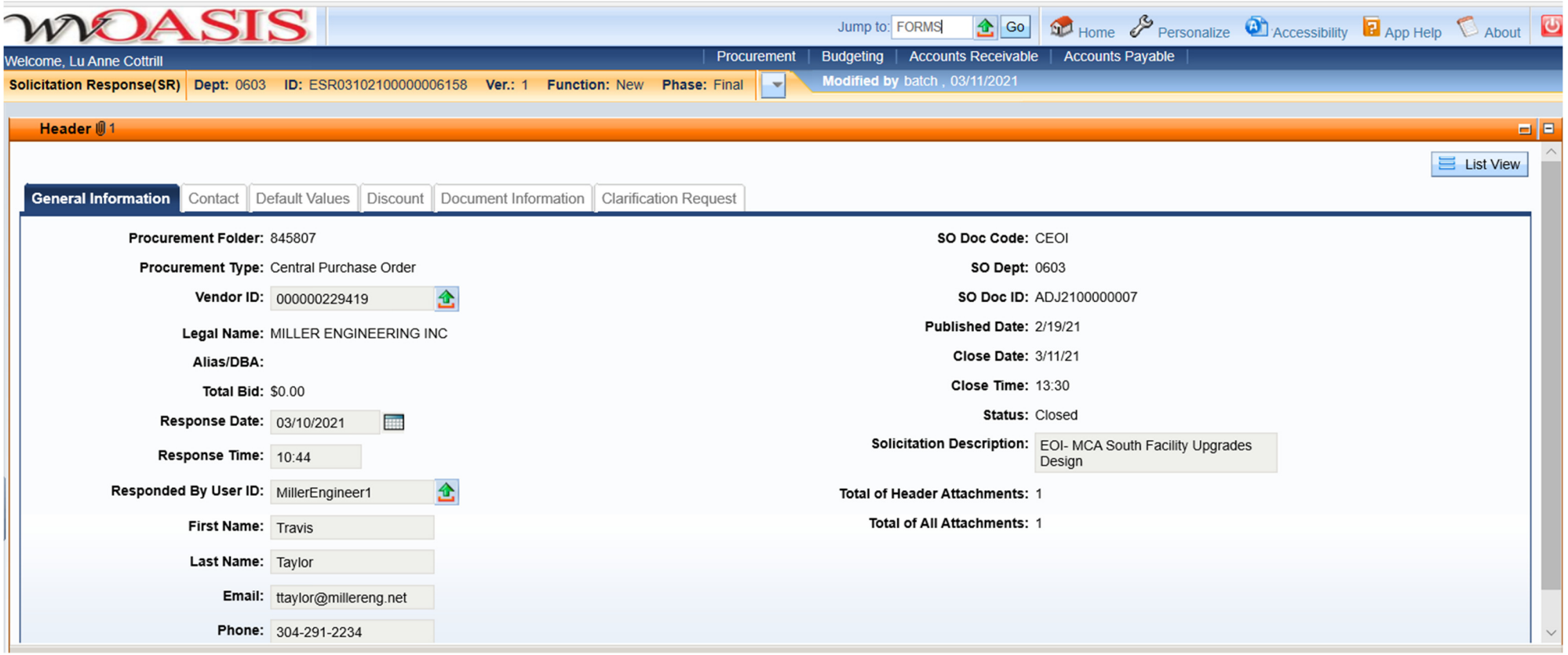
The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.


wvOASIS
Jump to: FORMS Go
Home
Personalize
Accessibility
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About
Welcome, Lu Anne Cottrill
Procurement
Budgeting
Accounts Receivable
Accounts Payable
Solicitation Response(SR) Dept: 0603 ID: ESR03102100000006158 Ver.: 1 Function: New Phase: Final
Modified by batch , 03/11/2021
Header 1
List View
General Information
Contact
Default Values
Discount
Document Information
Clarification Request
Procurement Folder: 845807
Procurement Type: Central Purchase Order
Vendor ID: 000000229419
Legal Name: MILLER ENGINEERING INC
Alias/DBA:
Total Bid: $0.00
Response Date: 03/10/2021
Response Time: 10:44
Responded By User ID: MillerEngineer1
First Name: Travis
Last Name: Taylor
Email: ttaylor@millereng.net
Phone: 304-291-2234
SO Doc Code: CEOI
SO Dept: 0603
SO Doc ID: ADJ2100000007
Published Date: 2/19/21
Close Date: 3/11/21
Close Time: 13:30
Status: Closed
Solicitation Description: EOI- MCA South Facility Upgrades Design
Total of Header Attachments: 1
Total of All Attachments: 1

