MILLER
ENGINEERING, INC.

Expression of Interest
Architectural & Engineering Services for Various Maintenance Projects
CEOI 0211 GSD2000000003

October 23, 2019

Department of Administration
Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

304-291-2234 (ext. 107) | 240 Scott Avenue Suite 1 | Morgantown, WV 26508 | www.MillerEng.net
West Virginia | Pennsylvania | Maryland | Ohio| Virginia

MILLER ENGINEERING, INC.

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MILLER ENGINEERING, INC.

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The Miller Engineering Difference

We are very pleased to submit our response for the Various Maintenance Projects Expression of Interest. MEI has decided to submit as the prime consultant on this project as several of these projects are HVAC focused. We believe our experience in both HVAC renovations and projects for WV General Services Division makes MEI a great fit for these projects. We have performed many HVAC renovations which require a phased approach to keep the facility in operations. We have successfully delivered phased HVAC renovations for educational, commercial, and government facilities. To address the structural and architectural aspects of the maintenance projects, we have decided to team up with CAS Structural Engineering and Montum Architecture. Both firms have extensive experience with WV state agency projects. Additionally, both firms have performed many successful projects as part of a team with Miller Engineering.

We're not your typical MEP firm; we ensure our designs meet very specific, time-tested criteria, including but not limited to being constructible, operable and maintainable. We want to set up our clients to be self-sufficient, but we work to be available every step of the way.

Our hands-on staff takes great pride in their construction and operations backgrounds, which help us visualize the project as it would be built instead of just lines on paper. We don't sit clients down and lecture to them about what they're going to get; we listen to them so we can strive to deliver exactly what they want and need. It costs too much time and money (for both our clients and us) to not deliver exceptional service every single time, and we work tirelessly to keep projects on time and on budget. We're proud to say that our change order percentage over the last 8 years is less than 0.1%, and that's not just a statistic; it's a proclamation of our commitment and determination to make sure things are done right the first time, every time.

Miller Engineering has completed several successful projects for WV General Services Division. We are currently the MEP consultant on the upgrades to WV Building 25, the WV Building 5 Elevator Modernization, and the Capital Chiller Ice Plant projects. Additionally, MEI has delivered many projects for WV Division of Natural Resources and the WV Department of Agriculture. We are very familiar with the rules and regulations of the WV Purchasing Department. We appreciate your consideration of Miller Engineering for the Architectural and Engineering Services for Various GSD Maintenance projects.

Best regards,

Craig Miller
President/Owner
Miller Engineering, Inc.

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TAB 1 - FIRM PROFILES

MILLER
ENGINEERING, INC.

Firm Profile

MILLER ENGINEERING is a solely held (S) corporation owned by Craig Miller PE, President. The corporation maintains a Certificate of Authority with the WV State PE Board and has carried professional liability insurance since its inception. Neither the firm nor its professional engineers have ever faced disciplinary action in any form from the states in which they are registered.

Our engineered solutions involve a detailed assessment process: investigation, observation, communication with stakeholders, system analysis, building modeling and engagement from our entire team. We approach each and every project with this process and the guiding principle that buildings are designed to be livable and function in their intended purpose.

Over the past 14 years Miller Engineering, Inc. (MEI) has engineered solutions for over $23.2M in MEP system upgrades, repairs and renovations for projects of all scopes and sizes, with clients ranging from private owners to local and state governments. With a strict attention to detail and commitment to delivering a job done well and done right the first time, every time, ***MEI has accumulated a change order percentage of less than 0.1% over the past 8 years.***

Our team has unique skill-sets regarding engineered renovation solutions. Each member of the team has hands-on mechanical system experience including installation, construction, design and maintenance.

Miller Engineering takes pride in being ***different by design****, and that difference shines through in all phases of our work and continued relationships with our clients.*

- Experienced and Licensed Professional Engineers
- Quality, Value-Engineered Project Delivery
- Qualified Construction Representative on Staff
- LEED-AP Certified
- Below Industry Change Order Status
- Building Information Modeling
- Emergency Facility Response

Engineering Design and Consultation

- Mechanical
- Electrical
- Plumbing
- HVAC Design
- Renovation
- New Construction
- Building Information Modeling

Aquatic Facility Design
Public Pools & Areas
ADA Compliance
Indoor & Outdoor (air flow)
Chlorination/Filtration

Construction Administration
Maintenance/Facility Improvement Plans
Contract Administration
Code Observation

Communication System
Intercomm & Public Address
Voice/Data/CATV
Urgent Response

Energy
Power Supply (main & backup)
Green & Renewable Consulting
Systems Utilization & Upgrades
Sustainable Solutions

Facility Utilization
Systems Assessment & Solutions
Adpative Re-use
Planning/Life-Cycle Control
Engineered Replacement

Life Safety Inspection/Design
Fire Protection & Alarm Systems
Access Control
Fire & Electrical Investigation

Industry Experience
Education
Local & State Government
Commercial Development
Healthcare

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Firm Profile

CAS Structural Engineering, Inc. – CAS Structural Engineering, Inc. is a West Virginia Certified Disadvantaged Business Enterprise structural engineering firm located in the Charleston, West Virginia area.

Providing structural engineering design and/or analysis on a variety of projects throughout the state of West Virginia, CAS Structural Engineering has experience in excess of 30 years on the following types of building and parking structures:

- Governmental Facilities (including Institutional and Educational Facilities)
- Industrial Facilities
- Commercial Facilities

Projects range from new design and construction, additions, renovation, adaptive reuse, repairs and historic preservation (including use of The Secretary of the Interior's Standards for Rehabilitation) to evaluation studies/reports and analysis.

CAS Structural Engineering utilizes AutoCAD for drawing production and Enercalc and RISA 2D and 3D engineering software programs for design and analysis. Structural systems designed and analyzed have included reinforced concrete, masonry, precast concrete, structural steel, light gauge steel and timber.

Carol A. Stevens, PE is the firm President and will be the individual responsible for, as well as reviewing, the structural engineering design work on every project. Carol has over 30 years of experience in the building structures field, working both here in West Virginia and in the York, Pennsylvania vicinity. Carol is also certified by the Structural Engineering Certification Board for experience in the field of structural engineering.

CAS Structural Engineering, Inc. maintains a professional liability insurance policy.

Montum Architecture

Montum Architecture, LLC was founded in 2017 to provide architectural design services to clients in West Virginia and western Maryland. Staff includes one licensed architect performing all tasks and duties. This ensures the utmost coordination of building plans and specifications with minimal potential for miscommunication. Extensive experience with projects of a historical nature and review and consent by both local historic AHJ's and the WV State historic Preservation Office.

Legal Organization

Montum Architecture is a Limited Liability Corporation initially filed in the State of West Virginia. The company is also registered in the State of Maryland as a foreign LCC.

Communication

Tom Pritts will be the primary point of contact for Montum's architectural services. Montum will serve as a sub-consultant to Miller Engineering.

Project Budget

Previous work experience has shown a consistent +/-2% bid-to-budget ratio.

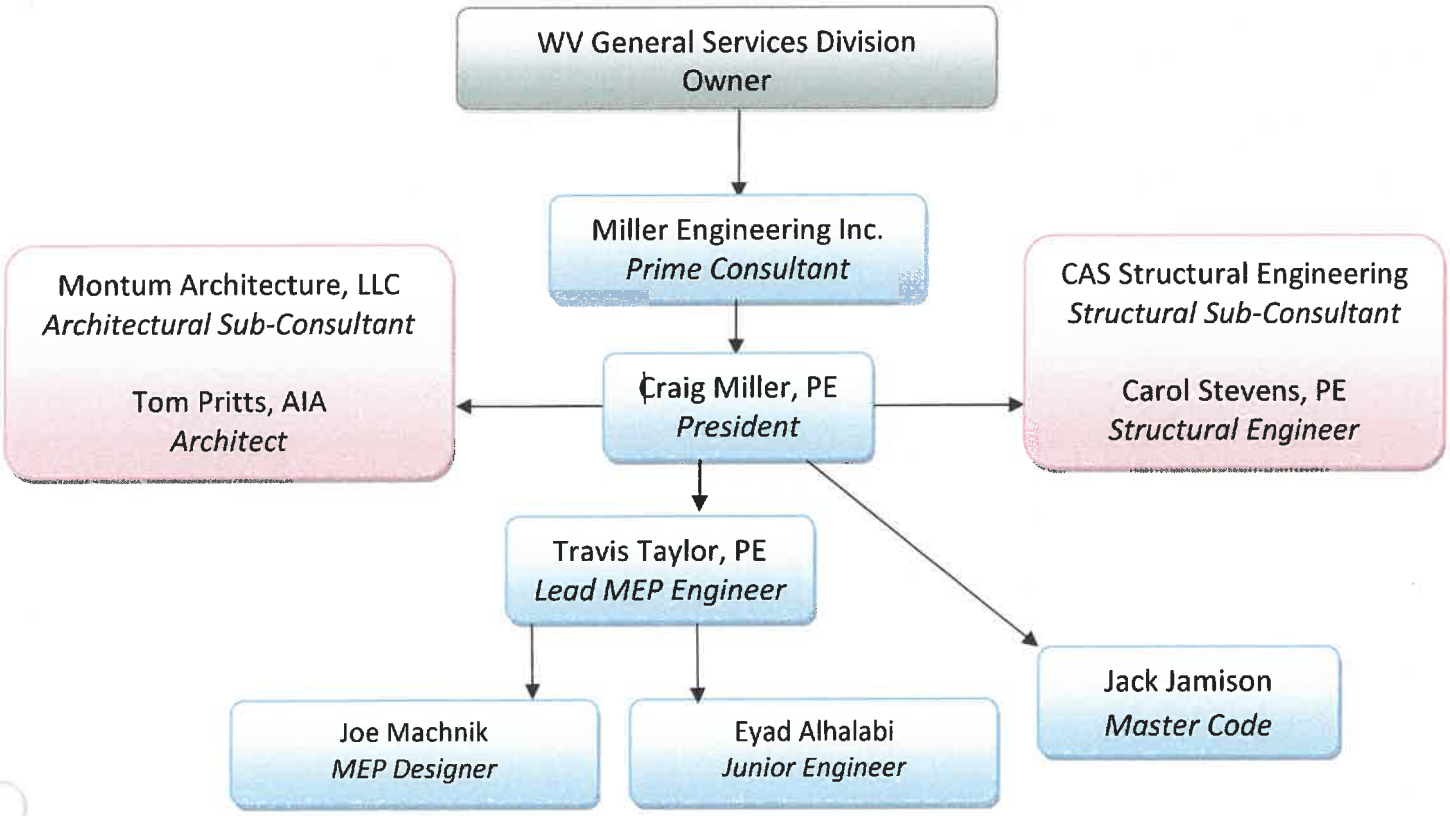
Project Schedule

Montum will monitor and adjust the design tasks in order to complete the design work on the established timetables. They will also work diligently during project construction to maintain the contractual constraints placed as part of the contractor's bid.

