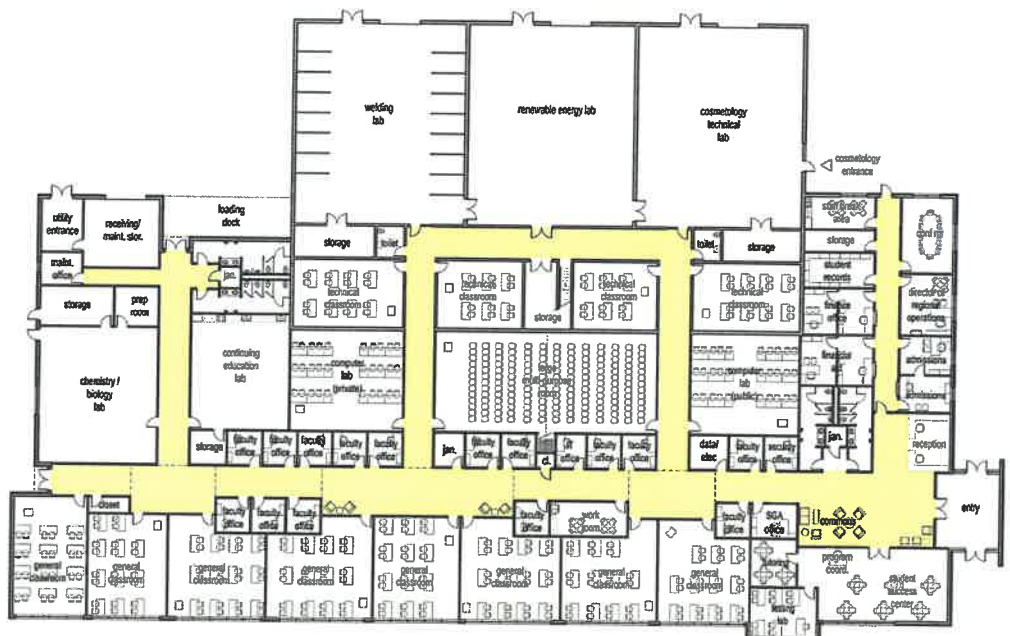
OWNER:  
Nicholas County Building  
Commission  
700 Main Street  
Suite #216  
Summersville, WV 26651

CONTACT:  
L. Marshall Washington,  
President  
New River Community and  
Technical College  
280 University Drive  
Beaver, WV 25813  
304.929.5446



The new educational building will house the operations of New River Community and Technical College. The main program areas for the building are Administration, General Instruction, Workforce/Adult Education, Student Areas, Support Areas, and Technical Labs. Approximately 14,000 SF of the building will house technical programs of the college such as welding, renewable energy, mining, and CDL training. This area will be designed with flexibility for the future. The exterior materials will consist of brick and metal panel, with accents of metal and glass.

The facility will be placed on the site to utilize maximum daylight opportunities. The building's long axis will be oriented from east to west, with all the general instruction classrooms oriented south. A roof overhang on the south elevation will be designed so the low, winter sun will be welcomed while the high, summer sun will be blocked. This will allow the general instruction classrooms to use less energy for lighting, heating, and cooling. The technical labs will be surrounded with high windows, so the technical labs can reduce energy costs as well.



# State of West Virginia

## Capitol Food Court



**LOCATION:**  
Charleston, WV

**SIZE:**  
14,000 SF

**COST:**  
\$3.7M

**COMPLETION:**  
2007

**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



This project involved renovating an existing food service area in the WV Capitol Building. The new renovations include a full service kitchen, self serve area and seating for 300 people. ZMM worked with a kitchen consultant and provided demolition drawings, base architectural, mechanical and electrical drawings.

The project included design of the first phase of a wet pipe sprinkler system that will serve the entire Capitol. ZMM also provided the documents to replace the Capitol medium voltage transformers located in the basement vault. ZMM met stringent timeline for a critical construction completion date.



# Girl Scouts of Black Diamond Council

## Volunteer Resource Center and Girl Zone/Urban Camp



LOCATION:  
Charleston, WV

SIZE:  
27,928 SF

COST:  
\$5M

COMPLETION:  
Fall 2013

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

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

Interior Before Pictures



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

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

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

# Construction & Facilities Management Office

WVARNG



LOCATION:  
Charleston, WV

SIZE:  
19,935 SF

COST:  
\$3.5M

COMPLETION:  
2008

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

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



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



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

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



# WEST VIRGINIA STATE CAPITOL MASTER PLAN

Charleston, West Virginia

GAI Consultants' Community Solutions Group (CSG) provided master planning and design services to the West Virginia State Capital campus.