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

State of West Virginia
Solicitation Response

Proc Folder:	845807
Solicitation Description:	EOI- MCA South Facility Upgrades Design
Proc Type:	Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2021-03-11 13:30	SR 0603 ESR03102100000006158	1

VENDOR

000000229419
MILLER ENGINEERING INC

Solicitation Number: CEOI 0603 ADJ2100000007

Total Bid: 0 **Response Date:** 2021-03-10 **Response Time:** 10:44:26

Comments:

FOR INFORMATION CONTACT THE BUYER
David H Pauline
304-558-0067
david.h.pauline@wv.gov

Vendor
Signature X **FEIN#** **DATE**

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

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	EOI- MCA South Facility Upgrades Design				0.00

Comm Code	Manufacturer	Specification	Model #
81101508			

Commodity Line Comments:

Extended Description:

EOI- MCA South Facility Upgrades Design per the attached documentation.

MILLER
ENGINEERING, INC.

Expression of Interest
West Virginia – Army National Guard
MCA South Facility Upgrades Design
Montgomery, WV
CEOI ADJ2100000007

March 11, 2021

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

304-291-2234 (ext. 107) | 54 West Run Rd. | Morgantown, WV 26508 | www.MillerEng.net
West Virginia | Pennsylvania | Maryland | Ohio| Virginia

Table of Contents

The Miller Engineering Difference

We are very pleased to submit our response for the MCA South Facility Upgrades Design project. We have elected to submit as prime consultant, teamed with Montum Architecture as our understanding from the Expression of Interest is that the upgrades are focused on boiler systems and restroom facilities. MEI has operated in this role many times before, including on the recent Mill Point Canopy and Camp Dawson FMS 4 Fire Protection Projects. While MEI's project portfolio includes many building systems, HVAC and MEP renovations constitute the majority of our work.

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.

Most every renovation we do requires a phased approach to keep the facility in operations. We routinely deliver phased renovations for educational, institutional, commercial, and government facilities. Most every project we do has a particular set of standards which we must apply, and this is no exception. We see our diversity of previous work as an advantage as we do not use "cookie cutter" design or presume we have all the answers when we start.

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 the State of West Virginia in recent years. We have upgraded boiler systems for facilities such as lodges for Blackwater Falls and Cacapon State Parks. We have also completed boiler upgrades for several K-12 schools throughout Monongalia County. We are the MEP consultant on the Capital Complex Chiller Plant project, which is implementing significant plant redundancy and decreased operating cost enhancements.Such projects involve detailed sequencing as work had to be performed in a manner to not disrupt student activities. The upgrades to restroom facilities will require architectural design services. For this purpose, we have included Montum Architecture with our team.Both firms have extensive experience working together on many successful projects so the effort is seamless from your perspective. MEI and Montum have recently completed renovations to the Berkeley Springs Old Raman Bathhouse which involved upgrades to domestic water heating and upgrades to restrooms for ADA compliancy. We have

several projects in the Charleston area at this time and will be in the area on a regular basis for at least the next three years.

We encourage you to contact any of our references to gauge our level of commitment, not only through design but continuing through construction administration, and beyond the warranty period.

I would like to personally thank you for affording Miller Engineering the opportunity to propose on the MCA South Facility Upgrades Design project and we look forward to the chance to discuss the project in an interview.

Best Regards and Good Luck on the Project,

Craig Miller, PE
President/Owner
Miller Engineering, Inc.

MILLER
ENGINEERING, INC.

TAB 1 –FIRM QUALIFICATIONS

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 AddressVoice/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

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

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. His experience with a wide range of projects including HVAC, electrical, plumbing, 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 "Relationship Manager" for Miller Engineering 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 Area 4 HVAC Renovations
- 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
- Pipestem McKeever Lodge HVAC Piping Replacement
- Beech Fork State Park – MEP New Construction Design
- Cheat Lake Elementary & Middle School Renovations

Professional History

2003- Present	Miller Engineering, Inc.	President, Relationship Manager
2002-2003	Casto Technical Services	Existing Building Services Staff 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
- Camp Dawson FMS4 Fire Protection
- WV State Building 22 2nd Floor Renovations
- WV State Building 25 HVAC Piping Replacement
- Morgantown High School Area 4 HVAC Renovation
- 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

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 25 HVAC Piping
- 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
- WVDA Ripley Warehouse Electrical Upgrades
- Huntington 8th & 10th Street Pump Stations
- Huntington Floodwall Pump Station Automation
- Blackwater Falls Lodge Renovation
- Hawks Nest Lodge Interior Improvements
- Capitol Complex Central Chiller Modificaitons

Professional History

2019- Present	Miller Engineering, Inc.	Junior Engineer

Education

2019 West Virginia University, BS - Mechanical Engineering

Licenses and Certifications

- ASHRAE Student Member

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

- *FacilityReview,CodeResearch,FieldObservations,IssueResolutions,andProjectEvaluation*

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-EngineeringTechnology-Electronics

Licenses and Certifications

- Master Code Professional, IAEI Master Electrical Inspector, Class C Electrical Inspector – WV, PA, MD, &OH
- ICCCommercialBuilding,BuildingPlans,CommercialPlumbing,ResidentialEnergy,andAccessibility Inspector/Examiner
- WV Master ElectriciansLicense
- NCPCCI-2B, 2C, 4B, 4C: Electrical & Mechanical General/PlanReview
- OSHA 30 Hour Course: GeneralIndustry
- NFPA Code Making Panel 14 – NEC 2014Edition

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.

