



GRW | engineering | architecture | geospatial  
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August 31, 2017

Ms. Crystal Rink, Senior Buyer  
Purchasing Division  
West Virginia Department of Administration  
2019 Washington Street, East  
Charleston, WV 25305-0130

**RE: Architecture & Engineering Services for Camp Dawson Master Plan | ADJ 1800000002**

Dear Ms. Rink and Selection Committee Members:

Achieving the goals established for the completion of the Camp Dawson Master Plan are greatly dependent upon selecting the right A/E consulting partner. GRW would like to work with you on your project. Our team offers you the right experience and expertise to successfully complete your project. We are committed to meeting your needs.

**Experience.** GRW is a full-service A/E design consulting firm that has been working with clients like you on similar projects throughout the region and locations nationwide for more than 50 years. Our military and National Guard experience ranges from the completion of projects at Camp Dawson to similar facilities at other National Guard and military campuses in the region. (See Section 3.0)

**Familiarity.** In addition to our work at Camp Dawson, we have completed in recent years numerous projects for the **West Virginia Air National Guard**, as well as the **West Virginia Division of Corrections'** Lakin Correctional Center Lightning Protection Improvements in West Columbia, WV. Our firm also designed the **Gilmer Federal Correctional Institution** and **Satellite Camp** in Glenville, WV; the **Marshall University Weisberg Family Engineering Laboratory**, and numerous projects the **WV Department of Parks** and **WV Division of Highways**.

Our team's local knowledge and capacity is strengthened by GRW's acquisition of Chapman Technical Group, a West Virginia-based firm.

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

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

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

Respectfully submitted,

Joe Bird, PLA, ASLA  
GRW Vice President

08/30/17 09:52:54  
WV Purchasing Division

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engineering | architecture | geospatial

## Expression of Interest

# Camp Dawson Master Plan Architecture & Engineering Services CEOI ADJ1800000002

## WV Department of Administration WV Army National Guard

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# 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.

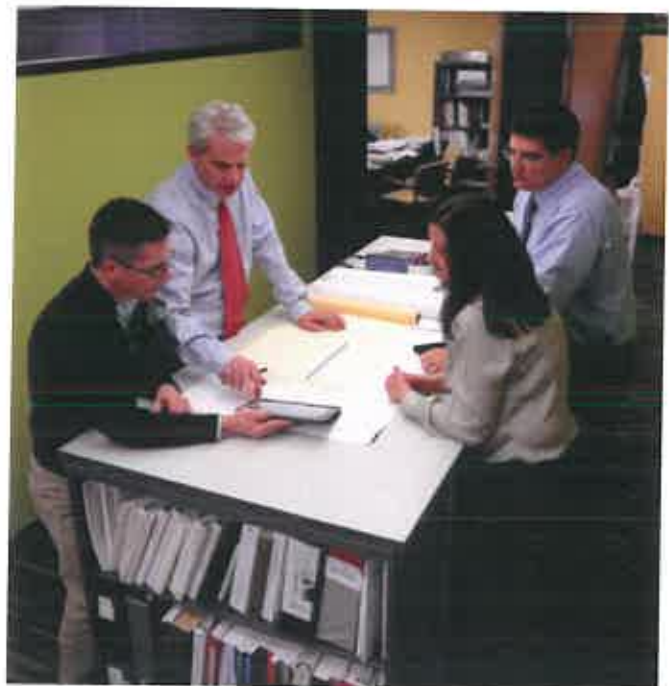


Among our achievements, GRW is listed in *Building Design and Construction's Giants 300* report as one of the nation's top Architecture-Engineering firms. Also, since 1972, GRW also has been recognized nationally as a top producing firm by *Engineering News-Record*.

