

**Michael Baker**

**I N T E R N A T I O N A L**

*We Make a Difference*

December 14, 2021

12/14/21 11:10:09  
WV Purchasing Division

Jessica L. Hovanec, Buyer  
Department of Administration  
Purchasing Division  
2019 Washington Street E.  
Charleston, West Virginia 25305

**Subject: Expression of Interest for the West Virginia Division of Public Transit  
Mountain Transit Authority Upgrade and Modifications  
CEOI 0805 PTR2200000001**

Dear Ms. Hovanec:

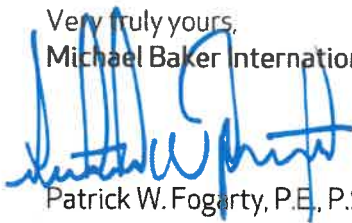
The Charleston, WV office of Michael Baker International, Inc. (Michael Baker) is pleased to respond to a solicitation for the Expression of Interest related to the proposed upgrades and modifications for the Mountain Transit Authority. Michael Baker is interested in the mission of your agency and would like to engage with the WV Division of Public Transit (WVDPT) as a trusted facilities consultant. We believe that our team of professionals is uniquely qualified to partner with the WVDPT on this important project and help bring their vision for this facility into reality.

Michael Baker is well positioned to assemble a comprehensive design team (in-house) including: Transportation Planning, Architectural, Civil/Site, Mechanical, Electrical, Plumbing, Fire Protection and Structural expertise. Our diverse team of professionals are well seasoned in the preparation of construction documents, bid specifications, and the application of required code compliance and construction permits. Michael Baker can also provide leadership or assistance during the Bidding process and the appropriate level of management and administration during the Construction Phase.

We thank you for your consideration and look forward to meeting with the selection committee in person in order to share our thoughts and ideas for this exciting opportunity!

Should you have any questions or require additional information, please feel free to contact me at (304) 923-9826 or by e-mail at [pfogarty@mbakerintl.com](mailto:pfogarty@mbakerintl.com).

Very truly yours,  
Michael Baker International, Inc.



Patrick W. Fogarty, P.E., P.S., LEED®GA

Enclosure

**MBAKERINTL.COM**

400 Washington Street, Suite 301 | Charleston, WV 25301

Office: 304.769.0821 | Fax: 304.769.0822



**TABLE OF CONTENTS**

**MANDATORY SUBMISSION FORMS**

**EXPRESSION OF INTEREST**

**PROJECT BACKGROUND**

**SECTION I**

**Qualification & Experience .....1-2**

**SECTION II**

**Project Team ..... 3**

**Management ..... 4**

**SECTION III**

**Project and Goals .....5-6**

**Additional Project Management Elements ..... 7**

**Demonstrated Experience..... 7**

**APPENDIX 1**

**Resumes**

**APPENDIX 2**

**Project Profiles**

**APPENDIX 3**

**References**



## MANDATORY SUBMISSION FORMS



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

**State of West Virginia**  
**Centralized Expression of Interest**  
**Architect/Engr**

<b>Proc Folder:</b> 948938			<b>Reason for Modification:</b>
<b>Doc Description:</b> Mountain Transit Authority Upgrade and modification			
<b>Proc Type:</b> Central Contract - Fixed Amt			
<b>Date Issued</b>	<b>Solicitation Closes</b>	<b>Solicitation No</b>	<b>Version</b>
2021-11-18	2021-12-14 13:30	CEOI 0805 PTR2200000001	1

**BID RECEIVING LOCATION**

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

**VENDOR**

**Vendor Customer Code:**

**Vendor Name :** Michael Baker International, Inc.

**Address :**

**Street :** 400 Washington Street East, Suite 301

**City :** Charleston

**State :** West Virginia      **Country :** U.S.A.      **Zip :** 25301

**Principal Contact :** Patrick W. Fogarty

**Vendor Contact Phone:** 304.769.0821      **Extension:**

**FOR INFORMATION CONTACT THE BUYER**  
 Jessica L Hovanec  
 304-558-2314  
 jessica.l.hovanec@wv.gov

**Vendor Signature X** 

**FEIN#** 25-1228638      **DATE** December 14, 2021

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

**ADDITIONAL INFORMATION**

The West Virginia Purchasing Division, for the agency, the Public Transit Division, is soliciting Expressions of Interest from qualified firms to provide professional engineering services related to the construction of an Expansion and Upgrades to the Mountain Transit Authority Headquarters , located at 1096 Broad Street, Summersville, WV, per the attached documentation.

INVOICE TO	SHIP TO
PUBLIC TRANSIT DIVISION OF BLDG 5 RM 663 1900 KANAWHA BLVD E CHARLESTON WV 25305-0432 US	PUBLIC TRANSIT DIVISION OF MOUNTAIN TRANSIT AUTHORITY 1096 BROAD ST SUMMERSVILLE WV 26651 US

Line	Comm Ln Desc	Qty	Unit Issue
1	Professional Engineering/Architectural Services		

Comm Code	Manufacturer	Specification	Model #
81101508			

**Extended Description:**

The scope of work involves adding an additional 3,000 sq. ft .to the existing building. Within the 3,000 sq. ft. expansion are contained additional offices, a training room, restrooms, a driver's room, a parts supply room and an extension of the current parking lot. In addition, the scope of work includes new LED lighting in the building, relocation of the building's existing downspouts, landscaping and site design, utility coordination/relocation and coordination with local officials.

**SCHEDULE OF EVENTS**

Line	Event	Event Date
1	Technical Questions Due by 11/29/2021 at 10:00AM EST	2021-11-29

	Document Phase	Document Description	Page 3
PTR2200000001	Final	Mountain Transit Authority Upgrade and modification	

**ADDITIONAL TERMS AND CONDITIONS**

See attached document(s) for additional Terms and Conditions

**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.

\_\_\_\_\_  
(Name, Title)

**Patrick W. Fogarty, Senior Associate**

\_\_\_\_\_  
(Printed Name and Title)

**Michael Baker International, Inc.**

\_\_\_\_\_  
(Address)

**400 Washington Street East, Suite 301, Charleston, WV 25301**

\_\_\_\_\_  
(Phone Number) / (Fax Number)

**304.769.0821 / 304.769.0822**

\_\_\_\_\_  
(email address)

**pfogarty@mbakerintl.com**

**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.

*By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.*

**Michael Baker International, Inc.**

\_\_\_\_\_  
(Company)

 **Patrick W. Fogarty, SENIOR ASSOCIATE**

\_\_\_\_\_  
(Authorized Signature) (Representative Name, Title)

**Patrick W. Fogarty, Senior Associate**

\_\_\_\_\_  
(Printed Name and Title of Authorized Representative)

**December 14, 2021**

\_\_\_\_\_  
(Date)

**304.769.0821 / 304.769.0822**

\_\_\_\_\_  
(Phone Number) (Fax Number)

**EXPRESSION OF INTEREST  
Mountain Transit Authority Upgrade and Expansion**

**BID FORM #1**

**BID FORM – SUBMITTED WITH BID**

**CERTIFICATION OF PRIMARY PARTICIPANT REGARDING  
DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS**

The Primary Participant (applicant for an FTA grant or cooperative agreement, or potential contractor for a major third party contract),  
Michael Baker International, Inc. (COMPANY NAME) certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and
4. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

If the primary participant (applicant for an FTA grant, or cooperative agreement, or potential third party contractor) is unable to certify to any of the statements in this certification, the participant shall attach an explanation to this certification.)

**THE PRIMARY PARTICIPANT (APPLICANT FOR AN FTA GRANT OR COOPERATIVE AGREEMENT, OR POTENTIAL CONTRACTOR FOR A MAJOR THIRD PARTY CONTRACT),**

Michael Baker International, Inc., CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE PROVISIONS OF 31 U.S.C. SECTIONS 3801 ET SEQ. ARE APPLICABLE THERETO.

 SENIOR ASSOCIATE

Signature and Title of Authorized Official



**EXPRESSION OF INTEREST**  
**Mountain Transit Authority Upgrade and Expansion**

**BID FORM #2**  
**BID FORM – SUBMITTED WITH BID**

**CERTIFICATION OF RESTRICTIONS ON LOBBYING**

The undersigned (Vendor, Contractor) certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influence or attempt to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress regarding the award of a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance, or the extension, continuation, renewal, amendment, or modification of any Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance.
2. If any funds other than Federal appropriated funds have been or will be paid to any person to influence or attempt to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or any employee of a Member of Congress in connection with any application for a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance, the undersigned assures that it will complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," Rev. 7-97; and
3. The undersigned understands that the language of this certification shall be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, sub agreements, and contracts under grants, loans (including a line of credit), cooperative agreements, loan guarantees, and loan insurance.

Undersigned understands that this certification is a material representation of fact upon which reliance is placed by the Federal government and that submission of this certification is a prerequisite for providing a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance for a transaction covered by 31 U.S.C. 1352. The undersigned also understands that any person who fails to file a required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The (Vendor, Contractor) Michael Baker International, Inc., certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the (Vendor, Contractor) understands and agrees that the provisions of 31 U.S.C. §§ 3801, et seq., apply to this certification and disclosure.

11 DEC 2021

Date

  
Authorized Signature

SENIOR ASSOCIATE

Title

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: Michael Baker International, Inc.

Authorized Signature: [Signature] Date: December 14, 2021

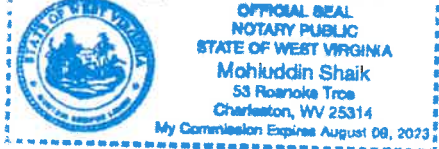
State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 14<sup>th</sup> day of December, 2021.

My Commission expires August 09, 2022.

**AFFIX SEAL HERE**



**NOTARY PUBLIC**

[Signature]  
Purchasing Affidavit (Revised 01/19/2018)



## PROJECT BACKGROUND

The West Virginia Division of Public Transit and the Mountain Transit Authority, Summersville, West Virginia are seeking a highly qualified architectural/engineering firm to provide design services and bid documents for the proposed expansion of the Mountain Transit Authority headquarters building and parking lot. The firm will be responsible to evaluate the existing conditions at the site, make recommendations and present cost-effective options and then provide Construction Documents for the expansion and exterior renovations. As specified in the Expression of Interest (EOI), design tasks could include, but are not limited to professional services for the design, preparation of bidding and construction documents, and construction administration and oversight for the expansion and renovations.

Michael Baker is extremely interested in developing a working relationship with the West Virginia Division of Public Transit

**Michael Baker International, Inc. (Michael Baker)** is a highly qualified firm with extensive experience in providing the type of services required for these projects, and Michael Baker is extremely interested in developing our working relationship with the West Virginia Division of Public Transit in support of their important mission.

## SECTION I

### QUALIFICATIONS & EXPERIENCE

Michael Baker's proposed team of experienced professionals has demonstrated the ability to deliver quality work products to our clients, on-time and within budget. Michael Baker can provide the entire depth of services necessary to complete the project without the need for costly sub-consultants. Every individual on this project team has extensive experience in their field of expertise and has demonstrated success on projects of similar size and scope.

According to our understanding of the project scope as stated in the EOI, no additional sub consultants will be required. Michael Baker will execute the entire project with our current staff.

### FIRM CAPACITY

Michael Baker is a full-service A/E firm. Our local WV office in Charleston is a "single-stop resource" capable of providing comprehensive professional services, from Mechanical/Electrical and Structural Engineering to Architecture and Planning, final design, and construction management through operational support. Michael Baker will provide the hands-on services needed for this project, from Client meetings to site surveys, design and construction Administration/Inspection. With over 30 in house professionals locally and over 750 regionally, Michael Baker can react quickly and efficiently to the needs of your project. Our Charleston staff has Clients and/or active projects in the south-central part of the state so key staff members are regularly travelling in and around the project area.



Central Connecticut FastTrack

Michael Baker's local clients for facility design and renovation projects include, but are not limited to, colleges and universities, schools, counties, cities, local municipalities, state departments of transportation, military facilities, airport complexes, and private sector clients. Michael Baker's geographic location and extensive experience enables us to respond seamlessly to wide-ranging scopes of service to meet our client's needs.