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 manage communications with sub-consultants on this project.

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.

Montum Architecture

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

Tom founded MontumArchitecture in 2017. He has more than 15 years experience in design, specification, and project management. During his former employment, Tomhas 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

Montum

Architecture

Professional Project Highlights (former employment built projects)

- 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 VolkswagenAutomotive 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

Staff – Proposed Staffing Plan

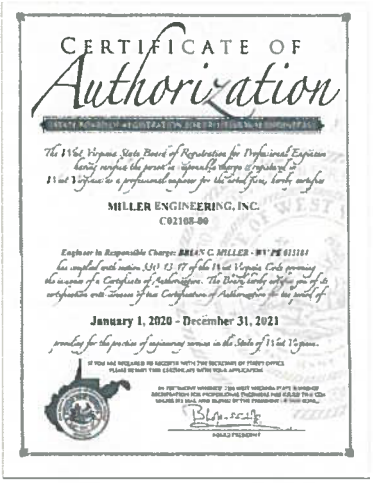
The State of West Virginia

To all to whom these presents shall come Greeting

The State Board of Registration for Professional Engineers

Brian C. Miller

Registration Number [redacted]



CERTIFICATE OF

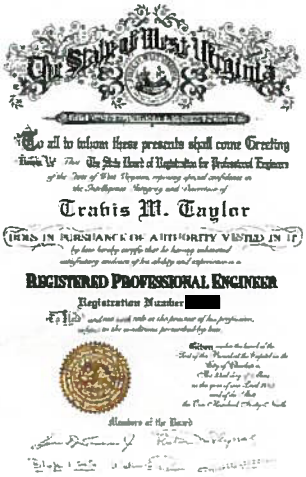
Authorization

MILLER ENGINEERING, INC.

C02108-00

Engineer in Responsible Charge: BRIAN C MILLER - WV PE [redacted]

January 1, 2020 - December 31, 2021



The State of West Virginia

To all to whom these presents shall come Greeting

The State Board of Registration for Professional Engineers

Travis W. Taylor

REGISTERED PROFESSIONAL ENGINEER

Registration Number [redacted]

West Virginia State Board of Registration for Professional Engineers

BRIAN C. MILLER

WV [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

West Virginia State Board of Registration for Professional Engineers

TRAVIS W. TAYLOR

WV P [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, 2013

Certificate Maintenance No.

[redacted]

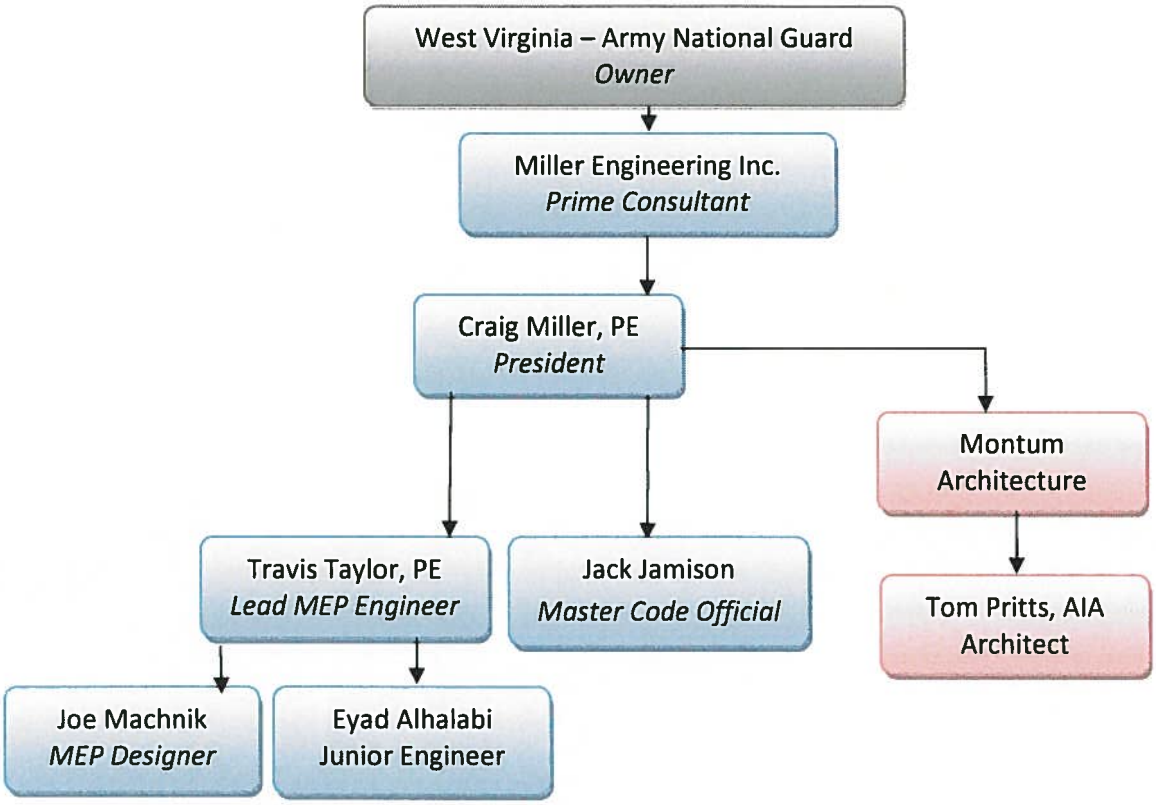
MILLER
ENGINEERING, INC.