## 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.

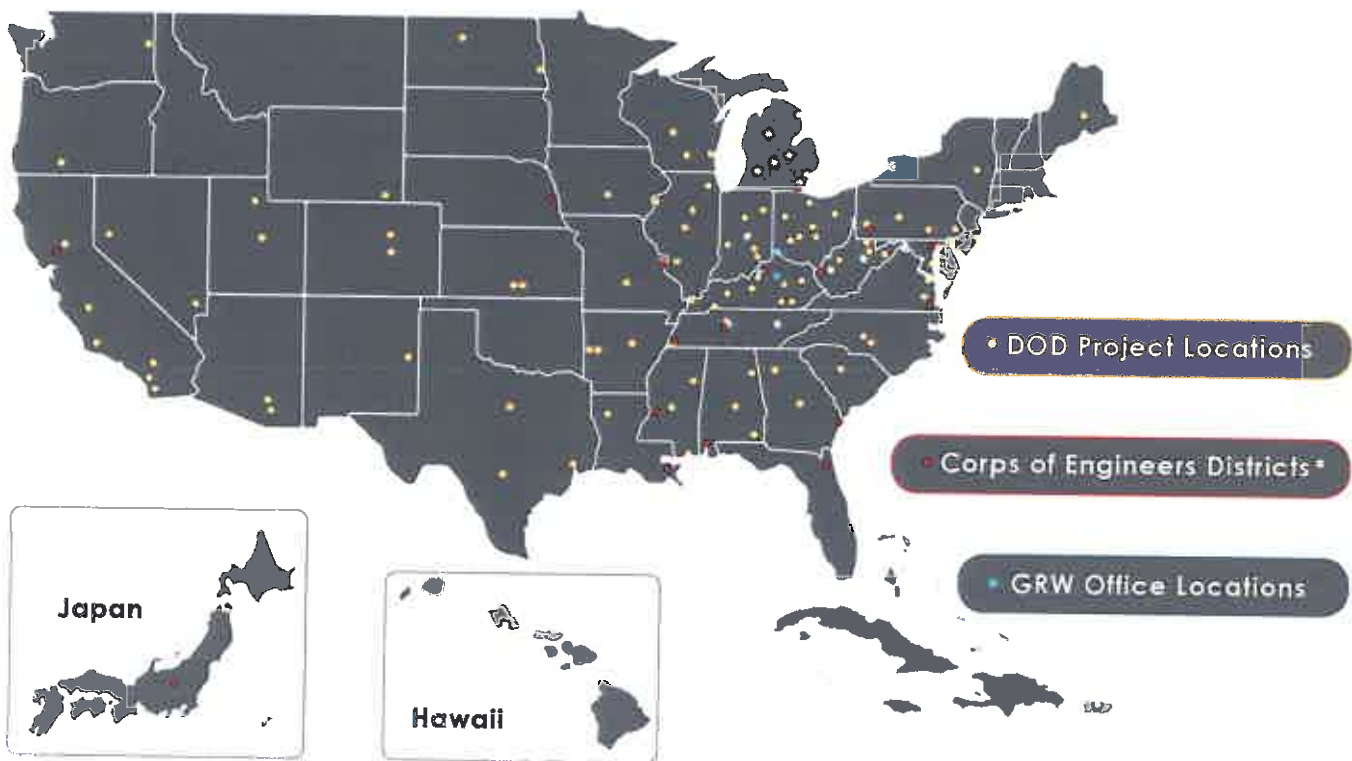
At GRW, we know that business relationships are built on trust – the ability to trust your business partner to deliver on their promises. By choosing GRW for your professional services, you are choosing a company that delivers on our promises. You can expect our full attention starting on day one, and 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.



## Sustainable Design

GRW understands the desire for energy efficiency and the option to incorporate sustainable design features. Whether planning for a Net-Zero or Net-Zero-Ready building, "designing to standards of" or achieving recognition from agencies such as Energy Star, LEED, or Green Globes, we work with you to develop an initial list of reasonable sustainable design features (using a GRW-standardized matrix), and determine an initial implementation approach. During this process, our knowledgeable staff looks at initial cost versus life-cycle cost, maintainability, and return-on-investment.



## 2.0 Relevant Past Projects

Your Camp Dawson Building Master Plan Project is similar in nature to planning projects completed by GRW for other National Guard and military campuses in the region.

