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Header 1

[List View](#)

General Information | Contact | Default Values | Discount | Document Information | Clarification Request

Procurement Folder: 845807

Procurement Type: Central Purchase Order

Vendor ID: 

Legal Name: GRW ENGINEERS INC

Alias/DBA:

Total Bid: \$0.00

Response Date: Response Time: Responded By User ID: First Name: Last Name: Email: Phone:

SO Doc Code: CEOI

SO Dept: 0603

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Solicitation Description:

Total of Header Attachments: 1

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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 ESR03102100000006156	1

VENDOR
 000000218570
 GRW ENGINEERS INC

Solicitation Number: CEOI 0603 ADJ2100000007
Total Bid: 0
Response Date: 2021-03-10
Response Time: 10:28:04
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.



EXPRESSION OF INTEREST

**MCA South Facility
Upgrades Design**

**Solicitation No.:
ADJ210000007**

West Virginia Department
of Administration
West Virginia Army National Guard
March 11, 2021



engineering | architecture | geospatial



March 8, 2021

Mr. David Pauline
Purchasing Division
West Virginia Department of Administration
2019 Washington Street, East
Charleston, WV 25305

RE: Expression of Interest for Mountaineer Challenge Academy South Facility Upgrades Design Solicitation No.: CE01 0603 ADJ2100000007

Dear Mr. Pauline and Selection Committee Members:

Achieving the renovation goals established for the West Virginia Army National Guard (WVARNG)'s Mountaineer Challenge Academy South are greatly dependent upon selecting the right A/E design partner. GRW would like to work with you on your project. Our team offers you the right experience and expertise to successfully complete your project, and we are committed to meeting your needs.

Experience and Familiarity. GRW is a full-service A/E design consulting firm that has been working with clients like you on similar projects throughout the region for more than 55 years. Our experience includes WVARNG renovation projects, as well as similar projects for a variety of clients. A few of the projects included in our proposal include:

- **Aliceville Federal Correctional Institution, Aliceville, AL:** Heating system with three 215 horsepower natural gas-fired boilers which are dual fuel--natural gas with oil backup.
- **Blue Grass Airport Terminal HVAC Equipment Replacement for Boiler Room 1, Lexington, KY:** Boiler system was modified by demolition of existing single dual-fuel firetube boiler and replacement with two high-efficiency condensing gas boilers and dual fuel, cast-iron backup boiler.
- **Kentucky School for the Deaf Boiler Replacements:** Phased projects to add new steam boiler system to Thomas Gym and new hot water boiler systems to Brady Hall and Grow Hall, as well as replacing the existing natural gas distribution system on campus. In addition, a new steam boiler system, including a new remote boiler building and new underground piping is currently under construction for historic Jacobs Hall.
- **WVARNG Secure Facility, Martinsburg, WV:** Complete replacement of non-operational HVAC system, and new building security and cameras
- **Murray State University, Murray, KY:** Demolition and renovation of six restrooms on three levels
- **Smithville Elementary School Renovation/Addition, Harrisville, WV:** Included demolition of two buildings and renovated restrooms
- **Jane Lew Elementary:** Addition and renovations throughout including renovated restrooms
- **WVANG Building 107 Renovation, Charleston, WV:** Upgrade of mechanical systems and replacement of restrooms
- **Northpoint Training Center Replacement, Burgin, KY:** Multiple public, staff and inmate restrooms and new security electronics (500± cameras total)



GRW and its subsidiary Chapman Technical Group (offices in St. Albans and Buckhannon, WV) also have extensive experience in developing projects through the WV Purchasing Division. We have designed, bid, and constructed numerous, major Division of Natural Resources projects throughout the state. Also, the West Virginia Division of Highways (DOH) works with the State's Purchasing Division for building projects, and **our \$10 million equipment shop building for District One was the first project that the DOH bid through the WV Purchasing Division.** Our knowledge and experience of the State's purchasing procedures made this an easy transition for all stakeholders. Although every agency has its own particulars with regard to bidding projects, our experience with the WVARNG and the State's Purchasing Division will help ensure effective and efficient project delivery.

We Are Committed to Your Success. Taking care to meet your goals for your budget and schedule is a priority, as it is on every GRW project. From our extensive federal, state and local government experience, GRW is skilled at delivering designs that maximize the potential of the site, and integrate the architectural and engineered features of the building in relation to its environment, eliminating the need for redesigns and re-bids to bring the cost within budget.

The ultimate measure of success is how well the completed projects meet your needs and aspirations. To this end, our project team is committed to establishing an inclusive, methodical and logical approach to the design process.

Thank you for your consideration and for the opportunity to work with the West Virginia Department of Administration, and Army National Guard Construction and Facilities Management office. We look forward to the next step in your selection process where we can present our additional ideas toward the successful completion of your project.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Shane Lyle', with a long, sweeping horizontal line extending to the right.

Shane Lyle, AIA, LEED AP/BD+C
GRW Vice President



engineering | architecture | geospatial

Expression of Interest

Mountaineer Challenge Academy South Facility Upgrades Design

CEOI 0603 ADJ2100000007

WV Department of Administration WV Army National Guard

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SECTION 1.0 | Introduction

1.0 GRW Introduction

About GRW

Founded more than 55 years ago, GRW is an employee-owned architectural, engineering and geospatial services firm with approximately 200 employees.

At GRW, we have the ability to address your projects from nearly every angle. Because of our in-house capabilities, we can more easily tailor our approach allowing our teams to deliver more quickly, with greater potential for more accurate cost estimates, and fewer change orders.

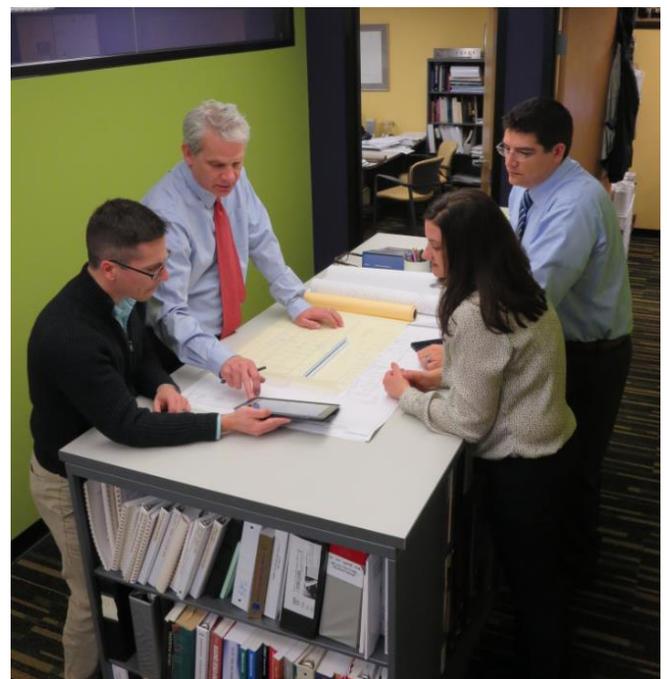
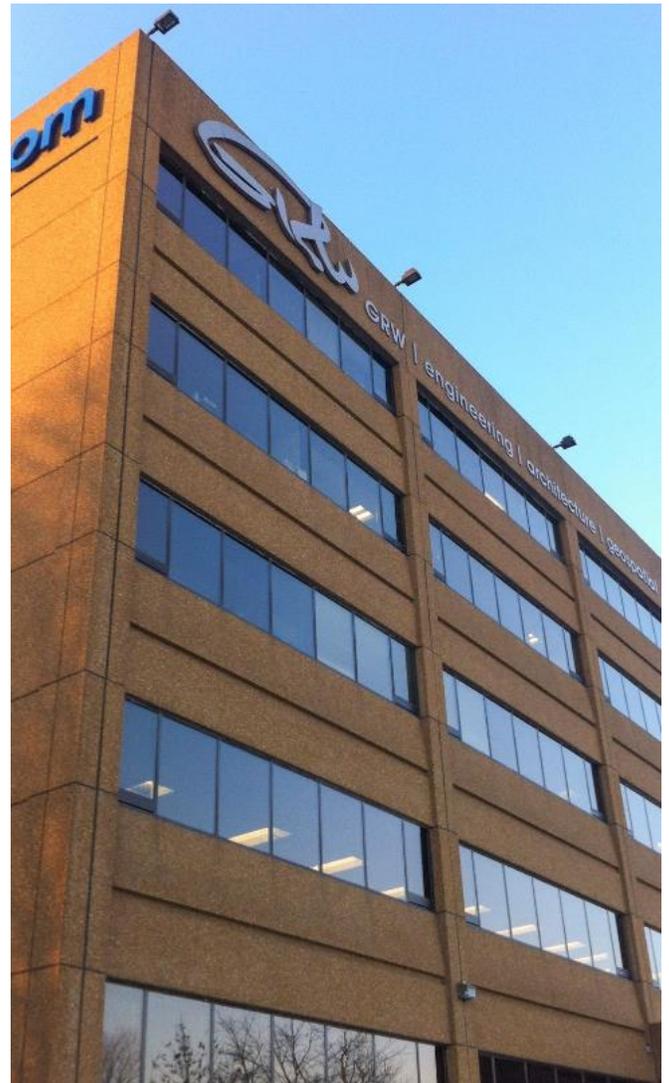
Among our achievements, GRW is listed in *Building Design and Construction's Giants 300* report as one of the nation's top Architecture-Engineering firms. Also, since 1972, GRW also has been recognized nationally as a top producing firm by *Engineering News-Record*.



Our Corporate Culture

Our corporate culture is one of close collaboration with an approach that gives our project managers and their project teams a hands-on approach, as needed, from planning through construction phases.

At GRW, we know that business relationships are built on trust – the ability to trust your business partner to deliver on their promises. By choosing GRW for your professional services, you are choosing a company that delivers on our promises. You can expect our full attention starting on day one, and extending to the day of project completion and beyond. **Listening diligently to your needs, and those of your stakeholders, is the hallmark of our approach.** Delivering projects that meet our clients' goals – honestly, reliably, and efficiently, time after time – is the reason why GRW has achieved a 90% rate of repeat business.



GRW Services

Architecture

- Space Utilization Studies
- Master Plans
- Building Design
- Life Safety
- ADA Compliance Studies
- Green Building Design
- Anti-Terrorism/Force Protection
- Construction Administration
- Resident Project Representation
- Cost Estimating

Electrical

- Low Voltage Power Distribution
- Medium Voltage Power Distribution (Overhead and Underground)
- Instrumentation/Controls/Telemetry/Automation
- Communications and CATV
- Access Control Systems
- Intrusion Detection Systems
- Fire Alarm Systems
- Industrial Networking (Ethernet, Modbus, DeviceNet, DNP3)
- Structured Cable Systems (Voice, Data, FO)
- Grounding Surveys and System Design
- Vertical Transportation Systems (New or Modernizations)
- Lightning Protection Systems
- Surge Protection
- Lighting (Exterior, Interior)
- Lighting Control Systems
- Roadway Lighting
- Building Code Analysis
- Power Quality Surveys
- Solar Photovoltaics

Mechanical

- Fire Protection Systems
- Water Supply Analysis
- Plumbing Systems

- Compressed Air
- Gas Distribution
- HVAC Systems
- Building Energy Loads and Simulations
- Hydronic Distribution
- Air Distribution
- Geoexchange Design
- Clean Space Design
- HVAC Commissioning Assistance
- Process Heating and Cooling Systems
- Industrial Ventilation
- Heat Transfer Analysis and Design
- Psychrometric Analysis and Design
- Acoustic and Vibration Analysis and Design
- Energy Auditing
- Building Energy Star Certification and Benchmark Assistance
- Code Analysis: Fire Protection, Plumbing, and Mechanical Systems

Structural

- Building Structures
- Water-Containing Structures
- Foundations
- Manufacturing Supports
- Equipment Isolation Pads
- Special Inspections
- Code Compliance

Civil

- Site Development
- Roads
- Parking
- Landscape Architecture
- Storm Drainage
- Water/Wastewater Systems

SECTION 2.0 | Relevant Past Projects

2.0 Relevant Past Projects

Aliceville Federal Correctional Institution and Satellite Camp

Federal Bureau of Prisons | Washington, DC

GRW led the design team, in conjunction with Caddell/Yates JV, for the design-build of a women's medium-security Federal Correctional Institution and minimum-security Federal Prison Camp located near Aliceville, Alabama. This \$196 million, LEED Silver certified, project has a gross building area of approximately 665,889 SF, and can house approximately 1,790 inmates. The FCI campus plan places the three, 4-story housing units, and program and multipurpose functions in a semi-circular campus layout enclosing a central secure compound.