TAB 2 – PROJECT ORGANIZATON

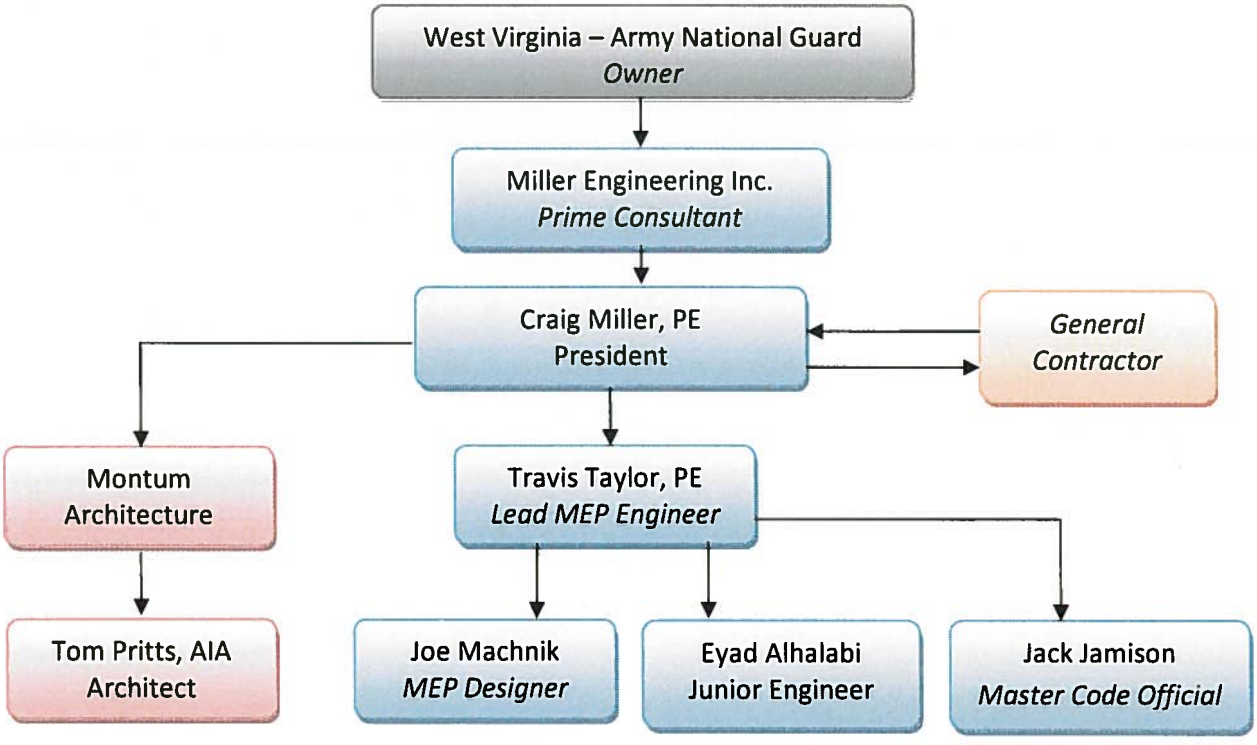
Staff – Proposed Staffing Plan

Team Leader/ Primary Point of Contact	***Craig Miller, PE***
Engineer in Responsible Charge	***Craig Miller, PE***
Electrical Code Specialist	***Jack Jamison***
Lead MEP Engineer	***Travis Taylor, PE***
Designer / BIM Coordinator	***Joseph Machnik***
Junior Engineer	***Eyad Alhalabi***
Master Code Specialist	***Jack Jamison***
Architectural Support (Montum)	***Tom Pritts, AIA***