In the past decade, Michael Baker was retained by WV General Service Division to evaluate and provide the A/E design upgrades for 31 restrooms at the historic West Virginia State Capitol Building. Most recently, Michael Baker provided A/E design and construction administration for the renovation of eleven of these restrooms for the West Virginia State Senate. In addition, we provided the same services to West Virginia University for two buildings at the relocated WVU Tech campus in Beckley West Virginia. These renovations included architectural, interior design, new roofing, a new and upgraded fire sprinkler system, upgrades to fire alarm systems, and HVAC renovations and upgrades.



WVU Tech – Classroom Building



Bettis Building Complex

Nationally, Michael Baker, is a leading global provider of engineering and consulting services which includes planning, architectural, environmental, construction, program management, and full life cycle support services as well as information technology and communications services and solutions. Michael Baker provides its comprehensive range of services and solutions in support of U.S. federal, state, and municipal governments, foreign allied governments, and a wide range of commercial clients. With

more than \$1.3 billion in annual revenue. Michael Baker has more than 6,000 employees in over 90 offices located across the U.S. and internationally. Michael Baker seamlessly integrates architecture, planning, landscape architecture, engineering and construction management. Internationally recognized with a portfolio spanning over half a century, the team provides excellence in solutions: superior technical ability, creative design and collaborative integration.

The success of our multidisciplinary approach to “built” environments results from the expertise of our design professionals. We solve challenges from multiple vantage points providing unsurpassed holistic, sustainable and innovative solutions that benefit our diverse clients, including institutions, governmental agencies, corporations, developers and builders.

Michael Baker has extensive resources and the required qualifications to provide the WV Department of Transportation/Division of Public Transit the key knowledge in providing a relevant and usable facility for the Mountain Transit Authority. We have local and nationally recognized experts with the technical experience necessary for this assignment. In addition, Michael Baker’s team of experienced professionals have an established record of delivering quality work products to our clients, on schedule and within budget.

In summary, Michael Baker’s staff can provide documentation of our extensive experience in the following areas for this project:

- Nationally recognized expertise in Architecture, Assessment, Programing and Planning
- Nationally recognized expertise in Engineering (Civil, Structural, Mechanical, Fire Protection, Plumbing and Electrical)
- Construction Administration and Construction Monitoring
- Coordination with State and Federal Agencies, as required

From new or renovated building facilities, site planning and infrastructure, aviation facilities, to oil and gas pipeline design, bridges and roadway designs, and water resource projects, Michael Baker has evolved into one of the leading engineering and energy services firms by consistently providing targeted solutions for its clients most complex challenges.



## SECTION II

### PROJECT TEAM

The Principal-In-Charge will ensure that all required resources including staff and equipment are available to the project manager to execute the project successfully. Team resumes and project profiles provide a brief discussion of team member's experience base relevant to this project.

Michael Baker International, Inc.  
Russell Hall, Vice President | 400 Washington Street, Suite 301, Charleston WV 25301  
304-769-0821 | [RHall@mbakerintl.com](mailto:RHall@mbakerintl.com)

#### Management and Staffing

The project team will be staffed primarily out of the Charleston West Virginia office, with other professionals working from other offices on an as need basis. Patrick Fogarty is the Facilities Services Practice Lead and will serve as Project Manager to oversee the efforts of the design team. Mr. Joseph Chaffin will oversee and manage Architectural portions of the project as the Architect of Record. David Hilliard will lead the Mechanical/Electrical/Plumbing/Fire Protection portion of the design team and oversee the other engineering disciplines. They will be coordinating extensively between the architectural and engineering designers to provide the most efficient and practical solutions for the proposed facility. Most of these professionals have worked together on numerous projects and bring a high degree of competency, understanding and experience for potential schedule and budget challenges.

#### Persons Assigned to the Project *(Resumes provided in Appendix 1)*

Name	Role
<b>Patrick Fogarty, P.E., P.S., LEED GA</b>	Project Manager
<b>WESLEY STAFFORD, P.E., A.I.C.P.</b>	Quality Assurance
<b>Joseph Chaffin, AIA</b>	Architect of Record
<b>Wayne AirGOOD, P.E.</b>	Structural Engineer
<b>David Hilliard, P.E., LEED AP BD+C</b>	Mechanical Engineer
<b>Kevin Spangler, P.E.</b>	Fire Protection Engineer
<b>Owen Milligan, P.E.</b>	Electrical Engineer
<b>ANDREW FRISHKORN, P.G., L.R.S.</b>	NEPA Compliance

#### STATEMENT OR EVIDENCE OF THE FIRM OR TEAM'S ABILITY TO PROVIDE SERVICES

This team was selected based on the current Project understanding. Additional team support members or specialists will be engaged on an as need basis. The process is part of the normal working procedure and is seamless in execution.



## MANAGEMENT



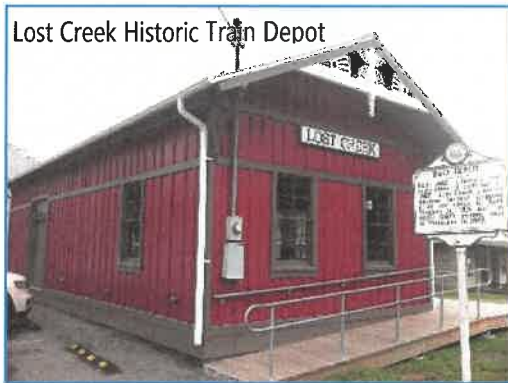
## SECTION III

### PROJECT AND GOALS

#### GOAL/OBJECTIVE 1: INVESTIGATION, ASSESSMENT AND DESIGN DEVELOPMENT

It is Michael Baker's current understanding that an expansion of the headquarters building and parking lot as well as exterior renovations are programmed for the existing Mountain Transit Authority facility in Summersville, West Virginia and may include Planning, Environmental Compliance, Architectural/Engineering design and specifications as well as Construction Administration services.

#### METHODOLOGY



The approach of the entire project would be holistic in nature. A kick-off meeting with the West Virginia Division of Public Transit and the Mountain Transit Authority will help us determine project requirements for each task assigned. The first step of the project would be to help prioritize work and develop time schedules for the project tasks. This process would include identification of existing conditions through information obtained by a review of as-built drawings, a general site walk-through and any existing environmental and geological information that might be available. Our Planners, Engineers and Architects will be involved in all aspects of the design, working together to formulate a solution that is both functional and aesthetically pleasing to the Client, the facility and the community.

#### GOAL/OBJECTIVE 2: ENVIRONMENTAL DOCUMENTATION

Michael Baker will provide the required environmental site analyses and construction permitting. Existing site-related environmental information will be examined to determine the level of study and documentation necessary for proposed development. Environmental Site Assessments Phase I, II and III can be conducted as necessary to provide NEPA compliance.

#### GOAL/OBJECTIVE 3: BIDDING AND CONSTRUCTION DOCUMENTS

Because of the nature of the planned construction process, the design will generally follow a design / procure / build sequence.

Based on the gathered information, the Michael Baker staff will develop **schematic design** concepts of the major portions of the project for review and approval by the Client and stakeholders. A general code review would also be undertaken to determine the State/Local Codes that would affect concept selection and schedule. The project will be studied in a systematic way to analyze the existing conditions, Client needs, affected system demands, budget and construction time frame. Only then will the appropriate solutions to meet those requirements be determined. Analyzing multiple solutions provides the Client the ability to choose the most cost-effective approach for the project. Depending upon the project requirements and available time, a minimum of two potential design approaches may be presented.

Michael Baker will provide cost estimating services for each submission. When design concept options are developed and the approach is identified from a technical standpoint, our cost estimating group would be engaged to provide the financial feasibility of each option.

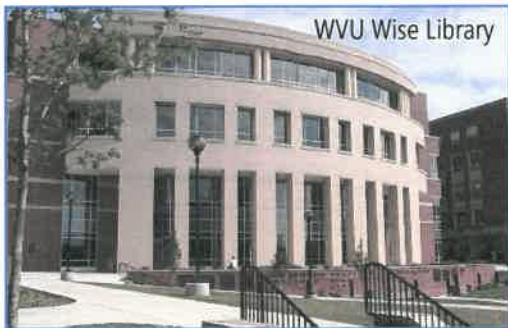
Michael Baker provides a variety of services and therefore has extensive experience in many fields of expertise. This will allow the core team members access to expertise in all areas of study which pertain to the project. Depending on the task, this may include: Architectural, as well as Civil, Structural, Mechanical, Electrical, Plumbing, and Fire Protection Engineering.



Design and schedule coordination meetings and/or site visits will be provided as a normal part of the **design development/construction document** process. This will help to ensure that the West Virginia Division of Public Transit and the Mountain Transit Authority are receiving exactly the facility that they need in the time frame that they require. As required, a project phasing plan may be provided with the construction documents. This will help to ensure limited disruptions to day-to-day operations. Also included will be plans to show the limitations and requirements for the demolition and removal of the existing components and systems to facilitate the new work. Documentation will include the location of “affected” existing on-site utilities or service lines, if necessary.

Cost opinions will be updated upon the completion of the **Construction Documents** plans and specifications. Final sealed drawings and specifications for each phase of the entire project will be provided.

Michael Baker provides an Internal Technical Review (ITR) as part of our normal quality assurance process. This is performed on every project prior to submittal delivery and is part of “The Baker Way” Project Management Process. This ITR is performed by professionals that are not part of the design team but are experts in the respective fields that they review. This ensures a nonbiased and critical review of the project documents. This process helps to minimize small errors and omissions and yields a smoother bidding/construction process.



Michael Baker will provide necessary design documents and will provide bidding documents in accordance with WV Department of Administration, Purchasing Division requirements. Specifications for the installation of all required products or components will be provided as part of the Construction Document package. Drawings and documentation will be provided based on provided as built drawings, site investigations and selected field measurements. Michael Baker will provide Bidding support and assistance as needed.

**GOAL/OBJECTIVE 4: CONSTRUCTION MANAGEMENT**

Site visits and construction inspection services are part of Michael Baker’s holistic project approach. If this project requires, a full-time construction coordinator can be provided for the duration of construction. The project coordinator could assist in ordering materials, planning and scheduling, and expediting responses to contractor questions. The team members that start the project will be the same professionals providing the regular onsite inspections during construction. All products intended to be installed on the project shall be submitted to and approved by the project team.

After the system installations are complete, Michael Baker will perform a final inspection and develop a corrective measure punch list and will coordinate with regulatory agencies to assure prompt award of the Certificates of Occupancy for the facility as required.





## ADDITIONAL PROJECT MANAGEMENT ELEMENTS

### GENERAL

Michael Baker has vast experience in technically sensitive renovations as well as from the ground up design and construction. The scope of this project, as presented, poses challenges that are exciting for our team of problem solvers. Between our Charleston West Virginia and Moon Township Pennsylvania offices, we bring diverse expertise and hundreds of years of experience to this progressive endeavor.



The management and coordination for this project will be a top priority for our Charleston staff, as most of our team members are residents of West Virginia and desire to see our State and its transportation facilities develop and grow.

### COST CONTROL

The use of prioritized phasing and additive or deductive alternates during the bidding and construction process can provide flexibility and help control project cost. This allows the Owner to better choose how they wish to spend their resources. Also, to control cost, Michael Baker professional staff will have the opportunity to review the plans at each milestone and make comments or make recommendations to the project based on comparison with the Owner's Project Requirements, the current plans and specifications, and the current project cost opinion. If need be, Michael Baker is very familiar with the value engineering process and can work productively with the Division of Public Transit to determine cost saving alternatives. If bids come in over budget or, if during construction, contractor staffing or schedules are reduced, value engineering can help keep the project on tract. These considerations, along with open discussion with the Division of Public Transit staff, will determine whether we move forward with the current design or make agreed-upon adjustments to the design.

### DESIGN AND CONSTRUCTION TIME FRAME

We have the resources to deliver the project on time and within budget. Michael Baker has a proven track record of working closely with our clientele and bringing projects to fruition within the structured timeline and the Client's desired budget.

## DEMONSTRATED EXPERIENCE IN COMPLETING PROJECT OF SIMILAR SIZE AND SCOPE

### **Project Profiles are included in Appendix 2.**

These selected projects are a representative group with similar budgets and with related project components. These include a recent project performed at the Morgantown Airport, a project for WVU at WVU Tech in Beckley, a renovation project for a West Virginia nonprofit 501(c)(3) company, the WVARNG Charleston Armory renovation and an open end 10-year contract with West Virginia State University, now in its' seventh year. We also included samples of an out-of-state project within the last five years and a design for the complete renovation of 31 restrooms in the historic West Virginia State Capitol Building.