The campus required enhanced levels of security while maintaining an architectural and aesthetic continuum with the strong participation of the WV National Guard and thorough research into the "best practices" of security devices/applications used elsewhere. Both perimeter and interior areas of the campus required degrees of security/protection. This very necessary protection is to be accomplished while enhancing the "park-like" qualities of the campus and ensuring the campus is inviting to the pedestrian.

Services required the establishment of a design language for the overall campus environment that speaks to the architectural and cultural heritage of this beautiful campus. Plantings, buildings, memorials, furniture/site elements, and views to/from the surrounding community all constitute that current setting.

Security devices needed to be designed to fit that language while performing their intended function. They will be designed to fit the campus landscape, become "contributing" elements to that landscape, and be visually non-invasive to the extent possible.



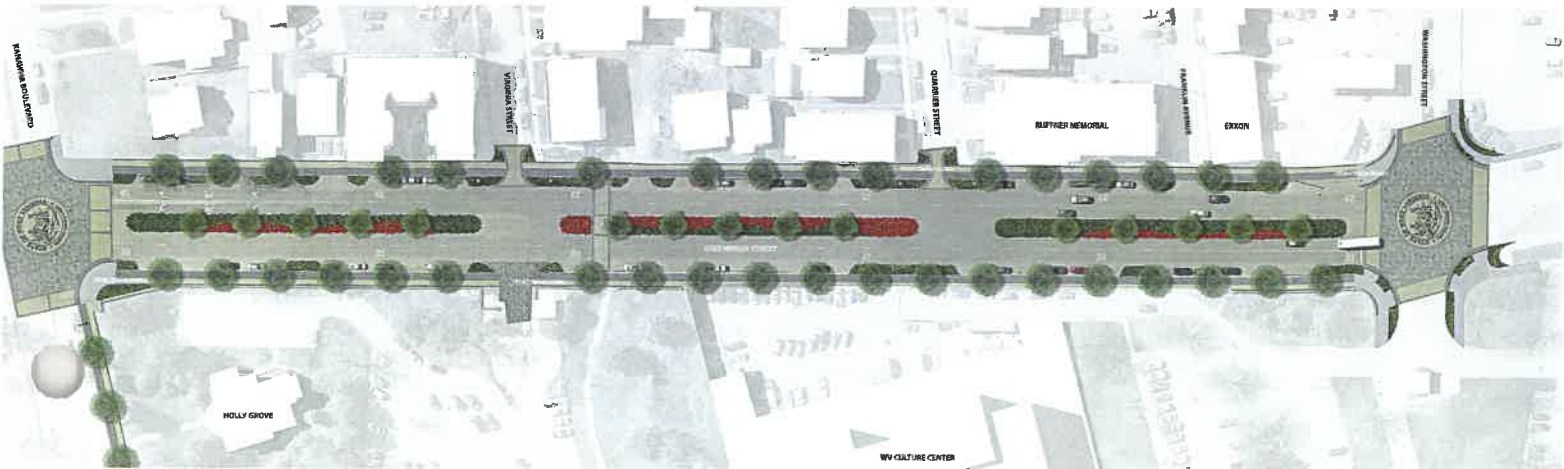
# GREENBRIER STREET PEDESTRIAN SAFETY IMPROVEMENTS

Charleston, West Virginia

Greenbrier Street is situated between the western edge of the West Virginia State Capitol Campus and the Charleston East End Historic District. With the numerous commuters utilizing I-64, and additional traffic from the nearby Yeager Airport, Greenbrier Street has been identified in the Charleston Downtown Redevelopment Plan as a crucial gateway into the city as well as the State Capitol grounds.

Utilizing a state-owned, 100-ft, right-of-way and an adjacency to the thriving East End neighborhood to the west and the State Capitol building to the east, GAI recommended a world-class streetscape that is beneficial to both the city and state. Above the importance of aesthetics, the design team also addressed pedestrian safety concerns.

With the goal of making Greenbrier Street a safe and appealing community gateway, GAI is continuing to assist East End Main Street (EEMS) in leading the charge making it a reality. GAI provided master planning services for a new streetscape that complemented the aesthetics set forth by GAI in another project around the adjacent WV State Capitol campus. Upon implementation, GAI's master plan offers a safe and boastful entrance into the City of Charleston and the heart of West Virginia.