Organization Chart – Design

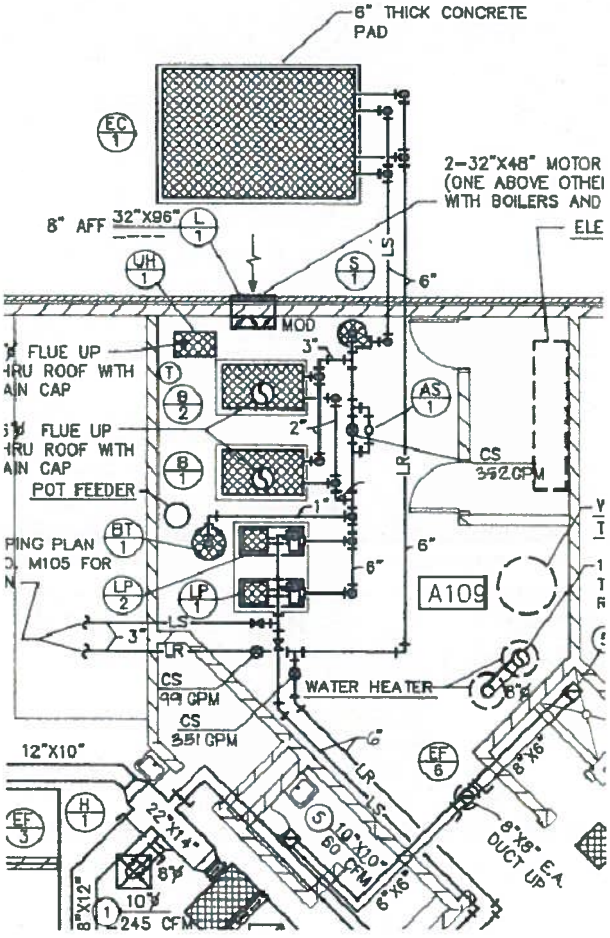


Organization Chart – Construction



MILLER
ENGINEERING, INC.

TAB 3 – EXPERIENCE



MILLER ENGINEERING, INC.

Experience –Electrical & Mechanical

Capital Complex Chiller Plant Evaluation and Modifications

Services Provided:

- Evaluation – Study
- Electrical
- Mechanical
- Plumbing

Project Cost: $7.26 mil
Facility Area: Approx. 7,500 ft^2
Owner: WV GSD

The existing chiller plant serving the WV State Capital Complex is 20 years old. The Owner wishes to reduce energy costs associated with the peak electrical demand metering applied to the plant's electrical service. MEI was retained to evaluate multiple options to reduce electrical demand, and thereby the operating costs. The determined optimal solution is to use large, medium voltage, natural gas generators which could operate select chillers during peak demand to reduce electrical peak demand. A 5kV switchgear will allow the select chillers and their respective pumps to operate under generator load when they are required to come online. A new 2,300 ft^2 building will be constructed to house the new switchgear, pumps, and heat exchangers to allow the chillers to still operate as a plant. The project is currently in construction and anticipated to be completed in January 2022.

Project Contact:
Dave Parsons
Energy Manager
WV GSD
112 California Ave.
Charleston, WV
304-957-7122

MILLER ENGINEERING, INC.

Descriptions of Past Projects Completed – HVAC

Blackwater Falls State Park Lodge Boiler Replacement

Davis, WV

Services Provided:

- General Trades
- Plumbing
- Electrical
- Mechanical

Contract Amount: $598K
Facility Area: 46,000 ft^2
Owner: West Virginia Division of Natural Resources

The existing fuel fired boilers serving the Blackwater Falls Lodge had reached the end of their serviceable life. MEI was tasked with designing a boiler replacement which involved keeping existing boilers active as Davis, WV has an extensive heating season. New propane fired stackable modulating condensing boilers were used. These boilers have a small footprint which allows the new boilers to be installed without any demolition to the existing boilers. The large electric water heaters were replaced with indirect water heaters fed from the new boilers. The existing boilers were steam with heat exchangers to hot water for the HVAC systems. New hot water supply and return headers were installed and the existing water piping was tied in. The smaller footprint allowed for the construction of a boiler room, leaving the existing boiler space to become a maintenance shop.

Project Contact:
Bradley S. Leslie, PE, Assistant Chief
State Parks Section
Phone: (304) 558-2764 ext. 51826

MILLER ENGINEERING, INC.