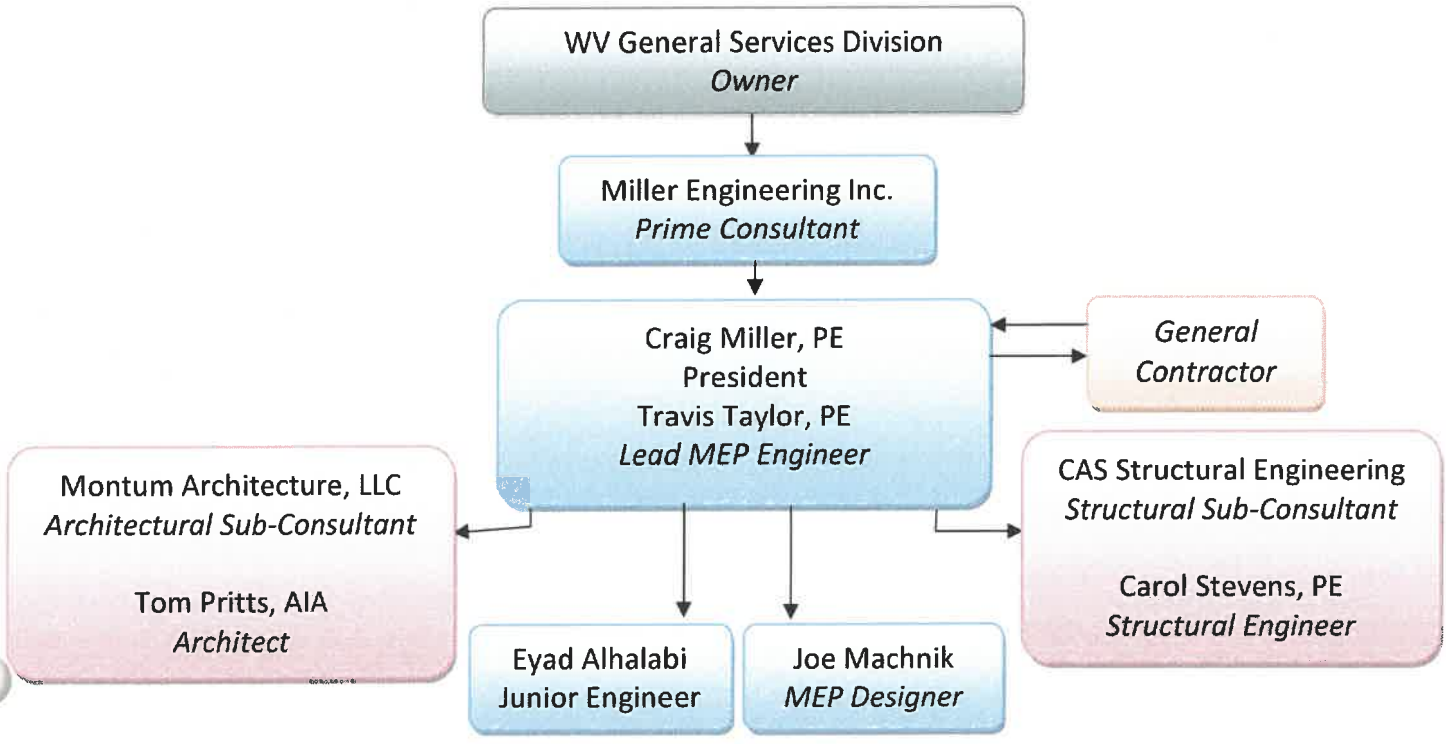
Design Software

Montum utilizes Autodesk Revit for all design projects incorporating three-dimensional modeling and parametric reporting.

Organization Chart – Design



Organization Chart – Construction



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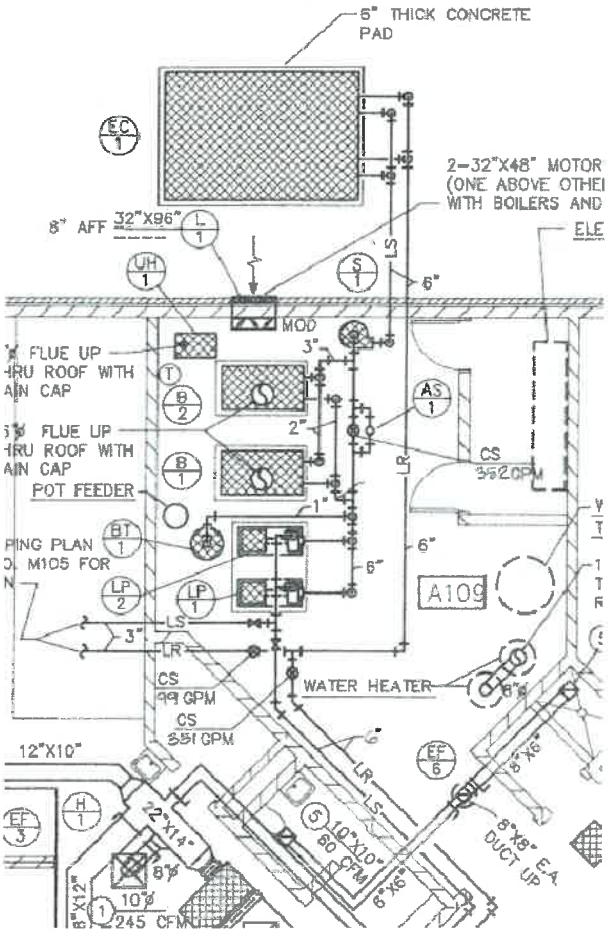
TAB 2 – Goals & Approach



WVGSD CAPITAL CAMPUS STEAM SYSTEM REPAIR/ REPLACEMENT
Project Goals

PROJECT GOALS

Miller Engineering has reviewed the project description under Section Three of the Expression of Interest and offers the following outline of project approach concepts, methodologies, core-values, and prior pertinent experience. Note that the project data sheets in section four (4) further describe many of the projects referenced in this section.

GOAL ONE – Central Chiller Plant Wall Repairs

For the Central Chiller Plant wall repairs, Miller Engineering will utilize the skill sets of CAS and Montum. Both firms have extensive experience with wall repairs and elevator experience. The firms will review all available existing documents of the chiller plant. As MEI is the consultant of record on the Chiller Plant Ice Storage project, we will also provide support to CAS and Montum based upon our extensive site investigations. The previous completed construction documents will be reviewed and discussed with WV General Services Division. The reviews will be related to constructability, cost, and code compliance. MEI will rely on the expertise of CAS and Montum for providing detailed final construction documents related to the wall replacement. MEI will review the wall replacement scope of work to determine if any MEP systems will be affected during construction activities and provide detailed remedies. Similar projects that involve both wall / facade replacements, and elevator projects are:

- Main Capitol Building Exterior Facade Restoration
- First Presbyterian Church Facade Restoration
- Building 5 Elevator Modernization
- Mapletown Jr/Sr High School Elevator

GOAL TWO – Building 84 HVAC System

Craig and Travis will lead the investigation into the HVAC inefficiencies and imbalances at Building 84. MEI will review all available existing documentation of the HVAC system. MEI will also compare the floor plan layouts against the existing design and perform load calculations as necessary to determine any modifications required due to changes in floor plans. MEI will perform a site investigation of the HVAC system to determine if any changes were made from the original design. We will also discuss comfort and operations with the maintenance staff at Building 84. Craig and Travis will use this information, along with their backgrounds in maintenance and construction, to get a complete understanding of the building and its systems. This understanding will be used to create a phased solution to the HVAC systems, allowing continued Owner occupancy. Detailed documentation will direct bidders to not only the scope of the project, but the sequencing. The sequencing will require communication with General

Services Division and the operations staff of Building 84. The contract will call for the contractor to perform Testing & Balancing (TAB) as a way of ensuring final comfort. To make sure TAB is executed properly, MEI requires that TAB is witnessed by MEI's staff and the HVAC controls programmer is present. As the HVAC upgrades will likely require modifications to the walls and ceilings, Montum Architecture will provide insight into the architectural modifications to the building. Some examples of phased HVAC upgrades projects include:

- Building 22 HVAC Upgrades
- Building 25 HVAC Piping Replacement
- South Middle School HVAC Renovations
- Alderson Broaddus University Withers Brandon Hall

GOAL THREE – Building 88 HVAC System

MEI has designed many phased projects to permit the Owner to use part of a facility while the rest was renovated. Renovations by nature tend to have multiple phases of construction. In this project we believe that the need to keep certain areas, parts, and pieces on line at different times will start with a base understanding of the Owner's needs, resulting from sit down interaction and discussions of operational realities. These realities will then be incorporated into our design matrix as project goals. We will design the project to meet those realities using phased construction and items such as temporary routings of piping or utilities to create a "work around" the concern.

