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Expression of Interest

Architecture & Engineering Services Camp Dawson Regional Training Institute Auditorium Renovation Design CEOI ADJ2000000003

WV Department of Administration WV Army National Guard

Table of Contents

Cover Letter

Section 1.0	GRW Introduction
Section 2.0	Project Experience
Section 3.0	Staff Qualifications
Section 4.0	Approach & Methodology for Meeting Goals & Objectives
Section 5.0	Project Management & Quality/Cost Control
Section 6.0	References
Section 7.0	West Virginia EOI Forms



GRW | engineering | architecture | geospatial
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February 13, 2020

Ms. Tara Lyle, Buyer Supervisor
Department of Administration, Purchasing Division
State of West Virginia
2019 Washington Street East
Charleston, WV 25305-0130

**RE: Camp Dawson Regional Training Institute Auditorium Renovation Design
Solicitation No.: CE01 ADJ2000000003**

Dear Ms. Lyle and Selection Committee Members:

Achieving the goals you've established for the auditorium renovation project at the Camp Dawson Regional Training Institute is important for this highly visible, regularly used facility on the Camp Dawson campus. GRW would like to work with you on this project – and we believe we offer you the right experience and expertise to successfully delivery the results you require.

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 50 years. Our project team's experience with the National Guard in West Virginia is substantial ranges from projects with West Virginia ARNG Martinsburg and Camp Dawson, to the West Virginia ANG's 130th Airlift Wing, 167th Airlift Wing, and 167th Airlift Wing. **See Sections 2.0 and 3.0.**

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. For example, we have designed, bid, and constructed numerous, major Division of Natural Resources projects throughout the state, as well as projects for the Department of Highways. 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. 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. **See Sections 4.0 and 5.0.**

Thank you for your consideration and for the opportunity to work with you. 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.

If you have questions about our qualifications or any other items, please feel free to call or email.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Aaron Nickerson', is written over a light blue horizontal line.

Aaron Nickerson, AIA, LEED Green Associate
GRW Architect / Project Manager

859-223-3999, ext. 321
anickerson@grwinc.com

1.0 GRW Introduction

About GRW

Founded more than 50 years ago, GRW is an employee-owned architectural, engineering and geospatial services firm with more than 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.

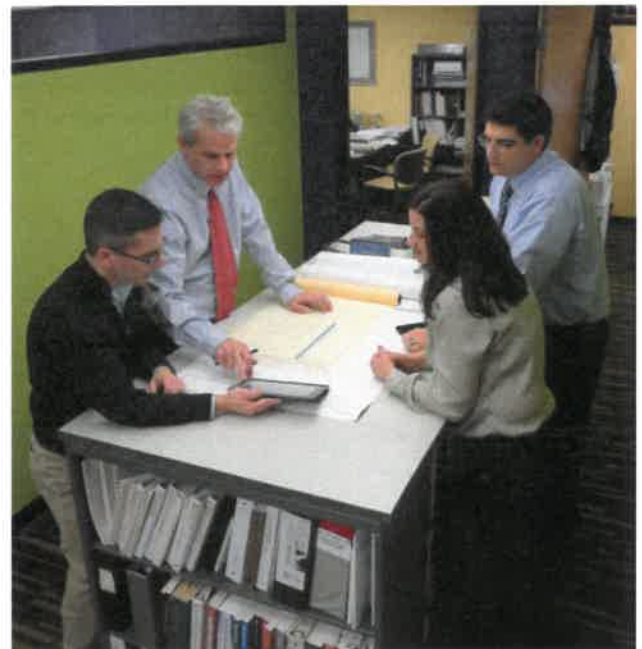


Among our achievements, GRW is listed in *Building Design and Construction's Giants 300* report as one of the nation's top Architecture-Engineering firms. Also, since 1972, GRW also has been recognized nationally as a top producing firm by *Engineering News-Record*.

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.



Department of Defense Experience

GRW brings to the table a wide ranging body of military experience that includes work for the National Guard, U.S. Army, U.S. Air Force, the U.S. Army Corps of Engineers, and the Naval Facilities Engineering Command (NAVFAC). These projects include renovation and new construction work, as well as military master plans, and a broad range of geospatial services.



The map below provides a general geographic overview of where we have provided services to the military.



* U.S Army Corps of Engineers work encompasses multiple IDIQs and task orders in 18 Districts
OCONUS Locations: Kadena Air Base, Okinawa, Japan and Camp Lemonnier, Djibouti

GRW's Experience at Camp Dawson and with the West Virginia Army & Air National Guard - Partial List

GRW has a long history of experience with the West Virginia Army and Air National Guard. Examples of many of these projects are shown on these pages.

West Virginia ARNG 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. **Client Contact:** MAJ Robert Kincaid, Jr., Range Operations Manager, (304) 791-4459, robert.j.kincaid.mil@mail.mil

West Virginia ARNG 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. **Client Contact:** MAJ Robert Kincaid, Jr., Range Operations Manager, (304) 791-4459, robert.j.kincaid.mil@mail.mil

West Virginia ARNG 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. **Client Contact:** MAJ Robert Kincaid, Jr., Range Operations Manager, (304) 791-4459, robert.j.kincaid.mil@mail.mil

West Virginia ARNG 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. **Client Contact:** MAJ Robert Kincaid, Jr., Range Operations Manager, (304) 791-4459, robert.j.kincaid.mil@mail.mil

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

West Virginia ANG 130th Airlift Wing Communications Duct, Charleston, WV – Concept Development Report to select a preferred concept for a new duct system for routing the base’s communications network to a new Communications Facility. New fiber optic cable for base network will consist of two ITNs (Information Transfer Nodes); ITN-1 in the new Communications Facility and ITN-2 in new hangar, Building 407. Duct bank will carry fiber optic lines, television and coaxial cabling; allows looping of current system; and provides redundancy of assets. A 4-duct and a 12-duct PVC conduit system with inter-duct is proposed. **Client Contact:** LtCol Rick Thomas, Base Civil Engineer

West Virginia ANG 130th Airlift Wing Aboveground Fuel Storage Dispensing Facility, Charleston, WV – Design for a new aboveground fuel station for the installation’s government-owned vehicles, comprising two new aboveground tanks (1 diesel, 1 unleaded gasoline) and a new dispensing system, replacing an older fuel station that included underground fuel storage tanks. **Client Contact:** LtCol Rick Thomas, Base Civil Engineer

West Virginia ARNG Joint Armed Forces Reserve Center and Area Maintenance Support Activity, Ripley, WV – Preparation of a Program Planning Document Charrette (PPDC) for replacement of two

local armories and a USAR center with aging facilities and site limitations, with a new, \$17 million Joint Armed Forces Reserve Center and support facilities on a 94-acre site. Resulting plans include an Armed Forces Reserve Center (60,927 SF), unheated storage (6,000 SF), area maintenance support (4,500 SF) and helipad. **Client Contact:** MG Melvin Burch, (304) 561-6458, melvin.burch@us.army.mil

West Virginia ARNG 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. **Client Contact:** MAJ Daniel Clevenger, CFMO, (304) 561-6446, daniel.w.clevenger.mil@mail.mil

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

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

West Virginia ANG 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. **Client Contact:** Col Rodney Neely, MSG Commander, (304) 616-5198

West Virginia ANG 167th Airlift Wing Maintenance Mall (Building 307) Repair, Martinsburg, WV – Concept Development Report for C-5 aircraft complex which requires electrical modifications to meet needs of current occupants' activities, and investigation/resolution of temperature control in numerous locations. Report included detailed discussion of current electrical, architectural and HVAC system problems; recommendations to resolve large-system problems, as well as particular solutions for small areas; conceptual level drawings; conceptual level outline specification; and construction cost estimate. **Client Contact:** Col Rodney Neely, MSG Commander, (304) 616-5198

West Virginia ANG 130th Airlift Wing Communications Facility Code / Criteria Review, Charleston, WV – Code/Criteria Review and LEED Update Report for facility designed to 65% three years prior under separate GRW/NGB contract then put on hold pending funding. Twofold project goal included: 1) identify and delineate known codes/criteria that are either new or updated since 65% Design Submittal; and 2) describe revised LEED 3.0 criteria now in effect for project and outline points for LEED Silver certification, compared to LEED Silver 2.2

criteria in effect at the 65% design stage. **Client Contact:** LtCol Rick Thomas, Base Civil Engineer