Descriptions of Past Projects Completed – HVAC, Electric

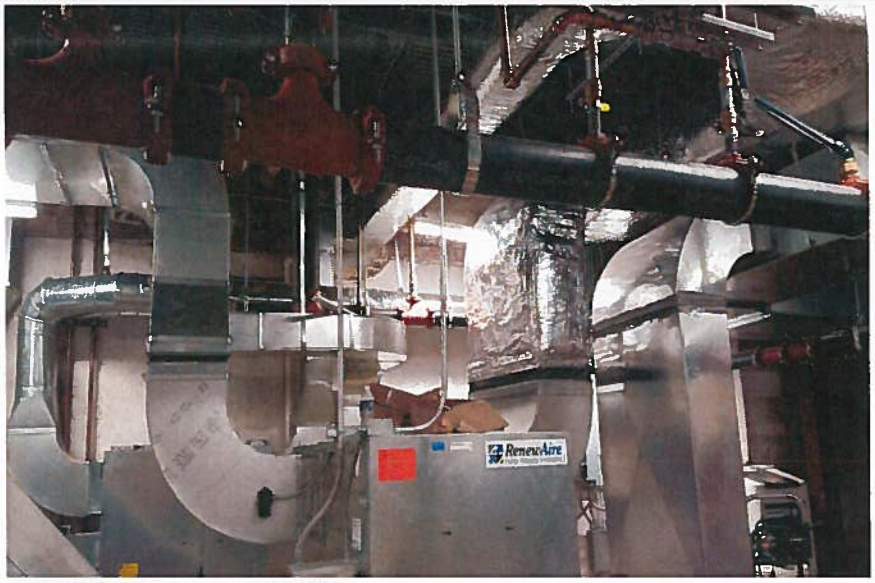
Withers Brandon Hall

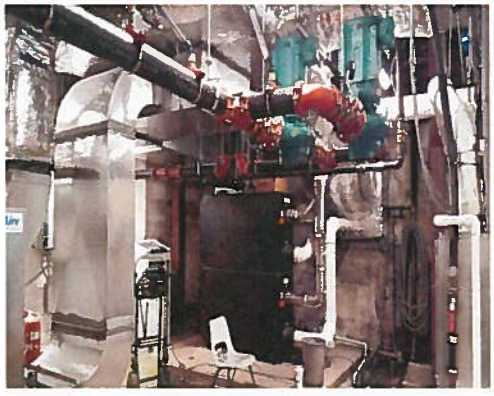
Philippi, WV

Services Provided:

- Electrical
- HVAC

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





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 was completed in October 2019.

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

MILLER ENGINEERING, INC.

Project Experience: HVAC Upgrade

West Virginia State Building 25

Parkersburg, WV

Services Provided:

- Mechanical Piping
- Electric
- Construction Administration

Estimated Budget: $843k
Facility Area: 58,500 ft^2
Owner: State of West Virginia – General Services Division

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.

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

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 had been suffering from poor air quality and temperature control issues. Additionally, the condensing unit had failed. Initiated in November, MEI designed a rebuild of the AHU; replacing the DX coils with HW and CW coils and adding new chillers in time to meet the Spring cooling need. 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 was completed in December 2019.

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

MILLER ENGINEERING, INC.

Descriptions of Past Projects Completed – Fire Protection

Camp Dawson FMS4 Fire Protection

Kingwood, WV

Services Provided:

- Fire Protection

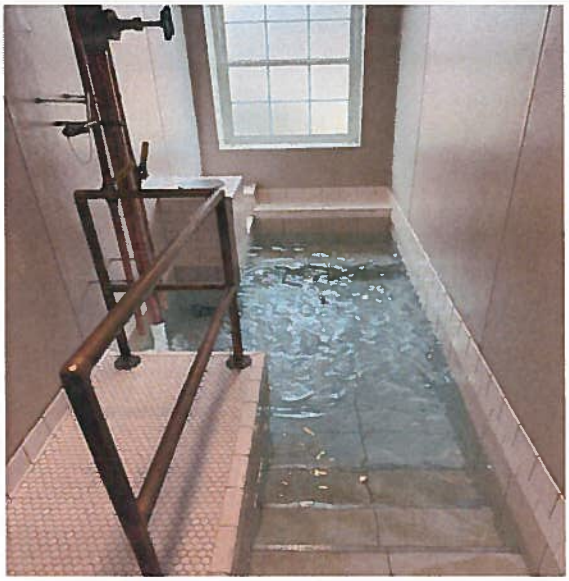
Budget: $130K
Facility Area: 7,400 sq ft
Owner: WVARNG