The utility plant building (12,647 SF) is located outside the secured perimeter. The central heating/cooling system is four pipe and distributes water underground to 40 variable volume and multi-zone air handling systems in 17 buildings. **The heating system consists of three 215 horsepower natural gas-fired boilers which are dual fuel-- natural gas with oil backup.** The primary hot water pumps are constant speed, and secondary pumps are variable. Three centrifugal chillers provide 1200 tons of cooling, and include variable speed secondary chilled water pumps. Variable speed

cooling towers are incorporated to match each chiller. Outside the secure perimeter, all HVAC systems are geothermal utilizing vertical bore wellfields in a closed-loop configuration. Both instantaneous and storage-type gas domestic water heating systems are distributed throughout the facility.

HVAC systems are monitored and controlled by a direct digital control (DDC) utility management control system (UMCS) utilizing stand-alone controllers in an open, distributed fiber-optic network, and this state-of-the-art system provides flexibility for future modifications or expansions, as required. The DDC system allows monitoring and control of all major equipment included boilers, chillers, cooling towers, pumps, air handling units, VAV boxes, and exhaust fans from the central Operators Work Station, located in the Operator/Clerk Office in the Central Utility Plant.

GRW remained committed to a cooperative and team-oriented approach throughout the life of the project. GRW staff - from design team leaders to support staff - were always extremely responsive, demonstrated excellent communication, and were genuinely fun to work with. The Bureau would be fortunate to repeat the positive experience of the FCI Aliceville project on future work and would benefit from the inclusion of GRW on any project team. - Judah Organic, Design Compliance Programs Manager, Federal Bureau of Prisons

Client Contact: Judah Organic, Design Compliance Programs Manager, Federal Bureau of Prisons, (202) 514-9566, jorganic@bop.gov

Terminal HVAC Equipment Replacement for Boiler Room 1

Blue Grass Airport | Lexington, KY

As part of the design-build team, GRW provided project construction and record documents to the contractor for the replacement of HVAC equipment in the main terminal building at the Blue Grass Airport in Lexington, KY.

Additional engineering services provided by GRW also included:

- Reviewing, documenting and modeling loads on the heating and cooling systems prior to final design
- Analysis and design, for additional rooftop structural modifications
- Coordination with the installing contractor during construction

The new equipment included a new rooftop cooling tower with enhanced design features, such as VFD fan motor and controls. **The boiler system was modified by demolition of the existing single dual-fuel firetube boiler and replacement with**

two high-efficiency condensing gas boilers and a dual fuel, cast-iron backup boiler.

The project also included replacement of four base-mounted constant-volume hot water and condenser water pumps and the addition of primary-secondary pumping for the hot water system, replacement of the existing fuel oil piping system and gas regulator station, and the relocation of the boiler discharge and air intake pipes, condenser water filtration system, electrical power panel and DDC controls. **The design challenge was amplified by the installation of the three new boilers and associated piping/pumping systems in the space originally occupied by the single boiler** and the need to meet the operating schedules of the airport in both cooling and heating modes.

Client Contact: Mark Day, PE, Director of Engineering and Maintenance, Blue Grass Airport, (859) 425-3152, mday@bluegrassairport.com

Kentucky School for the Deaf Boiler Replacements for Grow Hall and Jacobs Hall

Kentucky Division of Engineering & Contract Administration | Frankfort, KY

GRW was contracted by the Commonwealth of Kentucky to conduct a study of the central steam distribution system on the campus of the Kentucky School for the Deaf in Danville, Kentucky, with a view toward replacing the system with independent heating sources in each building.

This effort was followed by providing design documents and construction administration for **phased projects to add a new steam boiler system to Thomas Gym and new hot water boiler systems to Brady Hall and Grow Hall**, as well as

replacing the existing natural gas distribution system on campus. In addition, **a new steam boiler system, including a new remote boiler building and new underground piping is currently under construction for historic Jacobs Hall**, the last building currently being served by the existing central steam plant.

Client Contact: Tony Yates, Kentucky Division of Engineering & Contract Administration, (502) 564-3155, tony.yates@ky.gov

Central Lab Facility Boiler Plant Upgrade

Kentucky Division of Engineering & Contract Administration | Frankfort, KY

GRW was contracted by DECA to provide design documents to **replace the existing boilers** in the Centralized Laboratory Facility in Frankfort, Kentucky. The project included replacing three existing high pressure steam boilers with new high pressure steam boilers along with associated piping, controls, etc.

Client Contact: Scott Baker, Kentucky Division of Engineering & Contract Administration, (502) 564-5850, scott.baker2@ky.gov



Communities at Oakwood Cottage Renovation

Kentucky Division of Engineering & Contract Administration | Frankfort, KY

Located in Somerset, KY, the Communities at Oakwood is an institutional facility that provides 24-hour care for intellectual and developmentally disabled clients. Design services were provided for the renovation of three 7,500 SF residential cottages. The adjacent buildings remained occupied during construction. Special security and material storage provisions were implemented for the safety of the facilities clients.

The interior of Cottage 102 was completely gutted, redesigned, and renovated per the KAR, Life Safety Code, Office of the Inspector General, and Kentucky Building Code requirements. The renovated facility includes 12 single-occupancy rooms, **6 shared ADA compliant baths / showers**, two living room areas, a common dining area, kitchen, med room, treatment room, staff lockers, and various support spaces. The exterior received a new asphalt shingle roof, low-slope SBS - modified bituminous roof, concrete paving, copper gutters, copper flashing, and new aluminum windows with combination dual pane Lexan and tempered glazing.

HVAC systems were replaced and now feature hot and chilled water plants serving a single variable volume air-handling unit and hot water reheat terminal units. Boilers are high efficiency natural gas and the chiller is a custom packaged outdoor unit designed to fit in an existing pit.

Direct bury pre-manufactured piping system was provided to carry chilled water from the pit into the mechanical room. The system includes a new web-enabled digital control system with carbon monoxide and high-temp alarms for domestic hot water for scald protection. The existing dry-pipe sprinkler system was replaced with a wet-pipe system with a glycol loop for exterior sprinklers. The existing plumbing system was replaced in its entirety, accommodating for the new building layout and functions within (e.g., clinical sinks and a grease trap were added to the facility.)

The Owner plans to use Cottage 102 as the prototype for future Cottage renovations. Cottages 105 and 110 were designed to receive interior finish upgrades. The interior renovation of Cottages 105 and 110 has been put on hold pending the Owner's decision to fund construction.

West Virginia Division of Natural Resources Building 74 Renovation

West Virginia Department of Administration | Charleston, WV

GRW was selected by the State of West Virginia, Division of Natural Resources (DNR) to complete an evaluation of the building systems in Building 74. Services also have included making recommendations for possible improvements and upgrades needed to ensure continued suitability, improved energy efficiency, and code updates.

The three-story, 37,000 SF, masonry-construction facility was built sometime in the late 1970s. Following the purchase of the building by the State in 2009, extensive renovations were completed to create spaces suitable for the functions of DNR.

At that time, no upgrades were made to the primary mechanical and electrical systems – and it is believed the rooftop mechanical units are at least fifteen (15) years old.

The building is occupied by several sections of DNR including DNR Administration, State Parks, Wildlife Resources, Land and Streams, and Law Enforcement. There are approximately 100 employees in the building.

Based on GRW's evaluation of the building systems, the following recommendations have been selected by the State and are being designed by GRW:

- **Replacement of existing heating and cooling systems**, including all ductwork and all rooftop equipment, with new energy efficient rooftop units with electric heating VAV boxes
- New DDC controls throughout building
- Replacement of existing single-pane windows with energy-efficient double-pane windows
- Replacement of existing T5 light fixtures with energy-efficient LED fixtures
- **Updated security system** and fire alarm modifications as needed for the updated building layout
- Minor reconfiguration of office space on the second floor to address code egress issue
- Replacement of existing ceilings and floor finishes

Client Contact: Mark Crites, Building Project Management Specialist, (304) 957-7142, Mark.A.Crites@wv.gov



Martinsburg Secure Facility

West Virginia Army National Guard | Charleston, WV

GRW is designing renovations for a secure facility located adjacent to the Eastern WV Regional Airport in Martinsburg, WV. The purpose of the renovation is to provide new secure office space, and related support spaces, for a specific using agency. The main renovated area is on two upper levels, containing approximately 6,200 SF per level. The scope includes:

- Demolition of existing interior finishes and other improvements within the renovation area
- **Complete replacement of the existing non-operational HVAC system with a new energy-efficient system. New system consists of water source heat pumps (WSHP) connected to a new boiler and closed loop fluid cooler.** A new water-cooled dedicated outside air unit with heat recovery was designed for required outside air to the building.
- Redundant HVAC systems for secure IT room and non-secure IT room. Each room is served by the WSHP system as well as ductless split systems.

- New DDC control system for all new equipment
- New interior finishes throughout the areas, including raised access flooring throughout the renovated areas
- New structural roof deck and roofing system
- New elevator and fire stairs
- New site security fencing, sliding vehicular security gates, exterior parking, walkways, site utility improvements, and storm drainage improvements
- **New building security and cameras**

Client Contact: Todd Reynolds, Deputy Branch Chief
- Design & Construction, West Virginia Army National Guard, (304) 561-6568,
matthew.t.reynolds18nfg@mail.mil

Waterfield Library Upgrade

Murray State University | Murray, KY

The upgrade of Murray State University's Waterfield Library included the **demolition and renovation of six restrooms located on three levels**, and totaling approximately 1,350 SF. All existing finishes, restroom accessories, vanities, partitions, light fixtures, and plumbing fixtures were replaced in a handicap-accessible configuration.

High-efficiency, water-conserving plumbing fixtures were used to improve water consumption and reduce wastewater requirements for the building. The lavatories were upgraded to use electronic, proximity mixing faucets delivering tempered water at 0.5 gallons per minute. All water closets were replaced with low-flow versions using electronic, proximity flush valves that deliver 1.28 gallons per flush. The urinals were replaced with low-

flow versions using electronic, proximity flush valves that deliver water at 0.125 gallons per flush.

In addition to the restroom work, 12 thru-floor outlet duplex receptacles were installed within the main lobby to accommodate student electronic devices. Surface-mounted duplex outlets also were added to the technical services and office areas to alleviate the current demand on the existing wall outlets. At the ground level, an inlet louver and exhaust fan, along with associated duct work, was added to address the excessive heat generated by the existing air handling unit.

Client Contact: Pete Reyna, Sr. Project Manager,
Murray State University, (270) 809-3992,
preyna@murraystate.edu



Smithville Elementary Renovation/Addition

Ritchie County Board of Education | Harrisville, WV

The Smithville Elementary School project included the **demolition of two buildings** in the existing four building complex and the design of a new classroom wing and a new kitchen addition adjacent to the remaining buildings.

The new additions were designed to join with the existing classroom wing and multipurpose building to create a single facility under one roof.

The new school will provide access control and better security, new HVAC systems and better indoor air quality, compliance with ADA/ABA requirements throughout, **including renovated toilets rooms.**





Jane Lew Elementary Addition

Lewis County Board of Education | Jane Lew, WV

The project includes five new classrooms, an updated officer suite, and a new building entrance and bus loop. **Toilet rooms were renovated** and new floor finishes installed throughout the building. A new HVAC system serves the addition, and a new sprinkler system and fire alarm was installed for the entire school. New ceilings and lighting were also be provided throughout. The renovations allow the students to be housed in a single building that provides the safety, security and educational spaces that are required in a modern school.

Man K-8 School Addition

Logan County Board of Education | Logan, WV

The Man K-8 Addition included the design and space planning for a 9,360 square-foot addition to the existing school. The addition included four new classrooms, a 2,400 square-foot gymnasium/multipurpose room, **ADA compliant restroom facilities**, and a small landscaped courtyard. The project included all structural, mechanical, and electrical engineering. The design and construction was accomplished in 10 months and nearly 15% below budget.





Clay County High School Renovations

Clay County Board of Education | Clay, WV

GRW, working with its subsidiary Chapman Technical Group, was contracted by the Clay County School District to provide design and construction administration phase services to upgrade the existing high school building. The scope of work includes replacing all of the existing windows with new energy efficient windows, building a new addition to the front of the school to provide a new commons/lobby area, and **reconfiguring the existing gymnasium and existing restrooms throughout the building.** A portion of the construction will occur during summer months, but much of the work will be completed while school is in session.