Lastly, we have also included, for your review, the project summary for the Little Kanawha Bus Facility in Mt. Zion, WV.

Additional **References are provided in Appendix 3.**



**APPENDIX 1 - RESUMES**

## **Patrick W. Fogarty, P.E., P.S., LEED®GA**

### **Civil Engineer , Facilities Practice Manager**

#### **General Qualifications**

Mr. Fogarty has over 30 years of civil engineering project design and management experience. He is responsible for the technical and management aspects of civil design and surveying projects within Baker's Charleston, West Virginia office. Mr. Fogarty has designed and managed projects in numerous disciplines including civil, structural, and transportation engineering; site development planning; and surveying. These projects have included retail/commercial site preparation, airports, streets/highways, bridges, parking lots, buildings, retaining walls/foundations, sanitary systems and structures, as well as boundary and topographic and photogrammetric surveys. Duties included field surveying, drawings and specification preparation, design, design drafting, construction inspection, quality control testing, shop drawing review, project management, contract administration and report preparation.

#### **Experience**

**Little Kanawha Bus Facility, Calhoun County, West Virginia.** *WV Division of Public Transit.* Project Engineer. Responsible for the civil, site and structural engineering components of the project. Michael Baker provided architectural and engineering services, landscape architecture, and construction-phase support for a new, 9,900-square foot, pre-engineered, metal and brick bus maintenance and transit operations facility. The 5,100-square-foot administrative area includes offices, a conference room, a money-counting room, and a driver-training room, and the 4,800-square-foot bus maintenance area includes a dedicated wash bay and storage for seven buses. The facility will be ADA-compliant and was designed to achieve LEED® certification. Services included site survey and design, geotechnical investigations and testing, environmental compliance, utility coordination, bid documents, bid-phase support, construction services and as-built drawings.

**Renovations to Classroom Building, Beckley, West Virginia.** *WVU Tech/ West Virginia University.* Practice Lead. Responsibilities included overseeing and managing the required resources for the design team and quality control. This fast track design and construction project stemmed from a feasibility study produced by request of the Client. The deficiencies found during the Study were remedied during the design phase with a compressed time frame in mind. Coordination of new and old HVAC designs were a large component of this project. University branding elements were incorporated into the interior design to bring new life to a defunct campus. Special consideration was given to

**Years with Michael Baker:** 16

**Years with Other Firms:** 20

#### **Degrees**

B.S., 1985, Civil Engineering, West Virginia University Institute of Technology

Diploma, 1993, Surveying and Mapping, International Correspondence Schools

#### **Licenses/Certifications**

Professional Engineer –  
West Virginia, 1990  
Ohio, 1996  
Kentucky, 2000

Professional Surveyor –  
West Virginia, 1993  
Ohio, 1996  
Kentucky, 2001

Construction Documents  
Technologist, 1996

LEED Green Associate, 2011

coordination with the University's existing door hardware products as well as the design and product specifications for a nationally accredited psychological laboratory within the Project. This project is currently under construction.

**Renovations to the Benedum Center, Beckley, West Virginia.** *WVU Tech/ West Virginia University.* Practice Lead. A sister project to the above referenced Classroom Building, this 21,000 S.F. project ran concurrent and also stemmed from a Feasibility Study requested by the Owner. Primary responsibilities included overseeing and managing the required resources for the design team and quality control. This project is currently under construction.

**West Virginia State Capitol Restroom Renovations.** *State of WV General Services Division.* Project Manager. Responsible for the overall management of the project including the coordination of the subconsultant. Michael Baker led a planning study for the renovation of 31 restrooms in the historic West Virginia Capitol Building. The planning study assessed the facilities and their conformance to current code requirements and code-required capacities, compliance with Americans with Disabilities Act (ADA) requirements, quantification of the building occupancy during normal and peak periods, and an evaluation of gender distribution of restrooms within the capitol. Proposed renovations were scrutinized by both SHPO and the Capitol Building Committee with respect to historic aspects. Michael Baker provided design, construction sequence, and scheduling recommendations. Upon approval of the design, Michael Baker will prepare construction documents and provide construction administration services for the renovation of three restrooms on the basement level.

**A/E Services for the Office of the Adjutant General, West Virginia Army National Guard, Division of Engineering and Facilities, Charleston, West Virginia.** *State Army National Guard Headquarters.* Project Engineer. Responsible for the management and coordination of design activities. The Facilities Management Officer (FMO) for the State of West Virginia, Division of Engineering and Facilities (DEF), West Virginia Army National Guard (WVARNG) selected Michael Baker for a lump sum/ fixed fee contract for architectural and engineering services. Michael Baker was selected by the Division of Engineering and Facilities to provide complete design and construction administration services for the renovation of the first floor of the entire wing of the Office of the Adjutant General (TAG). The Owner requested the need for modernization of approximately 12,000 square feet of existing outdated office space - project elements included new acoustical ceilings, flooring, energy-saving light fixtures, duplex outlets, communications jacks, alterations to the existing floor plan, exterior door replacements, new interior doors and hardware, new wall finishes and asbestos removal.

**Lost Creek Train Depot Rehabilitation, Lost Creek, West Virginia.** *Town of Lost Creek.* Project Manager. Responsible for the management and coordination of all activities as well as all engineering design. The Town of Lost Creek retained Michael Baker for the planning and design of the rehabilitation of a historic train depot adjacent to the Harrison County Rail Trail. Michael Baker prepared a plan to raise the structure, make repairs to the deteriorated timber, excavate and place the concrete foundation system, then lower the structure to rest on the new foundation. Baker provided construction administration and inspection services as well as periodic site review during construction.

**Streetscape Improvements, Nitro, West Virginia.** *City of Nitro.* Project Manager. Responsible for concept planning, detailed design, construction document generation, and construction administration. Michael Baker provided design, bid-phase support, and construction services for streetscape improvements to Bank Street and 21<sup>st</sup> Street, located in the city's business district. Michael Baker's services include base mapping, background data collection, design plans, construction document preparation, bid-phase support, construction management, and construction inspection.

## Andrew A. Frishkorn, P.G., L.R.S.

### *Project Manager/Senior Geologist*

#### *General Qualifications*

Mr. Frishkorn has diverse educational and practical experience related to geological, hydrogeological, solid and hazardous waste investigations under a variety of geological settings and regulatory conditions. He has been responsible for development and/or implementation of Phase I and II Environmental Site Assessments (ESAs) throughout the United States including West Virginia. These projects have been conducted to meet the requirements of state and federal regulatory programs (e.g., RCRA, CERCLA, Brownfields) for a variety of steel, chemical, energy, transportation, manufacturing, military, and other governmental clients.

Mr. Frishkorn's areas of expertise include: project management; work plan preparations for geological and contamination characterization; cost estimates; field sampling of wastes, soils, groundwater and surface water; design and supervision of monitoring and extraction well installations; subcontracting and contractor oversight; geological and chemical data evaluation; interpretation of geologic/hydrogeologic settings with respect to the migration of hazardous constituents in the environment; property transfer and regulatory negotiations, RCRA compliance and permitting activities; waste management plans; specification writing and Brownfields redevelopment.

#### *Environmental Site Assessment (ESA) Experience*

**Phase I and II Environmental Assessment, Parking Area Properties, South Charleston, West Virginia.** FMC Corporation. Project Manager. Prepared a Phase I ESA that resulted in sale and redevelopment of a parcel of vacant property in West Virginia and deed restrictions on another portion of the property. Historically, the property had been occupied by a gasoline station and auto repair shops.

**Phase I/ II ESAs for Brownfields with the Beaver County/Ohio River Brownfields Coalition, Beaver County, Pennsylvania.** Stromberg-Garrigan & Associates, Inc. Project Manager. Responsible performance of ten (10) Phase I ESAs and four (4) Phase II ESAs. Responsible for development of site investigation strategies, attending meetings with local officials, preparing a USEPA-approved Programmatic Quality Assurance Project Plan (QAPP), and multiple USEPA-approved Sampling and Analysis Plans (SAP). Provided oversight of geophysical survey, soil, groundwater, surface water, sediments, and asbestos sampling. Wells were installed using sonic drilling technology. Provided technical support for identification of realistic redevelopment strategies.

**Appalachian Corridor H.** West Virginia Department of Transportation, Division of Highways. Hydrogeologist. Responsible for developing a monitoring plan to assess potential impacts of a road cut through Anderson Ridge on

*Years with Michael Baker: 35*

*Years with Other Firms: 1*

#### *Degrees*

Graduate Studies, Hydrology,  
University of Virginia

B.S., 1984, Geology/Chemistry,  
Juniata College

#### *Licenses/Certifications*

Licensed Remediation Specialist,  
West Virginia, 1998, LRS [REDACTED]

Professional Geologist,

Pennsylvania, 1994, [REDACTED]

and nine other states.

OSHA 40-Hour HAZWOPER  
Certification, 1986

OSHA 8-Hour HAZWOPER  
Supervisor Training, 1993

OSHA 8-Hour HAZWOPER  
Refresher Training, 2020

First Aid/CPR Training, 2018

PEC Safety Certification, 2014,  
[REDACTED]

SafeLand USA Training, 2014

Roadway Worker Protection  
Certification, 2019 for Norfolk  
Southern, Canadian National and  
Genesee & Wyoming Railroads

Radiation Safety Certification,  
2019

the town of Wardensville's Source Water Protection Area (SWPA). The monitoring will be conducted in support of the environmental commitments for the project.

**Lower Hill Redevelopment Infrastructure Project, Pittsburgh, Pennsylvania.** Sports and Exhibition Authority of Pittsburgh and Allegheny County. Technical Manager. Oversaw preparation of a Phase I ESA for multiple parking and commercial parcels, located at the site of the former Civic Arena to support redevelopment.

**Voluntary Remediation and Redevelopment Program (VRRP), South Charleston, West Virginia.** FMC Corporation. Project Manager and Licensed Remediation Specialist. Responsible for conducting Phase I & II ESAs for a wide variety of volatile organic compounds, semi-volatile organic compounds, pesticides, metals and other inorganic constituents at a former chemical plant under West Virginia's VRRP.

**Phase II Environmental Site Assessment, Washington, Pennsylvania.** Confidential Energy Producer. Project Manager. Responsible for performing a Phase II Environmental Site Assessment (ESA) on a roughly 32-acre parcel to support a property transfer assessment. The assessment included a **Membrane Interface Probe (MIP) Survey**, followed by sampling of soil, groundwater and **evaluation of potential ACM** by a licensed inspector. Based on the results of the investigation, order of magnitude remedial cost estimates were developed.

**Drainage Improvements, Virginia Beach, Virginia.** City of Virginia Beach, Virginia. Technical Advisor. Responsible for oversight of a **Phase II ESA** to assess soil and groundwater conditions near former leaking underground gasoline tanks. The project involved safely drilling borings in an area with numerous underground utilities. Assisted with subcontractor procurement, work plan development and QA/QC of the assessment reports. The work was performed to provide data for contract special provisions as they relate to management of contaminated soil and groundwater during dewatering operations. Michael Baker is providing program management, engineering and support services on the multi-phase combined drainage and roadway improvements.

**Pipeline ESAs for USACE Easement Renewal.** Equitrans. Technical Manager Responsible for preparation of two ASTM Complaint Phase I ESAs to support utility easement renewals with the United States Army Corps of Engineers (USACE). The pipelines crossed through multiple counties.

**SR 0068 Karns Crossing Bridge Preliminary Design, Butler County, Pennsylvania.** Pennsylvania Department of Transportation District 10. Task Manager. Responsible for performance of a Phase I ESA for the bridge alternatives assessment and preliminary design. The project evaluated 12 industrial, commercial, residential and undeveloped properties adjacent to the bridge and bridge approach. The project required coordination with multiple railroads.

**S.R. 28, Highland Park Bridge Interchange, Allegheny County, Pennsylvania.** Pennsylvania Department of Transportation, District 11-0. Task Manager. Responsible for performance of a Phase I in accordance with ASTM E1527 and Publication 281. Subsequently, a **Phase II ESA Sampling Plan**, Health and Safety Plan, subcontractor procurement and oversight of sampling were performed. Based on the results of sampling, special provisions were prepared to support the construction contract documents.