West Virginia ANG 130th Airlift Wing Building 107 Consolidation Study, Charleston, WV – Consolidation Study for historic hangar which will be renovated in phases to house Aero-Medical Evacuation Squadron, new Aerial Port Facility and Deployment Processing Center, and mobility storage for Security Forces Squadron. Work included floor plans for each phase as well as final floor plan and construction cost estimate. Major challenge involved consolidation of organizations with a total authorized area of over 50,000 SF into facility with 40,000 SF footprint - no additions were allowed. AT/FP, energy and ADA accessibility measures were incorporated, as well as current ANG guidelines. **Client Contact:** Capt Harry Netzer, Deputy BCE, (304) 341-6649, harry.g.netzer.mil@mail.mil

West Virginia ANG 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion, Charleston, WV – Complete architectural and engineering Type A, B and C services for \$2 million renovation of 5,395 SF SFS facility (B142) including addition of 2,500 SF administrative and training space to better serve unit. Project (MILCON/SRM split funded) increases space and improves mission performance and operational efficiency for command and administrative functions in ways that are energy efficient, code compliant and in

accordance with current ANG policies. Project meets LEED Silver design criteria, and all AT/FP and ADAAG requirements. **Client Contact:** Capt Harry Netzer, Deputy BCE, (304) 341-6649, harry.g.netzer.mil@mail.mil

West Virginia ANG 130th Airlift Wing Building 107 Renovation, Charleston, WV – Scope of work included design services (LEED Silver design criteria) for two separately funded (MILCON/SRM) sub-projects to repurpose existing unoccupied hangar into space for the 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. New functional areas include spaces for medical simulation training, maintenance, operations, administration, storage, and other mission-related activities. **Client Contact:** Capt Harry Netzer, Deputy BCE, (304) 341-6649, harry.g.netzer.mil@mail.mil

West Virginia ANG 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. **Client Contact:** LtCol John Poland, Base Civil Engineer, (304) 616-5198, john.r.poland4.mil@mail.mil

West Virginia ANG 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. **Client Contact:** Major Emerson Slack, Deputy Base Civil Engineer, (304) 616-5233, emerson.c.slack.mil@mail.mil

West Virginia ANG 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. **Client Contact:** Major Emerson Slack, Deputy Base Civil Engineer, (304) 616-5233, emerson.c.slack.mil@mail.mil

West Virginia ANG 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. **Client Contact:** Major Emerson Slack, Deputy Base Civil Engineer, (304) 616-5233, emerson.c.slack.mil@mail.mil

West Virginia ANG 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. **Client Contact:** Major Emerson Slack, Deputy Base Civil Engineer, (304) 616-5233, emerson.c.slack.mil@mail.mil

West Virginia ANG 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. **Client Contact:** Major Emerson Slack, Deputy Base Civil Engineer, (304) 616-5233, emerson.c.slack.mil@mail.mil

West Virginia ARNG Martinsburg Secure Facility, Martinsburg, WV – 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. **Client Contact:** Matthew Reynolds, Deputy Branch Chief - Design & Construction, (304) 561-6568, matthew.t.reynolds18nfg@mail.mil

About Thorburn Associates

GRW's subconsultant, Thorburn Associates, specializes in projects involving systems like those required as part of the RTI Auditorium renovation at Camp Dawson. Here's an introduction to their services.



Thorburn Associates (TA) specializes in the design and consulting of acoustics, technology, and lighting systems. We are involved with multiple market sectors which help to facilitate cross pollination of solutions between markets. With experience on over 3000 projects, one of TA's strengths is our ability to provide an integrated solution for these technical aspects of the design. TA is a Woman-owned Small Business Enterprise (WSBE) with offices located throughout the U.S. to serve your needs.

ACOUSTICAL



Acoustical design combines art and science to modify noise to achieve a desired auditory environment. TA creates acoustical environments tailored to the occupants of each space. We combine our expertise with extensive laboratory and electronic testing equipment to meet the unique sound sensitivities of each project.

Room Acoustics – Sound Isolation – Mechanical Noise – Vibration Isolation – Environmental Noise

TECHNOLOGY



Technology systems design is an ever-growing industry bolstered by the constant demand for multimedia communications. TA works with our clients to develop the system that will best meet their needs while planning for and understanding maintenance, upgrade, and expansion needs.

Audiovisual Systems – Telepresence – Sound Masking/Paging – Structured Cabling – Security

LIGHTING



We specialize in illumination design, a term that describes aspects much broader than the standard overhead electric lighting system; illumination also includes direct natural light, indirect natural light, indirect artificial light and reflected light, as well as the control of all light sources. As solution providers, TA enhances an environment through innovative yet practical lighting schemes.

Lighting Design – Fixture Layout – Specifications – Control Systems – Daylighting

Thorburn Military Experience Project Examples: Partial List

Thorburn Associates also has been working on projects with various branches of the military, including the National Guard. A few of these projects are listed below.

- **P1280 2d Radio Battalion Complex Operations Consolidation at Camp Lejeune, Jacksonville, NC**
 - The P1280 2d Radio Battalion complex at MCB Camp Lejeune consists of two buildings; Building A and Building B. In Building A, Thorburn Associates (TA) provided audiovisual design services for one instructional space, one multipurpose conference room and five conference rooms serving Command and Companies. In Building B, Thorburn Associates (TA) provided audiovisual design services for an auditorium with two 3x3 video walls, six VTC systems in three conference rooms, one training room and two offices.
- **P1219 SOF Marine Battalion/ Company / Team Facilities at MARSOC Complex, Stone Bay, Camp Lejeune, Jacksonville, NC**
 - Thorburn Associates (TA) provided audiovisual design services through-out for four government AV rooms types: Tier 2, Tier 1A, Tier 1B and TV
- **P1288 SOF Combat Service Support Facility at MARSOC Complex, Stone Bay, Camp Lejeune, Jacksonville, NC**
 - Thorburn Associates (TA) provided audiovisual design



services through-out for two government AV rooms types

- **Camp Lejeune Littoral Warfare Training Center, Jacksonville, FL** - TA provided audiovisual and acoustical consulting services for a comprehensive renovation of the Center to architecturally modernize the Warfare Training Room in Camp Lejeune. Also provided consulting service for Room Acoustics and Mechanical Noise and Vibration Control methods to allow the room to meet owner objectives.
- **Cherry Point Bachelors Enlisted Quarters, MCAS Cherry Point, NC** - Within a large contemporary-style lounge and common area, Thorburn Associates (TA) provided audiovisual design services, including three gaming kiosks, two large screen movie/TV viewing areas with surround sound, wireless internet.
- P229 K C130J EACTS Facility at MCAS Cherry Point, NC
- NC National Guard Joint Forces Headquarters Building, Raleigh, NC
- Travis Air Force Base, Global Support Squadron Command and Operations Facility, Fairfield, CA
- U.S. Coast Guard Integrated Support Command, New Orleans, LA
- University of South Florida, Joint Military Center, Tampa, FL

2.0 Project Experience

GRW's project experience with services similar to those needed at the Camp Dawson Regional Training Institute for the Auditorium Renovation are shown on the following pages. The work we've complete on these projects encompass all aspects of your current assignment including: ADA compliant design, LED lighting, as well as sound equipment and audio visual equipment specified for good quality, clarity and ease of operation.

Southeast Kentucky Community & Technical College, Harlan Campus, Building One Renovation, Commonwealth of KY

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:

- | | | | |
|--------------------------------------|-------------------------------------|----------------|-------------------------------------|
| ▪ 200-seat auditorium/theater | ▪ Conference | ▪ Library | ▪ Welding, machine, carpentry shops |
| ▪ Classrooms | ▪ Distance learning / ITV classroom | ▪ Computer lab | ▪ Science laboratory |
| | | ▪ Offices | |

The auditorium design included provisions for power and control of future dimming and sound system equipment to be provided by the Owner. The auditorium HVAC system was designed for minimal ambient noise. The ITV room included a raised floor with power and communications provisions for Owner-furnished teleconferencing equipment.

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**.



Indiana Army National Guard Readiness Center, Lawrence, IN

GRW provided A/E design and construction administration services for a new 109,555 SF two-story Army National Guard Readiness Center in Lawrence, a suburb of Indianapolis, IN. This facility is located on a site that was formerly part of Fort Benjamin Harrison. An 8,300 SF unheated storage facility is also included.