FMS4 is a vehicle and equipment repair facility located on the Camp Dawson Army National Guard base located near Kingwood, WV. The 7,400 square foot facility includes 4,800 square feet of high bay service area, with the remaining area dedicated to office space, storage, and locker rooms. The facility contains bulk storage of oil and other equipment fluids, requiring fire protection. MEI was tasked with designing a fire protection system which would provide adequate coverage of FMS4 and meet applicable codes. Through research of NFPA 30 and NFPA 13, MEI was able to determine the size of the service and coverage requirements. MEI determined that by providing separation of the bulk storage from the rest of the facility, the fire protection service requirements could be reduced, eliminating a water service upgrade by the utility. Montum Architecture was brought on board to provide architectural support in regards to the separation of the bulk storage room and for the construction of the sprinkler room. The project was successfully completed in December 2019, one month ahead of schedule.

Project Contact:
Jim Skaggs
WV ARNG
(304) 561-6550

Descriptions of Past Projects Completed – Renovation

Berkeley Springs Old Roman Bathhouse



Services Provided:

- Mechanical
- Electrical
- Plumbing

Construction Cost: $1.2M
Facility Area: 1,700 ft^2
Owner: West Virginia Division of Natural Resources

The Old Roman style bathhouse at Berkeley Springs State Park was suffering from tub leaks and a lack of sufficient hot water to operate more than one of the available nine tub rooms. As part of an overall renovation, MEI replaced the tub room fill and drain system. The existing boiler was replaced with high efficiency water heaters along with storage tanks. New distribution piping and tempering valves were installed to increase the number of simultaneous tub fills. The drains were replaced with new piping valves, and a sump pump to reduce drain times and tub turnover rates. Additionally, a tub was modified to be ADA accessible with automated control valves. A new ADA bathroom was also constructed. New radiant ceiling panels were installed in the tub rooms and the existing HVAC systems were modified. Once completed, the tub fill and drain times were cut in half, allowing the park to schedule more appointments and increase revenue.

Project Contact:
Bradley S. Leslie, PE, Assistant Chief
State Parks Section
(304) 558-2764 ext. 51826

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
WestVirginia State Building25	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 daysdue 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.

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, Dominion Post, Morgantown

"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, WV25303* ***(304) 289-7663*** Bradley.S.Leslie@wv.gov	**Paul Braham** Associate Director of Maintenance & Engineering *Mylan Pharmaceuticals* *781 Chestnut Ridge Road* *Morgantown, WV 256505* ***412-519-9846*** ***304-554-5626*** Paul.Braham@mylan.com	**Gregory L. Melton** *Director* *WV General Services Div.* *401 California Ave.* *Building 4, 5th Floor* *Charleston, WV 25305* ***(304) 558-1808*** ***304-965-1219*** Gregory.L.Melton@wv.gov
Bob Ashcraft *Safety and Ancillary Projects* *Monongalia County Schools* *533 East Brockway Street* *Morgantown, WV 26501* ***(304) 276-0152*** rbashcraft@access.k12.wv.us	**Dave Parsons** Energy Program Manager *WV General Services* *112 California Avenue* *Building 4, 5th Floor* *Charleston, WV 25305* ***(304) 957-7122*** David.K.Parsons@wv.gov	**Richard J. Briggs** Vice President *Lutz Briggs Schultz & Assoc. Inc.* *239 Country Club Drive* *Ellwood City, PA 16117-5007* ***(724) 651-4406*** 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"

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TAB 4 – METHODOLOGY & APPROACH

Project Methodology & Approach

Evaluation

Miller Engineering will begin the design process by reviewing all existing documentation regarding the MCA South Buildings related to the project, including any documentation regarding the DCW and heating hot water mechanical systems from when the facility was WVU Tech. Reviewing documents will give MEI an initial understanding of the facilities which will be confirmed or adjusted through an extensive on site evaluation of the facilities. Evaluations of both existing documents and site visits will allow the design team to create initial building models. MEI will utilize building information modeling (BIM) via Autodesk REVIT to create models and therefore drawings of the facilities' areas of impact.

Schematic

Once the BIM models are accomplished, and MEI grasps the building systems intent and construction, MEI will meet with the owner. The meeting will involve all stakeholders to gain an understanding of the intended project outcomes. MEI will discuss items which will affect the renovation including changes in building usage, current deficiencies and issues, operating methods, operating costs, and construction timeline phasing. This information will be used to confirm calculations regarding boiler, pump, and pipe sizing. This will also lead to which design options best meet the goals. The project documents call for different boiler systems to be dedicated for domestic hot water and heating hot water. MEI has successfully delivered boiler systems which utilize the same boiler plant to handle both domestic and heating water, while still providing redundancy in the event of equipment failure. These discussions will also affect the size and layout of the new facility to house these systems, with Tom Pritts from Montum Architecture leading the facility design. These options along with their implications to cost, aesthetics, and operations will be clearly communicated to the owner and pertinent stakeholders. Miller Engineering's staff has backgrounds in construction, maintenance, and operations which provide a unique perspective as we do not just think "Will it work?" but also consider "How will it be installed?" and "How well can it be maintained to work as intended?" A majority of MEI's past projects include renovations which must be phased as the owner still occupies the facility. In this situation, we will detail how to build and construct the new boilers and facility, interconnect to existing piping, and finally demolish the existing systems. Constructing and modifying the shower and restrooms will also need to be coordinated and scheduled to minimize interruptions. The initial schematic design will be the basis of the 35% documents. MEI will provide cost estimates using real material quotes and take-offs to convey projected costs to the owner.