**General Technical Assistance for the Pennsylvania Superfund Program and Interim Response and Remediation Services Contracts, Statewide, Pennsylvania.** Pennsylvania Department of Environmental Protection. Project Manager and Senior Geologist. Also served as geologist and project manager on multiple projects under PADEP's Hazardous Sites Cleanup Act (HSCA). Performed multiple Phase II ESAs throughout Pennsylvania, to characterize soil, groundwater surface waste, sediment and indoor air in accordance with Act 2 guidelines. Michael Baker completed hundreds of work assignments with PADEP over the past 25+ years.

**Monaca Phase I Environmental Site Assessment Update, Monaca Pennsylvania.** MVAH Partners. Project Manager. Responsible for updating an ASTM compliant Phase I ESA to support a property transfer.

## R. Joseph Chaffin, R.A., A.I.A.

### *Lead Design Architect*

#### General Qualifications

In balancing creative, organizational, and technical strengths, Joseph Chaffin's professional experience demonstrates a broad practice of architecture from residential through complex institutional projects. He challenges current capabilities, cultivates leadership, and develops new strengths through his position at Baker. As Director of Architecture, Mr. Chaffin is responsible for the daily operations, design quality, and project execution of the architectural and interior design staff. He performs interdisciplinary technical reviews for all designs and oversees coordination of related engineering disciplines. Ensuring the highest quality design services within budget and schedule parameters, he also emphasizes a "world view," or comprehensive perspective, within which professional services are delivered prioritizing and maintaining client expectations.

#### Experience

**Renovations to Classroom Building, Beckley, West Virginia.** *WVU Tech/ West Virginia University. Architect of Record.* Responsibilities included facilitating complete design package and collaboration with WVU Tech staff for the 31,000 S.F. facility. This fast track design and construction project stemmed from a feasibility study produced by request of the Client. The deficiencies found during the Study were remedied during the design phase with a compressed time frame in mind. Coordination of new and old HVAC designs were a large component of this project. University branding elements were incorporated into the interior design to bring new life to a defunct campus. Special consideration was given to coordination with the University's existing door hardware products as well as the design and product specifications for a nationally accredited psychological laboratory within the Project. This project is currently under construction.

**Renovations to the Benedum Center, Beckley, West Virginia.** *WVU Tech/ West Virginia University. Architect of Record.* A sister project to the above referenced Classroom Building, this 21,000 S.F. project ran concurrent and also stemmed from a Feasibility Study requested by the Owner. Primarily an interior design heavy project, this building required new retrofitted ADA toilet facilities as well as door hardware and HVAC systems coordination. This project is currently under construction.

**Aviation Science Center Renovation, Community College of Beaver County, Monaca, Pennsylvania.** Architect of Record. Responsible for design/technical quality and project execution provided by the architectural and interior design staff. The Project consisted of architecture, engineering, construction administration and cost estimates to design the auditorium renovations and replacement the HVAC system. Preliminary design services included research of applicable building codes; on site project assessment and verification, measurements, and documentation of the project areas, including a comprehensive field survey of the existing conditions, and the development and prioritization of preliminary scopes of work, schedule development, and oversight of estimates of probable cost. He directed the completion of pre-final 90 percent construction documents and the final construction and bid documents, including architectural, mechanical, electrical, and communications engineering drawings, and specifications. Mr. Chaffin also coordinated with the vendor of the air traffic control simulator throughout the design phase.

Years with Baker: 10

Years with Other Firms: 17

#### Education

B.Arch., 1990, Architecture, University of Cincinnati

Certificate, 1988, Architecture, Ecole d'Art Americaines - Ecole des Beaux Arts

#### Licenses/Certifications

Registered Architect, West Virginia, 2011

NCARB, 1999

Registered Architect, Pennsylvania, 2001

**Nursing Simulation Renovation and Laboratory Design, Clarion University, Clarion, Pennsylvania.** Director.

Responsible for design/technical quality and project execution provided by the architectural and interior design staff. This state-of-the-art nursing education facility, included a simulation laboratory with four high-technology mannequins and a control room, related classrooms and skills lab spaces, offices, conference rooms, social lounge, and study lounge. His role also included interdisciplinary technical reviews for all design/construction documents. Baker's tasks included architectural design, building systems engineering, construction cost estimate development, and as-built plans development.

**Building 12 Defense Logistics Agency Headquarters Renovation Design, Tobyhanna, Pennsylvania.** *Tobyhanna Army Depot.* Director.

Responsible for design/technical quality and project execution provided by the architectural and interior design staff. Role also included interdisciplinary technical reviews for all design/construction documents. Baker prepared design documents for the partial renovation of Building 12 to serve as the new Defense Logistics Agency headquarters building. Work was performed under a three-year indefinite delivery-indefinite quantity contract. Baker's tasks included architectural design, building systems engineering, construction cost estimate development, and as-built plans development.

**Restroom Renovation Design, TISCOM, Alexandria, Virginia.** *U.S. Coast Guard, CEU Cleveland.* Director.

Responsible for design/technical quality and project execution provided by the architectural and interior design staff. Role also included interdisciplinary technical reviews for all design/construction documents. Baker is developing specifications, construction drawings, a detailed cost estimate, and a projected construction schedule to renovate two male and two female restroom areas in the Telecommunication and Information Systems Command Navigation Center. The renovated restrooms will be compliant with the Americans with Disabilities Act and will include new plumbing fixtures, toilet partitions, floor coverings, wall coverings, electrical fixtures, and exhaust fans.

**U.S. Armed Forces Reserve Center, Rutland, Vermont.** *U.S. Army Corps of Engineers, Louisville District.* Director.

Responsible for design/technical quality and project execution provided by the architectural and interior design staff. Responsibilities also included detailed interdisciplinary reviews of the RFP design criteria documents with an emphasis on architecture. Baker developed design-build RFP documents for a new 600-member Armed Forces Reserve Center meeting Silver LEED® standards. A 97,634-square-foot training building (AFRC), a 14,600-square-foot multi-use classroom, a 7,302-square-foot Organized Maintenance Shop (OMS), and a 3,113-square-foot unheated storage (UHS) building were included in the RFP package. The center accommodates training and mobilization, and provides for the storage, inspection, maintenance, and repair of combat and tactical vehicles and equipment associated with the regional deployment of Vermont Army National Guard and Army Reserve units. RFP development consisted of conducting a design charrette; providing a topographical survey and geotechnical investigation; performing a utility survey; developing conceptual site plans, floor plans, and building elevations; developing RFP specifications; preparing DD Form 1354 – Transfer of Real Property; and providing a PACES construction cost estimate.

**Design of U.S. Army Reserve Center Renovation and Expansion, Homewood, Illinois.** *U.S. Army Corps of Engineers, Louisville District.* Director.

Responsible for design/technical quality and project execution provided by the architectural and interior design staff. Role also included interdisciplinary technical reviews for all design/construction documents. As designer of record, Baker provided architectural and engineering services for the renovation and expansion of a 400-member U.S. Army Reserve Center to provide a 60,374-square-foot Training Building, including an approximately 3,500-square-foot Unheated Storage Building. The project also includes construction of a 22,300-square-foot parking area for military equipment, and 130 parking spaces for privately owned vehicles. Tasks were performed under an indefinite quantity-indefinite delivery engineering agreement. Baker designed the training facility to meet LEED® Silver certification. Baker's services included architectural design, surveys, environmental and geotechnical investigation, all site and building engineering, cost estimating, value engineering, and LEED® certification administration.



## David J. Hilliard, P.E., LEED® AP

### *Mechanical/Electrical/Plumbing Engineer*

#### **General Qualifications**

Mr. Hilliard has a wide range of "hands on" design, engineering, and construction experience. From his beginnings as a carpenter he has expanded his professional abilities to a senior engineer for Baker. His recent design experience has included the design of new campus water lines and other service utilities at West Virginia State University, the complex mechanical design of such projects as a large Charleston, West Virginia hospital, a Bus Maintenance Garage and office building for the West Virginia Department of Transportation, an Army National Guard Armory HVAC/Electrical renovation, Master Planning and engineering at the West Virginia Capitol Complex including plumbing renovation design on the historic State Capitol Building. His resume covers over 30 years of real world work in engineering, design, fabrication and construction in the mechanical, electrical and general trades.

Over the years, while practicing his profession, Mr. Hilliard continued his education by studying mathematics, civil and mechanical engineering, finally taking degrees in both mathematics and mechanical engineering. He has continued his professional development through his involvement with ASME, ASHRAE, ASPE, USGBC, and other pertinent organizations

#### **Experience**

##### **Design of Three T-Hangars, Morgantown, West Virginia. *Morgantown***

***Municipal Airport. Mechanical/Electrical Engineer.*** Responsibilities included the Mechanical, Electrical and Plumbing Design of three T-hangars on the east side of the airfield and included, HVAC, plumbing ADA restrooms and drainage systems, fire protection, and electrical utilities design. He also, preformed Construction Administration for advised during construction and help coordinate with the Military IRT staff through an onsite project manager.

##### **Renovations to Classroom Building, Beckley, West Virginia. *WVU Tech/ West Virginia University. MEP Designer and***

***Engineer of Record.*** Responsibilities included facilitating complete design package and collaboration with WVU Tech staff for the 31,000 S.F. facility. This fast track design and construction project stemmed from a feasibility study produced by request of the Client. The deficiencies found during the Study were remedied during the design phase with a compressed time frame in mind. Renovation old HVAC systems, electrical upgrades, fire alarm upgrades, and a new building wide sprinkles system were undertaken, as well as the design of new ADA restrooms. Special consideration was given to the design and product specifications for a nationally accredited psychological rat laboratory within the Project. This project is currently under construction.

*Years with Michael Baker: 10*

*Years with Other Firms: 20*

#### ***Degrees***

B.S.M.E., 2005, Mechanical Engineering, West Virginia University Institute of Technology

B.S., 2002, Mathematics and Science, West Virginia State College

#### ***Licenses/Certifications***

Professional Engineer, West Virginia 2011

LEED AP, bd+c, 2010

#### ***Professional Affiliations***

American Society of Plumbing Engineers

American Society of Heating, Refrigerating, and Air-Conditioning Engineers

American Society of Mechanical Engineers

**Renovations to the Benedum Center, Beckley, West Virginia.** *WVU Tech/ West Virginia University. MEP Designer and Engineer of Record.* A sister project to the above referenced Classroom Building, this 21,000 S.F. project ran concurrent and also stemmed from a Feasibility Study requested by the Owner. Primarily an interior design heavy project, this building required new ADA toilet facilities, Fire Alarm and sprinkler system upgrades and retrofitted HVAC equipment. This project is currently under construction.

**West Virginia State University - Open-End Architectural/Engineering Services, Institute, West Virginia.** 10 year IDIQ. Mechanical/Electrical and Plumbing Designer and Engineer of Record for on demand projects at West Virginia State University. Mr. Hilliard has been involved with and coordinated all aspects of the various tasks which have included; programming, planning, design development, construction documentation, systems evaluations, and feasibility studies, as well as cost estimating. Also included were mapping, evaluation and design services for storm and sewer line systems, a campus wide domestic water loop system design, football field upgrades and overall facility maintenance support as requested by the University. He has also been involved with the development and acquisition of WVDEP permits for both MS4 and Air Perming.

**Little Kanawha Bus, Calhoun County, West Virginia.** *WV Division of Public Transit.* Mechanical Engineer. Responsible for the Mechanical, Electrical and Plumbing Design, MEP Document Preparation, and Construction Administration for a new bus maintenance and office facility for Gilmer County. Duties include the design of the vehicle storage, cleaning and maintenance mechanical systems, as well as oil pumping and collection systems. The design of an energy efficient HVAC system for the entire building is also part of his responsibilities. The facility was designed as a LEED® project.

**Good News Mountaineer Garage, Charleston, West Virginia.** Mechanical Engineer. Responsible for the Mechanical, Electrical and Plumbing Design, MEP Document Preparation, and Construction Administration for newly renovated Auto Repair garage and administrative office facility for this non-profit organization. The Good News Mountaineer Garage accepts donations of vehicles that are repairable for a reasonable amount of money. These donated cars are then distributed to families with low incomes for transportation to work.