Among other functional items, this Readiness Center includes the following spaces and features:

- Private offices and administrative common spaces, fully networked
- Classrooms, library and training center, training aid storage area, audio/visual area
- Assembly hall with fully functional kitchen and chair and table storage
- Locker rooms, medical section room
- Mechanical and electrical system rooms, communications equipment rooms
- Energy management and control system, lighting controls

"I want to take this opportunity to express my appreciation and gratitude to you and your team for what we feel will be a highly successful design of our Lawrence Readiness Center. The design process that your team led us through has been extremely productive and efficient. Their effectiveness was due in large part to the highly professional team you assembled for this project, and their willingness to meet the owner's requirements and timeline. Again thank you and the team at GRW for the hard work and professional approach to this design."

*Steven Hines, Facilities Management Officer,
Indiana ARNG*

Client Contact: Major Chris Purtell, Contracting Officer, Indiana Army National Guard, (317) 247-3514; chris.purtell@us.army.mil



Consolidated Municipal Utility Administration Building, Frankfort, KY



The Frankfort Plant Board, a municipal utility company that provides cable, broadband, telephone, security, electric and water for the city of Frankfort, KY, and surrounding areas, hired GRW to provide programming, planning and design services for its new consolidated administration building and associated 30-acre site.

The three-level, 46,000 SF administration building project consolidates the Frankfort Plant Board's administrative offices, as well as customer service offices. The multipurpose board/community room is regularly used by the community, the utility, and other entities for meetings, trainings, gatherings, etc.

As the local supplier of many critical utility services, it was important to the Frankfort Plant Board to ensure it **exemplified high-functioning and efficient**



audio/visual and lighting systems at its facility. A few highlights are described here:

- **Fully integrated audio-visual systems** are used in conference rooms, the network operating center, and the board/community and training rooms.
- **A video production system** complete with pan/tilt/zoom cameras, audio system, presentation system and video production switchers, recorders,

“From the beginning, Aaron has been attentive and took the time to gain a good understanding of how our business functions. He, along with the rest of the GRW project team, has been helpful and responsive throughout the design and construction phases. They’ve been an advocate for the owner; and FPB is assured that the GRW team will not overlook any details in order to deliver a high quality project.”

Sharmista Dutta, PE, Water Engineer, Frankfort Plant Board



and mixing boards were provided for taping and broadcasting of FPB board meetings.

- **Conference rooms have media presentation systems** with multiple types of user input connections, audio systems, touchscreen controllers and LED televisions.
- The **network operating center** has a media presentation system with multiple types of user input connections, audio systems, touchscreen controllers and a 2 X 3 LED monitor video wall. Staff can select content and choose to display that content on whichever monitor they choose.
- Wireless access points were provided for total wireless coverage of the building.
- The building telecommunications systems are served from a data center on the ground floor of the building and intermediate telecommunications rooms located on the first and second floor.
- **Energy efficient LED luminaires were used throughout the building interior and exterior as well as the site.** fully networked lighting controls

consist of standalone dual-technology occupancy sensing devices and dimmers.

- **A centralized lighting control system** was used for the board/community and training rooms which allowed for preset lighting scenes, window shade control, and automatic room divider/partition sensing which would allow the lighting control system to change control modes for instances when the partition wall is open or closed.

A few of the other systems designed by GRW:

- Electrical power systems, including an emergency generator and a portable generator docking station.
- The security camera system is an IP camera-based Video Management Software (VMS) type system.
- The intrusion detection system consists of passive infrared motion detectors, acoustical glass break detectors, duress-alarm switches, and bill trap switches for the cashier stations.
- The access control system consists of 13.56 MHz smart card readers and door control panels.

Client Contact: Sharmista Dutta, PE, Project Manager, Frankfort Plant Board, (502) 352-4407, sdutta@fewpb.com

Confidential Project for the U.S. Department of Defense (DoD)

GRW provided mechanical and electrical design services for this \$36.17 million, 51,000 SF confidential project, which is the first phase of an overall \$85M, 130,000 SF DoD project. The building was designed and constructed to meet LEED Silver certification.

Audio visual features with large screen arrays are the facility's main feature; the most sophisticated, high-resolution equipment available was designed and installed. A few facility highlights:

- The 1,514 SF JOC Room has 18 seats and the 1,113 SF shared conference room has 55 Seats. Each of these rooms has remote mounted AV lighting control interfaces which allow the AV system to control lighting. Each room has graphic touchscreen wallpods to allow 16 controls with 8 scene presets.
- Direct/indirect lighting including recessed LED downlights and LED wall wash luminaires throughout.
- It has seven (7) unique communication networks ranging from unclassified to classified top secret.
- **Highly reliable, redundant support systems:** Multiple level distributed building automation and control system for air pressure, temperature/

humidity control, and hard wired interlocked safety system were provided. Mechanical systems employ various configurations for energy optimization.

- **Innovative office design:** The building concept is an "L" shaped building with the central core comprises of a main entrance/lobby, vertical circulation nod, and building MEP spaces in the center of the "L." This design arrangement allows natural light in work spaces, as well as flexibility for organizational change. Spaces requiring acoustical separations are grouped together and placed along the perimeter walls or at the entrance.

Design services included: conducting on-site charrette meetings and user interviews; addressing UFC criteria; using metric units and SPECSINTACT; incorporating sustainability concepts for LEED silver rating; and providing commissioning and construction architectural and engineering consultant services.

Client Contact: Mark Strickland, Project Manager, Naval Facilities Engineering Command Atlantic, (757) 332-8359, mark.strickland@navy.mil



University of Kentucky 6th Floor Building Renovation

The University of Kentucky selected GRW to provide architectural and engineering services for the Phase II renovation of approximately 8,117 SF on the sixth-floor of the University's Nursing Building. The main objective of the approximately \$650,000 fit-up was to accommodate the construction of a **144-seat computer classroom**.

The computer classroom, which is used for computerized exams and lectures, includes several support functions: proctor/check-in room for access control and surveillance, a student belongings room with lockers, a processor room for the computer processors and CCTV surveillance equipment, as well as a corridor system to secure the floor after hours. The project also includes an IT office and a reading room with seating for 42.

Significant audio/visual features are included:

- **The audio/visual system was distributed to fixed multimedia projectors w/ motorized projection screens and omnidirectional ceiling speaker arrays.**

- **The computer classroom was designed to offer presentations/instruction from a fixed podium.**
- **The podium included a rack-mounted multimedia switch, SMART podium interactive display, gooseneck microphone, lavalier wireless system, audio system amplifier and input/outputs from owner-provided CPU/laptop and various auxiliary sources.**
- **Power over Ethernet (POE) camera is provided for classroom capture (additional POE cameras provided for surveillance).**

The design consisted of preparation of a combined schematic and design development phase and construction documents in accordance with University and Medical Center standards and procedures. The project was constructed in two phases to maintain corridor access during the semester. Phase Two, the majority of the corridor system, was constructed during spring break. Specific construction work complied with the 2007 edition of the Kentucky Building Code (KBC), and 2010 ADA Standards for Accessible Design.

Client Contact: Sandy Redmon, Project Manager, University of Kentucky, (859) 218-3115; sredmon@email.uky.edu



Frankfort Plant Board Telecommunications Facility, Frankfort, KY

GRW has provided programming, planning, design, and construction administration services for a new 6,725 SF telecommunications headend facility for the Frankfort Plant Board. The building site is on existing Plant Board land, and the new structure is located in relative proximity to the existing building and associated communications equipment. The telecommunications portion of the facility has been designed to receive signals for the processing and distribution of the FPB's cable, internet, and telephone telecommunications systems to the City of Frankfort. One of four rows of server cabinets – 96 in all – found in the building's data center, is *shown middle right*. The administrative area of the facility includes dedicated offices, shared workstations, conference/break room, and associated accessory spaces.

Audio/visual features can be found in the throughout the facility. Included are the following key items:

- **Wall-mounted LED TVs**
- **Tabletop multimedia inputs**
- **Internet/Ethernet connectivity**
- **Wireless/Wi-Fi capability**
- **LED and dimming**

The building was designed to accommodate forces from natural disasters, such as earthquakes and tornadoes, while maintaining crucial services to this state capital city. The design required a hardened structure, including cast concrete, reinforced walls and roof assemblies for the telecommunications area. Utility services for the building have been provided with mechanical and electrical system redundancy, including a backup generator, UPS and DC plant to maintain the facilities operations during an emergency event.