Many of MEI's projects are retrofits or renovations which have required a phased approach, by either multiple bid projects or phased scheduling while maintaining occupancy. McKeever Lodge in Pipestem State Park utilized both methods. The HVAC piping replacement was designed and documented in a manner in which only a small portion of guest rooms were unavailable at any given time. Each phase of construction was clearly documented to indicate the sequence of work flow. MEI was involved during construction acting as a communication conduit between the contractor and owner to coordinate any disruptions and maintain the lodge's utilization. Both of the above-mentioned projects required the contractor to clearly prepare a schedule and the documents contained language pertaining to staying on the prepared schedule. MEI will regularly verify that the projects remain on schedule and will help communicate to the building's staff the sequencing of construction and help devise methods to keep both the construction flow and maintain building utilization. Past examples of successful phased HVAC approaches are:

- Pipestem McKeever Lodge HVAC Piping
- MHS Area 4 HVAC Renovations
- Building 36 HVAC Renovations
- Wyoming County Schools

GOAL FOUR – Building 97 Slabs

MEI will rely on the expertise of CAS and Montum Architecture for the investigation into the settling of the concrete slabs at Building 97. The existing project documentation will be reviewed as part of a whole facility evaluation. Extensive site investigations will be performed to understand the causes and remedies of the slab settling. Once solutions are determined, they will be discussed with WV General Services Division to finalize the procedures based upon schedule and budget. The construction documents may lead to extensive construction administration (CA). MEI believes in site visits, formal and informal, to ensure the project remains on schedule and is being completed in accordance with the drawings and specifications. The construction documents will call for scheduling milestones, which the contractor will be required to meet. The documents will also call for coordination between the contractor with the engineers and owner in regards to utility disruptions, the owner to temporarily not occupy portions of the building, and any activity that requires inspection or approval. MEI's role in Building 97 will be to provide assistance with CA and any affected MEP systems. Some examples of some structural repair projects are:

- Building 3 Structural Repairs
- Capitol Steps
- Manchin Hospital Ramp
- Twin Falls State Park

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TAB 3 –STAFF QUALIFICATIONS

Staff – Proposed Staffing Plan

Team Leader/ Primary Point of Contact	***Craig Miller, PE***
Engineer in Responsible Charge	***Craig Miller, PE***
Lead MEP Engineer	***Travis Taylor, PE***
Code Specialist	***Jack Jamison***
BIM Coordinator / Designer	***Joseph Machnik***
Junior Engineer	***Eyad Alhalabi***
Architectural Sub-Consultant	***Tom Pritts, AIA***
Structural Sub-Consultant	***Carol Stevens, PE***

**Staff Resumes to Follow*

B. Craig Miller, PE

Craig founded Miller Engineering in 2003, and serves as President and Principal Engineer. He has more than 20 years experience in design, specification, operations and project management. During his employment with WVU, Craig was directly involved with approximately $130 million in new capital construction and an equal value in infrastructure renovations. His experience with a wide range of projects including HVAC, electrical, plumbing, steam and chilled water central plants, infrastructure upgrades, building automation, energy efficiency and maintenance/renovation, among others, allows him to serve in multiple capacities within a given project. Craig will serve as the main communication interface between the Owner, the design team, contractors, and end users.

Project Role: Relationship Manager – Primary Point of Contact

- *Engineer in Responsible Charge*
- *Design and Project Management of Mechanical, Electrical, Plumbing Projects*
- *Concept and Construction Design*
- *Business Operations and Financial Management Oversight*
- *Quality Assurance and Control*

Professional Project Highlights

- Morgantown High School Boiler Replacement/ HVAC Upgrades
- Graftek Steam System Improvements
- WVU Life Sciences Building and Student Recreation Center – Owner's Engineer
- Hawks Nest/Twin Falls HVAC
- Mapletown High School HVAC Replacement Phase I & II
- Advanced Surgical Hospital
- WV State Building 25 HVAC Piping Replacement
- Cheat Lake Elementary & Middle School Renovations

Professional History

2003- Present	Miller Engineering, Inc.	President, Relationship Manager
2002-2003	Casto Technical Services	Existing Building Services Design Engineer
2001-2002	Uniontown Hospital	Supervisor of Engineering
1995-2001	West Virginia University	Staff Engineer
1990-1995	BOPARC	Caretaker – Krepps Park
1983-1988	University of Charleston	Electrician/HVAC Mechanic

Education

1995	West Virginia University	BS- Mechanical Engineering
1988	University of Charleston	BA- Mass Communications

Licenses and Certifications

- Professional Engineer (West Virginia, Pennsylvania, Maryland, and Ohio)
- Licensed Master Plumber
- LEED-AP Certified

Travis Taylor, PE

Experience in project management facilitates Travis's ability to create and design constructible projects. Prior to joining the Miller Engineering team he was directly responsible for managing $10 million in electrical construction budgets. His experiences encompass both new construction and renovation. Travis maintains professional competencies by attending seminars and continuing education classes. These include local ASHRAE classes in addition to classes on electrical systems, and also steam systems through Shippenburg Pump Company. As lead engineer he provides HVAC, mechanical, plumbing, and electrical design solutions and services for our clients. In addition, he is part of our team's complete assessment process in both planning and MEP design through construction administration.

Project Role: Lead MEP Engineer

- *Design of Mechanical, Electrical, and Plumbing Systems*
- *Building Information Modeling - Revit*
- *Constructible Materials Evaluation*
- *Site Evaluation and Mechanical System Review*
- *Submittal and RFP Review*
- *RFI Coordination, Review, and Response*
- *Construction Observation*

Professional Project Highlights

- Blackwater Falls Lodge Boiler Replacement
- MTEC Welding Shop
- North Elementary Boiler Replacement
- WV State Building 36 HVAC Upgrades
- WV State Building 25 HVAC Piping Replacement
- Graftek Steam Systems Evaluations and Modifications
- Bobtown Elementary School HVAC Upgrades
- Holly River State Park Primary Electric Service Replacements Phase I & II
- Pipestem Lodge McKeever Lodge HVAC Piping Replacement

Professional History

2011-Present	Miller Engineering, Inc.	Staff Engineer
2006-2011	Tri-County Electric, Co.	Project Manager
2006-2006	Schlumberger	Field Engineer Trainee - MWD

Education

2006 West Virginia University, BS – Mechanical Engineering

Licenses and Certifications

- Professional Engineer - State of West Virginia
- OSHA 10-hour Course: Construction Safety & Health

MILLER ENGINEERING, INC.

Staff – Qualifications and Experience

Jack Jamison

Jack brings 20 years as an electrical/building inspector and over 25 years of experience in the commercial electrical construction industry. His knowledge and experience are valuable resources to Miller's complete assessment process.

Project Role: Master Code Official

- *Facility Review, Code Research, Field Observations, Issue Resolutions, and Project Evaluation*

Professional History

2010- Present	Miller Engineering, Inc.	Code and Construction Specialist
1999-2010	Megco Inspections	Chief Inspector
1972-1998	Jamison Electrical Construction	Master Electrician

Education

1971 Fairmont State College, BS-Engineering Technology-Electronics

Licenses and Certifications

- Master Code Professional, IAEI Master Electrical Inspector, Class C Electrical Inspector – WV, PA, MD, & OH
- ICC Commercial Building, Building Plans, Commercial Plumbing, Residential Energy, and Accessibility Inspector/Examiner
- WV Master Electricians License
- NCPCCI-2B, 2C, 4B, 4C: Electrical & Mechanical General/Plan Review
- OSHA 30 Hour Course: General Industry
- NFPA Code Making Panel 14 – NEC 2014 Edition

MILLER ENGINEERING, INC.

Joseph Machnik

Joe has experience with AutoCAD, MEP and Revit MEP. He provides design modeling, drafting and supervised design services and construction support for Miller Engineering.

Project Role: MEP Designer

- *Revit/CADD Coordination of New Construction and Renovation Designs*
- *Building Information Modeling Specialist*

Professional Project Highlights

- Bobtown Elementary HVAC
- WV State Building 25 HVAC Piping Replacement
- Blackwater Falls Boiler Replacement
- Suncrest Middle Gym HVAC
- North Elementary Gym HVAC
- Graftek Steam Systems Evaluations and Modifications
- WV State Building 36 HVAC Upgrades
- Pipestem Lodge HVAC Piping Replacement
- Westwood Middle Cooling Tower

Professional History

2010 – Present Miller Engineering, Inc. MEP Designer

Education

2008 Penn State – Fayette, AS - Building Engineering Systems Technology: *Building Environmental Systems Technology*

2007 Penn State – Fayette, AS - Building Engineering Systems Technology: *Architectural Engineering Technology*

Additional Training

2016 – Shippenburg Pump Company – Steam Systems Training

Eyad Alhalabi

Eyad joined Miller Engineering in June 2019. A recent graduate of West Virginia University, he has been eager to learn the means and methods of MEP consulting. Eyad assists the MEP design team with design calculations and is rapidly learning design software such as Autodesk REVIT. He is also learning construction administrations along with building codes and standards. Eyad is currently preparing to take the Fundamentals of Engineering exam.