The entire existing HVAC system is being replaced. The new HVAC system includes stand alone heat pump units for each classroom, new rooftop units for common areas such as the lobby, gymnasium, cafeteria, etc., and Variable Refrigerant Volume (VRF) systems for the two office areas. Outside air is being brought into the building thru each of the pieces of equipment as well as new energy recovery ventilators. New direct digital controls (DDC) will be installed throughout the building to control all of the new

equipment. **Back up heating for the stand-alone units and various unit heaters will be connected back to the existing hot water hydronic heating system in the building that is being fed by two existing gas fired boilers.**

New plumbing fixtures and piping will be installed in the newly configured restroom areas. The plumbing piping will connect back to the existing main piping and existing hot water heating system for the building. The existing fire protection system will remain in place and be reconfigured as needed to accommodate floor plan changes.

New power will be provided for all of the new HVAC equipment being installed. New LED lighting will be installed in the new commons/lobby addition as well as the gymnasium. New clocks and intercoms will be installed throughout the building as well as new security cameras. The fire alarm system will be upgraded as needed for the new systems and layouts.

Client Contact: Joe Paxton, Clay County Board of Education, (304) 587-4266

130th Airlift Wing Building 107 Renovation

West Virginia Air National Guard | Charleston, WV

This project included two separately funded (MILCON/SRM) sub-projects. These two companion projects were designed to re-purpose an existing unoccupied hangar into administrative, simulation training, and storage spaces for the Aeromedical Evacuation Squadron (AES). Both projects were designed to meet LEED Silver design criteria.

The project scope included:

- **Upgrade of mechanical and electrical systems** to meet current building codes and standards
- **Replacement of inadequate restrooms** and locker rooms
- Replacement of fire alarm and fire protection systems
- Hardening of the front façade, replacement of windows, and elimination of on-street parking to achieve ATRP compliance
- Construction of new interior spaces and renovation of existing shop areas to create necessary office, training, and support spaces

The completed building includes the following programmed spaces:

- Command and administration
- Flight crew support spaces
- Medical simulation areas for flight crew training
- Mobile storage and staging
- Medical equipment maintenance
- Conference rooms, classrooms, and breakrooms
- Restrooms and locker rooms
- HVAC, electrical, and communications support

Client Contact: Capt. Harry Netzer, Deputy BCE, WV ANG, (304) 341-6649, harry.g.netzer.mil@mail.mil

Contractor Performance Assessment Report (CPAR) from Contracting Officer Robert Barker:

- **QUALITY:** Contractor meet requirements for design on this project. Firm worked a difficult task order with 2 project task order numbers, utilizing 2 designs for one project. Quality of work for project benefited the government by providing a thorough final design for the project.
- **SCHEDULE:** Contractor kept to scheduled deadlines for project requirement. Worked well with Base Contracting and Civil Engineering to discuss any issues that would delay deadlines.
- **COST CONTROL:** Contractor kept costs controlled during project and worked very well with Base Contracting and Civil Engineering, keeping pace in utilization of 2 sources of funding, both MILCON and SRM.
- **MANAGEMENT:** Contractor met contractual requirements and worked well with the 130th Airlift Wing Base Contracting Office and Civil Engineering office. No major management issues were noted during the performance of the contract and GRW engineers and team continued to communicate regularly to ensure all aspects of the project were on track.
- **REGULATORY COMPLIANCE:** Performed all necessary environmental testing and occupational health requirements for project; kept base personnel informed of any findings or issues that would significantly delay project completion.
- **ADDITIONAL/OTHER:** Good team to work with; continues to maintain very professional standards and conduct.

Northpoint Training Center Replacement

Kentucky Department of Corrections | Frankfort, KY

GRW provided A/E design and construction oversight services for this fast-track project to rebuild prison facilities at the Northpoint Training Center in Burgin, KY. Originally a 1940's psychiatric hospital, the campus was later converted into a state corrections facility. The institution operates as a medium-security institution with a capacity of approximately 1,200 inmates.

In 2009, a fire rendered five buildings at the site complete losses. Following a week-long programming charrette with GRW and the Kentucky Department of Corrections and Division of Engineering & Contract Administration, the 41,646-SF project program (two new buildings, renovation of seven buildings, as well as the 1,900 SF addition/renovation of the control building) was defined and preliminary building placement locations were determined. **Meeting LEED Certified Design Criteria, the two new buildings include:**

- 40,000 SF Program Building (commercial kitchen, two dining rooms, medical and dental clinics, canteen, multipurpose classrooms, library, sanitation, **multiple staff and inmate restrooms**) centrally located adjacent to the six dormitories
- 6,400 SF Visitation Building with **public, staff and inmate restrooms** located adjacent to the existing central control building

The renovation work involved **new security electronics (500 +/- cameras total)**, and egress stairwell interior / exterior door replacement at six, existing, two-story dormitories. Site renovation included fencing design that created segregated recreation yard areas for each dorm within the existing secure perimeter fencing. The central control building received an addition and renovation to include a new control center room and enlarged security electronics room. This building includes the gate entrance controls, communications equipment



and a 300 SF area dedicated to security, control and recording equipment, which is now protected by a clean agent (NOVEC 1230) fire suppression system. The tanks, controls and release panel are located in an adjacent room, which is also protected by a separate zone of the clean agent system. An existing 100 kilowatt generator at the facility was relocated and connected to the central control building.

The project also included developing, sequencing, and specifying security procedures for operating within an inmate-occupied facility during construction work inside the existing secure perimeter.

The project was bid in six bid packages: building demolition, fencing, site/foundation, structural steel, building envelope and mechanical/electrical/kitchen equipment/security electronics/corrections doors/hardware/interior finishes. This approach allowed the contractor to break ground and complete site utilities, foundations, building envelopes before winter weather. Interior work progressed through inclement weather.

Client Contact: Guntant Shah, PE, Branch Manager, Kentucky Department of Corrections, (502) 564-2094 x227, Guntant.Shah@ky.gov

Southwestern High School Addition and Renovation

Pulaski County Schools | Somerset, KY

GRW provided mechanical, electrical and structural engineering design for a new 28,000 SF, two-story classroom addition and a 1980 SF renovation and expansion to the existing cafeteria. A new chiller and variable-volume air-handling system was provided for the addition. The central plant was replaced with new high-efficiency gas boilers and pumping systems. A new fire pump was added to the building to upgrade the entire school's sprinkler system. There were also many additions and renovations throughout the existing school such as **complete**

restroom replacements, laboratory casework replacements (including lab gas and fume hoods), as well as updates to broken or dilapidated HVAC systems. The project involved phased construction with work being completed during building occupancy.

Client Contact: Pat Richardson, Superintendent, Pulaski County Schools, (606) 679-1123, patrick.richardson@pulaski.kyschools.us

Southeast Kentucky Correctional Center Renovation

CoreCivic | Nashville, TN

Formerly the Otter Creek Correctional Facility, the Southeast Kentucky Correctional Center is owned by CoreCivic. This project is an overall upgrade to the existing closed correctional campus in anticipation of reopening the medium-security facility in 2020, at which time the Commonwealth of Kentucky will lease and operate the facility.

As CoreCivic's selected A/E design firm, GRW prepared plans and specifications for renovations to six existing buildings, and the construction of one new building:

- Administration Building
- Recreation Building
- Vocational Building
- Dormitory Building

- Housing Building
- Visitation Building
- Guard House (new)

General work common to each building includes: **ADA upgrades throughout including restrooms**, fire alarm upgrades, locking controls upgrades, fire suppression upgrades, and PREA upgrades.

In addition to the general work listed above, the dormitory building also receives a new smoke evacuation system to accommodate a change in use from R-2 to I-3.

Client Contact: Tim Aebie, AIA, Sr. Director, Project Dev. - Real Estate Dev., CoreCivic, (615) 263-6707, Timothy.Aebie@cca.com



Weisberg Family Engineering Laboratory

Marshall University | Huntington, WV

GRW was hired by Marshall University to masterplan and design the first phase for a new engineering complex on their main campus in Huntington, WV. This 16,000 SF teaching facility houses materials, soils, hydraulics, structural, and environmental laboratory space, as well as classroom space, public space for students, faculty offices, and **restrooms. A building-wide access control system was provided to monitor usage and control entry.**

The curved façade of the building was designed to create a park-like plaza along the north edge of 3rd Avenue, giving a softened edge to what previously had been parking lots and pavement. Brick and other exterior building materials were selected to complement the adjacent campus buildings, thus giving a more unified appearance to the campus.

Client Contact: Betsy Dulin, JD, MS, Former Dean, Marshall University College of Eng., (304) 561-7508, betsydulin@38thed.com



Southeast Kentucky Community and Technical College, Harlan Campus Building One Renovation

Commonwealth of Kentucky Division of Engineering & Contract Administration

The \$3.1 million renovation of this building located in Harlan, KY included updated exterior appearance, and modernized teaching spaces. Work included roof replacement, window replacement, complete interior reconstruction, interior excavation for new auditorium, and total replacement of building mechanical and electrical systems.

The 31,000 SF building includes:

- Classrooms
- Distance learning / ITV classroom
- Computer lab
- Conference room
- Science laboratory
- Library
- 200-seat auditorium/theater
- Offices

- **Restrooms**
- Welding shop
- Machine shop
- Carpentry shop

The building is now 100% sprinkled, with new fire alarm system and new 480/277V, 3,000A electrical service. Modifications were made to existing central plant mechanical systems to accommodate additional heating and cooling loads.

The project was completed **1 month ahead of schedule**, and the low bid was **3% below the Architect's estimate**. Because this project was so successful, the Owner made a videotape of the facility to train staff on the level of quality and finish that can be attained for their normal per unit budget amounts.

Additional West Virginia Army and Air National Guard Experience

Relocation of Camp Dawson Electrical Power and Communications Lines, Kingwood, WV

– Study and design for 4-phase construction program to relocate overhead electrical power lines and communications lines (telephone, data, etc.) to underground duct banks in order to eliminate historic problems associated with overhead services. Phase 1: 3000 LF of power line relocation to new underground duct banks, with the associated replacement of pole-mounted transformers with pad-mounted transformers (1000 KVA to 50 KVA). Phase 2: Relocation of communications service to new underground duct banks along Phase 1 route. Phases 3 & 4: Relocation of approximately 2000 LF of overhead power lines and overhead communications lines to new duct banks, respectively.

Camp Dawson Volkstone Training Area Utility Upgrade, Kingwood, WV

– Expansion of sewer (1,996 LF), water (1,996 LF) and electric (1,797 LF) to all existing and future buildings, unit training equipment site (UTES) and wash rack locations. Also includes design of Forward Operating Base (FOB) including 20 14' x 16' wooden buildings, new bath house for approximately 200 people and pavilion.

Camp Dawson Ranges at Briery Mountain, Kingwood, WV

– Project includes design and construction of new Hand Grenade Familiarization Range and Live Fire Exercise Breach (LFEB) Training Range at Briery Mountain Training area to conform site to government standard Breach Range Design Requirements. Included design of access road to the remote site, electrical connections, breaching structures, open covered range operations and control shelter, storage building, dry latrine, covered viewing stands, and parking area.

Camp Dawson Live Fire Exercise Shoot House, Kingwood, WV

– Design for innovative re-use of a recently-acquired former industrial complex adjacent to Camp Dawson to provide a \$2 million Live Fire Exercise Shoot House, including shoot house to be housed in a metal warehouse, operations / storage, after action review (AAR) facility, ammunition breakdown facility, warehouse restroom renovation, access road and parking area,

and utility services. Completed conceptual design for LFSH facility with final design and construction of LFSH completed by selected vendor (design / build); balance of facilities delivered with traditional design / bid / build approach.

Readiness Center Commissioning Projects, WV

– LEED Fundamental Commissioning for four building construction projects: Buckhannon AFRC - Phase I, 38,000 SF and \$13,150,000 construction cost; Morgantown Readiness Center, 58,520 SF and \$20,500,888 construction cost; Moorefield Readiness Center, 57,256 SF and \$17,725,351 construction cost; and Logan Readiness Center, 58,520 SF and \$14,296,326 estimated construction cost. Scope included all commissioning, coordination and documentation required for LEED certification on the HVAC systems and networked controls, the lighting control systems and the domestic hot water distribution systems.

167th Airlift Wing Munitions Storage, Martinsburg, WV

– New munitions inspection building, five magazines (all pre-manufactured modular units), new concrete pads (2,865 SF), all-weather pavement (5,566 SF) for vehicular access, gate/fencing, utilities, exterior lot lighting, communications, and security for the munitions area.

167th Airlift Wing C-5 Apron Repair, Martinsburg, WV

– Evaluation and design services to repair fractured/heaved C-5 apron caused by poorly draining base and sub base. Pavement repair of approximately 1,755 SY included demolition and removal of fractured and heaved pavement down to below original base and sub base, compaction of new material, placing of sub base and base and concrete pavement parking apron, asphalt shoulder stabilization, all constructed to support C-5 aircraft. Utility and site improvements were also included.