The projects we've selected help demonstrate our firm's experience with design and/or improvements similar to those you plan to incorporate into your project. They also help demonstrate our familiarity with Camp Dawson, West Virginia, the National Guard, and other similar clients. Details about these projects are provided on the following pages.

### Experience with Relevant Features

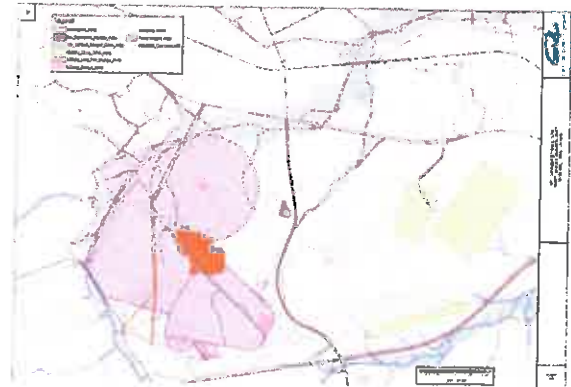
Our teams have experience with features including but not limited to the following:

- Identification of constraints and opportunities
- Tabulation of the existing and required facilities
- Development of alternatives
- Prioritization of activities
- Stakeholder meeting coordination/facilitation
- Analysis of expansion of all indentified areas
- Long and short range development plans
- Capital investment strategy
- Aerial photography and digital mapping
- Detailed GIS system data
- Land Use and Circulation
- Utility Systems/Infrastructure Planning

### Organization

We've grouped our projects as follows:

- A. Projects at Camp Dawson
- B. Projects with Similar Features
- C. Additional West Virginia National Guard Projects



## A. Projects at Camp Dawson

### Camp Dawson Live Fire Exercise Shoot House Complex

#### West Virginia Army National Guard | Charleston, WV

GRW provided full architecture and engineering services for the design and construction of a \$2 million Live Fire Exercise Shoot House (LFSH) complex. This project was completed as a combination design-build and design-bid-build program. Primary facilities include a LFSH (1,600 SF), an Operations/Storage facility (1,163 SF), an After Action Review (AAR) facility (1,362 SF) and an Ammunition Breakdown facility (593 SF), totaling approximately 4,720 SF.

The West Virginia ARNG acquired property, a former industrial complex adjacent to Camp Dawson, which included several vacant buildings. The project's first phase involved an on-site Project Planning Document Charrette (PPDC) which enabled the GRW design team to collect information about the vacant buildings and site, interview user groups, develop conceptual floor and site plans, and validate the project DD 1391.

Following the PPDC, GRW developed a conceptual design package for the re-purposing of an

abandoned metal warehouse into the 1,600 SF LFSH. This package included drawings and specifications that formed the basis of a design-build RFP. Final design and construction of the LFSH unit was completed by the selected vendor, under the supervision of GRW and the WV ARNG.

After completion of the LFSH, GRW prepared the design package for the remaining support facilities, which included the Operations/Storage, AAR and Ammo Breakdown facilities; renovation of an existing restroom in the warehouse; and access road, parking area and site utilities. GRW also provided construction administration services for this part of the project which utilized the traditional design-bid-build project approach.

This project was designed in accordance with: TC 25-8 Training Ranges (8 December 2000), CEHNC 1110-1-23 Design Guide for the Sustainable Range Program (for LFSH), NG PAM 415-5 ARNG Military Construction Program Execution, and DA PAM 385-63 DA Guidance on Range Safety.

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

### Camp Dawson Training Ranges at Briery Mountain

#### West Virginia Army National Guard | Charleston, WV

The scope of work for this project included the design and construction of a new Hand Grenade Familiarization Range and Live Fire Exercise Breach (LFEB) Training Range at the Briery Mountain Training Area to conform the site to government standard Breach Range Design Requirements. The project required construction of an 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 a parking area.