Project Role: Junior Engineer

- *Design Calculations*
- *Drafting of MEP Systems*
- *Assist with Construction Administration*

Professional Project Highlights

- Morgantown ALC

Professional History

2019- Present	Miller Engineering, Inc.	Junior Engineer

Education

2019 West Virginia University, BS - Mechanical Engineering

Licenses and Certifications

- ASHRAE Student Member

Licenses & Certifications

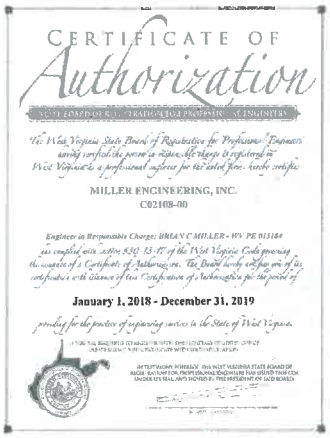

The State of West Virginia

To all to whom these presents shall come Greeting

Brian C. Miller

Registered Professional Engineer

Registration Number [redacted]


CERTIFICATE OF
Authorization

MILLER ENGINEERING, INC.
C02108-00

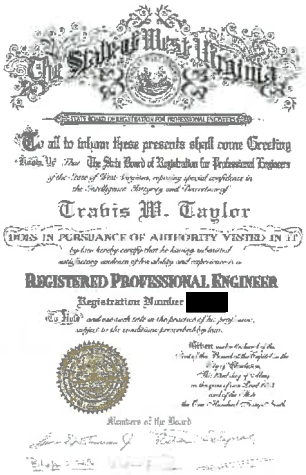
January 1, 2018 - December 31, 2019


West Virginia State Board of Registration for Professional Engineers

BRIAN C. MILLER
W[redacted]

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

EXPIRES December 31, 2020


The State of West Virginia

To all to whom these presents shall come Greeting

Travis W. Taylor

REGISTERED PROFESSIONAL ENGINEER

Registration Number [redacted]


West Virginia State Board of Registration for Professional Engineers

TRAVIS W. TAYLOR
WV PE[redacted]

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

EXPIRES December 31, 2020


Hereby Certifies that

Jack E. Jamison, Jr.

has demonstrated professional qualifications through a written examination based on the National Electrical Code® along with successful completion of field practice and documented expertise in required categories and has hereby achieved certification as

Master Electrical Inspector

Effective through
September 30, 2015

Certificate Holder's No.
[redacted]

Secretary to the International Board
International Association of Electrical Inspectors

Carol A. Stevens, PE, F.ASCE

Structural Engineer

EDUCATION

West Virginia University, BSCE, 1984
Chi Epsilon National Civil Engineering Honorary
The Pennsylvania State University, ME Eng Sci, 1989

PROFESSIONAL REGISTRATION

P.E.	1990	Pennsylvania
P.E.	1991	West Virginia
P.E.	1994	Maryland
P.E.	2008	Ohio
P.E.	2010	Kentucky
P.E.	2013	Virginia

BACKGROUND SUMMARY

2001 – Present	President, Structural Engineer CAS Structural Engineering, Inc.
1999 – 2001	Structural Engineer Clingenpeel/McBrayer & Assoc, Inc.
1996 – 1999	Transportation Department Manager Structural Engineer Chapman Technical Group, Inc.
1995 – 1996	Structural Engineer Alpha Associates, Inc.
1988 – 1995	Structural Department Manager Structural Engineer NuTec Design Associates, Inc.
1982 – 1988	Engineer AAI Corporation, Inc.

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers
National Society of Professional Engineers
American Concrete Institute
American Institute of Steel Construction
West Virginia University Department of Civil and Environmental Engineering Advisory Committee
West Virginia University Institute of Technology Department of Civil Engineering Advisory Committee

EXPERIENCE

West Virginia, State Capitol Complex, Holly Grove Mansion: Structural evaluation report for preliminary condition assessment of building structure. Building is on the National Register of Historic Places and was constructed in 1815.

West Virginia, State Capitol Complex, Main Capitol Building Parapet: Exploratory investigation of limestone/brick parapet/balustrade of Main Capitol Building to determine cause of movement/cracking/ leaks. Construction contract for repairs has been completed. Building is on the National Register of Historic Places and was constructed in the 1920's and 1930's.

West Virginia, WV Public Service Commission: Structural evaluation of existing brick façade to determine cause of brick and precast concrete damage and proposed solutions for repairs.

West Virginia, Collett House Structural Repairs: Structural renovations of 1770's log and framed structure to stabilize foundation and make repairs to log wall and floor. Building is on the National Register of Historic Places.

West Virginia, First Presbyterian Church Restoration: Structural renovations of steel in lantern level and terra cotta cornice, overview of repairs to limestone and terra cotta façade of 1920's structure.

West Virginia, Hawks Nest State Park Lodge: Repairs to spandrel beams at roof level and analysis and repairs of structural cracks in stairtower. Additional work included documentation of damage to brick and concrete façade.

West Virginia, State Capitol Complex, Governor's Mansion: Structural analysis and design in addition to evaluation report for modifications and renovations to several areas of mansion. Building is on the National Register of Historic Places and was constructed in the 1920's.

West Virginia, Twin Falls Resort State Park Addition: Structural design for new addition to existing facility.

West Virginia, State Capitol Complex, Main Capitol Building Dome: Exploratory investigation of structural steel components of Lantern Level of dome and development of contract documents for repairs. Building is on the National Register of Historic Places and was constructed in the 1930's. Received a NYAIA Merit Award for Design Excellence.

West Virginia, Twin Falls Resort State Park: Structural evaluation of existing recreation building including evaluation of issues related to brick façade.

West Virginia, Pipestem Resort State Park: Structural evaluation of existing recreation building.

West Virginia, Historic Putnam-Houser House (Parkersburg): Designed system for stabilization and upgrades to floor framing of building that was constructed in the 1700's.

West Virginia, Upshur County Courthouse: Developed construction documents for structural repairs to main entrance, dome and monumental sandstone columns of 1899 structure. Work was completed and received a WVAIA Honor Award for Design Excellence.

Ohio, Mahoning County Courthouse: Completed preliminary structural observation report of exterior façade conditions to recommended phased repairs for terra cotta and granite façade. Building is on the National Register of Historic Places and was constructed in the early 1900's.

West Virginia, State Capitol Complex, Building 5: Structural design and analysis for support of new boilers and other mechanical equipment to be placed in mechanical penthouse.

West Virginia, State Capitol Complex, Building 7: Investigation and development of Construction Documents for new elevators.

West Virginia, State Capitol Complex, Building 3: Structural design and construction administration of repairs to limestone canopy. Building is eligible to be placed on National Register of Historic Places and was constructed in the 1950's.

West Virginia, State of West Virginia Office Building #21, Fairmont, WV: Preliminary structural observation report for condition assessment of building structure.

PREVIOUS EXPERIENCE

West Virginia, State Capitol Building, North Portico Steps: Designed structural system to replace deteriorated reinforced concrete slab at landing on north side of Capitol steps. Building is on the National Register of Historic Places and was constructed in the 1930's.

West Virginia, Beech Fork State Park Pool, Bathhouse and Cabins: Designed structure for new bathhouse, swimming pool and cabins.

West Virginia, Moncove Lake State Park Pool: Designed structure for new swimming pool.

West Virginia, Upshur County Courthouse Annex: Performed structural evaluation and design for repairs to existing multi-story Annex addition, including repairs to brick façade.

West Virginia, Farrell Law Building: Performed analysis of existing deteriorated structural sidewalk over parking area. Recommended repair solutions for reinforced concrete and aged terra cotta façade of 1920's building.

West Virginia, Canaan Valley Resort and Conference Center: Structural feasibility study to upgrade lodging units.

West Virginia, West Virginia University Masterplan: Investigated structural floor load capacity of several university buildings as a consultant to a large national architectural firm for masterplan.

West Virginia, Morgantown High School Additions: Designed steel framing and foundations for science classroom, cafeteria and gymnasium additions to existing education complex.

West Virginia, Grafton High School Addition: Designed steel framing and foundations for new science classroom addition to existing high school.

Pennsylvania, York County Government Center: Structural analysis and design of 1898 former department store converted to county government offices. Interior renovations included adding floor framing at mezzanine level, analyzing and redesigning deficient floor framing, and adding new elevators. Exterior renovations included complete façade rework to recreate original appearance.

Pennsylvania, Metropolitan Edison Company, Headquarters: Structural design for new 80,000 SF two-story office addition to existing complex.

Montum Architecture

Thomas Pritts, AIA, LEED-AP, CSI-CCS

Tom founded Montum Architecture in 2017. He has more than 15 years experience in design, specification, and project management. During his former employment, Tom has designed and managed dozens of built projects. His experience encompasses a wide range of projects including K-12 and higher education facilities, financial Institutions, emergency services buildings, and automotive dealerships. A native of Mineral County, Tom is member of the West Virginia Chapter of American Institute of Architects and was involved in the establishment of the US Green Building Council's West Virginia chapter. He is highly skilled in the design of complex building systems, technical construction detailing and specifying, and construction contract administration. These skills were critical in the development and maintaining of many multi-year, multi-project relationships with Clients in his previous employment.