**West Virginia State Capitol Restroom Renovations.** *State of WV General Services Division.* Mechanical Electrical and Plumbing Engineer. Mr. Hilliard provided the State of West Virginia General Services Division a comprehensive MEP plan for the renovation and renovation of the 33 restrooms of the West Virginia State Capitol Building. He helped provide design, construction sequence, and scheduling recommendations. And will provide Construction Administration during construction

**Army National Guard Headquarters Renovations, Charleston, West Virginia.** *State Army National Guard Headquarters.* Mechanical Engineer. Responsible for all mechanical design oversight and construction management. Baker performed complete planning, design, and construction management services for renovations to the Office of the Adjutant General at the State Army National Guard Headquarters in Charleston, West Virginia. Project elements included a complete renovation and replacement of the HVAC system with a Loop Heat Pumps, new acoustical ceilings, flooring, energy-saving light fixtures, several new wall partitions, new interior doors and hardware, new wall finishes and asbestos removal. Baker provided Construction Administration and inspection services as well as periodic site review during construction.

## Wayne Airgood, P.E.

### Structural Engineer

#### General Qualifications

Mr. Airgood is a practicing structural engineer with experience in the design of commercial, institutional, light industrial building structure, and foundation systems.

#### Experience

**Design of Central Issue Facility, Fort McCoy, Wisconsin.** *U.S. Army Corps of Engineers, Louisville District.* Mr. Airgood was the senior structural engineer of record responsible for design of the building structure and foundation systems from concept through construction of an approximate 62,553-square-foot large-sized Central Issue Facility (CIF) to expedite the shipping and receiving, distribution, processing, and exchange of soldier equipment. The structural system consisted of steel joist and girder framing supported by interior steel columns and exterior precast, insulated concrete load-bearing walls. Foundations were soil supported, isolated and continuous, reinforced spread footings.

**Container-Loading Facility Design, Fort McCoy, Wisconsin.** *U.S. Army Corps of Engineers, Louisville District.* Mr. Airgood was the senior structural engineer of record responsible for the design of a clear span steel roof framing system to achieve column-free interior warehouse space of a 30,862-square-foot Container-Loading Facility. Roof framing system is supported by interior steel columns and exterior precast, insulated concrete load-bearing walls. Foundations were soil supported, isolated and continuous, reinforced spread footings.

**Montgomery County Public Schools Foodservices Facility.** *Montgomery County, Department of General Services.* Mr. Airgood was the senior structural engineer of record responsible for the development and design of structural framing and foundation systems for 70,000-square-foot food production, warehouse and distribution facility. His responsibilities included coordination with owner/user and other engineering disciplines throughout design, performing and overseeing of production structural design calculations and documents and construction administration services such as review of structural product submittals and periodic site visits.

**West Haven Commuter Rail Station Engineering Design, West Haven, Connecticut.** *Connecticut Department of Transportation.* Mr. Airgood was the senior structural engineer responsible for the structural framing and foundation design of a two story passenger train station building. The station building featured a two story, glass curtain wall enclosed passenger waiting area with exposed to view curved roof structure. The design also included a 75 foot span, glass curtain wall enclosed pedestrian bridge spanning over the four rail line track bed to connect the station building with a new two story stair and elevator tower. His responsibilities included coordination with engineering and architectural disciplines during design, performing and overseeing of production structural design calculations and documents, and review of fabrication shop drawings and other construction administration services as related to the building structural systems.

**Years with Michael Baker:** 11

**Years with Other Firms:** 23

#### Degrees

B.S.C.E., 1984, Structural Engineering, Geneva College

#### Licenses/Certifications

Professional Engineer, Pennsylvania, 1999, [REDACTED]

Professional Engineer, Maryland, 2013, 43414

Professional Engineer, North Carolina, 2014, 041701

**Penn Hills Operations Center Addition, Penn Hills, Pennsylvania.** *Duquesne Light Company.* Mr. Airgood was the senior structural engineer of record responsible for the development, design, and detailing of a load bearing masonry wall and steel framing addition to an existing facility.

**Design-Build Tactical Equipment Maintenance Facilities, 31st ADA Brigade, Fort Sill, Oklahoma.** *U.S. Army Corps of Engineers, Tulsa District.* Mr. Airgood was the senior structural engineer responsible for the design of the foundation systems to support an 18,000-square-foot, 35,200-square-foot, and 57,031-square-foot pre-engineered steel Tactical Equipment Maintenance Facilities (TEMF), and a 20,000-square-foot Supply Support Activity facility supply support activity warehouse (SSA). Because of existing expansive soil conditions, the ground floors of each building were designed as reinforced concrete floor systems with a void space between the expansive soil and floors. The concrete floor system and PEMB structural columns were supported by a deep foundation system of drilled concrete piers extending to rock. His responsibilities included review of structural fabrication drawings, attending design coordination meetings and periodic site visits during construction.

**Buildings 200 & 250 of Imperial Business Park, Imperial, Pennsylvania.** Mr. Airgood was the lead structural engineer responsible for the development and design of the structure and foundation systems for two, 250,000-square-foot warehouse facilities. Responsibilities also included construction administration services such as review of structural product submittals and periodic site visits. Each building consisted of steel joist and joist girder roof framing supported by interior steel columns and exterior precast concrete bearing and shear walls. Foundations were soil supported, isolated and continuous, reinforced spread footings.

**ABB Manufacturing and Office Facility, Mt. Pleasant, Pennsylvania.** Mr. Airgood was the lead structural engineer of a high-bay manufacturing, testing and warehouse facility for electric transformer equipment, including an attached two-story office area. The structural systems consisted of precast concrete wall panels enclosing a steel framed interior column and roof structure, including the support of numerous under-hung crane systems throughout the facility ranging from 5- to 20-ton capacities. The lateral framing system was a combination of steel braced and moment frames, and foundations were soil supported isolated and continuous, reinforced spread footings.

**Fuel Cell Facility, Pittsburgh, Pennsylvania.** *Siemens Westinghouse.* Mr. Airgood was the lead structural engineer of a high-bay manufacturing facility, warehouse and two-story attached office area. The structural systems consisted of precast concrete wall panels enclosing a steel framed interior column and roof structure. The lateral framing system was a combination of steel braced and moment frames, and the structural design included support of various top running bridge crane systems ranging from 10- to 40-ton capacities. The foundations were soil supported isolated and continuous, reinforced spread footings.

## Owen Milligan, P.E.

### *Electrical Engineering Manager*

#### **General Qualifications**

Mr. Milligan is an electrical engineer who is experienced working with consulting engineering firms in the study and design of electric distribution and control systems, emergency power for process plants and facilities, water/wastewater treatment plants, government and commercial projects, ASHRAE energy-efficient building design, coordination with vendor and contractors, and approval of vendor drawings. He has a strong knowledge of distribution equipment and designs, motor control center layouts and design, and start-up and services during construction. He is capable of handling multiple projects from conception to final design, working as a team member toward meeting project goals. His work includes management of Baker's electrical engineering department, supervising and providing technical advice to designers and coordinating design and construction work with engineers, contractors, vendors, and clients.

#### **Experience**

**Design/Build SATOC for Military Facilities in the Southwest Region, Various Locations in Southwestern U.S., AR,AZ, CA, LA, NM, NV, OK, TX.** *U.S. Army Corps of Engineers, Tulsa District.* Electrical Engineer. Provided design assistance to the electrical engineering subconsultant, and performed a technical quality review of the construction documents for the TEMFs located at Fort Bliss. Electrical systems included lighting, lightning protection and grounding, power distribution, telecommunications, fire alarm, and unique voltage and frequency requirements. Designs were required to meet UFC and military design standards. Projects constructed under this contract include Brigade Combat Team (BCT) Tactical Equipment Maintenance Facilities (TEMF). TEMFs provide facilities for the purpose of maintaining and repairing vehicles, complete with equipment and parts storage, and administrative offices. Task orders awarded to date include the following: Two TEMFs at Fort Bliss in El Paso, Texas to be shared by five Battalions and one Company; and a Unit Operations Facilities consisting of a TEMF and an Organizational (Deployment) Storage facility, at Fort Bliss in El Paso, Texas. Facility designs are required to meet or exceed a Silver LEED® certification.

**On-Call Multi-Discipline Services, Pittsburgh International, and Allegheny County Airports (PIT/AGC), Pittsburgh, Pennsylvania.** *Allegheny County Airport Authority.* Technical Advisor. Provided technical direction to electrical design staff and performed a technical quality review of the construction documents. Designs were required to meet NEC standards. Since 1989, Baker has provided multidiscipline, on-call services to the Allegheny County Airport Authority (ACAA). The ACAA owns and operates Pittsburgh International Airport (PIT) and Allegheny County Airport (AGC). Baker acted as an extension to the ACAA's staff, providing the depth of resources and experience of the entire company when called upon by the ACAA. Baker provided a full range of services to ACAA on an "On-Call/As-Needed" basis, including architecture, civil, structural, mechanical, electrical and environmental engineering, general engineering administration, construction support, and other areas.

*Years with Michael Baker:* 11

*Years with Other Firms:* 20

#### **Degrees**

B.S., 1988, Electrical Engineering,  
Gannon University

Computer Aided Drafting, Putnam  
County Technical Center, 1995

#### **Licenses/Certifications**

Professional Engineer, California,  
2003

Professional Engineer,  
Pennsylvania, 1999

Professional Engineer, Montana,  
2001

Professional Engineer, Kentucky,  
2005

Professional Engineer, Oklahoma,  
2008

**Rescue Swimmer Training Facility, U.S. Coast Guard Support Center, Elizabeth City, North Carolina.** *U.S. Coast Guard, Facilities Design & Construction Center Atlantic. QA/QC.* Performed a technical quality review of the electrical design for this building renovation project, including lighting and electrical receptacles. Baker prepared Design/Build RFP Documents for a new Rescue Swimmer Training Facility (RSTF) for the Aviation Technical Training Center (ATTC), a tenant of and located on the SC Elizabeth City, NC. The \$13.3 million RSTF is a dedicated aquatic trainer for the purpose of supporting the Aviation Survival Technician (AST) School and recurrent water survival training requirements. Sized appropriately for the curriculum and student loading, the RSTF contained elevated platforms, pool temperature controls, adequate wet and dry storage, male and female locker/shower facilities, classrooms, and office space.

**Gymnasium Locker Room Rehabilitation, USCG Training Center Cape May, New Jersey.** *U.S. Coast Guard. QA/QC.* Performed a technical quality review of the electrical design for this building renovation project, including lighting and electrical receptacles. Baker prepared the design, construction documents, and cost estimate for the interior rehabilitation of an existing facility to combine two women's locker rooms into one large room.

**Relocation and Improvements to the Front Gate, USCG Training Center Cape May, New Jersey.** *U.S. Coast Guard. QA/QC.* Performed a technical quality review of the electrical design for this building renovation project, including lighting and electrical receptacles.

**Route 52, Contract - "B", Somers Point & Ocean City, New Jersey.** *New Jersey Department of Transportation.* Electrical Engineer. Responsible for the electrical systems design to meet NEC standards for a new Visitor's Center, bridge and site lighting, power distribution, and a supplemental photovoltaic solar system.

#### **Non-Baker Project Experience**

**Siemens Government Services, Inc (formerly SD Engineers), Pittsburgh, Pennsylvania.** Senior Electrical Project Engineer. Responsibilities included Senior Electrical Engineer in charge of all electrical work at the Department of Energy's Naval Reactor Facility in West Mifflin, Pennsylvania. Duties included complete electrical design including multiple new office building designs and construction, light industrial type facilities for confidential DOE projects, retrofitting and relocation of existing laboratories, power studies, arc flash calculations, and site power distribution.

**Chester Engineers / US Filter Corporation, Pittsburgh, Pennsylvania.** Electrical Project Engineer. Responsibilities included the following:

- Lead electrical engineer for multiple site water and wastewater treatment projects for a large automobile manufacturer.
- Lead electrical engineer for design of water treatment plants for several large steel manufacturers.
- Lead electrical engineer on design of numerous remote cellular telephone communication sites for a large, wireless Telecommunications Company.
- Assisted a Senior Electrical Engineer on a Short Circuit and Coordination Study using CAPTOR/DAPPER analysis program.
- Responsible for several large detailed constructions cost estimates.
- Lead Electrical Engineer to many local municipalities for wastewater and water pumping/filtration upgrades.

## Kevin Spangler, P.E.

### Fire Protection Engineering Manager

#### General Qualifications

Mr. Spangler is a registered fire protection engineer with an M.S. degree in Fire Protection Engineering and 9 years of experience in the fire and life safety consulting industry. He has been with Michael Baker International since 2009 and has been the fire protection engineering manager since 2014. He provides leadership to the fire protection group and performs project technical reviews of system designs. He also serves as the Designer of Record for his specific project designs. In his wide-ranging fire protection experience and education, he has an extensive technical background and knowledge in the design of fire protection engineering systems, code and life safety analysis, and the commissioning and testing of fire systems. The variety of projects have exposed Mr. Spangler to various types of facilities for military, government, commercial, public, and private clients.