GRW designed the concrete pads and utility distribution for the satellite dishes, pads and utility boxes.

Client Contact: Adam Hellard, Security / Broadband Technology Manager, Frankfort Plant Board, (502) 352-4325, ahellard@fewpb.com



U.S. Federal Courthouse Renovation, Lexington, KY



GRW was part of the design-build team selected by the U.S. General Services Administration (GSA) to design and construct improvements for the federal courthouse located in Lexington, KY. The project team's design enhanced security at the building through the renovation of existing space, as well as new construction. Improvements included upgraded security electronics, site blast protection, and circulation / control enhancements.

GRW provided civil/site engineering, and mechanical

and electrical engineering. LED lighting was added in all new spaces. Additions and modifications were made to IDS, CCTV system and access control systems.

The project involved a phased construction schedule; work was completed while the building was occupied. The four-story building, plus basement, contains 84,000 SF of rentable space and currently houses both the U.S. District Court (79% of the building) as well as the U.S. Marshals Service (USMS), U.S. Attorneys and the U.S. GSA.

Audio/visual features can be found in several spaces around the courthouse:

- The jury suite, judge's chambers, and a conference room have **wall-mounted flat screen monitors** with A/V source from owner-provided CPU (or laptop). **Network outlets** are available.
- The courtroom is equipped with **sound system** with a mixture of existing and new **ceiling mounted speakers**.
- Jury box has duplex receptacles with dual USB (3.6A/5VDC) charging ports and tablet mounts for each juror.
- New **microphone outlets** for judge's bench, deputy station, witness box, attorney's tables, and jury box. Additional audio/visual infrastructure has been provided for future cabling.

Client Contact: Kevin Dunham, Architect, U.S. General Services Administration, (404) 331-2998, kevin.dunham@gsa.gov

Ohio Army National Guard, Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH



GRW provided full-discipline A/E services for planning, design and construction of a new LEED Silver Certified 85,865 SF Joint Armed Forces Readiness Center (AFRC) and Field Maintenance Shop (FMS) for the OH Army National Guard (ARNG) and the US Army Reserves in Springfield, Ohio. The new complex was designed to match the architecture of the nearby Ohio ANG structures; both the ARNG and ANG facilities are located within the secure perimeter of the Springfield-Beckley Municipal Airport.

The 60,902 SF administrative/training complex includes the following functional spaces and features:

- Private offices and administrative common spaces
- Classrooms and library
- Gymnasium-type multipurpose assembly hall with fully functional kitchen
- Energy submetering connected to building management system (DDC)
- Physical fitness area
- Heated and unheated storage areas
- Emergency power generator

"I want to take this opportunity to tell you and your team how much the Ohio ARNG appreciated the design GRW produced for the Springfield AFRC and FMS. Of particular note was your Project Manager, who did an outstanding job coordinating all design disciplines, incorporating the Ohio ARNG design comments, and following all required design guidance from the NGB to ensure all design submissions were timely and complete."

COL Robert C. Clouse, CFMO, Ohio ARNG

- Occupancy sensor controlled interior lights throughout
- Full cutoff luminaires for site lighting to eliminate light trespass
- Site AT/FP measures, security card readers, security lighting, security fencing, utilities and landscaping

Client Contact: George McCann, Project Manager, Ohio Army National Guard, (614) 336-7413, george.c.mccann@us.army.mil



**DEANZA PERFORMING ARTS CENTER
Cupertino, California**

Thorburn Associates teamed with DES Architects to provide acoustic and audiovisual consulting for this state-of-the-art project featuring a 400-seat theater and adaptable, technologically advanced learning spaces. This building is in the process of achieving LEED-silver certification.

The 20,500-square-foot theater was designed to accommodate lectures, dance and music, cinema and drama, and to facilitate rapid changeovers from one use to another.



**BARTLETT COMMUNITY THEATRE
Anchorage, Alaska**

This new Performing Arts Wing includes rehearsal rooms for band, choir, orchestra, and dance and a 400-seat auditorium with full production capabilities. The rehearsal rooms have audio systems for music recording and playback. The auditorium's sound system includes capabilities for small presentations with no technical support using a plug and play automatic mixing feature. Larger productions use mixers located either in the control booth or at a mix position in the audience area. The system supports the future addition of front projection video and computer sources.

ADDITIONAL PROJECTS

- N.C. A&T State University, Robeson Theatre – Greensboro, NC
- Aladdin Hotel & Casino, Music Experience Theatre – Las Vegas, NV
- Archbishop Mitty High School, Theatre Renovation – San Jose, CA
- Atkins High School, Performing Arts Stage – Winston-Salem, NC
- Christopher High School, Auditorium – Gilroy, CA
- New Traditions Elementary School, Auditorium – San Francisco, CA
- Mt. Tabor High School, Performing Arts Center – Winston-Salem, NC
- Leroy Martin Middle School – Raleigh, NC
- Western Carolina University, Coulter Recital Hall – Cullowhee, NC
- N.C. A&T State University, Harrison Auditorium – Greensboro, NC
- Diamond High School, Auditorium – Anchorage, AK
- San Manual Band of Mission Indians Community Center – Highland, CA
- Monte Vista High School, Theatre – Danville, CA
- Reagan High School, Performing Arts Center – Winston-Salem, NC
- Crow Landing Middle School, Music/Performing Arts Room – Newman, CA
- Father Ryan High School, Theater – Nashville, TN
- Cumberland County High School, Auditorium – Fayetteville, NC
- Presentation High School, Theatre Building – San Jose, CA
- Bellevue High School, Performing Arts Building – Merced, CA

3.0 Staff Qualifications

By choosing GRW, you have access to some of the most qualified and knowledgeable military design consultants in the region. From operations and facility renovation or design - to high-efficiency mechanical and electrical systems, our team members are experts in their fields.

Aaron Nickerson, AIA, LEED Green Associate, will be the overall leader of the design team and directly involved with you through every stage of the project. Aaron regularly provides architectural leadership for complex building projects; he has

managed teams on projects ranging in scope from \$2.3 million to as high as \$182 million.

Our team’s **discipline leaders** – and their backup team members – are equally experienced and will work closely with Aaron. More information about their roles are provided in **Section 4.0**, Approach & Methodology. Furthermore, our team’s local knowledge and capacity has been strengthened by GRW’s recent acquisition of Chapman Technical Group, a 25-person **St. Albans, WV**-based firm. **Structural engineer David Hoy works in that office.**