# WEST VIRGINIA UNIVERSITY EVANSDALE INFRASTRUCTURE MASTER PLAN

Morgantown, West Virginia

GAI performed an evaluation of storm damage, sanitary, and water system infrastructure for West Virginia University's 150-acre Evansdale Campus in Morgantown as part of the University's capital improvement program for the campus.

Work included relocation design for various utilities to avoid building new facilities as well as upgrades to provide the additional service capacity needed for the project. The plan included design of stormwater management upgrades to control development-generated runoff and included sustainable stormwater provisions to address water quality. The work also included design of parking lot expansions to replace spaces lost due to the building construction implemented during the capital improvement program.

Value-added innovations included sustainable stormwater techniques and practices with an emphasis on maintenance and monitoring to ensure long-term functioning of the structures, measures, and programs recommended.



# ORLANDO HEALTH DOWNTOWN CAMPUS INFRASTRUCTURE

Orange County | Orlando, Florida

GAI's Community Solutions Group is the lead Master Planner, Land Use Planner, Landscape Architect, and Civil Engineer for Orlando Health's 65+-acre downtown Orlando campus. We work to define and implement the campus vision for Orlando Health's Campus Planning and Real Estate Board Committee. The work has focused on healthcare facilities, healing comfort and environment, access and circulation, social needs and uses, and ensuring the vision.

Work has included urban design for the campus and the newly formed 500-acre Downtown South Neighborhood Improvement District (DSNID), new walkable streets with innovative rain gardens, reclaimed green space such as Lake Beauty Park and Winnie Palmer Pond, wayfinding and interpretive signage, property acquisition, and private sector redevelopment. The work has also included continual coordination not only with Orlando Health's leadership, but also with the City of Orlando, FDOT, LYNX/LYMMO, SunRail, DSNID, Main Street, and adjacent property owners and neighborhoods.





# STANWIX STREET PARKING GARAGE REPAIRS AND PLAZA DECK REHABILITATION

Pittsburgh, Pennsylvania

GAI conducted an evaluation of the below-grade structure to assess the condition of the parking garage and plaza deck structure and determined areas in need of repair. The four-level 170,000 square foot parking garage is situated beneath a 23-story office building in Pittsburgh, Pennsylvania. It was constructed in 1969 and consists of cast-in-place reinforced concrete slabs supported by composite steel framing and steel columns. GAI developed concrete repair drawings and specifications to address required structural repairs and developed design drawings for complete rehabilitation of the plaza deck. The ensuing rehabilitation effort included removal and rehabilitation of the abovegrade plaza deck to replace the underlying waterproofing membrane. Other tasks included engineer's estimate of probable construction costs and bid coordination services.



# UNITED STEELWORKERS PARKING GARAGE REPAIR AND PLAZA REDEVELOPMENT

Pittsburgh, Pennsylvania

GAI performed a condition assessment of the existing two-level, 22,400 square foot, below grade parking garage at the United Steelworkers tower. The garage was constructed in 1969 and consists of cast-in-place concrete slabs supported by concrete beams, girders, and columns. Deficiencies in the plaza level waterproofing membrane and drainage system allowed wide-spread water infiltration, resulting in severe structural deficiencies in the plaza level and garage level structure. GAI prepared construction documents for the selective demolition, repair, and reconstruction of the plaza and garage structures, and replacement of the waterproofing membrane. In conjunction with the membrane replacement, GAI provided landscape architectural services for the redesign of the United Steelworkers Plaza. This included schematic and conceptual design phases and preparing construction documents for the plaza rehabilitation and modification of the existing plaza drainage system. GAI's tasks for this project included structural engineering, with mechanical and electrical engineering support for garage utilities for the following: condition assessment of the parking garage and plaza structures and water infiltration investigation; selective demolition, repair, and reconstruction drawings and specifications for garage structure; plaza rehabilitation, controls for the ventilation system, addition of gas detection sensors, LED lighting fixtures, drainage system modification, and waterproofing membrane drawings and specifications; engineers estimate of probable construction cost; and construction phase services.



# CHARLESTON COLISEUM + CONVENTION CENTER

Charleston, West Virginia

GAI's Community Solutions Group assisted in leading the master plan and landscape architecture for a major renovation to the downtown Charleston Coliseum and Convention Center (CCCC), as well as the associated adjacent streets and waterfront. Our work focused on the urban experience of arrival, parking, outdoor gathering, and adjacent urban development. This work completed in several components of landscape architecture and urban engineering.

Our team's renovations and updates presented a modern vision by updating exterior and interior aesthetics, designing additional spaces, and tying the site to the downtown core. The team created a comprehensive plan to bring the CCCC up to the standard of today's entertainment and convention venue needs—for example, by including several distinct areas of improved visitor experience in the adjacent area.