#### Experience

**Renovations to Classroom Building, Beckley, West Virginia.** *WVU Tech/West Virginia University.* Mr. Spangler was the fire protection engineer of record responsible for the design of the fire protection systems at the WVU Tech Beckley Classroom Building. The project consisted of a renovation of an existing building. A new wet-pipe sprinkler system was added to the building, and the existing fire alarm system was adjusted to account for the building renovation. Mr. Spangler provide drawings and specifications for the installing contractor, and reviewed the delegated design submittals for compliance with the project scope and construction codes. This project is currently under construction.

**Renovations to the Benedum Center, Beckley, West Virginia.** *WVU Tech/West Virginia University. Designer.* A sister project to the above referenced Classroom Building, this 21,000 S.F. The existing sprinkler and fire alarm systems were adjusted to account for the building renovation.. This project is currently under construction.

#### **Army Reserve Center, Full Facility Revitalization (FFR), Independence, MO.**

Mr. Spangler was the fire protection engineer for the renovation of the existing army reserve center located in Independence, Missouri. He was responsible for performing a field investigation of existing conditions, performing a fire hydrant flow test and preparing RFP specifications and design criteria documents. The building scope included a new wet pipe sprinkler system in the Reserve Center Building and also the Maintenance Facility. The existing fire alarm system was documented and determined to be removed and replaced with a new fire alarm and mass notification system. The new fire alarm system is designed to serve both buildings and an outdoor speaker system for parking lot notification.

**Years with Michael Baker: 11**

**Years with Other Firms: 1**

#### Degrees

M.S., 2008, Fire Protection Engineering, University of Maryland, College Park Campus

B.S., 2006, Agricultural and Biological Engineering, The Pennsylvania State University

#### Licenses/Certifications

Professional Engineer, California, 2011, [REDACTED]

Professional Engineer, Virginia, 2012, [REDACTED]

Professional Engineer, Pennsylvania, 2012, [REDACTED]

Professional Engineer, Illinois, 2013, [REDACTED]

Professional Engineer, Idaho, 2014, [REDACTED]

Professional Engineer, New York, 2014, [REDACTED]

Professional Engineer, Connecticut, 2015, [REDACTED]

Professional Engineer, South Carolina, 2016, [REDACTED]

Professional Engineer, Minnesota, 2016, [REDACTED]

Professional Engineer, Mississippi, 2017, [REDACTED]

**Shaw Headquarters Building Renovation, Shaw AFB, South Carolina**

Mr. Spangler was the Fire Protection Engineer of record for the renovation of the three story Headquarters Building at Shaw AFB in South Carolina. The building contained an existing fire alarm and existing sprinkler system. The fire alarm system was removed and installed with a new fire alarm and mass notification system. The existing sprinkler system was modified to account for the new building design. The existing sprinkler system was identified by field investigation and as much of the existing sprinkler system was re-used as possible to keep costs minimal for the client. A life safety analysis was performed according to NFPA 101 Life Safety Code and the IBC to ensure the new system design met all building and egress requirements. Mr. Spangler was responsible for the delegated design review and approval of shop drawings prepared by the installing contractor.

**Fire Pump Replacement. Allegheny County Airport Authority – Pittsburgh International Airport.**

Mr. Spangler was the fire protection engineer designer of record for the project. He completed detailed field measurements of the existing systems and finalized the design for the newly installed fire pumps. The project included the installation of 4 new, electric motor driven fire pumps in two (2) separate fire pump houses (2 pumps per fire pump house). The fire water tanks and existing water supply were analyzed to meet code requirements and the existing piping rerouted as necessary to provide appropriate pump recirculation. The challenges that were faced and solved during in the project included the installation of previously purchased fire pumps into an existing system. The project was successful due to the attention to detail in field measurements of the existing systems and the detailed design of the new system.

**Private Corporate Client. Hangar located at Allegheny County Airport.** Michael Baker was responsible for the building design for a renovation of a historic hangar located at the Allegheny County Airport. Mr. Spangler was the Fire Protection Engineer responsible for the design of fire protection systems throughout the building including sprinkler system, foam system, and fire alarm system. Two fire pumps were designed and retrofitted into the building to provide the adequate flow and pressure for the suppression systems. Detailed hydraulic calculations were performed and discussed with the local Authority Having Jurisdiction in order to remove the existing fire water storage tanks from the project. As part of the project, a site survey of existing building and final inspections of the final systems installations were performed.

**Camp Geiger East Infantry Training Complex, Marine Corps Base Camp Lejeune, North Carolina. Naval Facilities Engineering Command, Mid-Atlantic.** Mr. Spangler was the fire protection engineer of record for Academic Building, CIF and Warehouse buildings. He was responsible for fire protection design of protection systems including sprinklers, fire alarm and mass notification systems to meet the requirements of the RFP, UFC and NFPA codes. He performed life safety analysis for complete compliance with NFPA 101, IBC and the UFC criteria. This includes classifying occupancies, occupant load calculations, egress analysis and rated separations. He also performed an on-site fire hydrant flow test according to NFPA 291 to determine the available water supply. This information was used to perform detailed hydraulic calculations for the building sprinkler systems. He worked directly with the NAVFAC fire protection engineer to analyze the water system and remove the need for a fire pump for each of the buildings. Michael Baker served as the lead designer for the design-build delivery of a 137,850-square-foot infantry training complex on five acres at Camp Geiger. The project included the construction of a two-story headquarters and academic building, a warehouse, a consolidated issue facility, an armory building, and an emergency weather center, the demolition of five buildings and various electrical distribution upgrades. The project was designed to meet the requirements for LEED Silver certification.



## Jennifer Cristobal, PLA, A.I.C.P.

### Landscape Architect / Planner

#### General Qualifications

Ms. Cristobal is a community planner and landscape architect with fifteen years of varied experience in community development, urban design, and park planning. Her experience has exposed her to trail planning along abandoned railroad corridors, riverfront development projects, as well as adaptive reuse and planning in communities where populations are continuing to contract. As both a planner and a designer, she excels at identifying policy, programming, and design solutions.

#### Experience

**Bloomfield Streetscape Project.** *Bloomfield Development Corporation. Pro Bono Landscape Architect.* As a pro bono effort, provided planning assistance and landscape architecture services for a streetscape project. Coordinated the installation of demonstration streetscape improvements like benches, planters, and trash cans. Due to the demographics of the community, produced a visual survey for resident feedback that was designed for users with low literacy and vision issues. The survey was widely distributed and resulted in significant response rates and community engagement.

**Mon-Oakland Mobility Plan, Pittsburgh, Pennsylvania.** *City of Pittsburgh, Pennsylvania. Planner.* Provided technical planning and community engagement for a stakeholder-driven process for a multi-modal transportation plan. Michael Baker created the Mon-Oakland Mobility Plan with Pittsburgh's Department of Mobility Infrastructure and the Urban Redevelopment Authority. Michael Baker developed an alternative mobility concept that would provide new transit connections for the residents of Hazelwood, Greenfield, and Four Mile Run. Seeking to build community consensus, Michael Baker created a methodology of extensive public consultation and engagement and evaluated five possible alternatives, and through geotechnical, planning, and engineering expertise, proved each alternative's merits, including cost, time of construction, and disruptions to the neighborhoods. Additionally, Michael Baker conducted several site visits to help create the best route for this system. The Mon-Oakland Mobility Plan quantified demand and connectivity access between neighborhoods and Oakland; explored routes and technologies to meet demand; recommended mobility facilities for design that can coincide with the Four Mile Run Green Infrastructure Project; and identified the associated provisions and policies to make a new connection work. The Mon-Oakland Mobility Plan is expected to be implemented by 2021.

**Area Development Master Plans.** *US Army Corps of Engineers. Planner.* Responsibilities included QA/QC for graphics, reports, and illustrative master plans related to Area Development Plans and other planning documents for US Army installations nationwide. This project supports the holistic Installation Management Command (IMCOM) Master Planning program which focuses on working with diverse installations and regional organizations to build a collaborative planning outreach to engage stakeholders. This results in empowering stakeholders to build consensus and prepare a Real Property Vision Statement, Installation Planning Standards, a set of planning strategies, a development plan strategy, and regulatory planning guidance as part of an Area Development Plan. The project involved Facility Occupancy Verification Surveys (FOVS), Planning Charrettes, and Planning Products at six large IMCOM installations.

**Ross Township Bicycle and Pedestrian Plan.** *Ross Township, Pennsylvania. Planner.* Provided planning and design on the bicycle/pedestrian plan for Ross Township including overall recommendations, mapping, and report production.

*Years with Michael Baker: 6*

*Years with Other Firms: 9*

#### Degrees

M.L.A., 2009, Landscape Architecture, Chatham University

B.A., 2004, Urban Studies/Planning, University of Pittsburgh

#### Licenses/Certifications

Landscape Architect, Pennsylvania, 2015, [REDACTED]

American Institute of Certified Planners, USA and Canada, 2016, [REDACTED]

**Portage Lakes Water Trail, Summit County, Ohio.** *Ohio and Erie Canalway Coalition. Landscape Architect.* Completed designs for non-motorized boat ramps and trails at three overland connections for the Portage Lakes Water Trail. Designs included natural and manmade shorelines, connections with existing communities, additional pedestrian/boater amenities, signage, and landscaping. Completed research for and recommendations related to overall objectives and design guidelines for the creation of land trails. Completed report production including text, graphics, and mapping. Michael Baker performed a feasibility study for connecting the Ohio and Erie Canal with Long Lake and the Portage Lakes for nonmotorized and motorized boating. The water trail would provide residents and visitors the opportunity to travel between Portage Lakes and downtown Akron. Michael Baker's services included cost estimates, project phase development, and examination of the various elevation changes between the Ohio and Erie Canal and Portage Lakes.

**West Point Military Academy Master Planning.** *U.S. Army Corps of Engineers. Senior Planner.* Acted as a senior planner for multiple master planning efforts at West Point. Participated in the creation of a Vision Plan and Planning Standards that divides the campus into districts and provides general planning guidance. Worked on 3 Area Development Plans, which include a weeklong stakeholder-drive workshop, illustrative master plan showing phased projects and cost estimates, and a report documenting the process and results. Currently working with the Academy to schedule a fourth Area Development Plan.

**Advanced Training Center.** *US Customs and Border Protection. Planner.* Provided master planning concepts and plans. This training/classroom campus is designed to meet the training needs of career CBP Officers, Border Patrol Agents, and Air and Marine law enforcement personnel within Operational Security (OPSEC) parameters. The campus is currently overutilized for the current trainings and conducts numerous trainings at various locations across the country due to lack of space. Michael Baker developed Master Planning products to help address overcrowding and address ongoing facility needs.

**Flag Officer Quarters Bahrain.** *US Army Corps of Engineers. Landscape Architect.* Provided landscape architecture/landscape design for Officers Quarters at the installation.

**Landscape Design & LEED Silver.** *Basic Systems, Inc. Landscape Architect.* Provided landscape architecture design for small office campus site in compliance with LEED Silver requirements.

## Wesley O. Stafford, P.E., AICP

### Technical Manager

#### General Qualifications

Mr. Stafford has experience in highway planning and design. As a consultant he has been the project manager for numerous traffic engineering project and environmental documents, including developing NEPA environmental documents from CEs to an EIS. His previous experience includes working as both a consultant and with the State of West Virginia and North Carolina. He led NCDOT Statewide Planning Branch's Small Urban Unit. The unit provided transportation planning expertise to municipalities across North Carolina and plans for the coordinated development of the road and highway systems for counties, planning regions, and municipalities on a statewide basis.

#### Experience

**Corridor H Quality Assurance Management (QAM) Services, Randolph and Tucker Counties, West Virginia.** *West Virginia Department of Transportation, Division of Highways.* Michael Baker provided quality assurance management (QAM) for construction of Sections 1, 2, and 3 of the Corridor H highway from Kerens to Parsons. During a long-term relationship with the client, Michael Baker served as the owner's representative to provide all the services needed from pre-award phase, through post-award and construction stages of their largest ever construction project being executed as design-build.