Project Role: Relationship Manager – Primary Point of Contact

- Principal in Charge
- Design and Project Management
- Concept and Construction Design
- Quality Assurance and Control

Professional History

2017- Present	Montum Architecture	Architect
2004-2017	Alpha Associates	Associate and Architect
2003	Marshall Craft Associates	Architectural Intern

Education

2004	Virginia Tech	Bachelors of Architecture

Licenses and Certifications

- Licensed Architect (West Virginia, Maryland)
- NCARB Certificate
- Construction Specifier Institute – Certified Construction Specifier
- LEED-AP Certified
- Part 107 Remote Pilot
- 30-hour OSHA Card

Associations and Memberships

- American Institute of Architects
- Mineral County Chamber of Commerce – 1st Vice President

Professional Project Highlights

- Potomac State College – Bachelor of Nursing Renovation
- Wyoming East High School HVAC Renovation – Wyoming County Schools, WV
- Mountainview and MTEC HVAC Renovation – Monongalia County Schools, WV
- Berkeley Springs State Park – Pool Bathhouse Roof Replacement
- Berkeley Springs State Park – Old Roman Bath Renovation
- Blackwater Falls State Park – Boiler Room Renovation
- Our Lady of the Mountains Parish – Bathroom Renovation
- Mountain View Assembly of God – Rec Hall Ceiling Design

Professional Project Highlights (former employment built projects)

Montum

Architecture

- Potomac State College – ADA Connector Building, Church-McKee Plaza, Shipper Library Façade
- WVU Engineering Sciences Building – East Wing Addition, 10th Floor Fit-Out, Basement Renovation
- WVU Engineering Research Building – G07 & G08 Renovation
- WVU Equine Education Center
- WVU College of Physical Activities and Sports Sciences/ Student Health Center
- WVU Center for Alternative Fuel Engines and Emissions
- WVU Colson Hall Water Infiltration Repairs
- WVU Mountainlair Water Infiltration Repairs
- WVU Chemistry Research Laboratories Fit-Out
- WVU Creative Arts Center Wheelchair Lift
- Alderson Broaddus University – Pyles Arena Deck Replacement
- Glenville State College – Morris Stadium Skybox
- Washington High School, Jefferson County Schools, WV
- Pineville Elementary School, Wyoming County Schools, WV
- Huff Consolidated School, Wyoming County Schools, WV
- Aurora School Addition, Preston County Schools, WV
- Riverview High Field House Design-Build, McDowell County Schools, WV
- Safe School Entries, Monongalia County Schools, WV
- Morgantown High Elevator, Monongalia County Schools, WV
- 2010 Comprehensive Education Facilities Plan- Monongalia County Schools, Wyoming County Schools
- Clear Mountain Bank Branches, Oakland, MD - Reedsville, WV - Kroger-Sabraton, WV
- Grant County Bank, Petersburg, WV
- Fairmont Federal Credit Union, Bridgeport, WV
- Freedom Ford, Kia, and Volkswagen Automotive Dealerships, Morgantown and Clarksburg, WV
- Jenkins Subaru Addition, Bridgeport, WV
- Elkins Fordland Renovation - Elkins Chrysler Dealership, Elkins, WV
- Harry Green Nissan Design-Build, Clarksburg, WV
- Cool Green Automotive Addition and Renovation, Shepherdstown, WV
- Veteran's Affairs – OI&T Office Fit-Out, Shepherdstown, WV
- OPM, Eastern Management Development Center Addition, Shepherdstown, WV
- National Energy Technology Laboratory – Building B-8 Roof Replacement, Morgantown, WV
- US Coast Guard – Conference Room Renovation, Martinsburg, WV
- Eastern Panhandle Transit Authority Addition, Martinsburg, WV
- Cacapon State Park – Old Inn HVAC and Interior Renovation
- WV National Guard - Armory Office Fit-out, Parkersburg, WV
- South Berkeley Fire Station, Inwood, WV
- Jefferson County Emergency Services Agency – New Headquarters
- Berkeley County Ambulance Authority - South Station Renovation and Addition
- Poolhouse Renovation, McMechen, WV
- Community Center, Ridgeley, WV
- Wastewater Treatment Plant Renovations, Martinsburg, WV
- Public Works Building, Fairmont, WV
- Oatesdale Park Little League Fields, Martinsburg, WV
- St. Luke Canopy Replacement, Morgantown, WV
- Freshwater Institute – Aquaculture Building, Shepherdstown, WV
- Clarion Hotel Renovation, Shepherdstown, WV
- Shenandoah Village Apartments - Façade and Deck Replacement, Martinsburg, WV
- Regional Eye Associates/ Surgical Eye Center, Morgantown, WV
- Bavarian Inn – Infinity Pool/ Pool Bar, Shepherdstown, WV

MILLER ENGINEERING, INC.

What our satisfied customers have to say...

"Hard working, do-whatever-it-takes, diligent team that provides excellent customer service is what you can expect from Miller Engineering."

--Chris Halterman

"As a design/build team, working with Miller Engineering, our project involving a private surgical hospital together was a success – completed ahead of schedule and on budget. Miller worked with us throughout the project to consult, engineer and inspect the mechanical systems. Craig Miller, PE and his staff are working with us again, and are very important members of our design/build team. I highly recommend their services.

--Richard J. Briggs

Brad Leslie, PE *Assistant Chief* *WV Division of Natural Resources* *State Parks Section* *324 4th Avenue* *South Charleston, WV 25303* ***(304) 558-2764 ext. 51823*** Bradley.S.Leslie@wv.gov	**Kerri J. Wade, MSW** *Extension Agent - Kanawha County* *West Virginia University* *4700 MacCorkle Avenue, SE* *Suite 101* *Charleston, WV 25304* ***304.720.9573*** Kerri.Wade@mail.wvu.edu	**J. Douglas Carter** *General Manager* *Potomac Valley Transit Authority* *185 Providence Lane* *Petersburg, WV 26847* ***(304) 257-1414*** jcarter@potomacvalleytransit.org
Bob Ashcraft *School Safety & Loss Coordinator* *Monongalia County Schools* *533 East Brockway Street* *Morgantown, WV 26501* ***(304) 276-0152*** rbashcraft@access.k12.wv.us	**Mike Trantham** *Program Administrator Senior* *WVU Environmental Health & Safety* *P.O. Box 6551* *975 Rawley Avenue* *Morgantown, WV 26506* ***(304) 293-5785*** Mike.Trantham@mail.wvu.edu	**Richard J. Briggs** *Vice President* *Lutz Briggs Schultz & Associates Inc.* *239 Country Club Drive* *Ellwood City, PA 16117-5007* ***(724) 758-5455*** lbsa@zoominternet.net

From Jonathan Miller, Mechanical Project Manager, Nitro Mechanical:

"Miller Engineering is not your average engineering company; they work with the owner AND the contractor to solve all issues that arise throughout the project to make the process as fluid as possible.

MacBRACEY CORPORATION

P.O. Box 558
2155 Park Avenue
Washington, PA 15301

General Construction & Consulting

Phone 724/229-0119
Fax 724/225-1180

To whom it may concern,

As the Vice-President and Lead Project Manager of MacBracey Corporation, a commercial and industrial general contractor located in Washington, PA, I am writing to support and endorse Miller Engineering and their ability to provide construction design services as well as project management.

MacBracey has found Miller Engineering's drawings and specifications to be both thorough and accurate as to the in-field conditions. Any issues that have come about throughout a construction project Miller Engineering is quick to develop a corrective plan and ensured the project doesn't face delays.

I have found Miller Engineering to go above and beyond the industry standard throughout the entire construction process to make sure everything stayed on track. I have spoken with many members of Miller Engineering "after hours" to solve an issue that needed addressed by the following morning. This is a characteristic that you don't see with a lot of design teams.

I found the entire Miller Engineering team to be both knowledgeable and professional. We at MacBracey would enjoy the opportunity to work with Miller Engineering again in the future. It is truly refreshing to work with a design team that has a passion for the industry and is willing to work with everyone involved to ensure the project gets done correctly and in a timely manner.

Sincerely,

Patrick Bracey

Patrick Bracey
Vice President,
MacBracey Corporation

PENNINGTON PLUMBING & HEATING INC.
301 George St. Beckley WV 25801 License WV 001456

April 17, 2019

To Whom it May Concern,

Re: Miller Engineering Design Firm

Pennington Plumbing & Heating has worked with Miller Engineering on numerous projects throughout the years, ranging in size from several hundred thousand dollars to several million. We have always found their firm to be professional, competent, and helpful.

We have found that they are always available to help on challenging situations on different projects, and their designs have had great success on the projects that we have been involved with. They have the capability to handle MEP designs of any size and are always open to modifications that allow the owner to save time and money while maintaining the highest quality and design intent.

We would have no issue recommending their firm to building owners seeking design and construction administration.

Should you have any questions please do not hesitate to contact me.

Best Regards,

Eric Mahaffey
President.

FAIRCHANCE CONSTRUCTION COMPANY

100 YEARS

1916 • 2016

June 6, 2018

RE: Miller Engineering

To Whom it May Concern,

I have worked on several project with Miller Engineering, over the last few years. Craig Miller and his staff are some of the most detail-oriented engineers I have met. They take extra time, and care, to ensure that their design meets the requirements set forth by the owner and that trades are coordinated properly. Their staff make routine visits to the jobsite to ensure the quality of installation meets their specified standards.

Miller Engineering is also willing to help with value engineering, if required, to meet budgets. However, they are not willing to sacrifice the quality, set forth, in their original design standards. This is an admirable trait in today's engineering world. Many times, value engineering is done without the original designer's review or they may allow substandard products and quality is sacrificed as a result.

In closing, Craig Miller always states that "working with them is different". He's correct. In a world where things are done with little input or involvement by the engineering firm during construction, they stand out as a firm who truly cares. They put thought into their design and the functionality of buildings and the results speak for themselves. Their designs are quality and built to last.