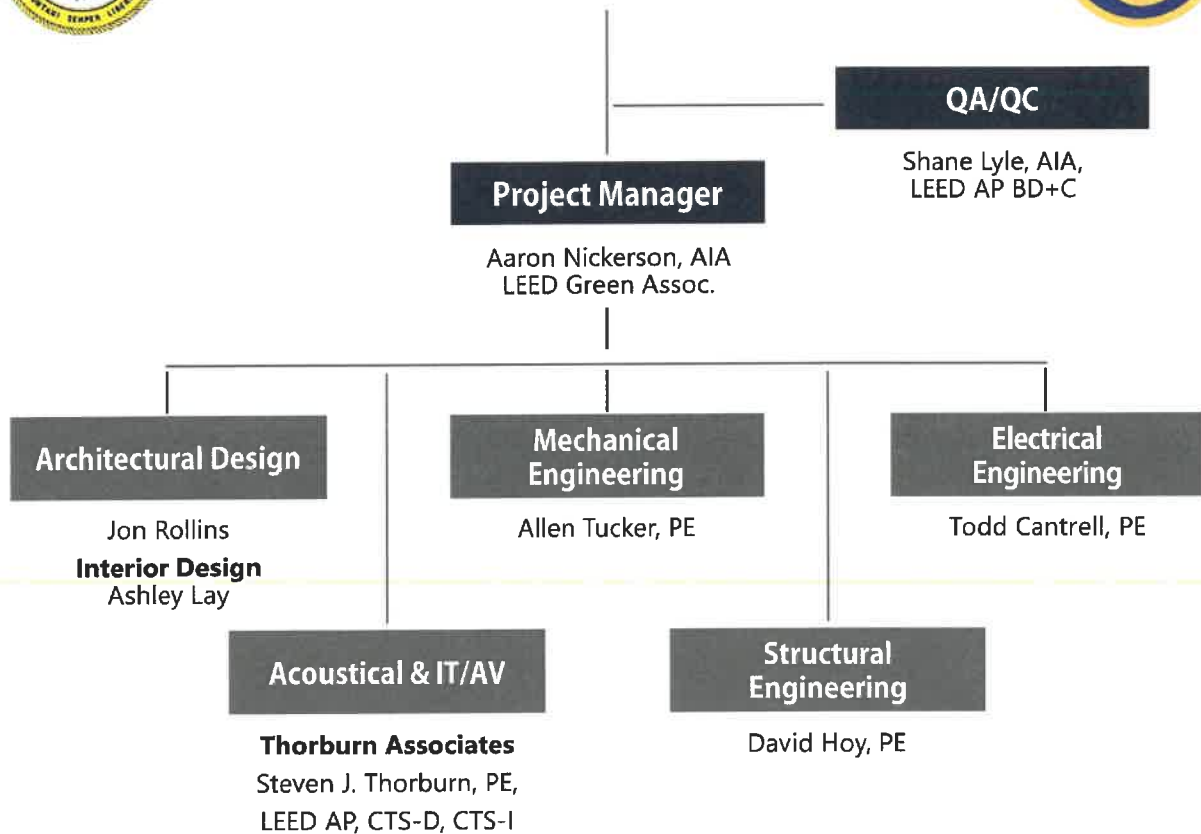
In-House Collaboration & Acoustics Subconsultant

You will directly benefit from GRW’s one-stop business model and multidiscipline staff: architecture and landscape architecture; mechanical, electrical, structural, transportation, and civil/site engineering. These capabilities allow our teams to collaborate more efficiently.

Joining us to consult on the specifics of video and sound systems design and equipment selection will be **Thorburn Associates**.



West Virginia Department of Administration and West Virginia Army National Guard



Shane Lyle, AIA, LEED AP BD+C | GRW QA/QC



YEARS OF EXPERIENCE:

With GRW: 31

Total: 37

EDUCATION

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

REGISTRATION

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

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

RELEVANT PROJECT EXPERIENCE

West Virginia ANG 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion, Charleston, WV – Principal. Renovation to better serve unit, project (MILCON/SRM split funded) increases space and **improves mission performance and operational efficiency** for command and administrative functions in ways that are **energy efficient**, code compliant and in accordance with current ANG policies. Meets LEED Silver design criteria, and all AT/FP and ADAAG requirements.

West Virginia ANG 130th Airlift Wing Building 107 Consolidation Study, Charleston, WV – Principal. Major challenge involved consolidation of organizations with total authorized area of over 50,000 SF into facility with 40,000 SF footprint - no additions allowed. AT/FP, energy and ADA accessibility measures incorporated, as well as current ANG guidelines.

Southeast Kentucky Community and Technical College, Harlan Campus Building One & Auditorium 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, **interior excavation for a new 200-seat auditorium**, and total replacement of building mechanical and electrical systems.

Murray State University Lovett Auditorium Renovation, Murray, KY – Principal. The approximately 3,100 SF **interior auditorium renovation** includes creation of ticket kiosk and concessions area; replacement of sconce lighting; upgrade of ceiling lights; creation of lighting/sound booth; mechanical / fire suppression systems; restrooms and other items.

Murray State University Racer Arena ADA Seating Upgrades, Murray, KY – Project Manager. **ADA upgrades** involving approximately 161,906 SF.

Liberty Theater Renovation, Liberty, KY – Project Manager. Planning and design using energy-efficient principles for renovation of an early 1950s-built movie theater to provide a city-owned **multi-use performance center of 350 seats** for the community. Renovations provide lobby, concessions, restrooms, projection / sound room, and backstage support areas supporting speakers, musical performances, plays and movies. **Facility is fully ADA accessible.**

Ohio ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH – Architect. Planning and design for new LEED Silver Certified 85,865 SF complex. Functional spaces include administrative, educational, assembly hall and kitchen, general storage, flammable materials storage and many other spaces.

Frankfort Plant Board Administration Building, Frankfort, KY – Principal. New three-level, 46,000 SF administration building on 30-acre site. Facility has **fully integrated audio-visual systems** in conference, operating center, board/community/training rooms.

Cumberland County Justice Center, Burkesville, KY – Project Manager. \$4.1 million, 24,270 SF, two-story courts facility with two courtrooms and more.

Aaron Nickerson, AIA, LEED Green Asc. | GRW Project Manager



YEARS OF EXPERIENCE:

With GRW: 14

Total: 15

EDUCATION

Bachelor of Architecture (with honors), 2006, University of Kentucky

Master of Architecture, 2007, University of Kentucky

REGISTRATION

Registered Architect: KY, TN, IN, WV, FL, NY, WA

National Council of Architectural Registration Boards (NCARB) Certification

LEED Green Associate

Certified Interior Designer: Kentucky

PROFESSIONAL AFFILIATIONS AND TRAINING

American Institute of Architects (AIA)

U.S. Green Building Council (USGBC)

Society of American Military Engineers (SAME)

RELEVANT PROJECT EXPERIENCE

Frankfort Plant Board Administration Building, Frankfort, KY – Project Manager. New three-level, 46,000 SF administration building on 30-acre site. Facility has **fully integrated audio-visual systems** in conference, operating center, board/community/training rooms.

Ohio ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH – Architectural Designer. Planning and design for **LEED Silver** Certified 85,865 SF complex with administrative, educational, **assembly hall** and kitchen, general storage, & many other spaces.

West Virginia ANG 130th Airlift Wing Communications Facility, Charleston, WV – Architectural Designer. Design (Type A and B, 65%) for a new \$3.6 million, 13,100 SF Communications Facility at Yeager Airport, designed for **LEED Silver** rating, to provide common user communications system for both intra-base and off-base communications, with ground control of all ground point-to-point and air to ground point-to-point contact.

Frankfort Plant Board Headend Telecommunications Facility, Frankfort, KY – Project Manager. New 6,725 SF telecommunications "headend" facility containing **Capitol city's cable, internet and telephone communications systems**.

Hardin County Water District No. 2 Office Building Facilities Assessment, Elizabethtown, KY – Project Manager. Comprehensive assessment, review and report of existing site and building floor plans. **Day-to-day operational efficiency and adequacy reviewed and assessed**.

Nicholasville City Hall Programming Study and Fire/Police Building Needs Assessment, Nicholasville, KY – Project Manager. Scope involved **evaluation of buildings, site facilities, accommodation/staffing**, and anticipated growth. Included site selection, cost estimates, order of importance, implementation.

Yazoo City U.S. Penitentiary and Satellite Camp, Yazoo City, MS – Project Manager. Design-build delivery of certified **LEED Gold**, \$182 million complex with a gross building area of 780,000 SF, program and multipurpose functions in rectangular campus layout enclosing a central secure compound.

Marshall University Weisberg Family Engineering Laboratory, Huntington, WV – Architectural Designer, 16,000 SF building for materials, soils, hydraulics, structural, environmental studies classrooms & faculty offices.

Pulaski County Schools Area Technology Center Gas Appliance Training Laboratory, Somerset, KY – Architect. Involved renovation and alterations to approximately 1,900 SF classroom space into vocational lab space, including **classroom presentation systems**.

Northpoint Training Center Replacement, Burgin, KY – Architectural Designer. Design and construction oversight for fast-track project with multiple bid packages. Meets **LEED Certified** design criteria. Program building has kitchen/dining, medical, canteen, classrooms, library.

Escambia County Correctional Facility, Pensacola, FL – Architect. New \$130 million, three-story, 300,000 SF, correctional facility via two-phase design-build delivery method. Facility will be designed to comply with LEED, achieving a rating of **LEED Silver**.

Jon Rollins | GRW Architectural Design



YEARS OF EXPERIENCE:

With GRW: 13

Total: 21

EDUCATION

Bachelor of Architecture, 1999,
University of Kentucky

REGISTRATION

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

RELEVANT PROJECT EXPERIENCE

West Virginia ANG 130th Airlift Wing Building 107 Renovation, Charleston, WV – Architectural Designer. Major challenge involved consolidation of organizations with total authorized area of over 50,000 SF into facility with 40,000 SF footprint - no additions allowed. AT/FP, energy and ADA accessibility measures incorporated, as well as current ANG guidelines.