167th Airlift Wing C-17 Maintenance Hangar Modifications, Martinsburg, WV

– Fast-track design of maintenance hangar modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft.

167th Airlift Wing C-17 Fuel Cell Hangar Modifications, Martinsburg, WV

– Fast-track design of fuel cell hangar modifications required to meet 167AW’s change in mission from C-5 to C-17 aircraft.

167th Airlift Wing C-17 Corrosion Control Hangar Modifications, Martinsburg, WV

– Fast-track design of corrosion control hangar modifications required to meet 167AW’s change in mission from C-5 to C-17 aircraft.

167th Airlift Wing C-17 Composite Material Shop, Martinsburg, WV

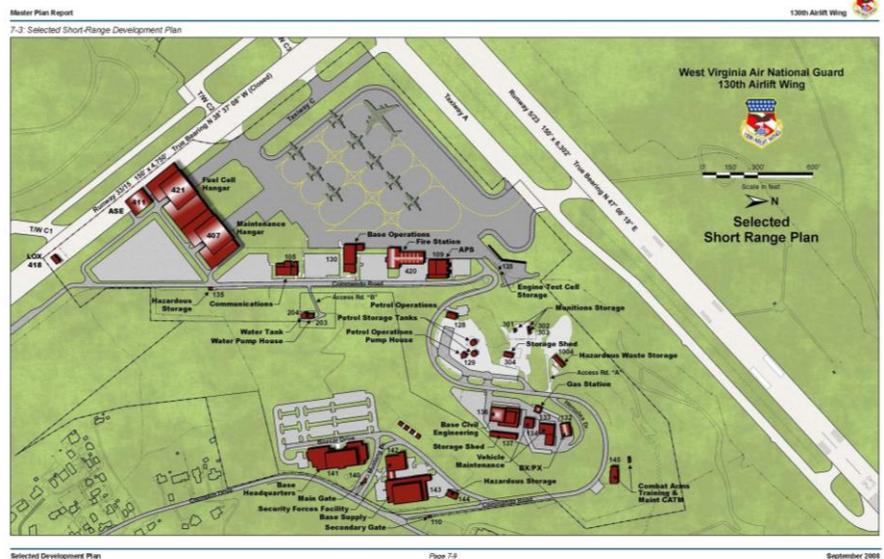
– Fast-track design of composite material shop to the existing corrosion control hangar required to meet 167AW’s change in mission from C-5 to C-17 aircraft.

167th Airlift Wing Basewide Sewer Line Repair, Martinsburg, WV

– Planning, design and construction administration services for replacement of sanitary sewer system, circa 1954. Pipe included combination of various construction materials including vitrified clay pipe (VCP) with dilapidated sections allowing high rates of inflow and infiltration during storm events.

130th Airlift Wing Squadron Operations Facility Repair, Charleston, WV

– Design services for \$3 million renovation and energy-efficient improvements to 25,765 SF facility with history of remodeling activities resulting in a building that inadequately serves its users (Administration and Operations, Base Operations, Command Post, and Life Support and Fitness Center). Work included Charrette to develop alternative floor plans. Selected design allows for efficient use of space; HVAC, electrical and fire protection systems upgrade; and roof repairs. Designed to achieve USGBC LEED Certified rating, meet all ANG Sustainable Design criteria and utilize MILCON/SRM split funding.



130th Airlift Wing Master Plan Update and CIP, Charleston, WV

– Engineering consulting for preparation of a Web-Enabled Master Plan Update and GeoBase Common Installation Picture (CIP) for the 130th Airlift Wing in Charleston to evaluate benefits and impacts associated with acquiring additional airfield property for aircraft parking, operations, and maintenance facilities to meet current and future proposed missions. Identified constraints and opportunities that apply to the 130th AW aircraft parking, operations and maintenance areas, including Anti-Terrorism/Force Protection (AT/FP) measures; quantified existing and required airfield facilities; developed new alternatives for long- and short-range plans; and created plan tabs that depict constraints and opportunities, long- and short-range development plans, land use and circulation plan, real estate plan, and facility utilization plan.

West Virginia ANG 130th Airlift Wing LOX Storage Relocation, Charleston, WV

– Type A and B design and construction administration services to relocate LOX function to south end of flight line to meet operational and installation development plan requirements. Facility includes covered storage facility with adjacent tank storage canopy; elevated pads and spill containment structure for storage tanks; paved entry road; protective fencing; and utilities (electric and communications).

SECTION 3.0 | Staff Qualifications

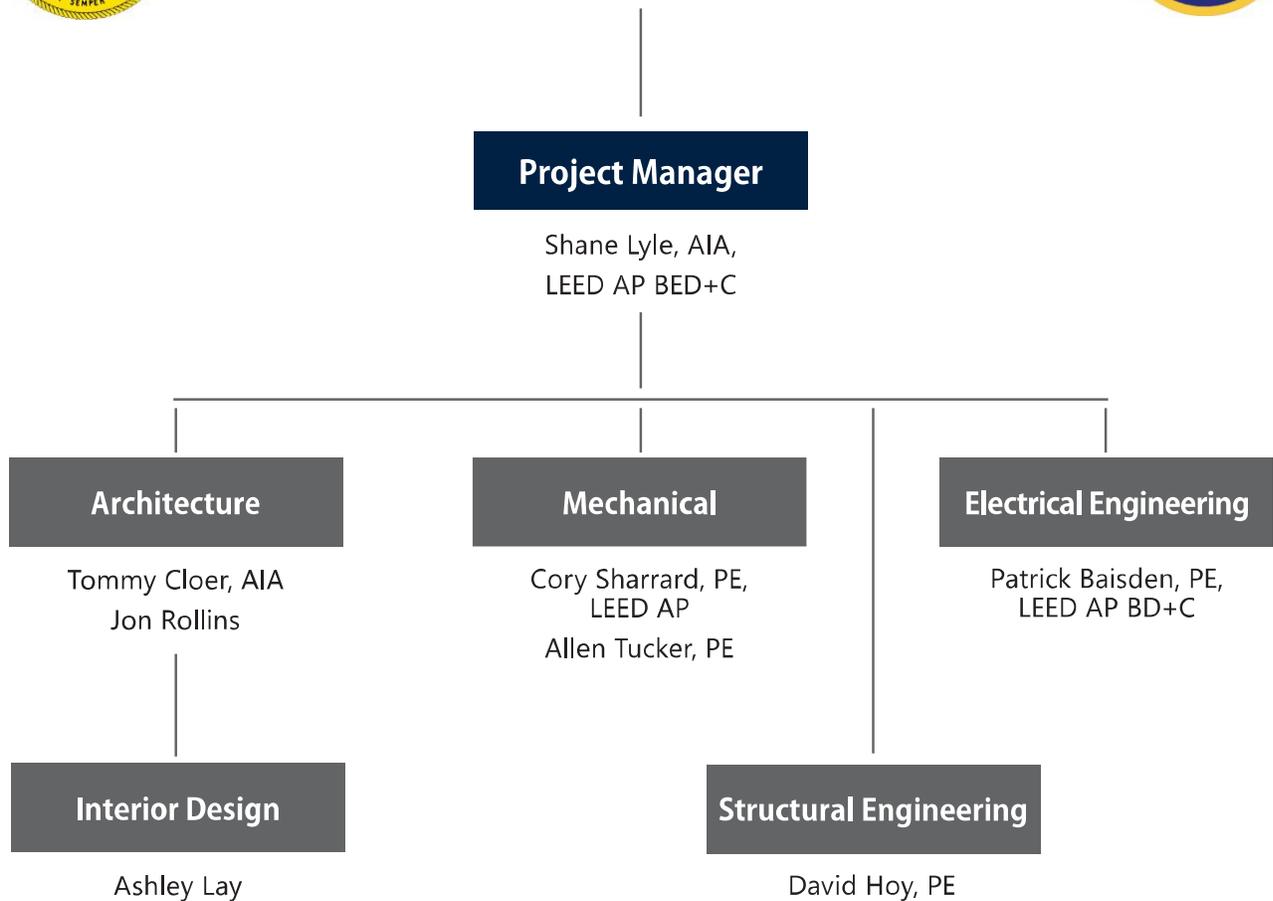
3.0 Staff Qualifications

When you work with a GRW team, you have access to some of the most reputable consultants in the industry. For the Mountaineer Challenge Academy South project, each of the GRW team members has relevant experience. From the design of HVAC facilities to bathrooms to security systems, our team members are experts in their fields. Furthermore, our team’s local knowledge and capacity has been strengthened by GRW’s acquisition of West Virginia-based Chapman Technical Group.

Our clients also directly benefit from GRW’s one-stop business model and multidiscipline staff who specialize in architecture, engineering (mechanical, electrical, structural, transportation, civil/site), interior design, and landscape architecture. These capabilities allow our teams to collaborate more efficiently with you, which makes a significant positive impact on your project experience.



West Virginia Department of Administration and West Virginia Army National Guard



Shane Lyle, AIA, LEED AP BD+C | GRW Project Manager



YEARS OF EXPERIENCE:

With GRW: 32

Total: 38

EDUCATION

Bachelor of Architecture (with honors), 1983, University of Kentucky

REGISTRATION

Registered Architect: KY, WV, TN, AL, GA, IN, TX, MS, NC, SC, FL, MO, AZ, NM, CA, WA, KS, MD

National Council of Architectural Registration Boards (NCARB) Certification

LEED Accredited Professional, Building Design + Construction

Certified Interior Designer: Kentucky

PROFESSIONAL AFFILIATIONS AND TRAINING

American Institute of Architects

Past President - AIA East

Kentucky Chapter Board of Directors

American Correctional Association (ACA)

Member / Past Officer - UK College of Architecture Alumni Association

Life Member - UK Alumni Association

Shane's architectural design and project management experience is extensive. He regularly takes primary responsibility for a wide range of projects for a diverse group of clients including universities, medical facilities, local and state governments, the U.S. Armed Forces, the Federal Bureau of Prisons, and private developers. His areas of responsibility typically include programming/planning, budget analysis, design, construction documents, client meetings, bidding/negotiation services, construction phase services, and code compliance.

RELEVANT PROJECT EXPERIENCE

West Virginia ARNG Martinsburg Secure Facility, Martinsburg, WV –

Project Manager. Renovations to 2-story area (6,200 SF per level) to provide new secure office space and related support spaces for specific using agency. Includes HVAC replacement; new interior finishes (including raised access flooring), structural roof deck and roofing system, elevator and fire stairs, building security and cameras, and site security fencing, sliding vehicular security gates, exterior parking; and site utility and storm drainage improvements.

Marshall University Weisberg Family Engineering Laboratory,

Huntington, WV – Project Manager. New, 16,000 SF Engineering Laboratory Building on the main campus providing laboratories for materials, soils, hydraulics, structural, and environmental studies, classrooms, faculty offices and restrooms. Building security systems included access control and CCTV. HVAC systems feature rooftop VAV systems with variable electric reheat.

Murray State University Waterfield Library Upgrade, Murray, KY –

Principal. Design services for demolition and renovation of six restrooms (totaling approximately 1,350 SF) located on three levels. All finishes and fixtures replaced in handicap-accessible configuration. Design includes high-efficiency, water-conserving plumbing fixtures to improve water consumption and reduce wastewater requirements. Work also includes addition of 12 thru-floor outlet duplex receptacles in main lobby to accommodate student electronic devices. Inlet louver and exhaust fan, along with associated duct work, added at ground level to address excessive heat generated by existing air handling unit.

Communities at Oakwood Cottage Renovation, Somerset, KY –

Principal-in-Charge. Design for renovation of a 7,500 SF residential cottage (Cottage 102) for mentally disabled, completely gutted and redesigned to serve as prototype for additional cottage renovations. Provided 12 single-occupancy rooms, 6 shared ADA compliant baths / showers, two living room areas, a common dining area, kitchen, med room, treatment room, staff lockers, various support spaces, new roofing system, copper gutters and flashing, and new windows. New HVAC include: high-efficiency natural gas boilers; custom packaged outdoor chiller unit to fit existing pit; and web-enabled digital control system. Existing dry-pipe sprinkler system replaced with wet-pipe system. Existing plumbing system replaced in entirety.

Southeast Kentucky Community and Technical College, Harlan Campus Building One Renovation, Harlan, KY – Project Manager. Renovation design for 31,000 SF building including updated exterior appearance, and modernized teaching spaces. Work included roof replacement, window replacement, complete interior finish replacement including restrooms, interior excavation for a new 200-seat auditorium, and total replacement of building mechanical and electrical systems. The project was completed 1 month ahead of schedule, and the low bid was 3% below the Architect's estimate.