**Eugene A. Carter Memorial Bridge Six-Year Inspection Program, Kanawha County, West Virginia.** *West Virginia Department of Transportation, Division of Highways.* Under a six-year agreement, Michael Baker conducted in-depth, periodic, and interim inspections of the Eugene A. Carter Memorial Bridge, also known as the Fort Hill Bridge. A periodic inspection of four exit/entrance ramps was also included. Michael Baker's services included project management, hands-on bridge inspections in accordance with various state and federal bridge inspection standards, preparation of a stream channel profile, oversight of traffic control and inspection access by a subcontractor, and preparation of detailed inspection reports.

**NC 127 Widening Preliminary Design, Catawba and Alexander Counties, North Carolina.** *North Carolina Department of Transportation.* Michael Baker is providing engineering and environmental services for improvements to NC 127 from Cloninger Mill Road (S.R. 1400) to Richey Road (S.R. 1156). Michael Baker's services include project management, a noise analysis, and air quality analysis, community impact studies, oversight of a preliminary hydraulic analysis, preliminary roadway design, a state-level environmental assessment, public involvement, and regulatory agency coordination.

**Project Development and Environmental Analysis Procedure Manual Development and Updates, Statewide, North Carolina.** *North Carolina Department of Transportation.*

*Years with Michael Baker: 8*

*Years with Other Firms: 27*

#### Degrees

B.S., 1988, Civil Engineering, West Virginia University

Coursework, Transportation Engineering, North Carolina State University

Coursework, Computer Science/Mathematics, West Virginia State College

#### Licenses/Certifications

American Institute of Certified Planners, 2003, [REDACTED]

Professional Engineer, West Virginia, 2004, [REDACTED]

**Planning and Design Limited Services Agreement, Statewide, North Carolina.** *North Carolina Department of Transportation.* Michael Baker is providing comprehensive engineering and environmental services for highway and interchange improvement projects under a three-year limited services agreement for planning and design. Michael Baker's services include project management, traffic analyses, right-of-way plans, hydraulic and hydrological analyses, environmental investigations and documentation, public involvement, and preliminary and final design.

**Traffic Counts Districts 7, 8 and 9.** *WV Department of Transportation, Division of Highways.* Project Manager.

**WVDOH 2019-2021 Traffic Counts.** *WV Department of Transportation, Division of Highways.* Project Manager.

**West Virginia Statewide Pavement Data Collection, Statewide, West Virginia.** *WV Department of Transportation, Division of Highways.* Project Manager. Michael Baker is performing statewide pavement data collection, including laser crack measurement system (LCMS) inventory and panoramic image collection on 28,000 miles of state roadway, extending across 10 districts and 55 counties in West Virginia. The inventory is being performed using Michael Baker's mobile data collection vehicle, which is equipped with a sensor-based LCMS. All pavement data collected is being spatially referenced and aligned with the 360-degree spherical imagery and downward facing pavement imagery from the LCMS and provided to the client via a web-based pavement data viewer application.

**Pavement Data Collection - 2019.** *WV Department of Transportation, Division of Highways.* Project Manager.

**NC Rail Division - Engineering & Safety Branch, General Rail Environmental (LSC No. 7000012159).** Project Manager, for on-call environmental planning. *North Carolina Department of Transportation.*

## **Non-Michael Baker Project Experience**

**I-64 St. Albans to Nitro Interchange Justification Study, Nitro, West Virginia.** *WV DOT.* Traffic Engineer. This study for the widening of I-64 between a proposed U.S. 35 interchange and the 40th Street overpass included analysis of the new design, network modifications, and traffic elements for the interchange justification/access modification report. We served as traffic engineer and provided traffic services.

**Traffic Impact Studies, various cities, West Virginia, West Virginia, and Ohio.** *Private Clients.* Project Manager. Used ITE Trip Generation to determine impacts to adjacent street system impacts caused by the development of discount stores, service station, office parks and residential development.

**District 2 Bridge Replacements Design-Build, Logan, Mingo, and Wayne Counties, West Virginia.** *West Virginia Department of Transportation.* Project Director. Responsible for a design-build project to replace six bridges in southern West Virginia. The bridge replacements varied in length from 34 to 186 feet. WSA provided comprehensive engineering services to address the bridge and associated roadway design. These design services also included drainage, bridge hydraulics and scour analysis, and environmental planning.

## **Professional Affiliations**

American Council of Engineering Companies (ACEC)  
American Institute of Certified Planners (AICP)  
American Planning Association (APA)  
American Society of Civil Engineers (ASCE)



## APPENDIX 2 – PROJECT PROFILES

# Little Kanawha Bus Administrative and Maintenance Facility

*Mt. Zion, West Virginia*

Michael Baker provided general Architectural and Engineering services to the West Virginia Division of Public Transit for the Little Kanawha Administrative/Maintenance Facility located near Grantsville, West Virginia.

The WV Division of Public Transit selected Michael Baker to provide complete design and construction administration services to include the construction of a pre-engineered metal and brick building, sited on the available property allowing for future expansion needs. Parking for the buses and employee vehicles will surround the building. The site is approximately 4.55 acres.

The operations facility has approximately 10,000 square feet of which 4,500 square feet houses five offices, a conference room, and money counting room, office storage space, copier and supply room, and a driver training room that accommodates approximately 25 individuals. The remaining 5,500 square feet is dedicated to the maintenance functions and includes a Wash Water Reclaim System. **The building is provided with selective stand-by electrical power from a 50 KW natural gas generator with an automatic switch gear system.**

The garage structural roof the overall eave height will be about 18 feet. This area also includes space for indoor bus storage for approximately seven (7) vehicles. The building is designed so that the vehicles can pull through the facility. The building was designed to employ green building practices, but was not LEED (Leadership in Energy & Environmental Design) Certified.

### *Client*

State of West Virginia  
Department of Transportation  
Division of Public transit  
Building 5, Room 906  
1900 Kanawha Blvd., East  
Charleston, WV 25305-0432

### *Contract Completion Date*

2013

### *Baker's Role*

- Architecture
- Renovation design
- Feasibility studies
- Cost estimates
- Civil engineering
- Surveying
- MEP engineering
- Structural engineering
- Environmental Permitting



# Good News Mountaineer Garage Administrative and Maintenance Facility

*Charleston, WV*

Michael Baker provided general Architectural and Engineering services to the Good News Mountaineer Garage (GNMG). The facility is located on the west side of Charleston, West Virginia. The Good News Mountaineer Garage is a nonprofit organization that accepts donations of vehicles that are repairable for a reasonable amount of money. After repair, these donated cars are then distributed to low-income families needing dependable transportation.

The GNMG selected Michael Baker to provide complete design and construction administration services in three phases. Among these design services were the installation of a new HVAC, fire alarm system and fume detection systems. The first phase was to renovate the interior of the building on 4<sup>th</sup> Avenue in order to provide facilities for the automobile repair and administrative staff. Phase II included the build-out of a show room and Phase III was dedicated to the exterior of the building including vehicle storage and special event areas. Parking for some repaired vehicles and employee vehicles was provided east side of the building. The site is approximately 0.75 acres. The main facility has approximately 7,500 square feet of space of which 4,700 square feet, houses four administrative offices, a board room, a copier/supply room, restrooms and a large show room /event center which can accommodate up to approximately 75 individuals. The remaining 2,100 square feet is dedicated to the automotive repair functions. The garage includes two new vehicle lifts and overhead parts storage. The building was designed so that the vehicles can pull through the garage while the lifts are being used. Michael Baker incorporated green building practices, including passive solar tube lighting in the showroom and maintenance garage. LED lighting was also used in order to help control utility costs for the operation of the facility.

## **Client**

Good News Mountaineer Garage  
1637 4<sup>th</sup> Avenue  
Charleston, WV 25387

*Ms. Asley Orr,*  
*Executive Director*  
304-344-8445

## **Completion Date**

March 2016

## **Michael Baker's Role**

- Architecture
- Civil Engineering
- MEP Engineering
- Landscape architecture
- Structural Engineering
- Bid Phase Services
- Construction Management
- Estimating



# West Virginia State Capitol Restroom Renovations

*Charleston, West Virginia*

Michael Baker led a team of experts in a planning study for the restoration or renovation of 31 restrooms in the West Virginia Capitol Building. The planning study was intended to assess the facilities and their conformance to current code requirements and code-required capacities, compliance with Americans with Disabilities Act (ADA) requirements, quantification of the building occupancy during normal and peak periods, and an evaluation of gender distribution of restrooms within the capitol. The infrastructure of the plumbing and associated systems were also assessed in the course of the study including; water and sewer, fire protection, ventilation, electrical and structural as it related to the restrooms.

The capitol building was built in three phases between 1925 and 1932, and is on the National Register of Historic Places.

The study and subsequent design addressed the design framework for the renovation of the selected restrooms, provided an overall project cost, and propose a logical sequence of design, construction, and schedule of implementation over three years. The study portion identified and verified physical characteristics, including room layouts; fixture counts; location of all mechanical, electrical, and plumbing (MEP) devices; current level of ADA compliance; and location and condition of vitrolite and carrara glass panels. The study also included an analysis of building population issues, building code issues, and the potential impacts of construction.

The findings and recommendations were presented and accepted, and a complete set of construction documents were developed with for construction sequencing and scheduling. The final plan incorporated the client's comments in the schematic and design development documents. Michael Baker has completed the final design and construction administration services for eleven (11) of the restrooms which serve the WV State House of Representatives.

## **Client**

State of WV General Services  
Division  
Department of Administration  
1900 Kanawha Boulevard East  
Building 1, Room MB-60  
Charleston, WV 25305

## **Completion Date**

Phase I – January 2021

## **Michael Baker's Role**

- Feasibility studies
- Architecture
- Plumbing engineering
- Mechanical engineering
- Fire Protection Engineering
- Electrical engineering
- Cost estimates
- Construction Administration





# WVARNG Charleston Armory HVAC & Architectural Renovations

*Charleston, West Virginia*

The existing building/facility started as the Coonskin Armory constructed in 1961. The Headquarters Building was constructed simultaneously with the Coonskin Armory and occupied the second floor. Also, in 1961, as a separate structure, the Adjutant General's Wing (TAG Wing) was constructed nearby. Later, in 1984 the Coonskin Armory/Headquarters Building was physically connected to the TAG Wing with an area of administrative offices. This final major construction project connected all the buildings into one major facility of over 50,000 square feet, referred to as the Charleston Armory.

The West Virginia Army National Guard (WVARNG) Construction and Facilities Management Office (C&FMO) requested a study be conducted of the consolidated mechanical and electrical components of the consolidated facility known as the Charleston Armory. Such items were considered as the condition of existing HVAC/MEP systems and design improvements or upgrades to those systems and examination of the existing building envelope and recommend possible improvements to the Envelope, HVAC, Electrical and Plumbing systems.

A loop pipe water source heat pump system determined the most cost effective for this situation, with fewer pipes, smaller space requirements and a lower installation cost. Various HVAC components included a Fluid Cooler, Boilers, Pumps, Wall Consoles, above ceiling HPs, along with some Rooftop Units and Energy Recovery Units. During the renovation process, mold was discovered growing in certain areas of the building. An investigation was undertaken, building humidity was logged and measures were implemented to install dehumidification in existing equipment in the building, building leaks were sealed and existing mold was remediated. Michael Baker's design also addressed the repair of the existing roofing system, addition and repairs of roof curbs for HVAC equipment, repositioning of blocking and walk pads around the roof, and installation, repair and patching of the existing EDPM roofing system and maintaining the existing warranty.

## *Client*

West Virginia Army National Guard  
Division of Engineering and  
Facilities  
1703 Coonskin Drive  
Charleston, WV 25311-1085

*Mr. Joe McClung*  
304-561-6475

## **Contract Completion Date**

2013

## **Baker's Role**

- Architecture
- Mechanical Engineering
- Feasibility studies
- Cost estimates
- Civil engineering
- Electrical Engineering
- Structural engineering
- Environmental Permitting



# WVU Institute of Technology, Benedum Building

*Beckley, West Virginia*

Michael Baker provided general Architectural and Engineering services to the West Virginia University Institute of Technology, Beckley Campus. The client requested a feasibility study, which laid the groundwork for the fast pace renovation of the building prior to the start of the new school year in August 2017. The facility will house administrative services, student services, student government, a recreational area and upward bound.