The project design schedule was nine months, including the design charrette, document development submittals and government reviews, one of which was on-site with user group representatives. The project was divided into seven additive bid options to enable the government to maximize the construction to available funds, avoid rebidding and as a hedge against an unpredictable construction market. Once bid, the construction schedule was developed to avoid disruption of an endangered species nesting cycle.

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

## Camp Dawson Volkstone Training Area Utility Upgrade

West Virginia Army National Guard | Charleston, WV

GRW provided design services for the expansion of sewer, water and electric to all existing and future buildings, unit training equipment site (UTES) and wash rack locations.

This project 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

## Relocation of Camp Dawson Electrical Power and Communications Lines

West Virginia Army National Guard | Charleston, WV

The WV ARNG retained GRW to develop a phased design for the relocation of the overhead electrical power lines and communications lines to underground duct banks. Following a study that established the scope of each phase of the relocation project, GRW prepared plans and specifications for a 4-phase construction program to eliminate the historic problems associated with overhead services. These phases were based on funding limitations that precluded a single, large construction project.

Phase 1 provided for relocating approximately 3000

LF of power lines to new underground duct banks, with the associated replacement of pole-mounted transformers with pad-mounted transformers. The transformers ranged in capacity from 1000 KVA to 50 KVA. Phase 2 included relocating the communications service to new underground duct banks along the same 3000 LF route. The third and fourth phases included the relocation of approximately 2000 LF of overhead power lines and overhead communications lines to new duct banks, respectively. Vacuum interrupters were added to improve selective coordination between various circuits.

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





## B. Projects With Similar Features

### 130th Airlift Wing Master Plan Update and CIP (#3280-18)

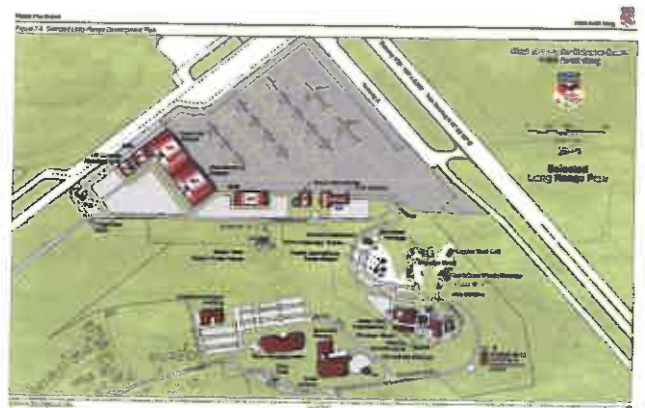
#### West Virginia Air National Guard | Charleston, WV

GRW prepared a Web-Enabled Master Plan Update for the 130th Airlift Wing in Charleston. A GeoBase Common Installation Picture (CIP) was also provided. The purpose of the Master Plan was to evaluate benefits and impacts associated with acquiring additional airfield property. The Plan determined the best use of the additional property for aircraft parking, operations, and maintenance facilities. In addition, the Plan addressed the following elements:

- Identification of constraints and opportunities that apply to the 130th AW aircraft parking, operations and maintenance areas, including Anti-Terrorism/Force Protection (AT/FP) measures,
- Tabulation of the existing and required airfield facilities,
- Development of new alternatives for the long- and short-range plans, and
- Creation of plan tabs that depict the constraints and opportunities, the long- and short-range development plans, the land use and circulation plan, the real estate plan, and the facility utilization plan.

The Master Plan Update provided long- and short-range development alternatives (*shown*) that meet or exceed the proposed development plans for the 130th AW. The proposed long-range alternatives for the 130th AW included a PAA of twelve C-130J-3 aircraft, and two C-5A aircraft. The short-range alternative proposed a strategy to best support the current mission of the 130th AW.

The information provided in this Master Plan Update will facilitate the 130th AW in their decision making as to which alternatives best fit the long- and short-range missions of the 130th AW.