CSG also redesigned the Quarrier Street and Civic Center Drive entrance plaza with new dropoff and arrival features. Near the entry/box office areas, the entire Clendenin Street frontage was "dieted," by reducing travel lanes, adding guest dropoff, and enhancing pedestrian crossing elements.

Finally, the CSG team have created an activated plaza featuring a staircase leading down from the ballroom addition that connects to a multi-purpose plaza and pre-function space overlooking the Elk River. When needed, the plaza space can serve as an outdoor extension of the CCCC by allowing guests to congregate outside during events.



# VALLEY PARK

Putnam County, West Virginia

Completed as a portion of the Putnam County Park, Recreation and Open Space (PROS) Plan, the Valley Park Master Plan project encompassed renovation plans for a popular 60-acre park in Hurricane, West Virginia.

The existing park was designed and built in fragmented phases and, as a result, faced several issues. GAI's Community Solutions Group team worked closely with the Putnam County Parks and Recreation Commission, the owners of the facility, to identify key issues and problems, and to create design solutions.

The master planning process began with an in-depth look at the park's existing infrastructure, facilities, amenities, context, and connections to the surrounding neighborhoods and region. Following the assessment stage, programmatic elements were investigated and considered in response to the recreation needs assessment that was explored during the county-wide study. Once it was determined how Valley Park positively supports the county's recreational needs, and which opportunities are potentially available to better serve the community and region, the design team brought forth a master plan that leverages the park's already valuable assets and creates additional amenities that will strengthen it and the countywide system at large.



# W.R. GRACE – BUILDING 23 REMEDICATION

Curtis Bay, MD

GAI provided structural engineering services and construction support for the remediation of Building 23, which included the selective demolition of structural and non-structural elements, structural repairs, and reconstruction to maintain the stability of the facility post-remediation.

GAI performed the following activities as part of our scope of services:

- Condition assessment of the existing structural system
- Remedial design for the selective demolition of deficient or contaminated elements
- Stability analysis of the existing structural system to remain
- Repair and reconstruction design to maintain structural stability
- Fall Protection evaluation and design
- Prepared an Evaluation Report that included conclusions from our assessment and analysis, and recommendations for remedial repairs and reconstruction
- Prepared selective demolition, repair, and reconstruction Drawings, Specifications, and Quantities
- Developed a Remedial Action Work Plan
- Reviewed Shop Drawings and responded to Contractor Requests for Information (RFIs)
- Performed site visits during construction at Contractor's request to observe unanticipated field conditions and provide direction for selective demolition and repairs
- Performed a final walk down to observe the post-remediation condition of the building
- Prepared a Closure Report and Final Condition Plan Drawings



# GRAPHTECH PICKLING BUILDING

St. Marys, Pennsylvania

GAI is contracted to provide structural engineering services to perform the Structural Existing Condition Evaluation of the existing GrafTech Pickling Building. The evaluation will include an analysis of the existing structure with respect to the structure's required rehabilitation for reuse and the recommendation of the feasibility and practicality of the rehabilitation. As part of this building rehabilitation, the existing kiln pits will be backfilled and the floor at the pits will be brought up to the main floor elevation. Work Tasks for this project include the following:

- The structural drawings will be reviewed by GAI in preparation for the investigative site visits to become familiar with building structural systems.
- An investigative site visit will be made to perform a visual review of the existing condition of the building foundation and to review the current condition and gather information needed to present methodology for filling the existing kiln pits and to provide the addition of two sump pits within the kiln pit at exiting sump locations.
- Based on the structural drawings provided and the observations at the site visit, GAI will analyze the existing structure for structural adequacy and potential rehabilitation under current Building Codes. The analysis will be conducted in accordance with Chapter 34, "Existing Buildings and Structures," International Building Code, 2009 Edition, and "Guidelines for Structural Condition Assessment of Existing Buildings," ASCE 11-99.
- An analysis and evaluation will be made on the existing foundation as it pertains to the proposed rehabilitation of the building for reuse.
- The analysis and evaluation will include the impact on the structure and construction methodology for filling the kiln pits in the building. A concept design will be provided with the recommendation for providing the sump pits within the existing kiln pits.
- GAI will develop a Report of Findings, "Structural Evaluation of Existing GrafTech Pickling Building" (Report). The Report will include the project description, a summary of the findings of the investigative site visits, and a summary of the structural analysis and description of recommended structural rehabilitation needed for building reuse. If further investigation is needed, or in situ material testing is required for the assessment, this will be stated in the Report.



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