Design Development

MEI will take input from the owners based upon review of the 35% design documents and proceed. While the requirements of the EOI give specific milestones for progress sets (35%, 65%, 95%, & 100%), MEI will not wait until the next progress set to speak with the stakeholders if questions arise. Our philosophy is that the sooner issues are brought forward and addressed, the less they cost the project in time and money. The estimate will also be updated regularly as MEI treats the estimate as a "living document." Any changes or inputs from the owner, as well

as other changes made during proceeding with design development, will be reflected in the estimate. MEI believes in giving the owner the information necessary, including budgetary effects, to make informed decisions regarding the design. The 65% and 95% progress sets will reflect the outcomes of the formal and informal discussions with the owners.

Construction Documents

The construction documents will be completed using both the results of the progress set reviews and internal peer review. MEI understands that while working on a project, engineers and designers can get "tunnel vision", meaning they see what they want to see reflected in the documents. All drawings and specifications issued by Miller Engineering go through a three step peer review internally to ensure the intent of the document is clearly transmitted. The final 100% construction document set will be issued to the owner for bidding, along with our best estimate of probable cost.

Bidding

During bidding, Miller Engineering will assist the owner to successfully procure bids for the upgrades. MEI will be present during the pre-bid meeting to discuss the technical scope of work for the project. Any technical questions from contractors or vendors to the owner during bidding will be answered by MEI. MEI will provide addendum documents as needed. MEI will also assist in reviewing bids and making recommendations to the owner. We have completed many projects through WV State Purchasing, and understand the requirements to successfully bid a project with the state of West Virginia.

Construction Administration

After bids are received and the contract awarded, MEI is not a firm that disappears until the final punch list. MEI will provide thorough construction administration (CA) services as agreed upon with the owner. We will be present for a construction kick-off meeting to make sure the project gets off on the right foot. MEI believes in being present at construction progress meetings and making informal site visits to keep the project on track. Our background in construction and operations allows us to understand the sequencing of construction in the field to better aid the contractors when questions arise. One of MEI's main beliefs is that any requests for information (RFIs) submitted by the contractor should be reviewed and answered within one business day if possible. This is because we understand that delays in RFI responses can lead to additional costs and construction days. If necessary, we will provide an informal answer and follow up with the formal response to keep the project rolling. During progress meetings and site visits, any issues discovered by MEI will be relayed to the owner and contractor immediately to prevent delays. Another company standard is for our staff to be present for testing and balancing (TAB), equipment start-up, and owner training. While these events occur at the very end of the project, they are critical to ensure the new systems operate as designed. MEI will be on hand for these activities to quickly answer any questions and confirm these items are performed properly in accordance with the construction documents.

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TAB 5 – PROJECT 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

Proc Folder: 845807 **Doc Description:** EOI- MCA South Facility Upgrades Design **Proc Type:** Central Purchase Order			**Reason for Modification:**
Date Issued	**Solicitation Closes**	**Solicitation No**	**Version**
2021-02-19	2021-03-11 13:30	CEOI 0603 ADJ2100000007	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 :

Address :

Street :

City :

State : **Country :** **Zip :**

Principal Contact :

Vendor Contact Phone: **Extension:**

FOR INFORMATION CONTACT THE BUYER
David H Pauline
304-558-0067
david.h.pauline@wv.gov

Vendor Signature X **FEIN#** -1386 **DATE** 3/10/2021

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)
B. Craig Miller, PE - President

(Printed Name and Title)
54 West Run Rd. Morgantown, WV 26508

(Address)
(304) 291-2234 ext. 3

(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)

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

3/10/2021
(Date)

(304) 291-2234
(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: 3/10/2021

State of West Virginia

County of Monongalia, to-wit:

Taken, subscribed, and sworn to before me this 10th day of March, 2021.

My Commission expires 9/16/2024, 20___.

AFFIX SEAL HERE

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Travis Taylor
2279 Meadows Drive Morgantown, WV26505
My Commission Expires 09/16/2024

NOTARY PUBLIC _____