***"It's been a real pleasure working with you... What a difference it makes working with someone who knows how our side of the deal works vs. someone who doesn't. Thanks."***

**– MSgt. Tina Kubic, 130th AW/MSC**

## Campus Master Plan

### West Virginia Division of Highways | Charleston, WV

Chapman Technical Group worked with the West Virginia Division of Highways team to create the master plan for the redevelopment of its District 1 campus in downtown Charleston.

Chapman Technical Group's architects evaluated several existing buildings and determined which ones could be renovated and which were beyond their useful lives and should be demolished. They also provided all of the necessary documentation to the State Historic Preservation Office for the historic structures.

Chapman Technical Group then developed a phased development plan to prioritize demolition projects, new building construction and renovations. All activities had to be planned so that the operations of the District could continue uninterrupted.

As part of the infrastructure upgrades, Chapman Technical Group designed all parking and vehicular circulation, as well as all of the utility upgrades. The campus also suffers from occasional flooding so Chapman Technical Group designed a stormwater detention system to help alleviate flooding.

The final phase of the project will be the design of a streetscape including underground utilities, decorative paving and site amenities. Chapman Technical Group initiated coordination with the City of Charleston which resulted in a cooperative effort to provide a comprehensive streetscape (entire block of Smith Street from Morris Street to Ruffner Street) beyond the boundaries of the District 1 campus project.



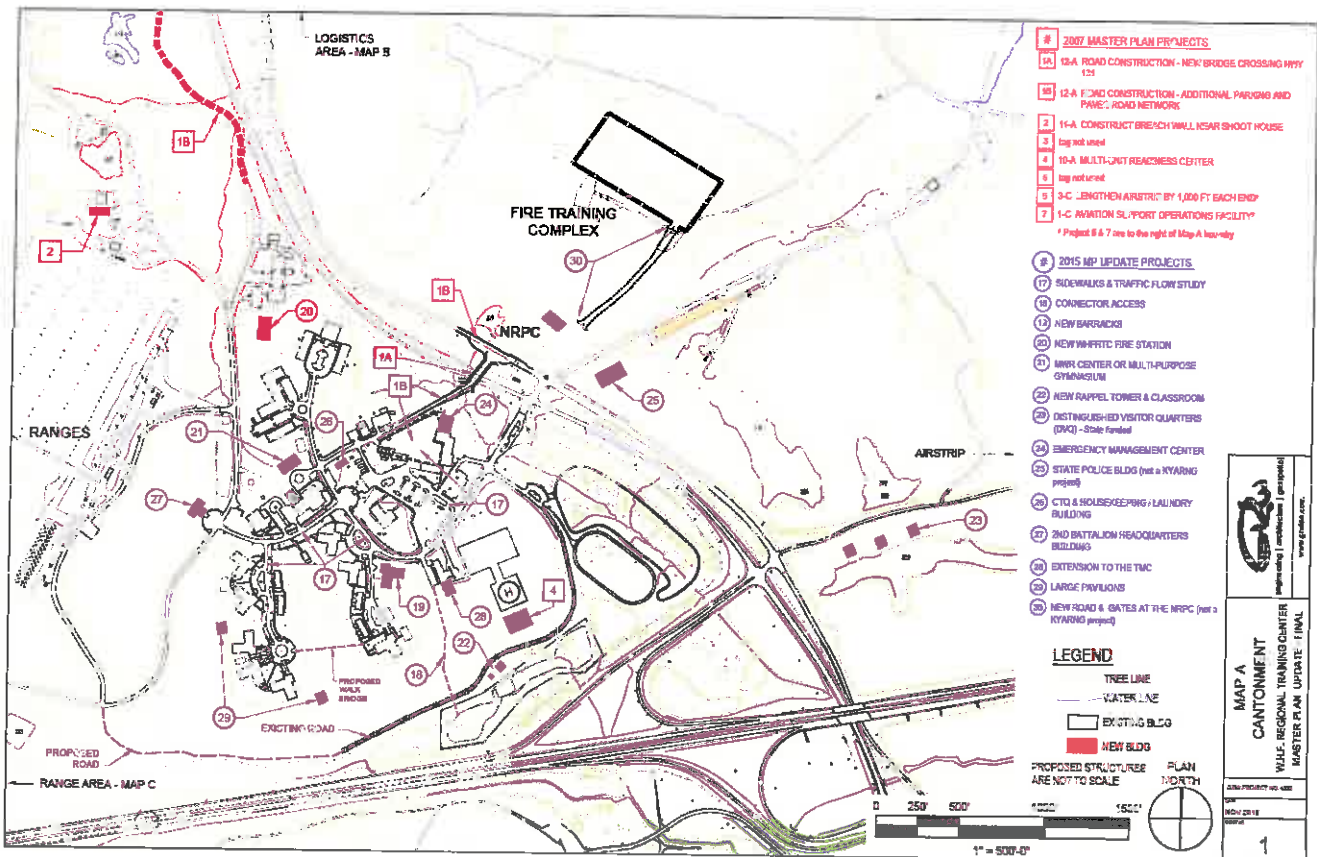
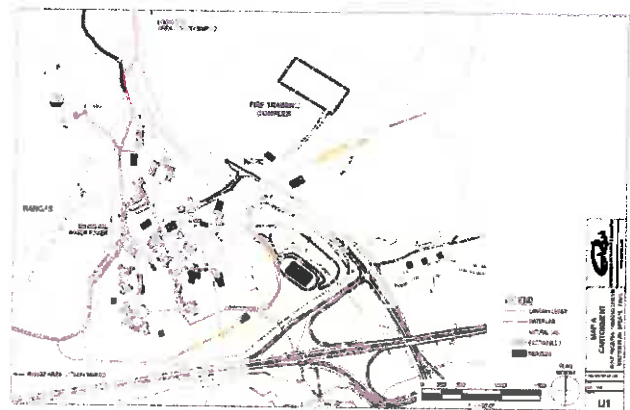
## Wendell H. Ford Regional Training Center Master Plan Update