West Virginia ARNG Martinsburg Secure Facility, Martinsburg, WV – Architectural Designer. Renovations to 2-story area (6,200 SF per level). Includes HVAC replacement; new interior finishes (including raised access flooring), structural roof deck and roofing system, and many other items.

Frankfort Plant Board Administration Building, Frankfort, KY – Architectural Designer. New three-level, 46,000 SF administration building on 30-acre site. Facility has **fully integrated audio-visual systems** in conference, operating center, board / community / training rooms.

West Virginia ANG 130th Airlift Wing Communications Facility, Charleston, WV – Architectural Designer. Design (Type A and B, 65%) for a new \$3.6 million, 13,100 SF Communications Facility at Yeager Airport, designed for **LEED Silver** rating, to provide common user communications system for both intra-base and off-base communications, with ground control of all ground point-to-point and air to ground point-to-point contact.

Ohio ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH – Architectural Designer. Planning and design for **LEED Silver** certified 85,865 SF complex with administrative, educational, **assembly hall** and kitchen, storage, & many other spaces.

Frankfort Plant Board Headend Telecommunications Facility, Frankfort, KY – Architectural Designer. 6,725 SF telecommunications facility containing **Capitol city's cable, internet, telephone communications systems**.

Berea College Forestry Outreach Center, Berea, KY – Architectural Designer. Approximate 5,000 SF facility includes classroom, forest history display area, offices, conference room, restrooms, care taker apartment.

Kentucky ANG 123rd Airlift Wing Renovation Projects, Louisville ANG Base, KY – Architectural Designer. Fast-track design for various upgrade and renovation projects including remodeling the Operations Center, etc.

Northpoint Training Center Replacement, Burgin, KY – Architectural Designer. Design and construction oversight for fast-track project with multiple bid packages. Meets **LEED Certified** design criteria. Program building has kitchen/dining, medical, canteen, classrooms, library.

LG&E and KU Services Company E.W. Brown Generating Station Office Building, Harrodsburg, KY – Architectural Designer. Programming and design services for new, 2,781 SF office building with private offices, break room, file library, and turbine/generator control room with access flooring.

Yazoo City U.S. Penitentiary and Satellite Camp, Yazoo City, MS – Architectural Designer. Design-build delivery of certified **LEED Gold**, \$182 million complex with a gross building area of 780,000 SF, program and multipurpose functions in rectangular campus layout enclosing a central secure compound.

Ashley Lay | GRW Interior Designer



YEARS OF EXPERIENCE:

With GRW: 3

Total: 3

EDUCATION

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

RELEVANT PROJECT EXPERIENCE

Ashley is a recent graduate who completed several noteworthy and/or award-winning projects. Her design skills include the use of Autocad, Revit, SketchUp, and Adobe Creative Suite programs, among others.

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.

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.

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. Facility will be designed to comply with LEED, achieving a rating of **LEED Silver**.

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.

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.

Berea College Seabury Center Renovation, Berea, KY – Interior Designer. 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 Edwards Building Renovation, Berea, KY – Interior Designer. Renovation of three-story administrative and residential services building to house offices for fund raising activities, as well as to provide **space for offices related to media production**. Preliminary design proposes new interior stairs, elevator, public restrooms on each floor, open floor plan suites, and lobby gallery space.

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.

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

Allen Tucker, PE | GRW Mechanical Engineer



YEARS OF EXPERIENCE:

With GRW: 11

Total: 36

EDUCATION

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

REGISTRATION

Professional Engineer: KY, SC, FL,
WV

Construction Documents
Technologist (CDT)

NCEES Member allows
reciprocity with other states

RELEVANT PROJECT EXPERIENCE

West Virginia ANG 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion, Charleston, WV – Mechanical Engineer. Renovation to better serve unit, project (MILCON/SRM split funded) **increases space and improves mission performance and operational efficiency** for command and administrative functions in ways that are energy efficient, code compliant and in accordance with current ANG policies. Meets LEED Silver design criteria, all AT/FP & ADAAG requirements.

West Virginia ANG 130th Airlift Wing Building 107 Consolidation Study, Charleston, WV – Mechanical Engineer. Major challenge involved consolidation of organizations with total authorized area of over 50,000 SF into facility with 40,000 SF footprint - no additions allowed. AT/FP, **energy** and **ADA accessibility** measures incorporated, as well as current ANG guidelines.

Indiana ARNG 76th Brigade Combat Team Readiness Center, Lawrence, IN – Mechanical Engineer. Planning, design and construction administration for 109,555 SF, 2-story Readiness Center and 8,300 SF unheated storage. Includes: administrative areas; classrooms, COMSEC training, library and **training center, distance learning; assembly hall** with fully functional kitchen; **energy management and control system**; and many other items.

Ohio ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH – Mechanical Engineer. Planning and design for **LEED Silver** certified 85,865 SF complex with administrative, educational, **assembly hall** and kitchen, storage, & many other spaces.

Nicholasville Municipal Utilities Building Renovation, Nicholasville, KY – Mechanical Engineer. Renovation including **reorganization of building's lobby and customer service functions**, four new customer service stations, **accessibility upgrades**, material finishes upgrades, new exterior building access, and new lobby lighting, **power and data/communications**.

Frankfort Plant Board Administration Building, Frankfort, KY – Mechanical Engineer. New three-level, 46,000 SF administration building on 30-acre site. Facility has **fully integrated audio-visual systems** in conference, operating center, board / community / training rooms.

Yazoo City U.S. Penitentiary and Satellite Camp, Yazoo City, MS – QA/QC. Design-build delivery of certified **LEED Gold**, \$182 million complex with a gross building area of 780,000 SF, program and multipurpose functions in rectangular campus layout enclosing a central secure compound.

Pulaski County Northern Elementary School, Somerset, KY – Mechanical Engineer. Engineering design services for new 62,974 SF, 450-student elementary school. Includes **high efficiency lighting; data and voice telecommunications**.

Aliceville Federal Correctional Institution and Satellite Camp, Aliceville, AL – Mechanical Engineer. Design-build delivery of \$196 million, **LEED Silver** complex totaling 665,889 SF. Buildings include food service (kitchen/dining), medical services, warehouses/sanitation, administrative, recreational, **academic educational**, industrial/vocational, personal services, vehicle maintenance, and central utilities plant.

Todd Cantrell, PE | GRW Electrical Engineer



YEARS OF EXPERIENCE:

With GRW: 14

Total: 16

EDUCATION

B.S., Electrical Engineering, 2004,
University of Kentucky

B.S., Physics, 2004, Morehead
State University

REGISTRATION

Professional Engineer, Electrical:
KY, TN, OH, MO, NY, VA

PROFESSIONAL AFFILIATIONS AND TRAINING

National Society of Professional
Engineers

Kentucky Society of Professional
Engineers

AGi32 Lighting Software

Roadway Emphasis Class -

Presented by Lighting Analysts,
Inc.

RELEVANT PROJECT EXPERIENCE

Indiana ARNG 76th Brigade Combat Team Readiness Center, Lawrence, IN – Electrical Engineer. Planning, design and construction administration for 109,555 SF, 2-story Readiness Center and 8,300 SF unheated storage. Includes: administrative areas; classrooms, COMSEC training, library and **training center, distance learning; assembly hall** with fully functional kitchen; **energy management and control system**; and many other items.

West Virginia ANG 130th Airlift Wing Communications Facility, Charleston, WV – Electrical Engineer. Design (Type A and B, 65%) for a new \$3.6 million, 13,100 SF Communications Facility at Yeager Airport, designed for **LEED Silver** rating, to provide common user communications system.

Frankfort Plant Board Administration Building, Frankfort, KY – Electrical Engineer. New three-level, 46,000 SF administration building on 30-acre site. Facility has **fully integrated audio-visual systems** in conference, operating center, board / community / training rooms.

Pulaski County Northern Elementary School, Somerset, KY – Electrical Engineer. Engineering design services for new 62,974 SF, 450-student 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.