Brian D. Gaudiano

Vice President

Fairchance Construction Company ▼ PO Box 535 77 S. Morgantown Street Fairchance, PA 15436 Ph: 724-564-7485 Fx: 724-564-7488 ▼ FairchanceConstruction.com

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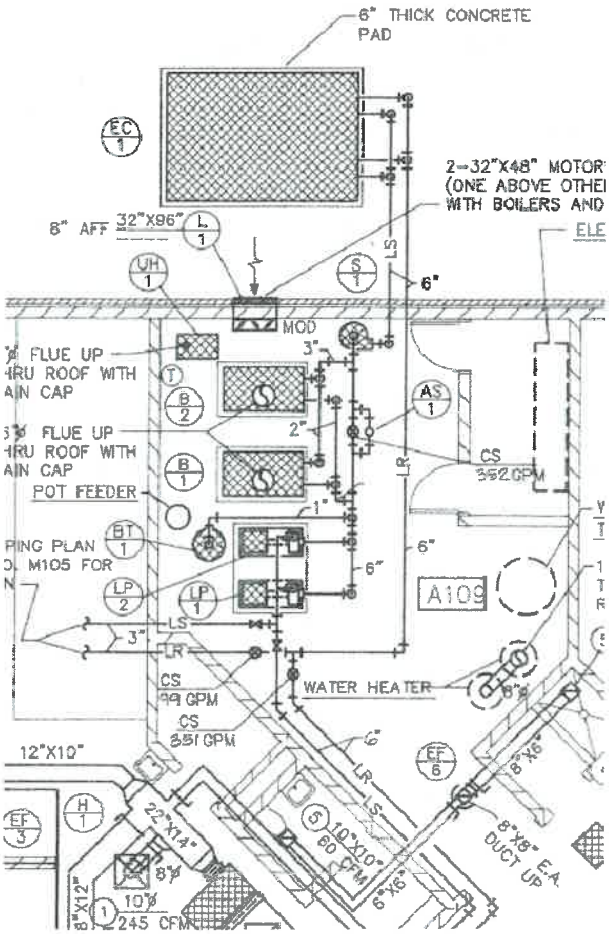
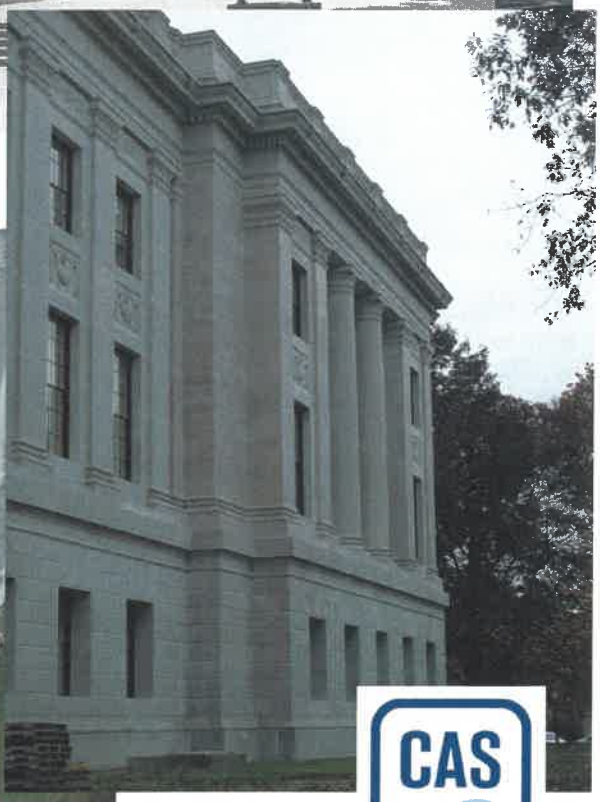
TAB 4 – EXPERIENCE



EXTERIOR FAÇADE RESTORATION
MAIN CAPITOL BUILDING

Charleston, West Virginia

Exterior façade restoration included cleaning, pointing, and repairs to the limestone and terra cotta components, windows and doors.



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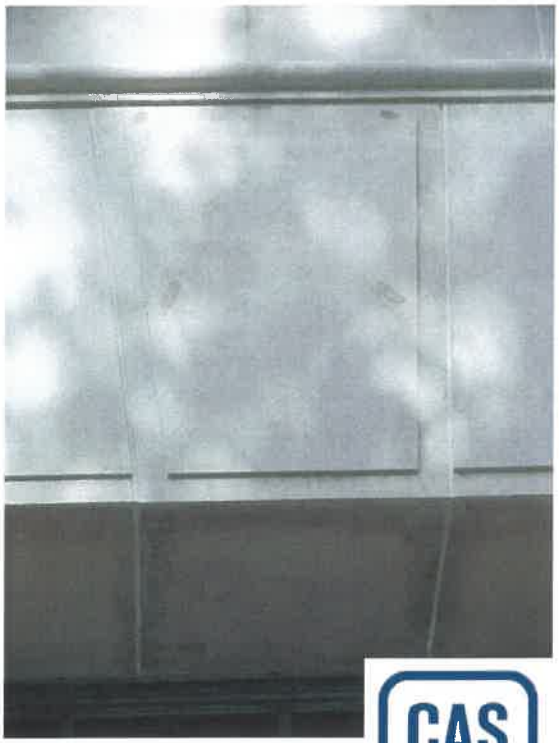
Portions of the limestone cornice were damaged to the point that they fell when work was being conducted and had to be pinned back in place.



Other repairs included various spall repairs, pinning and epoxy injection of larger cracks and lifting and pinning keystones over windows.

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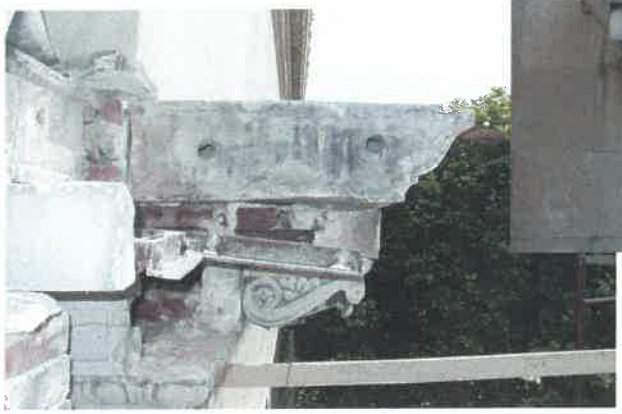
FIRST PRESBYTERIAN CHURCH
EXTERIOR FACADE RESTORATION

Charleston, West Virginia

The terra cotta and limestone exterior of this 1910's building was in need of being restored to prevent continued damage to the exterior and interior of the building. The structural steel in the lantern level was replaced with stainless steel members and wind bracing

The terra cotta balustrade was re-built after the iron components were found to be deteriorated.

The corners of the terra cotta cornice exhibited significant deterioration of the mortar joints and rotation of the units. It was found that the supporting steel members were not adequate for the load that was being supported. They were also replaced with stainless steel components.



CAS STRUCTURAL ENGINEERING, INC.

MILLER ENGINEERING, INC.

Project Experience: Elevator

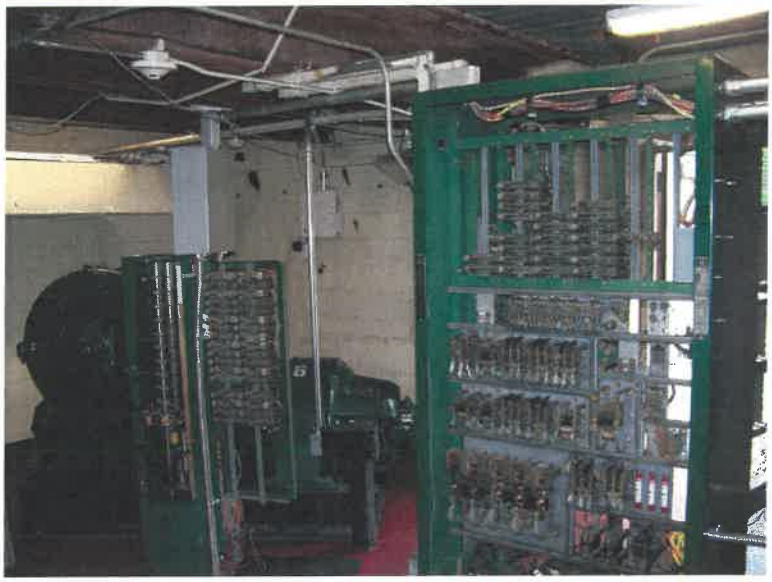
Building 5 Elevator Replacement

Charleston, WV

Services Provided:

- Mechanical
- Electrical
- General Trades

Contract Amount: $483k
Owner: State of West Virginia – General Services Division



Miller Engineering was retained by WV General Services Division to design the replacement of service elevator #6 in WV Building 5. The hoisting system including motor generator, cable drive & cabling, sheaves, gear drive, controls, safeties, & slings are to be replaced. The cars, doors, calls, and indicators will also be replaced. The existing rails and door frames remain in place and will be modified. An existing rail leader which was run inside of the elevator shaft will be concealed with a drywall chase to meet elevator code. The elevator chase will be upgraded with new sump pump, lighting, receptacles, and fire alarm. The HVAC system in the elevator penthouse will be modified to better meet the equipment requirements. The project has specific means and methods called out in order to keep the remaining elevators in operation while #6 is being replaced. The project has been bid and is scheduled to begin in the near future.

Project Contact:
David Parsons, Operations and Maintenance Manager
State Capitol, Room E-119
(304) 957-7122

MILLER ENGINEERING, INC.