Commonwealth of Kentucky Division of Engineering & Contract Administration | Frankfort, KY

GRW recently completed the update to the master plan for the Wendell H. Ford Regional Training Center located in Greenville, KY. Constructed on 8,500 acres of reclaimed strip-mine land, the training center has complete year-round accommodations including barracks and quarters for nearly 500 troops, a 400-seat dining hall, a drill hall, and a modern learning center for computer simulator training. The site also features live-fire ranges, hardened bivouac sites, a controlled humidity storage complex, complete maintenance facilities for military equipment, engagement skills training center, obstacle course and a 4,200-foot grass runway.

Work for the master plan update includes the analysis of expansion for:

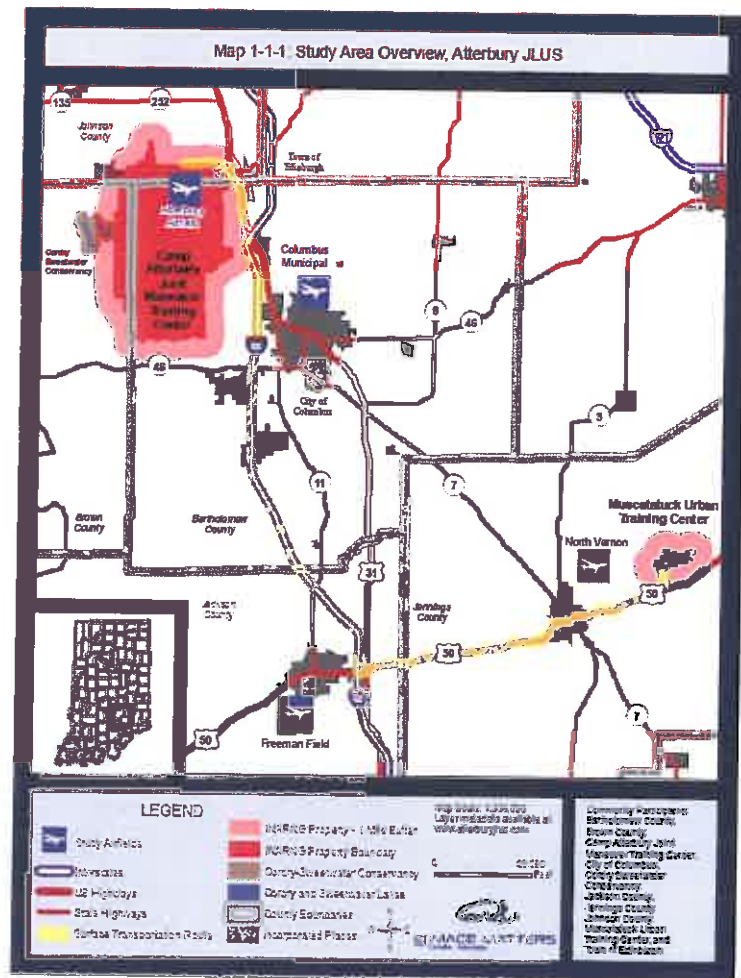
- Utilities
- Cantonment
- Range facilities
- Training barracks
- Maintenance and warehouse facilities