Aliceville Federal Correctional Institution and Satellite Camp, Aliceville, AL – Electrical Engineer. Design-build delivery of \$196 million, **LEED Silver** complex totaling 665,889 SF. Buildings include food service (kitchen/dining), medical services, warehouses/sanitation, administrative, recreational, **academic educational**, industrial/vocational, personal services, vehicle maintenance, and central utilities plant.

Nicholasville Municipal Utilities Building Renovation, Nicholasville, KY – Electrical Engineer. Renovation including **reorganization of building's lobby and customer service functions**, four new customer service stations, **accessibility upgrades**, material finishes upgrades, new exterior building access, and new lobby lighting, **power and data/communications**.

UnitedHealth Group Lexington Green Office Fit-Up, Lexington, KY – Electrical Engineer. Engineering design services for fit-up of 7,000 SF office building. Project encompassed mechanical, electrical and plumbing design.

Hamburg Pavilion Village Shoppes Electrical System Conditions Assessment, Lexington, KY – Project Manager. Electrical condition assessment of four retail buildings, gazebo, and a long landscape island separating parking areas. Included on-site visual inspection of all exterior lighting fixtures, landscape area power outlets, branch and feeder circuits, report with conditions of exterior electrical systems and components, recommendations for future improvements, and preliminary cost estimate.

Yazoo City U.S. Penitentiary and Satellite Camp, Yazoo City, MS – Electrical Engineer. Design-build delivery of certified **LEED Gold**, \$182 million complex with a gross building area of 780,000 SF, program and multipurpose functions in rectangular campus layout enclosing a central secure compound.

Dave Hoy, PE | GRW Structural Engineer



YEARS OF EXPERIENCE:

With GRW: 13

Total: 13

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

RELEVANT PROJECT EXPERIENCE

West Virginia Department of Highways District 1 State Road Commission Building, Charleston, WV – Structural Engineer. Renovation of historic 40,000 SF State Road Commission Building to house offices and support facilities for local highway district.

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

West Virginia ANG 167th Airlift Wing C-17 Maintenance Hangar Modifications, Martinsburg, WV – Structural Engineer. Fast-track design of maintenance hangar modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft.

West Virginia ANG 167th Airlift Wing C-17 Fuel Cell Hangar Modifications, Martinsburg, WV – Structural Engineer. Fast-track design of fuel cell hangar modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft.

West Virginia ANG 167th Airlift Wing C-17 Corrosion Control Hangar Modifications, Martinsburg, WV – Structural Engineer. Fast-track design of corrosion control hangar modifications required to meet 167AW's change in mission from C-5 to C-17 aircraft.

West Virginia ANG 167th Airlift Wing C-17 Composite Material Shop, Martinsburg, WV – Structural Engineer. 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.

Ritchie County School District Smithville Elementary School Renovation/Addition, Smithville, WV – Structural Engineer. Demolition of two buildings in existing four-building complex and design of new classroom wing and kitchen addition adjacent to remaining buildings to create single facility under one roof. Also included access control and improved security, new HVAC systems, compliance with ADA/ABA requirements throughout, and renovated restrooms.

Lewis County Schools Jane Lew Elementary School Addition, Jane Lew, WV – Structural Engineer. Addition includes five new classrooms, updated officer suite, and new building entrance and bus loop, along with new HVAC system for addition. Also includes new sprinkler and fire alarm system, ceilings, floor finishes, and lighting for entire school, as well as renovated toilet rooms.

Clay County BOE Clay County High School Renovations, Clay, WV – Structural Engineer. Design and construction administration phase services for gymnasium and locker rooms, commons area, and HVAC system renovations; door/window replacement; and security/communications system improvements.



EDUCATION

Michigan Technological University
B.S. Electrical Engineering
Major: Electroacoustics
B.S. Liberal Arts
Major: Theatre and Lighting Design

PROFESSIONAL LICENSES

Mr. Thorburn is a registered Engineer in the following states:

AL: P.E.	MI: P.E.
AZ: P.E.	MN: P.E.
CA: E.E.	NC: P.E.
DC: P.E.	NM: P.E.
FL: P.E.	NV: E.E.
GA: P.E.	OH: E.E.
IL: P.E.	OR: P.E.
IN: P.E.	SC: P.E.
KY: P.E.	VA: P.E.
MO: P.E.	WA: P.E.

INDUSTRY CERTIFICATIONS

ICIA: Certified Technology Specialist,
Design and Installation
USGBC: LEED AP

PROFESSIONAL SOCIETIES

- Acoustical Society of America
- American Institute of Architects
- Audio Engineering Society
- InfoCOMM
- Institute of Electrical and Electronic Engineers
- National Council Acoustical Consultants
- National Society of Professional Engineers

AREAS OF EXPERTISE

Mr. Thorburn practices acoustical consulting and audiovisual system design in the following areas:

- Architectural acoustics
- Mechanical noise control
- Audiovisual, sound and control systems
- Video and teleconference systems
- Security

Mr. Thorburn, as a founder of Thorburn Associates, has been involved with over 3000 different projects.

He is active in projects that require both acoustical engineering and technology system design services. His dual degrees from Michigan Technological University in theatre design and electrical engineering enable him to coordinate technical requirements involved in the construction bid process with practical issues required by the end-users.

His projects have included performing arts centers, recording facilities, entertainment facilities, presentation and conference facilities, government and university buildings, film and video studios, luxury hotels, libraries, churches, and medical facilities.

Mr. Thorburn was responsible for developing the International Communications Industries Association's Design Consultant's Council.

He regularly attends conferences, trade shows, and product exhibitions that allow him to recommend the most cost-effective yet functional products to meet his client's needs. Manufacturers often ask for his input on the 'next generation' of system components.

PUBLICATIONS and LECTURES

Mr. Thorburn frequently teaches seminars and lectures on both acoustical consulting and audiovisual system design. Recent topics include:

- Planning for Classroom Technology
- Presentation Facilities Design
- Surviving the Construction Process
- Acoustics in Architecture

He is also a regular contributor to industry publication, *Systems Contractor News*.

PROFESSIONAL EXPERIENCE

Projects he has managed and consulted on include:

- Bakersfield College Performing Arts Center – Bakersfield, CA
- Bartlett Community Theatre, – Anchorage, AK
- Bayer Auditorium Renovation – Berkley, CA
- Campbell University Convocation Center – Buies Creek, NC
- DeAnza Performing Arts Center, – Cupertino, CA
- Durham Arts Council, Carolina Theater, – Durham, NC
- Green Level High School Theatre – Cary, NC
- Martin Methodist College, Fine Arts Center – Pulaski, TN
- Monroe Center Theatre – Monroe, NC
- NC A&T State University, Robeson Theatre Bid Review- Greensboro, NC
- North Carolina A&T State University, Harrison Auditorium – Greensboro, NC
- Queens University of Charlotte, Performing Arts Center – Charlotte, NC
- Queens University Performing Arts Center – Charlotte, NC
- Research Triangle Institute Building 8 Auditorium– Research Triangle Park, NC
- SAS Executive Briefing Center – Cary, NC
- Savannah Cultural Arts Center – Savannah, GA
- Stecker Auditorium – Columbus, OH
- Sullivan County High School Auditorium – Blountville, TN
- University of Central Florida Visual Arts Auditorium – Orlando, FL
- University of Illinois Smith Hall Performing Arts Theatre - Urbana-Champaign, IL
- Washington Pavilion of Arts and Science Theatre – Sioux Falls, SD



4.0 Approach & Methodology for Meeting Goals & Objectives

The West Virginia Department of Administration along with the West Virginia Army National Guard are embarking on an important auditorium renovation project at the Camp Dawson Regional Training Institute. The overall campus is a vital part of this WVARNG region and offers myriad services, spaces, and specialized training opportunities for the guard and its various stakeholders / users.

The project at the RTI is important because the facility is needed to support elements of the WVARND command. At this time, the auditorium and its equipment are out of date and in need of upgrades.

We understand your primary goals and objectives for this project include:

- Complete design – architecture and engineering – to prepare construction bid documents for West Virginia State Purchasing.