UK Nursing Building Renovation, Lexington, KY – Principal. Design services for Phase II renovation of approximately 8,117 SF on sixth-floor of University's Nursing Building. Fit-up project includes 144-seat computer classroom used for computerized exams and lectures, IT office and reading room with seating for 42. Also included processor room for computer and CCTV surveillance equipment, as well as corridor system to secure floor after hours.

Aliceville Federal Correctional Institution and Satellite Camp, Aliceville, AL – Project Manager. Design-build delivery of \$196 million, LEED Silver women's medium-security Federal Correctional Institution (70-acre site) and minimum-security Federal Prison Camp (20-acre site) totaling 665,889 SF, housing approximately 1,790 inmates. FCI includes three 4-story housing units and one single-story segregation unit dormitory. Complex includes following buildings: food service (kitchen/dining), medical services, warehouses/sanitation, administrative, recreational, academic educational, industrial/vocational, personal services, vehicle maintenance, and central utilities plant.

West Virginia ANG 130th Airlift Wing Building 107 Renovation, Charleston, WV – Principal. Repurpose of unoccupied hangar into space for Aeromedical Evacuation Squadron (AES). Repairs and building repurposing includes: new interior spaces within existing facility to accommodate new functions; building exterior repairs, new interior finishes; mechanical and electrical systems upgrade; fire alarm and fire protection systems repair; and site/building revisions to meet ATFP standards.

West Virginia ANG 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion, Charleston, WV – Principal. Renovation of 5,395 SF SFS facility including addition of 2,500 SF administrative and training space to better serve unit.

West Virginia ANG 130th Airlift Wing Squadron Operations Facility Repair, Charleston, WV – Principal. Renovation and energy-efficient improvements to 25,765 SF facility. Selected design allows for efficient use of space; HVAC, electrical and fire protection systems upgrade; and roof repairs. Designed to achieve USGBC LEED Certified rating, meet all ANG Sustainable Design criteria and utilize MILCON/SRM split funding.

West Virginia ANG 167th Airlift Wing C-17 Corrosion Control Hangar, Fuel Cell Hangar, and Maintenance Hangar Modifications, and Addition of Composite Material Shop Martinsburg, WV – Project Manager. Fast-track design of projects required to meet 167AW's change in mission from C-5 to C-17 aircraft.

Tom Cloer, AIA | GRW Architect



YEARS OF EXPERIENCE:

With GRW: 15

Total: 20

EDUCATION

Bachelor of Architecture, 2001,
University of Tennessee

REGISTRATION

Registered Architect: WV, VA,
KY

National Council of Architectural
Boards of Certification

PROFESSIONAL AFFILIATIONS AND TRAINING

WV Chapter, American Institute
of Architects

St. Albans Property and
Maintenance Board

St. Albans Historic District
Committee Member

Tommy has extensive architectural experience, having worked with clients on programming/planning, budget analysis, design, construction documents, meeting coordination, bidding/negotiation services, construction phase services, and code compliance. He regularly provides leadership in architectural design and project management for new building design and renovation projects such as K-12, parks and recreation, and government and municipal facilities.

RELEVANT PROJECT EXPERIENCE

Jane Lew Elementary School Addition, Jane Lew, WV – Project Architect for the design of an addition and renovation project that included five new classrooms, an updated office suite, and a new building entrance and bus loop. Toilet rooms were also renovated and new floor finishes were installed throughout the building. A new HVAC system serves the addition, and a new sprinkler system and fire alarm were installed for the entire school. New ceilings and lighting were also provided throughout.

Smithville Elementary School Addition, Smithville, WV – Project Architect for the addition and renovation of the Smithville Elementary School project which included the demolition of two buildings in the existing complex and the design of a new classroom wing and a new kitchen addition adjacent to the remaining buildings. The new school will provide access control and better security, new HVAC systems and better indoor air quality, compliance with ADA/ABA requirements throughout, including renovated toilets rooms.

Man K-8 Addition, Man, WV – Project Architect for the Man K-8 Addition which included the design and space planning for a 9,360 square-foot addition to the existing school. The addition included four new classrooms, a 2,400 square-foot gymnasium/multipurpose room, ADA compliant restroom facilities, and a small landscaped courtyard. The design and construction was accomplished in 10 months and nearly 15% below budget.

Lewis County High School Man Trap, Weston, WV – Project Architect for the design of a new secure entrance to Lewis County High School which included the planning and design of a man trap entrance.

Other School Experience

Tommy has served as an architect and designer on numerous school projects throughout West Virginia ranging from small renovation projects to new middle schools. He is well versed in the requirements and procedures of the West Virginia School Building Authority and the West Virginia Department of Education Policy 6200.

Jon Rollins | GRW Architectural Intern



YEARS OF EXPERIENCE:

With GRW: 14

Total: 22

EDUCATION

Bachelor of Architecture, 1999,
University of Kentucky

PROFESSIONAL AFFILIATIONS AND TRAINING

LEED (Leadership in Energy and
Environmental Design) qualified
pre- and post-construction
credit documentation for
building certification

Adaptive reuse for Universal
Design in residential projects

Jon's experience with architectural design services is diverse. He has been involved with projects involving Air National Guard and Army National Guard facilities, as well as educational, historical building restoration/renovation, residential, commercial, and healthcare projects.

RELEVANT PROJECT EXPERIENCE

Pulaski County Schools Maintenance Projects, Somerset, KY –

Architectural Designer. Projects included: Northern Middle School masonry removal and repairs, metal roof flashing replacement, hot water heater replacement, and asphalt paving resurface; Oak Hill Elementary School roof replacement; Memorial Education Center roof replacement; and Day Treatment Center (alternative school) masonry replacement, roof replacement, door and window replacement, and replacement of two rooftop mechanical units.

Pulaski County Schools Area Technology Center Renovation, Somerset, KY –

Architectural Designer. Design for 6,000 SF renovation of approximately 38,000 SF facility. Spaces include industrial technology classroom, robotics tech lab, hydraulics tech lab, weld tech lab, electronics tech lab, and support spaces.

West Virginia ANG 130th Airlift Wing Building 107 Renovation, Charleston, WV –

Architectural Designer. Repurpose of unoccupied hangar into space for Aeromedical Evacuation Squadron (AES). Repairs and building repurposing includes: new interior spaces including restrooms within existing facility to accommodate new functions; building exterior repairs, new interior finishes; mechanical and electrical systems upgrade; fire alarm and fire protection systems repair; and site/building revisions to meet ATEFP standards.

Berea College Forestry Outreach Center, Berea, KY –

Architectural Designer. New building located in Berea College's forest area adjacent to trailhead of Indian Fort Mountain Trails. Approximate 5,000 SF facility includes classroom, forest history display area, three forester offices, conference room, public restrooms, and care taker apartment.

Harlan County Courthouse Renovations, Harlan, KY –

Architectural Designer. Design for phased renovation of 31,040 SF, 4-story courthouse constructed in 1922 of poured-in-place concrete columns, beams, floor slabs and roof deck, and classically-styled Indiana limestone exterior. Initial phase provided masonry and metal cornice restoration at parapet area, roof replacement. Phase 2 included addition of four-stop elevator and ADA/code upgrades; Phase 3 involved replacement of water main feed and all interior water lines. Phase 4 encompassed new public restrooms on second floor; renovation of existing non-ADA compliant ground floor restrooms; renovation of courtroom to provide small meeting rooms and fit-up for use as multi-purpose meeting room. Vacant County Judge Executive suite on ground floor was renovated for use by Commonwealth Attorney.

Northern Kentucky Area Development District Office Addition, Florence, KY – Architectural Designer. Approximate 4,500 SF addition at rear of existing 13,524 SF facility. Includes new private offices, office cubicle area, support spaces, and break room, as well as separate exterior entrance, private work spaces for six employees, computer/printer area for client use, private one-on-one consultation room, restrooms, and electronic-controlled access for employees to main facility for workforce development staff relocating to building. Existing parking lot was reconstructed to correct drainage issues.

Ohio ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH – Architectural Designer. New LEED Silver Certified 85,865 SF complex serving both Ohio Army National Guard and U.S. Army Reserves. Joint Armed Forces Reserve Center (60,902 SF) includes administrative, educational (classrooms, weapons simulator, distance learning, training-specific libraries, COMSEC), and assembly hall and kitchen.

Berea College Fee Glade Building Elevation Studies, Berea, KY – Architectural Designer. Elevation design studies for Bruce-Trades Building, Edwards Building, and Science Hall Building with back elevations facing Fee Glade, a green space with walkways, sculptures and curved stone walls. Goal of project is to assist Berea College with design ideas to revise elevations of these buildings to help unify architecture facing Fee Glade.

Berea College Quad Walkway Studies, Berea, KY – Architectural Designer. Three dimensional design study documents to provide walkway pavement additions and modifications to allow carts and pedestrians to pass without moving off paths. Study provided paving material and layout alternatives, as well as stormwater management solutions.

Frankfort Plant Board Administration Building, Frankfort, KY – Architectural Designer. New three-level, 46,000 SF administration building on 30-acre site providing consolidated facility for administrative offices (accounting, human resources, management, IT, dispatch, customer service), as well as exterior drive through tellers, board/community room and designated shelter area. Building construction includes primarily architectural precast concrete panels with design elements such as structural silicone glazing systems and aluminum panels.

Georgetown College Cooke Memorial Building and Anna Ashcraft Ensor Learning Resource Center Renovation Study, Georgetown, KY – Architectural Designer. Code review services and schematic floor plans for the possible renovation of 19,982 SF Cooke Memorial building and 55,000 SF Anna Ashcraft Ensor Learning Resource Center (LRC). Study involves adding partition walls to form approximately 3,854 SF of office space at Cooke Memorial and 7,488 SF of classroom space at LRC.

Ashley Lay | GRW Interior Designer



YEARS OF EXPERIENCE:

With GRW: 4

Total: 4

EDUCATION

B.A., Interior Design, 2017,
University of Kentucky

Ashley is a recent graduate who completed several noteworthy and/or award-winning projects. Her experience is benefiting GRW with her current involvement in educational, medical, and municipal government projects. Ashley's design skills include the use of Autocad, Revit, SketchUp, and Adobe Creative Suite programs, among others.

RELEVANT PROJECT EXPERIENCE

Adair Youth Development Center Ceiling Replacement, Columbia, KY – Interior Designer. Ceiling replacement for 80-bed maximum security juvenile detention facility.

Georgetown College Knight Hall Renovation - Assessment and Preliminary Design, Georgetown, KY – Interior Designer. Preliminary design, cost estimates, and a life cycle cost analysis to renovate four-level, 60,000 SF women's residence hall. Included are interior finishes, restroom and shower renovation, accessibility, window replacement, as well as HVAC and electrical systems. Anticipated renovation is expected to take place in two phases.

Berea College Seabury Center Renovation, Berea, KY – Interior Designer. Design services to renovate two existing racquetball courts into office suites for coaches and create separate entry for Athletics Department. Proposed design involves addition of flooring/ceiling system to create two-story office suite, as well as enclosure of portion of lobby with aluminum/glass wall at lower level to create reception space.

Berea College Facilities Maintenance and Auxiliary Maintenance Buildings, Berea, KY – Interior Designer. New 37,445 SF pre-engineered metal Facilities Maintenance (FM) and 15,504 SF pre-engineered metal Auxiliary Maintenance (AM) buildings to unify and improve efficiency for Facilities Maintenance Departments. FM building includes office space; office support spaces; maintenance work areas for each department; multipurpose lunchroom/classroom for 60+ staff; toilet/shower/locker area; general work/storage area; additional mezzanine storage area with freight service elevator access; unit heaters and exhaust/air circulation systems in shop areas; HVAC in office areas via one central roof top unit; and building wide fire suppression. AM building includes: vehicle repair area with two, slab-supported lifts; vehicle wash bay; bus storage; campus recycling center with industrial cardboard bailer and paper shredder; offices; bathrooms; additional overflow storage area; and 30 electric cart maintenance vehicle charging/parking spaces. Both buildings have card reader access, motorized overhead doors, man doors, concrete floors with trench drains where applicable, and oil/water separator systems.

Multiple Kentucky Judicial Center Facility Assessments, KY – Architectural Designer. Scope for each of 12 initial - with the potential of 25 additional sites - include on-site inspection and assessment to identify building interior and exterior deficiencies, space limitation issues, security concerns, and ADA compliance issues. Reports include findings, potential solutions, and cost estimates.

Comprehend Medical Office Building, Maysville, KY – Interior Designer. Design and construction phase services for a new 26,000 SF addition to provide space for clinical and administrative functions. Key design factors incorporated: welcoming, secure environment; brand and identity promotion; large open atrium; public circulation space; easy wayfinding; connection to existing clinic; clearly defined public, clinical, and administrative zones. Building responds to a complex, steeply sloped site by incorporating expanded parking into the lower level adjacent to primary public and staff entrances.