Descriptions of Past Projects Completed – MEP

Mapletown Junior/Senior High School Elevator Addition

Services Provided:

- Elevator Addition
- MEP Relocation
- Elevator Lobby Construction

Estimated Budget: $650K
Facility Area: 18,500 ft^2
Owner: Southeastern Greene School District

The Southeastern Greene School District in Pennsylvania made the decision to add an elevator to Mapletown Jr/Sr High School. Miller Engineering was hired to provide design consultation on the project. After walking the facility and meeting w/ facilities staff, it was determined that the loading dock would be the best location for the elevator. A three stop hydraulic elevator will be installed. Miller hired Alpha Associates for assistance with architectural and structural design related to the elevator shaft and new elevator lobby that will be created on the second floor. Existing mechanical, electrical, and plumbing systems had to be relocated for the elevator installation as well as new MEP extended to serve the elevator.

Project Contact:
Patrick R. Sweeney, Business Manager
Southeastern Greene School District
(724) 943-3630 ext. 2243

MILLER ENGINEERING, INC.

Project Experience - HVAC Upgrade

Building 22 2nd Floor Upgrades

Charleston, WV

Services Provided:

- Mechanical
- Electric
- Telecommunications
- Architectural
- Construction Administration

Renovation Area: 7,400 sq ft
Contract Amount: $398k
Owner: State of West Virginia – General Services Division

PROJECT GOAL:
Revise the floor plan, HVAC, Electrical and Data for new check processing equipment, while Owner working in adjacent spaces.

Goal met by intensive field investigation, detailed documents, close monitoring of construction. Post substantial equipment issues pursued until fully resolved.

West Virginia State Building 22 required renovations to the 2nd floor, which houses the state tax office. New check processing equipment, which has specific cooling, power, and data requirements, was purchased by the state. The floor plan needed modifications to accept the equipment and improve work flow. This building is an extremely high security area. It houses the tax and revenue department for the State of WV. Approximately 2.5 million dollars is processed through the 2nd floor daily.

Miller Engineering, along with Montum Architecture, designed the renovations to the 2nd floor to accommodate the changes needed for the equipment. The existing space was served by a fan powered VAV AHU. The existing air distribution was modified to meet the requirements of the revised floor plan. The processing room and server rooms, which require year - around cooling, are being served with computer-room air conditioning (CRAC) units. The revised floor plan called for modifications to the power and telecommunications layouts for the integrated furniture systems. The grounding and bonding systems for the server room were upgraded as well. This project was completed in April, 2018. We followed and resolved some equipment issues related to initial startup until November 2018.

Project Contact:
David Parsons, Energy Manager
WV General Services
112 California Ave
Charleston, WV 25305
(304) 957-7122

MILLER ENGINEERING, INC.

Project Experience - HVAC Upgrade

West Virginia State Building 25

Parkersburg, WV

Services Provided:

- Mechanical Piping
- HVAC
- Electric
- Lighting
- Construction Administration

Estimated Budget: $843k
Facility Area: 58,500 ft²
Owner: State of West Virginia – General Services Division

PROJECT GOALS:
Piping - Evaluate and replace HVAC Piping.
6th Floor - Provide full MEP service for fit-out of office space in 6th floor.

The piping project goal was met by extensive evaluation into existing conditions and review of original design documents. Thorough discussions with maintenance and operations staff allowed MEI to develop a complete and phased approach.

The 6th floor is currently under design. MEI is part of a design team with Alpha Associates. Experience with the existing project allowed MEI to design a practical solution which integrates into the existing MEP systems.

Project Contact:
David Parsons, Operations and Maintenance Manager
State Capitol, Room E-119
(304) 957-7122

The PVC piping system at Building 25 had a history of leaking, along with smaller piping sagging over time and breaking, prompting the owner to replace the entire system. The building was a logistic challenge to design due to offset multi-level mezzanines, resulting in low deck-to-deck heights in the lower levels. A new, rolled-groove piping system was installed, including a new cooling tower and supporting structure, and connected to the original boilers. To eliminate the problems associated with manganese, which forms solids and clogs piping, the system was converted from water to propylene glycol with the flow rates adjusted to accommodate the change. The water source heat pumps which serve the building were flushed and cleaned to prevent contamination of the new water. MEI designed a phased approach to accomplish the piping, which was adjusted in consultation with the owner and contractor during construction to minimize the impact on the building occupants, who remained in the building during the entire construction period. MEI worked on an almost daily basis with the contractor to accomplish the re-piping of the building, providing support and real-time answers to questions and to work around challenges.

MILLER ENGINEERING, INC.

Descriptions of Past Projects Completed – MEP

South Middle School HVAC Renovations

Services Provided:

- Mechanical
- Electrical
- Plumbing
- Fire Alarm

Contract Amount: $1.45M
Facility Area: 111,800 ft^2
Owner: Monongalia County Board of Education

PROJECT GOALS: Improve air quality and temperature controls. Limit school disruptions.

MEI designed retrofits to existing HVAC equipment which will allow the system to perform correctly. The project was detailed in phasing to permit some work to be performed during the school year during breaks and holidays to keep the school in operation.

South Middle School was served by a single DX AHU with various terminal devices such as VAV and self-piloted boxes. The school has been suffering from poor air quality and temperature control issues. Additionally, the condensing unit had failed. MEI designed a rebuild of the AHU; replacing the DX coils with HW and CW coils. The two large supply fans were replaced using a fan wall system which allowed the fans to operate at max output and minimize noise and vibration issues which plagued the old sled mounted fans. A new boiler serves the hot water coil and two chillers were installed with piping on the roof to serve the AHU cooling coil. The air terminal devices will be rebuilt and retrofitted to provide better control. The project is currently under construction with the AHU rebuild and chiller installation completed. The air terminal device retrofits will be completed during summer break.

Project Contact:
Robert Ashcraft
Monongalia County Facilities
Phone: (304) 291-9210

MILLER ENGINEERING, INC.

Descriptions of Past Projects Completed – HVAC, Electric

Withers Brandon Hall

Philippi, WV

Services Provided:

- Electrical
- HVAC

MEP Budget: $700k
Facility Area: 31,800 ft^2
Owner: Alderson Broaddus University
Status: In Construction

As part of renovations to Withers Brandon Hall at Alderson Broaddus University, MEI was brought in to evaluate and design upgrades to the HVAC system. The existing chiller and piping insulation had failed. The existing system was a two-pipe system with chiller and boilers serving fan coil units. MEI proposed to re-use the piping and replace the fan coil units with water source heat pumps (WSHP). This allows the existing piping to be re-used and piping insulation would not have to be replaced. The chiller will be replaced with a fluid cooler located outside the building. The three non-condensing boilers will be replaced with a much more efficient modulating condensing "double stack" boiler. The ventilation units are located in the unconditioned attic space and are difficult to perform maintenance on. New ducted heat pumps tied to energy recovery ventilators will tie into the existing fresh air duct to provide ventilation and relief air. The design limits the amount of modifications outside of the mechanical rooms which will aid with the compressed construction schedule. The project is currently substantially complete and is awaiting final completion.

Project Contact:
David Snider, AIA
Omni Associates, Inc
(304) 367-1417

MILLER ENGINEERING, INC.

Descriptions of Past Projects Completed – HVAC Piping

Pipestem McKeever Lodge

Pipestem, WV

Services Provided:

- HVAC
- Plumbing
- Electrical
- Accommodation of Existing Systems

Estimated Budget: $1.7M
Facility Area: 63,000 ft^2
Owner: West Virginia Division of Natural Resources

The original HVAC piping at McKeever Lodge had exceeded its lifespan and had been suffering from corrosion leading to multiple leaks, including one causing an electrical service outage. Miller Engineering was hired to investigate the existing piping, discovering all of the some 4,000 linear feet of piping required replacement. As this lodge is regularly occupied for larger conferences, the project had to be phased to minimize the amount of guest rooms taken out of service at one time. MEI also designed provisions to interconnect the lodge's two separate boiler/chiller plants so one plant could operate the entire lodge at a partial capacity while the other plant was replaced and re-piped. This interconnect also allows the lodge to operate in the event of a boiler or chiller outage. Power was provided to new equipment, and motor control centers were added to control the building loop pumps. A new building controls system was installed to allow the plants to run at optimum efficiency while meeting the lodges heating and cooling needs.

Project Contact:
Carolyn Mansberger, Project Manager
State Parks Section
(304) 558-2764

MILLER ENGINEERING, INC.

Descriptions of Past Projects Completed – MEP

Morgantown High School Boiler Replacement/ Area 4 HVAC Renovation

Services Provided:

- Mechanical
- Electrical
- Plumbing
- Fire Alarm

Estimated Budget: $1.0M
Contract Amount: $1.038M
Owner: Monongalia County Board of Education
Status: Complete

Morgantown High school, like others throughout the state, has seen many changes through the years. Unfortunately,the steam boiler plant remained in operation with little maintenance for a number of years.The 45 year old boilers had exceeded their operational life and were experiencing reliability issues. MEI evaluated the boilers and the associated 80 years old steam systems, recommending their replacement. Steam heating control was a significant issue, as were safety issues caused by failed traps and inoperable valves.

Previous projects installed split DX refrigerant based systems in several classrooms within the science and technology wing. These units were obsolete and required replacement with a more reliable system, which can meet current ventilation standards. Additionally, there were 3 classrooms, which were heating only with little or no control, that require addition to the overall solution for this section of the building. Based on the conditions of the steam systems piping and devices, new hot water boiler were installed.

This project was completed in late 2017.

Project Contact:
Robert Ashcraft
Monongalia County Facilities
Phone: (304) 276-0152

MILLER ENGINEERING, INC.