Of particular interest are the following:

- ADA compliance for seating, access, and video
- New sound equipment
- All new LED lighting throughout
- Bring the space and all systems to current building codes

Making changes to this space also will mean we would address the following:

- Design that provides for overall efficient use of space, adjusts floor plans to establish better flow and accommodates for seating changes.
- Construction adjustments to improve acoustics
- Working with you and our subconsultant to specify video and sound equipment that's of good quality, clarity, easy to operate. For insights into how **Thorburn Acoustics**, our acoustics subconsultant, *see the last page of this section.*
- Researching, investigating, and incorporating into drawings and specifications locations of and/or changes to utilities, both interior and exterior.

We also understand we will be responsible for:

- Submitting drawings at 35%, 65%, 95% and 100%, as well as revising and submitting costs estimates at each phase.

- Breakdown of costs will address sustainment, restoration, modernization, and energy.
- Providing construction bid services.

An Approach Based on Respect & Clarity

Our approach to accomplishing these goals and objectives for your project is straightforward:

- 1) assemble the best and brightest design talent with **knowledge of the national guard/military projects**;
- 2) bring an **open mind** and **fresh perspectives**; and
- 3) **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, which we believe is key this relationship. 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.

A Project Team You Can Count On



Leading our team will be one of GRW's primary architecture division project managers, **Aaron Nickerson**. He'll provide overall supervision for the design team and be directly involved with you through every stage of the project. Aaron regularly manages teams on projects ranging in scope from \$2.3 million to as high as \$182 million. We believe you will find him a knowledgeable architect and a valuable partner.

Aaron's logical and methodical approach will provide a steady hand guiding the team and the WVARNG through the design process to a successful conclusion. He'll work to balance vision with a realistic and practical assessment of cost and schedule.

In addition to Aaron, our architectural services are bolstered by **Jon Rollins** and **Ashley Lay** who bring a balance of WVARNG familiarity and the latest architectural design skills.

Closely supporting Aaron to ensure efficiency, effectiveness, and code compliance of mechanical systems will be **Allen Tucker**. Our electrical engineer **Todd Cantrell** will apply his experience with audio visual systems. Both will ensure code compliance and well-coordinated system upgrades. Our in-house structural engineer, **David Hoy**, is based in West Virginia. All three have the experience you need and



are accustomed to working on complex, systems-oriented, code-oriented projects. They all also have experience with WVARNG projects.

Shane Lyle, a GRW vice president and our firm's most senior architect, brings to the team a high familiarity with the WVARNG and other military projects. He will also support Aaron throughout offering quality assurance/quality control, as well as technical advice.

Kickoff/Charrette

As part of the first phase of the project, we'll hold 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

After we gain a full understanding of your desires and goals through the kickoff, we also will complete an examination of the existing conditions. We will take stock of the existing equipment, through an examination of existing documentation and field observations.

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.

Again, we will meet with you to determine likes, dislikes, what working for them, and what's not

This will give us a foundation as we move forward.

We'll use all information we collect to begin an outline for recommendations – including initial cost estimates

Thorburn Acoustics | Approach & Ideas

ACOUSTICAL ENGINEERING SERVICES



ACOUSTICS

Acoustical engineering is the art of modifying noise to achieve a desired auditory environment. Thorburn Associates (TA) strives to create acoustical environments tailored to the occupants of each space. We combine our expertise with extensive laboratory and electronic testing equipment to meet the unique sound sensitivities of each project. The following are a few tips drawn from TA experience:

Architectural Room Acoustics: The geometric design of a room and the interior finishes greatly affect the overall sound quality. Echoes and reverberation can be easily avoided during the design phase with simple alterations.

Sound Isolation: Successful sound isolation cannot be obtained just by applying materials to the surface of the walls; the actual construction methods are critical.

Mechanical Noise and Vibration Control: Vibrating equipment such as fans, pumps, and transformers can set a structure in motion or generate noise far from the source.

Environmental Noise: Environmental noise can cause projects not to meet stringent state and local codes as well as impact neighboring sites.

Acoustical engineering services include:

Architectural Room Acoustics

- Conceptual and Detailed Architectural Acoustic Design
- Acoustic Analysis of Existing Facilities
- Speech Intelligibility
- Reverberation and Clarity of Sound
- Reflection, Diffusion, and Absorption of Sound
- Aspect Ratios to Promote Excellent Room Acoustics
- Room Finishes and Furnishings
- Room Modeling
- LEED Analysis and Support

Sound Isolation

- Speech Privacy within Rooms
- Floor/Ceiling and Wall Details to Prevent Noise Transmission
- Window/Door Selections
- Mitigation of Interior and Exterior Noise to Reduce Transmission to Sensitive Spaces

Mechanical Noise and Vibration

- Vibration Isolation
- Industrial Noise Control
- Mechanical Systems, Plumbing Systems
- Ventilation Systems – Duct Rumble, Diffuser Hiss, Rooftop Units
- Control of Central Plant, Co-Generation, and Emergency Generator Noise
- Monitoring of Construction Related Noise and Vibration

Environmental Noise Abatement

- Traffic Noise Studies
- Highway, Aircraft, Railroad Noise
- Extended Generator and Construction Noise
- Site Evaluations and Surveys

5.0 Project Management & Quality/Cost Control

Project Management

Our straightforward approach continues throughout the management of the entire project.

Schematic Design | 35%

Using the information from the Kickoff/Charrette and analysis of existing conditions, we continue through the A1/10% phase – and move into the A2/35% design phase. At this time we present the **schematic design** 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.

Design Development, Pre-final & Final Construction Documents | 65%, 95% & 100%

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 **pre-final construction documents** and completion of final construction documents for bidding.

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 **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

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

Construction Bid Services | 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

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.

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 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.

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

Aaron Nickerson, Project Manager, has primary responsibility for the daily management and coordination of the project team. With over 15 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. 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).



6.0 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

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West Virginia Air National Guard

Capt. Harry Netzer, Deputy BCE

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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)



ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CEOI ADJ2000000003

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

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

Addendum Numbers Received:

(Check the box next to each addendum received)

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

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

GRW

Company

Shane Lyle, AIA

Authorized Signature

2/10/20

Date

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

SOLICITATION NUMBER: CEOI ADJ20000000003
Addendum Number: 1

The purpose of this addendum is to modify the solicitation identified as CEOI ADJ20000000003 (“Solicitation”) to reflect the change(s) identified and described below.

Applicable Addendum Category:

- Modify bid opening date and time
- Modify specifications of product or service being sought
- Attachment of vendor questions and responses
- Attachment of pre-bid sign-in sheet
- Correction of error
- Other-

Additional Documentation:

1. To attach documentation inadvertently omitted from the CEOI published on 01/27/2020.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.



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

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

Proc Folder: 679242

Doc Description: Addendum No. 1-RTI Auditorium Renovation Design Camp Dawson

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2020-01-28	2020-02-13 13:30:00	CEOI 0603 ADJ2000000003	2

BID RECEIVING LOCATION

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

VENDOR

Vendor Name, Address and Telephone Number:

GRW
 801 Corporate Drive
 Lexington, KY 40503
 (859) 223-3999

FOR INFORMATION CONTACT THE BUYER

Tara Lyle
 (304) 558-2544
 tara.l.lyle@wv.gov

Signature X FEIN # 61-0665036 DATE 2/10/2020

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

ADDITIONAL INFORMATION:

Addendum No. 1 - to attach documentation inadvertently omitted from the CEOI published on 01/27/2020.

* Online submissions of Expressions of Interest are Prohibited*

No other changes.

INVOICE TO		SHIP TO	
DIVISION ENGINEERING & FACILITIES ADJUTANT GENERALS OFFICE 1707 COONSKIN DR		FACILITY MAINTENANCE MANAGER CAMP DAWSON ARMY TRAINING SITE 240 ARMY RD	
CHARLESTON	WV25311	KINGWOOD	WV 26537-1077
US		US	

Line	Comm Ln Desc	Qty	Unit Issue
1	RTI Auditorium Renovation Design Camp Dawson		

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description :

Provide professional architectural and engineering design services per the attached documentation.

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

(Name, Title)
Aaron Nickerson, AIA, LEED Green Assoc. | GRW Architect

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

(Address)
859-223-3999 / 859-223-8917

(Phone Number) / (Fax Number)
anickerson@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

(Company)

(Authorized Signature) (Representative Name, Title)

Shane Lyle, AIA, LEED AP BD+C | GRW Architect & Vice President

(Printed Name and Title of Authorized Representative)

2/10/2020

(Date)

859-223-3999 / 859-223-8917

(Phone Number) (Fax Number)