Escambia County Correctional Facility, Pensacola, FL – Interior Designer. New \$130 million, three-story, 300,000 SF, correctional facility via two-phase design-build delivery method. Phase 1 includes housing for 720 inmates, as well as central core of administration, program, and support spaces for anticipated full build out of approximately 1,500 beds (adult and juvenile). Phase 2 is addition of remaining beds. Other key components include secure sallyport; inmate intake and receiving area; and commissary, laundry, and food service areas that will serve both old and new facilities. Facility will be designed to comply with LEED, achieving a rating of LEED Silver.

FibroTex Manufacturing Facility Renovation and Expansion, McCreary County, KY – Interior Designer. Design-build project including addition/renovation of approximately 80,000 SF to textile manufacturing facility.

Nicholasville Fire Station #4, Nicholasville, KY – Interior Designer. Facility programming, facility needs assessments, architectural and engineering design, and construction phase services for new 6,825 SF fire station with two pull-through apparatus bays, and vehicle storage for up to six vehicles. Facility includes station captain's office, training room, sleeping quarters for two companies (total of 10 staff), dayroom/break area, and dedicated Personnel Protection Gear (PPE) gear and laundry spaces. Also includes controlled security lock systems for visitors; backup generator power for entire building, communications, electrical, and mechanical/HVAC; zoned sloped concrete floors with trench drain and oil/water separator system; high pressure washing system in apparatus bays; four zones of dedicated vehicle exhaust and makeup air units in vehicle maintenance area; high-speed, motorized overhead section doors; staff and visitor parking; concrete apparatus vehicle parking and driveways; staff assembly areas with sustainable stormwater including rain garden and vegetated filtration plantings.

Cory Sharrard, PE, LEED AP | GRW Mechanical Engineer



YEARS OF EXPERIENCE:

With GRW: 2

Total: 22

EDUCATION

B.S., Industrial Technology, 1996,
Murray State University

B.S., Mechanical Engineering,
1998, University of Kentucky

REGISTRATION

Professional Engineer: KY, IN,
OH, WV, NY, FL, TN

NCEES Member allows
reciprocity with other states

LEED AP

PROFESSIONAL AFFILIATIONS AND TRAINING

Kentucky Local Correctional
Facilities Construction Authority
Board (through 2023)

American Society of Heating,
Refrigerating and Air-
Conditioning Engineers
(ASHRAE) - Board of Governors,
Bluegrass Chapter

Kentucky Society of Professional
Engineers (KSPE) - Professional
Development Committee (Vice
Chair), Bylaws & Operational
Procedures Committee, Ethical
Practices Committee

Society of American Military
Engineers (SAME)

Society of Marketing
Professional Services (SMPS) -
Past President

Cory possess more than 20 years' experience with mechanical engineering including design of traditional water source heat pump (WSHP), geothermal WSHP, hybrid geothermal WSHP, variable refrigerant flow (VRV), split system, rooftop units, unit ventilators, variable air volume (VAV), and ice storage systems. Her experience includes numerous K-12, higher education, vocation school, detention center, church, and library projects.

RELEVANT PROJECT EXPERIENCE

Clay County BOE Clay County High School Renovations, Clay, WV – Mechanical Engineer. Design and construction administration phase services for gymnasium and locker rooms, restrooms, commons area, and HVAC system renovations; door/window replacement; and security/communications system improvements. Portion of construction will occur during summer months, but much will be completed while school is occupied.

West Virginia ARNG Martinsburg Secure Facility, Martinsburg, WV – Mechanical Engineer. Renovations to 2-story area (6,200 SF per level) to provide new secure office space and related support spaces for specific using agency. Includes HVAC replacement; new interior finishes (including raised access flooring), structural roof deck and roofing system, elevator and fire stairs, building security and cameras, and site security fencing, sliding vehicular security gates, exterior parking; and site utility and storm drainage improvements.

West Virginia Division of Natural Resources Building 74 Renovation, South Charleston, WV – Project Manager. Evaluation and recommendations for possible improvements and upgrades to building systems in three-story, 37,000 SF, masonry-construction facility that houses approximately 100 employees. Among improvements selected for design are replacement of heating and cooling systems, windows, T5 lighting with LED fixtures, and replacement of ceilings and floor finishes, as well as new DDC controls throughout building.

West Virginia Department of Highways District 1 Vehicle Maintenance and Equipment Shops Building, Charleston, WV – Mechanical Engineer. Approximate 35,000 SF facility includes: 8 heavy vehicle repair bays; 6 light vehicle repair bays; 2 welding bays; wash bay; small engine shop; parts and tire storage areas; offices; 2 cranes serving repair bays; 1 crane serving entire weld shop area; freight elevator; perimeter fencing; keycard entry system; and generator. Structure features cavity walls with concrete panel backup, petroleum resistant concrete floors, and metal roofing over rigid insulation, metal decking, and bar joists.

Pulaski County Schools Maintenance Projects, Somerset, KY – Mechanical Engineer. Projects included: Northern Middle School masonry removal and repairs, metal roof flashing replacement, hot water heater replacement, and asphalt paving resurface; Oak Hill Elementary School roof replacement; Memorial Education Center roof replacement; and Day Treatment Center (alternative school) masonry replacement, roof replacement, door and window replacement, and replacement of two rooftop mechanical units.

Multiple Kentucky Judicial Center Facility Assessments, KY – Mechanical Engineer. Scope for each of 12 initial - with the potential of 25 additional sites - include on-site inspection and assessment to identify building interior and exterior deficiencies, space limitation issues, security concerns, and ADA compliance issues. Reports include findings, potential solutions, and cost estimates.

Berea College Seabury Center Renovation, Berea, KY – Mechanical Engineer. Design services to renovate two existing racquetball courts into office suites for coaches and create separate entry for Athletics Department. Proposed design involves addition of flooring/ceiling system to create two-story office suite, as well as enclosure of portion of lobby with aluminum/glass wall at lower level to create reception space.

Additional K-12 School Experience

- Scott County Schools New Great Crossing High School, Georgetown, KY
- Scott County Schools High School Cafeteria Improvements, Georgetown, KY
- Scott County Schools High School Career Technology Center, Georgetown, KY
- Washington County Schools Elementary and High School Renovations, Springfield, KY
- Wayne County Schools Area Technology Center, Monticello, KY
- Berea Independent Schools HVAC Renovation, Berea, KY
- Burgin Independent School District Elementary School Renovation, Burgin, KY
- Clark County Schools High School Gym Addition and Athletic Fields, Winchester, KY
- Corbin Independent Schools Middle School HVAC Renovation, Corbin, KY
- Danville Independent Schools Hogsett Elementary School Renovation, Danville, KY
- Estill County Schools High School Renovation, Irvine, KY
- Fayette County Public Schools Johnson Elementary HVAC, Lexington, KY
- Fayette County Public Schools Deep Springs Elementary School, Lexington, KY
- Fayette County Public Schools Breckinridge Elementary School Renovation, Lexington, KY
- Fayette County Public Schools Facility Surveys, Lexington, KY
- Fayette County Public Schools ADA Upgrades, Lexington, KY
- Garrard County Schools Camp Dick Elementary School Classroom Additions, Lancaster, KY
- Harlan Independent Schools Elementary School Renovation, Harlan, KY
- Jessamine County Schools West Jessamine High School Auditorium Addition, Nicholasville, KY
- Laurel County Schools Hunter Hills Elementary School, London, KY
- Laurel County Schools Alternative School, London, KY

Allen Tucker, PE | GRW Mechanical Engineer



YEARS OF EXPERIENCE:

With GRW: 12
Total: 37

EDUCATION

B.S., Mechanical Engineering,
1984, Clemson University

REGISTRATION

Professional Engineer: KY, SC, FL
Construction Documents
Technologist (CDT)
NCEES Member allows
reciprocity with other states

Allen's experience as a mechanical engineer has encompassed water resources projects, as well as educational, commercial, and governmental facilities. His broad expertise includes mechanical system design, plumbing, and fire protection as well as various field inspection services. Allen has been involved with overall mechanical design, client interface, multidiscipline coordination, plan preparation, specifications, calculations, and scope of work development. His experience also includes shop drawing and material submittal review, preparation of request-for-proposals, project design review and development of design documentation in accordance with the owners project requirements and basis of design.

RELEVANT PROJECT EXPERIENCE

West Virginia ANG 130th Airlift Wing Building 107 Renovation, Charleston, WV – Mechanical Engineer. Repurpose of unoccupied hangar into space for Aeromedical Evacuation Squadron (AES). Repairs and building repurposing includes: new interior spaces including restrooms within existing facility to accommodate new functions; building exterior repairs, new interior finishes; mechanical and electrical systems upgrade; fire alarm and fire protection systems repair; and site/building revisions to meet ATEP standards.

West Virginia ARNG Martinsburg Secure Facility, Martinsburg, WV – Mechanical Engineer. Renovations to 2-story area (6,200 SF per level) to provide new secure office space and related support spaces for specific using agency. Includes HVAC replacement; new interior finishes (including raised access flooring), structural roof deck and roofing system, elevator and fire stairs, building security and cameras, and site security fencing, sliding vehicular security gates, exterior parking; and site utility and storm drainage improvements.

Kentucky School for the Deaf Boiler Replacements, Danville, KY – Mechanical Engineer. Study of central steam distribution system with goal of replacing system with independent heating sources in each building. Subsequent phased design included new steam boiler system to Thomas Gym and new hot water boiler systems to Brady Hall and Grow Hall, as well as replacing existing natural gas distribution system on campus. Work at historic Jacobs Hall involved new steam boiler system, including new remote boiler building and new underground piping.

Pulaski County Northern Elementary School, Somerset, KY – Mechanical Engineer. Engineering design services for new 62,974 SF, 450-student elementary school. Systems include central geothermal heating and cooling plant generating hot and chilled water serving variable volume air-handling systems with hot water reheat; high efficiency lighting; data and voice telecommunications; low-flow plumbing fixtures; and complete wet-pipe sprinkler and fire alarm systems. Also included bus fueling station and 9,000 gpd packaged wastewater treatment plant.

Harlan County Courthouse Renovations, Harlan, KY – Mechanical Engineer. Design for phased renovation of 31,040 SF, 4-story courthouse constructed in 1922 of poured-in-place concrete columns, beams, floor slabs and roof deck, and classically-styled Indiana limestone exterior. Initial phase provided masonry and metal cornice restoration at parapet area, roof

replacement. Phase 2 included addition of four-stop elevator and ADA/code upgrades; Phase 3 involved replacement of water main feed and all interior water lines. Phase 4 encompassed new public restrooms on second floor; renovation of existing non-ADA compliant ground floor restrooms; renovation of courtroom to provide small meeting rooms and fit-up for use as multi-purpose meeting room. Vacant County Judge Executive suite on ground floor was renovated for use by Commonwealth Attorney.

Georgetown College Knight Hall Renovation - Assessment and Preliminary Design, Georgetown, KY – Mechanical Engineer.

Preliminary design, cost estimates, and a life cycle cost analysis to renovate four-level, 60,000 SF women's residence hall. Included are interior finishes, restroom and shower renovation, accessibility, window replacement, as well as HVAC and electrical systems.

Frankfort Plant Board Administration Building, Frankfort, KY –

Mechanical Engineer. New three-level, 46,000 SF administration building on 30-acre site providing consolidated facility for administrative offices (accounting, human resources, management, IT, dispatch, customer service), as well as exterior drive through tellers, board/community room and designated shelter area. The heating ventilation and air conditioning (HVAC) is a variable air volume (VAV) system with chilled water, heating hot water, primary/secondary pumping and energy recovery. Major components supplying the HVAC are a 140-ton, air cooled scroll chiller; high efficiency natural gas boilers; chilled and hot water pumps; air handling units (AHU); VAV terminal units with hot water reheat, and an energy recovery unit.

West Virginia ANG 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion, Charleston, WV – Mechanical Engineer.

Renovation of 5,395 SF SFS facility (B142) including addition of 2,500 SF administrative and training space to better serve unit.

West Virginia Department of Highways District 1 Vehicle Maintenance and Equipment Shops Building, Charleston, WV – Mechanical Engineer.

Approximate 35,000 SF facility includes: 8 heavy vehicle repair bays; 6 light vehicle repair bays; 2 welding bays; wash bay; small engine shop; parts and tire storage areas; offices; 2 cranes serving repair bays; 1 crane serving entire weld shop area; freight elevator; perimeter fencing; keycard entry system; and generator. Structure features cavity walls with concrete panel backup, petroleum resistant concrete floors, and metal roofing over rigid insulation, metal decking, and bar joists.