Project Experience: HVAC Upgrade

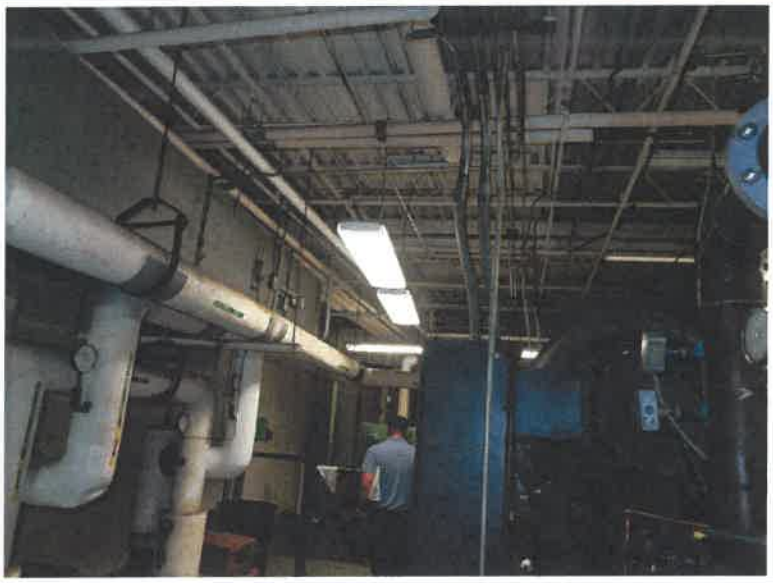
West Virginia State Building 36 (1 Davis Sq.)

Charleston, WV

Services Provided:

- HVAC System Replacement
- Mechanical Piping
- Electric
- Construction Administration

Estimated Budget: $2.1M
Facility Area: 58,400 ft^2
Owner: State of West Virginia – General Services Division



The 30-plus year old chiller serving Building 36 failed in the spring of 2016. MEI was retained to design the installation of a temporary rental chiller, which remains in service at this time. MEI was then retained to design a full HVAC retrofit to the building due to the condition of the air handlers, ductwork, VAV boxes, and associated systems. The building presented unique challenges as it was originally two buildings in which the common space was later in filled to create one building. The deck to deck heights in some areas are very limited, resulting in the need for accurate evaluation, design, and detailing in the construction documents. MEI designed a phased approach to accomplish the project. The phasing was developed directly with the owner to minimize the impact on the building occupants; who had to relocate to swing space phase by phase. Instead of just replacing the existing system in-kind, MEI designed a system utilizing three rooftop units ducted vertically through the building, which eliminates the sole source failures that have plagued the system for several years. The project was bid and then cancelled by the Owner.

Project Contact:
David Parsons, Operations and Maintenance Manager
State Capitol, Room E-119
(304) 957-7122

WYOMING COUNTY SCHOOLS

WYOMING EAST HIGH SCHOOL HVAC AND ROOF REPLACEMENT

Montum Architecture

The West Virginia School Building Authority funded replacement of the HVAC systems and roofing at the existing Wyoming East High School in 2017. Montum Architecture is the architect-of-record for the HVAC project and integrated the roofing design consultant's information into bid package scenarios. Work is being performed within an occupied building with close coordination of school daily schedules and calendar of events. Many of the units are being replaced one-for-one with some zones being split into multiple units to allow flexibility of new curriculum within the spaces or needs for additional comfort control. Ceilings are being replaced to meet updated guidelines for educational facility acoustics.

COMPLETION: SUMMER 2019

BUDGET: $3.2M

SIZE: 130,000 SF EXISTING

LOCATION: NEW RICHMOND, WV

CONTACT:
Donald Clay
Director of Facilities
304-732-6262

Montum Architecture, LLC
37 ER Path, Keyser, WV 26726 • 304-276-7151 • tom@montumarch.com • montumarch.com

DIVISION OF MOTOR VEHICLES—BUILDING 3
CAPITOL COMPLEX

Charleston, West Virginia

The limestone at the canopy was deteriorated to the point that pieces were loose and ready to fall. The project included an investigation to determine the support conditions for the stone.

During the investigation, it was determined that the support structure was not as shown on the original construction documents.

The repair of this element was completed in 2002.

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NORTH PORTICO STEPS—MAIN CAPITOL BUILDING
CAPITOL COMPLEX

Charleston, West Virginia

This project consisted of developing a method to repair or replace the deteriorated reinforced concrete stair landing on the north side of the Main Capitol Building. The area was enclosed, without ventilation, since its original construction in the 1930's.

The deteriorated concrete was removed, galvanized metal deck was put in place and a new reinforced concrete slab was poured.

This project was completed while working for a previous employer.

Additional work included epoxy injection of brick masonry, removal and re-laying of brick at the cheek walls and cutting an opening in the brick and granite to install a grill to provide ventilation to the space.

Schedule was a factor due to the Governor's Inauguration that was due to take place in a relatively close time period.

CAS
STRUCTURAL
ENGINEERING, INC.

MANCHIN HOSPITAL STRUCTURAL RAMP INVESTIGATION

Fairmont, West Virginia

The project included limited investigation of the precast concrete ramp structure with recommendations for repairs to restore to pedestrian only usage.

Vehicular usage was not permitted under any circumstances without significant structural repairs.

CAS STRUCTURAL ENGINEERING, INC.

STRUCTURAL INVESTIGATION
TWIN FALLS STATE PARK RECREATION BUILDING & LODGE

Mullens, West Virginia

Project includes investigation into causes of structural cracking in existing lodge and recreation buildings and preparation of a construction cost estimate for repairs.

Steel pipe columns have been installed in many locations due to the excessive amount of deterioration that is present at the brick piers.

The structural steel beam within the concrete beam has rusted due to water infiltration through the wall system. Additionally, the steel beam was not designed for current code-related deflection requirements.

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MILLER ENGINEERING, INC.

Budget and Timeline History

Project Name	Project Type	Budget	Cost	Notes
Bluestone State Park	Pool Replacement	$1,000,000	$935,600	On budget
West Virginia State	HVAC Piping Renovation	$650,000	$533,400	On budget
Canaan Valley Resort	Emergency Electrical Repairs	$225,000	$129,829	On budget
Holly Grove Manor	Renovation	$885,000	N/A	On hold
Mapletown Jr/Sr High School	HVAC Renovation	$1,050,000	$1,105,900	5.19% over budget
Pipestem – McKeever Lodge	HVAC Piping Replacement	$1,600,000	$1,776,000	10.43% over budget
Tygart Lake State Park	Beach and Bathhouse	$750,000	$695,000	On budget

= Delivered on budget/on time

MILLER ENGINEERING, INC.

Budget and Timeline History

Project Name	Project Type	Contract Length	Contract Delivery	Notes
Blackwater Falls State Park	Boiler Replacement	120 days	180 days*	*Extended 60 days due to equipment delivery issues
Bluestone State Park	Pool Replacement	180 days	180 days	Delivered on time
Canaan Valley Resort	Construction Administration	3.5 years	3.5 years	Long-term project with varying facets – no direct schedule
Twin Falls/Hawks Nest Lodge	HVAC Renovation	90 days	90 days*	*Expedited delivery
Mapletown Jr/Sr High School	Boiler/ HVAC Renovation	180 days	180 days	Delivered on time
Pipestem – McKeever Lodge	HVAC Piping Replacement	365 days	365 days	Delivered on time
Tygart Lake State Park	Beach and Bathhouse	270 days	270 days	Delivered on time

MILLER
ENGINEERING, INC.

TAB 5 – PROJECT FORMS

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

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

Proc Folder: 629660

Doc Description: EOI: A/E Services for Various GSD Maintenance Projects

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2019-10-04	2019-10-18 13:30:00	CEOI 0211 GSD2000000003	1

BID RECEIVING LOCATION

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

VENDOR

Vendor Name, Address and Telephone Number:

FOR INFORMATION CONTACT THE BUYER

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

Signature X **FEIN #** -1386 **DATE** 10/22/2019

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

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)
Craig Miller, PE - President
(Printed Name and Title)
429 Laurel Run Rd. Carmichaels, PA 15320
(Address)
304 291-2234
(Phone Number) / (Fax Number)
cmiller@millereng.net
(email address)

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

Miller Engineering, Inc.
(Company)

(Authorized Signature) (Representative Name, Title)

Craig Miller, PE - President
(Printed Name and Title of Authorized Representative)

10/22/2019
(Date)

304 291-2234 n/a
(Phone Number) (Fax Number)

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

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

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

DEFINITIONS:

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

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

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

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that: (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: Miller Engineering, Inc.

Authorized Signature: _____ Date: 10/22/2019

State of West Virginia

County of Monongalia, to-wit:

Taken, subscribed, and sworn to before me this 22 day of October, 2019.

My Commission expires 9/16/2024, 2024.

AFFIX SEAL HERE

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Travis Taylor Miller Engineering
240 Scott Avenue Suite #1 Morgantown, WV 26508
My Commission Expires September 16, 2024

NOTARY PUBLIC _____

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

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

Proc Folder: 629660

Doc Description: Addendum No. 1 EOI: A/E Services for Various GSD Maintenance

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2019-10-04	2019-10-23 13:30:00	CEOI 0211 GSD2000000003	2

BID RECEIVING LOCATION

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

VENDOR

Vendor Name, Address and Telephone Number:

FOR INFORMATION CONTACT THE BUYER

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

Signature X **FEIN #** -1386 **DATE** 10/22/2019

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

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: GSD2000000003

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

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

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

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

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

Miller Engineering, Inc.
Company

Authorized Signature

10/22/2019
Date

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