The work completed at the 21,000 SF Benedum Center included interior finishes selection to support large numbers of student use. Other notable portions of the work included upgrades to the mechanical and fire alarm and fire suppression systems as well as retrofitted ADA toilet facilities. A conglomerate of three separate buildings, special attention was spent on exiting requirements and coordination of door hardware systems.

The facility also received a completely new EPDM roof and specialized basement wall treatments to shore up existing water penetration problems. The Benedum Center also required technical upgrades including new data lines and server. The project also requires lots of coordination of the existing door hardware to interface with existing products as appropriate and necessary. These hardware considerations also had to align with campus wide standards. Lastly, both facilities received interior upgrades to emphasize University branding elements and bring renewed life to a defunct campus.

Additionally, all portions- feasibility study to design and cost proposals- of this traditional design, bid, and build project were performed under a compressed and confined time constraint, allowing the client to successfully move one campus to another in one short year.

## **Client**

West Virginia University  
Beckley Campus  
400 Kanawha Street  
Beckley, WV 25801

## **Completion Date**

September 2017

## **Michael Baker's Role**

- Feasibility studies
- Architecture
- Mechanical engineering
- Fire Protection Engineering
- Electrical engineering
- Plumbing engineering
- Cost estimates
- Construction Administration



# WVU Institute of Technology, Classroom Building

*Beckley, West Virginia*

Michael Baker provided general Architectural and Engineering services to the West Virginia University Institute of Technology, Beckley Campus. The client requested a feasibility study, which laid the groundwork for the ambitious renovation of two buildings concurrently. The first was the Classroom building, the facility will house engineering labs, computer classrooms, psychological observation and Rat laboratories as well as some administrative services.

The Classroom Building required extensive coordination between generations of building engineering systems as well as selective demolition of architectural interior systems to allow for update use. The 31,000 SF facility was designed originally as a junior high school on the 1940's and was renovated to house technically advanced mechanical, hydraulic and computer engineering laboratories. To bring the facility to the 21<sup>st</sup> century, a student lounge, student rest and study spaces- where electronics can be utilized and charged- were devised from a former kitchen and corridor locker areas, respectively. A modern mechanical distribution system was designed to support air conditioning while a new, **building-wide fire suppression system**, complete with a larger water supply line, was engineered. The Classroom Building also included the design of a psychological observation laboratory that requires national accreditation and necessitated special design considerations.

The facility also received a completely new EPDM roof to shore up existing water problems. A large energy recovery unit was installed on the roof to provide fresh air to the classrooms throughout the building. The Classroom Building also required technical coordination of the existing door hardware to interface with existing products as appropriate and necessary. These hardware considerations also had to align with campus wide standards. Lastly, both facilities received interior upgrades to emphasize University branding elements and bring renewed life to a defunct campus.

Additionally, all portions- feasibility study to design and cost proposals- of this traditional design, bid, and build project were performed under a compressed and confined time constraint, allowing the client to successfully move one campus to another in one short year.

## Client

West Virginia University  
Beckley Campus  
400 Kanawha Street  
Beckley, WV 25801

## Completion Date

September 2017

## Michael Baker's Role

- Feasibility studies
- Architecture
- Mechanical engineering
- Fire Protection Engineering
- Electrical engineering
- Plumbing engineering
- Cost estimates
- Construction Administration



# Design & Construction Oversight of Three PEMB T-Hangars

*Morgantown Municipal Airport (MGW),  
Morgantown, West Virginia*

Michael Baker provided design and engineering services for three pre-engineered metal building (PEMB) t-hangars west of the West Virginia Army National Guard Readiness Center known as the East Side Development and east of Runway 18-36. The construction was completed using the Civil/Military Partnership - Innovative Readiness Training Program (IRT).

Phase 1 of the project encompassed development of infrastructure, including site grading, drainage, bituminous taxilanes, pavement markings, vehicle parking, and fencing for the three t-hangars. Phase 2 encompassed the t-hangars on the east side of the airfield and included site civil, structural, architectural, interior, mechanical, plumbing, fire protection, and electrical utilities design. Michael Baker also provided material bidding/procurement services, and construction administration/management services.

## Phase 1

Michael Baker surveyed the project site to locate existing drainage structures, determine structure inverts, pipe sizes, orientation, and pertinent utility structures; performed a geotechnical investigation to determine subgrade soil properties for pavement design and building foundations; and developed an engineer's report to serve as the basis of design. Michael Baker also prepared and submitted FAA Form 7460-1 to address the permanent and temporary impacts to the airspace as a result of the project.

Additionally, Michael Baker developed a grading plan with best management practices (BMP), provided a bituminous pavement design with a 20-year structural design-life, developed preliminary airfield lighting and wiring layouts for the existing Taxiway D, and designed electrical and communication utility infrastructure necessary for future hangars. Michael Baker then prepared construction plans and specifications for all required materials for completion of the development.

## Phase 2

Michael Baker produced drawings and specifications for the construction of the three PEMB t-hangars and the associated site work. Site/civil design included sewer, sanitary holding tank, trench drains, medium voltage duct bank, concrete access aprons, sidewalks, grading, and drainage. Structural design included spread footing foundation for each t-hangar. Architectural design included floor plans and elevations, restroom, and fire barrier walls. Mechanical and plumbing design included heating, ventilation, plumbing, water heating, and drain-waste-vent

## **Client**

Morgantown Municipal Airport  
100 Hart Field Road  
Morgantown, West Virginia 26505

## **Completion Date**

2017

## **Michael Baker's Role**

- Survey and mapping
- Stormwater management
- Geotech investigation
- Permitting
- Engineer's report
- Pavement design
- Site grading design
- Drainage design
- Environmental assessment
- Architecture
- Structural Engineering
- Mechanical Engineering
- Electrical Engineering
- Construction Documents, Estimating and Bidding phase services
- Construction management

## Open-End Architectural/Engineering Services

West Virginia State University, Institute, West Virginia

Michael Baker was retained by the West Virginia State University (WVSU) under an Open-End Architectural and Engineering contract to perform renovations, alterations, reconstruction and/or extensions of existing facilities. The Indefinite Delivery / Indefinite Quantity (IDIQ) agreement is for a period of 10 years. Michael Baker's specific tasks include programming, planning, design development, construction documentation, evaluations, feasibility studies, cost estimating and construction contract administration services. Major "building" design and "building" renovation projects are not included in this contract.

The following is a summary of some of our experiences:

### East Hall Renovations

East Hall is a historic facility housing faculty administrative functions for the University. In the last several years, the original wood siding and window units have begun to show signs of age deterioration. Baker performed an inspection of the building then prepared a scope of work and construction cost opinion for the replacement of the siding and windows as well as the design of a new ADA-compliant entrance ramp.

### Ferrell Hall Entrance Improvements

Ferrell Hall is the primary administrative facility for the University. Baker performed a building entrance inspection and code review for ADA compliance. Baker then prepared a scope of work and construction cost opinion for the upgrades to both entry/egress points on the west end of the facility. The work included ADA-compliant walkways, stairs and railing, upgrades to the existing wheelchair ramp, a decorative retaining wall and landscape improvements.

### Dawson Hall Humidity Assessment

Dawson Hall is a women's dormitory on the University Campus. Baker performed a building inspection for humidity and mold related problems. It was determined that further investigation and testing was required. Once the investigation is complete, a report will be prepared outlining recommendations for improvements to the ventilation and insulation within the individual dorm rooms Baker will then prepared a scope of work for corrective measures of the air flow/ventilation and building envelop. .

### Hamblin Hall Water Line Location

Hamblin Hall serves as the University's Science Building. A main 10" water line serving the campus runs under the facility and through the adjacent vacant lot. Baker was engaged to locate the line and associated shut-off valve which was inadvertently buried during fill operations circa 1985. Services involved underground line location techniques, the examination of old campus mapping, and coordination with the site survey team that actually located the buried valve.

### Client

West Virginia State University  
124 Ferrell Hall  
Institute, WV 25112

*Mr. Marvin Smith*/Director of  
Physical Facilities  
304-766-3010

### Completion Date

10-Year IDIQ ending 2021



### Storm Drain Assessment and Repair

A study was completed of 72" storm drain system, 42" storm drain system and various combined sewer and storm drains on campus. Camera crews videoed selected pipe sections from the outfalls back to manholes and beyond.

A Deeply buried 72" CMP (Corrugated Metal Pipe) and damaged portions of an existing RCP (Reinforced Concrete Pipe) needed replacement with new RCP, the project was designed and constructed after an extensive study to determine the extents of the damage.

Also a 42" storm drainage system from State Route 25 on the east side of campus that combine at a drop inlet (DI) east of the Hamblin Hall parking area an on to Dubois Street was evaluated for damage. Recommendations and estimates were provided to the university.

An 18" VCP (Vitrified Clay Pipe) main sewer line serving the campus was also evaluated for damage due to the presents of sinkhole forming behind the baseball field. . Old drawings indicate that this pipe extends from Athletics Drive south to a lift station east of the football field and was a "combined sanitary and storm sewer". Recommendations and estimates were provided to the University for the upgrade of this line.



### Campus Main Water Loop Assessment and Design

Baker mapped domestic water valves, meters and fire hydrants in and around the main core campus in preparation for new district water piping system design.

A new loop water system for the main campus was designed and included a new secondary service connection from Barron Drive. This will back-feed the main water piping system. The new service mains are being installed in phases to help control costs and minimize disruptions to the campus.



### Lakin Field Football Stadium Improvements

WVSU's Lakin Field serves the University's Football Program and is currently in need of upgrades. The field has a natural turf field with an oval track surrounding it, and drainage structures in the area which are aging and need upgrading. The University requested that Baker assist them with planning upgrades to the football field and drainage system. Baker's civil services included a topographical survey of the area including the drainage structures in the football field area. We also prepared an analysis of the conditions and a proposal with costs of upgrading the field to an artificial turf field, addition of an ornamental fence, a new scoreboard with video display, new goal posts, ticket booths, and upgrades to the existing drainage. Baker additionally prepared a preliminary cost analysis of the work for fund raising purposes.



pipng for restrooms. Fire protection design included a two-hour rated fire barrier, life safety report and drawings, and a code review. Electrical design included power feed, power distribution, lighting system, controls, and grounding; site lighting photometric calculations, layout, and controls; and exit emergency egress lighting.

**Bidding and Construction Management Services**

During the bidding phase, Michael Baker distributed bid documents to material suppliers, prepared material lists, evaluated bids for completeness and accuracy, provided a recommendation for award, assisted with preparation of grant application documents, and prepared and coordinated contract documents.

Construction phase services consisted of construction administration, construction management, and construction observation. Michael Baker provided an on-site inspector to observe construction progress and activities were completed in accordance with the plans and specifications. Administrative services consisted of project coordination, meeting attendance, submittal and shop drawing review, and project closeout.



## APPENDIX 3 - REFERENCES





Each of the Project Profiles found in Appendix 2 lists Michael Baker's client and contact information for your use as a reference. Additionally, we offer the following diverse list of past or current clients and contact information:

- **West Virginia Alcohol Beverage Control Administration**  
900 Pennsylvania Avenue, 4<sup>th</sup> Floor  
Charleston, WV 25302  
*Mr. Fred Wooton, Commissioner*  
*(304) 356-5501*
- **130<sup>th</sup> Airlift Wing West Virginia Air National Guard**  
1679 Coonskin Drive, Unit 18  
Charleston, WV 25311-5005  
*Captain Harry Netzer, P.E., Deputy Base Civil Engineer*  
*(304) 341-6649*
- **West Virginia Army National Guard**  
1707 Coonskin Drive  
Charleston, WV 25311-1099  
*Mr. Joe McClung, Project Manager*  
*(304) 561-6548*
- **Town of West Milford**  
925 Liberty Street  
West Milford, WV 26451-0120  
*Mr. Jeff Barnhart, Councilman*  
*(304) 745-3131*
- **City of Madison**  
255 Washington Avenue  
Madison, WV 25130  
*Mr. Steve Byus, Emergency Management Director*  
*(304) 369-2762*
- **City of Elkins**  
401 Davis Avenue  
Elkins, WV 26241  
*Mr. Robert Pingley, Operations Manager*  
*(304) 369-2762*
- **West Virginia Department of Transportation – Division of Highways**  
1900 Kanawha Boulevard East, Building 5, Room 740  
Charleston, WV 25305  
*Mr. Timothy B. Sedosky, Planning Division Grant Administration Unit Leader*  
*(304) 414-6938*