West Virginia ARNG Camp Dawson Live Fire Exercise Shoot House, Kingwood, WV – Mechanical Engineer.

Design for innovative re-use of recently-acquired former industrial complex adjacent to Camp Dawson to provide Live Fire Exercise Shoot House, including shoot house to be housed in a metal warehouse, operations / storage, after action review (AAR) facility, ammunition breakdown facility, warehouse restroom renovation, access road and parking area, and utility services. Responsible for performing HVAC, plumbing and fire suppression calculations, equipment lay out, specifications, and controls, as well as sizing, selecting and locating exhaust system for live fire shoot house proper.

Patrick Baisden, PE, LEED AP BD+C | GRW Electrical Engineer



YEARS OF EXPERIENCE:

With GRW: 12

Total: 24

EDUCATION

B.S., Electrical Engineering, 1997,
University of Kentucky

REGISTRATION

Professional Engineer, Electrical:
KY, IN, WV, OR, NM, WV

LEED Accredited Professional,
Building Design + Construction

NCEES Member allows
reciprocity with other states

Patrick's experience with electrical systems design has encompassed industrial, educational, and commercial projects, as well as numerous projects for GRW's water resources, and local, state, federal clients. His areas of expertise include electrical power distribution, communication systems, interior/site lighting, lighting control systems (network, dimming, and theatrical), and code compliance.

RELEVANT PROJECT EXPERIENCE

West Virginia ARNG Martinsburg Secure Facility, Martinsburg, WV –

Electrical Engineer. Renovations to 2-story area (6,200 SF per level) to provide new secure office space and related support spaces for specific using agency. Includes HVAC replacement; new interior finishes (including raised access flooring), structural roof deck and roofing system, elevator and fire stairs, building security and cameras, and site security fencing, sliding vehicular security gates, exterior parking; and site utility and storm drainage improvements.

Kentucky School for the Deaf Boiler Replacements, Danville, KY –

Electrical Engineer. Study of central steam distribution system with goal of replacing system with independent heating sources in each building. Subsequent phased design included new steam boiler system to Thomas Gym and new hot water boiler systems to Brady Hall and Grow Hall, as well as replacing existing natural gas distribution system on campus. Work at historic Jacobs Hall involved new steam boiler system, including new remote boiler building and new underground piping.

UK Nursing Building Renovation, Lexington, KY –

Electrical Engineer. Design services for Phase II renovation of approximately 8,117 SF on sixth-floor of University's Nursing Building. Fit-up project includes 144-seat computer classroom used for computerized exams and lectures, IT office and reading room with seating for 42. Also included processor room for computer and CCTV surveillance equipment, as well as corridor system to secure floor after hours.

Pulaski County Schools Eubank Elementary Renovation and Addition, Pulaski County, KY –

Electrical Engineer. Mechanical and electrical engineering design, and construction administration services for renovation and addition of a 46,820-SF school. Scope includes a new kitchen and addition to the cafeteria, as well as a renovation of entire building. Mechanical work included HVAC systems involving rooftop VAV boxes with electrical reheat and energy recovery ventilation, as well as geothermal units. Electrical work included replacement of lighting, fire alarms, and communications, and new service for the addition.

Pikeville High School HVAC Replacement, Pikeville, KY -

Electrical Engineer for a HVAC replacement project for which the existing heater banks located in two (2) air handler units were replaced with individual heaters located in the supply duct serving each individual space to allow individual temperature control for each office/classroom space. Electrical work was limited to providing branch power to individual heaters and providing power to the new air handler units.

Lee County Vocational School Renovation, Beattyville, KY- Electrical Engineer for a complete renovation of an existing vocational school. Existing classrooms were provided with additional power, data/voice, and video outlets as required to accommodate new student computer workstations/ teacher workstations, and projector/interactive whiteboards. The lighting in the building was completely replaced with fixtures containing T5 lamps and energy efficient ballasts. Lighting controls consists of a network lighting control system for all interior spaces including the exterior lighting. This project meets the requirements set forth by the International Energy Conservation Code with regard to Electrical Power and Lighting Systems. A new microprocessor controlled, intelligent fire alarm system was provided along with all new notification and initiating devices throughout to meet current codes along with to meeting ADA requirements. A new microprocessor controlled voice and communication/intercom system was provided with all new speakers throughout

Georgetown College Knight Hall Renovation - Assessment and Preliminary Design, Georgetown, KY – Electrical Engineer. Preliminary design, cost estimates, and a life cycle cost analysis to renovate four-level, 60,000 SF women's residence hall. Included are interior finishes, restroom and shower renovation, accessibility, window replacement, as well as HVAC and electrical systems. Anticipated renovation is expected to take place in two phases.

West Virginia Department of Highways District 1 Vehicle Maintenance and Equipment Shops Building, Charleston, WV – Electrical Engineer. Approximate 35,000 SF facility includes: 8 heavy vehicle repair bays; 6 light vehicle repair bays; 2 welding bays; wash bay; small engine shop; parts and tire storage areas; offices; 2 cranes serving repair bays; 1 crane serving entire weld shop area; freight elevator; perimeter fencing; keycard entry system; and generator. Structure features cavity walls with concrete panel backup, petroleum resistant concrete floors, and metal roofing over rigid insulation, metal decking, and bar joists.

West Virginia ANG 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion, Charleston, WV – Electrical Engineer. Renovation of 5,395 SF SFS facility including addition of 2,500 SF administrative and training space to better serve unit.

West Virginia ANG 130th Airlift Wing Squadron Operations Facility Repair, Charleston, WV – Electrical Engineer. Renovation and energy-efficient improvements to 25,765 SF facility. Selected design allows for efficient use of space; HVAC, electrical and fire protection systems upgrade; and roof repairs.

Crane NSA Building 174 Complex Boiler Renovations, Crane NSWC, IN – Electrical Engineer. Mechanical and electrical design, and construction administration services for design/build replacement of heating systems at Building 174 and two other buildings.

David Hoy, PE | GRW Structural Engineer



YEARS OF EXPERIENCE:

With GRW: 14

Total: 14

EDUCATION

B.S., Civil Engineering, 2006,
West Virginia University

REGISTRATION

Professional Engineer: WV, KY,
IN, TN, NC, OH, VA

PROFESSIONAL AFFILIATIONS AND TRAINING

American Society of Civil
Engineers

Dave is experienced in the design of various building structural systems including timber, concrete, steel, and masonry construction, as well as foundation design, including deep foundation systems. He has provided structural engineering on a variety of structures including schools, office buildings, and recreation facilities. In addition to building structures, David also has experience with water/wastewater projects involving the design of below grade concrete structures and elevated structural slabs.

RELEVANT PROJECT EXPERIENCE

West Virginia ANG 167th Airlift Wing C-17 Corrosion Control Hangar, Fuel Cell Hangar, and Maintenance Hangar Modifications, and Addition of Composite Material Shop Martinsburg, WV – Structural Engineer. Fast-track design of projects required to meet 167AW's change in mission from C-5 to C-17 aircraft.

Clay County High School, Clay, WV – Project Structural Engineer. New bus garage, locker room renovations, new restroom facility, and press-box renovations.

Jane Lew Elementary School Addition, Jane Lew, WV – Project Structural Engineer. Addition and renovation project that included five new classrooms, an updated office suite, and a new building entrance and bus loop.

Smithville Elementary School Addition, Smithville, WV – Project Structural Engineer. Addition and renovation of the Smithville Elementary School project which included the demolition of two buildings in the existing complex and the design of a new classroom wing and a new kitchen addition adjacent to the remaining buildings.

Pocahontas Wellness Center, Marlinton, WV – Project Structural Engineer. 13,000 square-foot community wellness center, constructed adjacent to but separate from the existing Marlinton Elementary School.

Coal Heritage Discover Center, Mt. Hope, WV – Project Structural Engineer. Rehabilitation of the historic Patterson Building into Coal Heritage Discovery Center consisting of offices, meeting rooms, an historic information center, a small theater space, a public lobby area, a gift shop, and a small café area.

State Road Commission Building, Charleston, WV – Project Structural Engineer. Renovation of the historic State Road Commission Building for the West Virginia Division of Highways. The 40,000 square-foot building houses offices and support facilities for the local highway district.

WV DOH District One Equipment Shop, Charleston, WV – Project Structural Engineer. New 34,000 square-foot, 14-bay vehicle maintenance building. The design included pre-cast concrete wall panels and deep foundations and grade beams.

SECTION 4.0 | **Project Management and
Quality/Cost Control**

4.0 Project Management and Quality/Cost Control

Project Management

Our approach to managing your project is straightforward: assemble the best and brightest design talent with knowledge of the national guard projects; bring an open mind and fresh perspectives; and remain accountable to you throughout the process for cost control/budget. The relationship between you and your chosen design consultant is critically important. The cornerstone of the GRW design approach is collaboration. Communicating in an open dialog, where ideas can be freely expressed and considered, helps to vest everyone in the project's success, and is a vital prerequisite to ensuring buy-in from all project stakeholders. The following provides a general overview of our process.

Kickoff/Charrette

We will have an initial meeting with you and the primary project stakeholders to discuss in detail your project goals, options for accomplishing those goals, and budget and schedule requirements for the work. Following this meeting, we issue a written record of our discussions.



Existing Conditions

We will take stock of the existing building(s), through an examination of existing documentation and field observations. We will identify existing conditions that are not in compliance with current codes and standards, including, but not limited to, ADA compliance, life-safety compliance, and state/federal facility requirements.

At the conclusions of this step we will create a report that outlines the condition of the existing building components and systems that will be affected by the work of this project. This information will include the identification of existing hazardous materials.

A1 & A2 Design Submittals

Using the information from the Kickoff/Charrette and analysis of existing conditions, we will proceed with developing a schematic design.

We will present this concept to you through the use of drawings, product information sheets, written narratives and an initial cost estimate. After your review of the material, we will meet together to go over the design review comments, review the budget, and document any desired revisions. We will repeat this process as needed to reach an acceptable solution that meets your goals and budget.

We will also discuss with you potential construction phasing opportunities, if/as needed. We will document each step of the process with thorough meeting minutes.

B1, B2 & B3 Construction Documents

Using the approved Schematic Design documents, the design team will proceed with Design Development docs which likewise, are issued for Owner/User review and approval before proceeding to completion of Construction Documents for bidding.

The Estimate of Probable Cost is updated at each design review submittal to check the estimate against the drawings and specs, to make sure the work remains within budget. We will also reconfirm final decisions on materials, equipment, and finishes.

If needed, we will incorporate a phasing plan into the final documents to minimize the impact of construction on the facility's day-to-day operations.

The final construction documents will consist of drawings, specifications, and instructions to bidders. The completed documents are then ready for bidding.

Construction Phase

The same Project Manager you worked with throughout design continues as your point of contact through the entire construction process. Also, the original designers are the team we use to review shop drawings, attend meetings and observe the work in progress. This provides a continuity that benefits the project and is an integral part of our quality control process.



GRW manages and tracks our construction administration and resident inspection responsibilities using **Newforma®** Project

Center (project information management software); this ensures that the process is transparent to all parties. Newforma has built-in modules specifically developed for the A/E industry. **Using this system, Owners, Design Team, and Contractor/GC all have access to real-time logs showing the current status of all construction-related activities.**

During project construction, GRW provides consultation and advice on construction matters including visits to the site to check work progress and quality and to evaluate general conformance with the contract documents.

In addition, we review laboratory, shop and on-site tests of equipment and materials related to the submittals. Once reviewed, copies of submittals, with comments, are distributed to the team members (Owner, Contractor, etc.) for appropriate action. A comprehensive submittal file is maintained in the Newforma software.

Our team members review and recommend progress payments to the construction contractor based on observation of the work in-place. Project costs automatically update for tracking of project budgets.

Our team performs semifinal inspections of the project and creates a list of work yet to complete prior to the final technical inspection. Upon completion, we will provide a set of record drawings based on mark-ups from the contractor, to show field changes made during construction. These drawings are reviewed by the Project Manager and serve as the record drawings for the project and are suitable for facility management.

Changes

The GRW project team will not approve any change that affects project cost, time or quality without your approval, and then only after a thorough discussion and vetting of the reasons for the change. Contractor cost proposals are carefully reviewed to ensure the proposed costs are fair and reasonable. When needed, GRW will negotiate on your behalf to reach an equitable solution.

Flexibility

These procedures are not cast in concrete, as GRW prides itself on being an organization which seeks to simplify and expedite procedures that can impede the work and stifle creative people. Sometimes these procedures are streamlined for smaller projects, and sometimes they are more formalized for larger projects but at all times they remain flexible to accommodate the needs of our client's organizations. We want you to be satisfied with the quality of your facility: the bottom line is that GRW cares a great deal about securing repeat business with our clients.

GRW and its subsidiary Chapman Technical Group (offices in St. Albans and Buckhannon, WV) have extensive experience in developing projects through the WV Purchasing Division. For many years, we have designed, bid, and constructed numerous, major Division of Natural Resources projects throughout the state. The West Virginia Division of Highways (DOH) recently began working with the State's Purchasing Division for building projects, and our \$10 million equipment shop building for District One was the first project that the DOH bid through the WV Purchasing Division. Our knowledge and experience of the State's purchasing procedures made this an easy transition for all stakeholders. Although every agency has its own particulars with regard to bidding projects, our experience with the West Virginia Purchasing Division will help ensure effective and efficient project delivery.

Quality & Cost Control

At GRW, cost control, scheduling and value engineering are daily components of design rigor. Project planning decisions are assessed in weekly project meetings with all A/E disciplines to confirm budgets and schedules will be met. During these sessions, project status is discussed to direct adequate resources to meet the project schedule. The issues tracking list we create is reviewed to ensure problems are resolved before they impact the schedule or budget. Our vision as your full-service architectural and engineering design firm is to partner with you to simplify the design and construction process for the results you intend.

Quality Control

Shane Lyle, our Project Manager, has primary responsibility for the daily management and coordination of the project team. With over 38 years of experience, he has a clear understanding of the most effective methods for maintaining the programming, planning, and design schedule.

COMMUNICATION: At GRW, our highest project-management priority is focused on maintaining clear and effective communication throughout the entire project. This focus includes our communication with you and your stakeholders, with the Contractor, and with our internal design team members. Key to this effort is our use of Newforma project information management software, which allows the storage, sharing, and retrieval of project information both internally and externally.

PROJECT MANAGER: Our process begins initially with the assignment of an experienced Project Manager who is responsible for organizing the design effort and who manages the Quality Control process. While a project design team may involve many different departments or groups, the Project Manager has the ultimate authority over the project at all times.

A key element in effective Quality Assurance/Quality Control (QA/QC) is the use of regularly scheduled progress meetings. A kickoff meeting between key members of GRW's proposed project team and your management and staff will be held to ensure a common understanding of the goals and objectives among all project partners. These issues will be

reviewed and the work plan will be discussed in detail. Lines of communication and coordination will be established. Regular meetings will then be scheduled throughout the project to report on project progress and to review technical issues. These meetings provide a forum for discussing concerns and ideas. The assigned Project Manager is the primary conduit for communication between you and the design team.

TEAM MANAGEMENT: QA/QC is enhanced at GRW since most design disciplines are in-house. Because of this, scheduling internal team meetings or over-the-shoulder reviews is greatly simplified. On this project, the Project Manager will conduct weekly team meetings with the design team members to facilitate coordination of design issues. Any design problems are identified along with a path for their correct resolution. A checklist managed by the Project Manager is used to track the resolution of issues from meeting-to-meeting.

SCHEDULE MANAGEMENT: No QA/QC process can succeed without allocating sufficient time for internal review. The Project Manager will develop a proposed internal design schedule at the beginning of the project for appropriate time for internal review. These internal reviews typically occur prior to normal design submittal dates for the project.

QUALITY CONTROL REVIEWS: QC reviews at GRW includes desk-to-desk, task-to-task, and person-to-person crosschecking of work that takes place on a regular basis within the company. Impromptu meetings to discuss specific issues take place as often as needed. The peer review personnel are determined by the Project Manager at the beginning of the project, and remain consistent throughout the course of the project.

QUALITY ASSURANCE: A major advantage of providing all design disciplines within the same firm is the opportunity to streamline communication and work flow resulting in a well-coordinated set of construction documents. By close collaboration throughout the design stage, ideas can be quickly discussed and evaluated to understand impacts on cost, schedule and effectiveness.

PROGRAMMATIC OVERSIGHT: The Project Manager is tasked with maintaining oversight of the project as the design develops, to insure that the design decisions are in keeping with the programmatic criteria developed with you at the project's initiation. At each interim submittal, the Project Manager takes a step back, and looks at the project in broad terms to insure that the design is progressing in accordance with the original criteria.

Cost Control

PROJECT BUDGET ACCOUNTABILITY: Government officials are accountable to the public for the expenditure of public monies. The GRW team understands this obligation and develops a project design that is cost-effective and delivers an efficient and appropriate use of funds assigned to the military. Rarely do projects have sufficient budget to accommodate everything on the programmatic *wish list*. Reconciling the program against the project budget is done early and often in order to guide the project to a successful conclusion. GRW approaches

this process in a pragmatic and open manner. This subject will be on the agenda of every project meeting we have with you for open and frank discussion so that everyone is kept abreast of any potential concerns. Prioritizing the program relative to the budget can be a difficult task, with different stakeholders sometimes at odds over how to resolve differences of opinion. GRW excels at guiding this process and helping you to resolve these differences.

GRW has a strong history of successful estimating of projects, and our design experts will draw upon this knowledge during the development of our construction cost estimates.

We can also develop a list of possible value-engineering for consideration to help manage construction costs and give you the most construction value for your dollar.



GRW provided design and construction phase services for the WV ANG's 130th Airlift Wing Building 107 Renovation. With a construction budget of \$5M, the awarded bid was \$4,941,290, and the final construction cost was \$4,991,876 (within 1% of awarded bid).

SECTION 5.0 | References

5.0 References

GRW understands that professional consulting begins as a relationship built on trust. We fully understand the importance of gaining your respect, proving our worth, and being there long after your successful project is completed. With repeat clients providing more than 90 percent of GRW's current workload, we believe this is a testament to our business philosophy of providing close, personal, high quality service. We invite you to contact our references to verify GRW's performance.

West Virginia Army National Guard

MAJ Robert Kincaid, Jr.

(304) 791-4459

robert.j.kincaid.mil@mail.mil

Matthew T. Reynolds

(304) 561-6568c

matthew.t.reynolds18nfg@mail.mil

West Virginia Air National Guard

Capt. Harry Netzer, Deputy BCE

(304) 341-6649

harry.g.netzer.mil@mail.mil

Maj. Emerson C. Slack, Deputy BCE

(304) 616-5233

emerson.c.slack.mil@mail.mil

Federal Bureau of Prisons

Judah Organic, Design Compliance

Programs Manager

(202) 514-9566

jorganic@bop.gov

Frankfort Plant Board, Frankfort, KY

Sharmista Dutta, PE, Project Manager

(502) 352-4407

sdutta@fewpb.com

(New Administration Building Shown Right)



SECTION 6.0 | West Virginia EOI 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			Reason for Modification:
Doc Description: EOI- MCA South Facility Upgrades Design			
Proc Type: Central Purchase Order			
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: 000000218570
Vendor Name : GRW Engineers, Inc.
Address : 801 Corporate Drive
Street :
City : Lexington
State : Kentucky **Country :** USA **Zip :** 40503
Principal Contact : Shane Lyle, AIA, LEED AP BD+C, Vice President
Vendor Contact Phone: (859) 223-3999 **Extension:** 251

FOR INFORMATION CONTACT THE BUYER

David H Pauline
 304-558-0067
 david.h.pauline@wv.gov

Vendor Signature  **FEIN#** 61-0665036 **DATE** March 2, 2021

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

ADDITIONAL INFORMATION

The West Virginia Purchasing Division, for the agency, the West Virginia Army National Guard, Construction and Facilities Management Office, is soliciting Expressions of Interest from qualified firms to provide professional engineering design services for Facility Upgrades at the MCA South Facility, located in, Montgomery, WV, per the attached documentation.

INVOICE TO	SHIP TO
ADJUTANT GENERALS OFFICE 1707 COONSKIN DR CHARLESTON WV 25311 US	ADJUTANT GENERALS OFFICE 305 FAYETTE PIKE MONTGOMERY WV 25136 US

Line	Comm Ln Desc	Qty	Unit Issue
1	EOI- MCA South Facility Upgrades Design		

Comm Code	Manufacturer	Specification	Model #
81101508			

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

SCHEDULE OF EVENTS

<u>Line</u>	<u>Event</u>	<u>Event Date</u>
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	Document Phase	Document Description	Page
ADJ210000007	Final	EOI- MCA South Facility Upgrades Design	3

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

**ADDITIONAL TERMS AND CONDITIONS
(Architectural and Engineering Contracts Only)**

1. PLAN AND DRAWING DISTRIBUTION: All plans and drawings must be completed and available for distribution at least five business days prior to a scheduled pre-bid meeting for the construction or other work related to the plans and drawings.

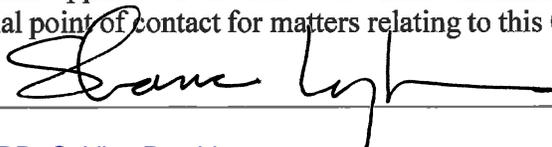
2. PROJECT ADDENDA REQUIREMENTS: The Architect/Engineer and/or Agency shall be required to abide by the following schedule in issuing construction project addenda. The Architect/Engineer shall prepare any addendum materials for which it is responsible, and a list of all vendors that have obtained drawings and specifications for the project. The Architect/Engineer shall then send a copy of the addendum materials and the list of vendors to the State Agency for which the contract is issued to allow the Agency to make any necessary modifications. The addendum and list shall then be forwarded to the Purchasing Division buyer by the Agency. The Purchasing Division buyer shall send the addendum to all interested vendors and, if necessary, extend the bid opening date. Any addendum should be received by the Purchasing Division at least fourteen (14) days prior to the bid opening date.

3. PRE-BID MEETING RESPONSIBILITIES: The Architect/Engineer shall be available to attend any pre-bid meeting for the construction or other work resulting from the plans, drawings, or specifications prepared by the Architect/Engineer.

4. AIA DOCUMENTS: All construction contracts that will be completed in conjunction with architectural services procured under Chapter 5G of the West Virginia Code will be governed by the attached AIA documents, as amended by the Supplementary Conditions for the State of West Virginia, in addition to the terms and conditions contained herein. The terms and conditions of this document shall prevail over anything contained in the AIA Documents or the Supplementary Conditions.

5. GREEN BUILDINGS MINIMUM ENERGY STANDARDS: In accordance with West Virginia Code § 22-29-4, all new building construction projects of public agencies that have not entered the schematic design phase prior to July 1, 2012, or any building construction project receiving state grant funds and appropriations, including public schools, that have not entered the schematic design phase prior to July 1, 2012, shall be designed and constructed complying with the ICC International Energy Conservation Code, adopted by the State Fire Commission, and the ANSI/ASHRAE/IESNA Standard 90.1-2007: Provided, That if any construction project has a commitment of federal funds to pay for a portion of such project, this provision shall only apply to the extent such standards are consistent with the federal standards.

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.

Shane Lyle, Vice President 

(Name, Title)
Shane Lyle, AIA, LEED AP BD+C, Vice President

(Printed Name and Title)
801 Corporate Drive, Lexington, KY 40503

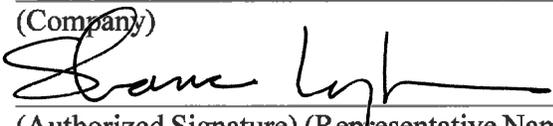
(Address)
(502) 223-3999 (502) 223-8917

(Phone Number) / (Fax Number)
slyle@grwinc.com

(email address)

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

GRW Engineers, Inc.

(Company)
 Shane Lyle, Vice President

(Authorized Signature) (Representative Name, Title)

Shane Lyle, AIA, LEED AP BD+C, Vice President

(Printed Name and Title of Authorized Representative)

March 2, 2021

(Date)

(502) 223-3999 (502) 223-8917

(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.

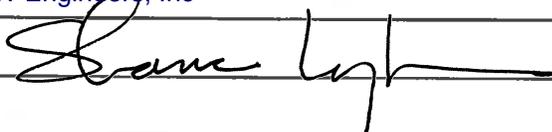
"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' 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 exceeds five percent of the total contract amount.

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

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: GRW Engineers, Inc

Authorized Signature:  Date: March 2, 2021

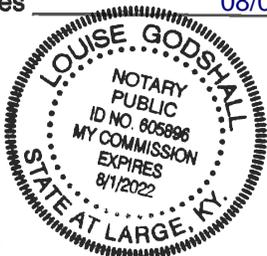
State of Kentucky

County of Fayette, to-wit:

Taken, subscribed, and sworn to before me this 2 day of March, 2021.

My Commission expires 08/01, 2022.

AFFIX SEAL HERE



NOTARY PUBLIC 