## Camp Atterbury JMTCC and Muscatatuck UTC Joint Land Use Study

GRW conducted a Joint Land Use Study for the local governments adjacent to two southern Indiana military installations. The Department of Defense funded the project through a grant to the State of Indiana Office of Community and Rural Affairs. The GRW team worked with the military, the state, a handful of local governments and interested stakeholders surrounding Camp Atterbury and the Muscatatuck Urban Training Center. The project was a cooperative land use planning effort. The study used GIS to analyze the existing and future land uses surrounding the military installations to identify areas of potential incompatibility. It identified noise sensitive land uses around the military installations and safety concerns surrounding the local airports. The project involved significant public outreach. The objective was to reduce potential conflicts between the military installations and the host communities.

The planning effort will accommodate new growth and economic development, sustain economic vitality, and protect the public's health, safety, and quality of life. The principal goal is to protect the military mission and acknowledge its economic impact. The project helped increase understanding between the military, the local jurisdictions and other stakeholders. Further, it promoted the strong economic and physical relationship between the installations and the communities. Its legacy will promote collaboration on land use planning to safeguard the



mission of the military installations from future incompatible development. The project made recommendations on implementation strategies for reducing the impacts of incompatible activities on the communities and the military and identified tools to support compatibility in the future.

## Combined Arms Collective Training Facility Master Plan Indiana Army National Guard | Indianapolis, IN

The Indiana ARNG retained GRW for a series of A/E services related to the planning and design of the world's largest Combined Arms Collective Training Facility (CACTF), located in Muscatatuck, Indiana, to provide Military Operations in Urban Terrain (MOUT) training. This facility is located on an 850-acre rural site in southern Indiana that was formerly the grounds of a state mental hospital campus that operated from the 1920's through 2003.



During the period that the IN ARNG was acquiring the Muscatatuck property, the IN ARNG requested GRW to assess the condition of the 65 administrative, operational, staff housing, and dormitory buildings.

On-site utilities include a central heating plant, a surface water treatment plant, a wastewater treatment plant, and their associated distribution systems. The property includes the Brush Creek Reservoir and a low head dam that supplies drinking water to the water plant and the nearby City of North Vernon. The master plan included preliminary analysis of each utility system's ability to meet future demands either through expansion or connection to nearby city or utility systems.

GRW was initially tasked to prepare a Master Plan for the conversion of the hospital complex into a CACTF. The primary purpose of the CACTF will be to increase the combat readiness of IN ARNG troops, as well as other soldiers and facility users from anywhere in the world, to operate in varied urban environments. The CACTF will be designed to conduct multi-echelon, full-spectrum operations up to battalion task force level with each leader or commander capable of evaluating unit urban operations efficiency. In addition, the CACTF will be able to support Infantry Fighting Vehicle (IFV), Tank, Artillery and Aviation positioning and maneuvers.

The planning effort included both Long and Short Range Development Plans; a Capital Investment Strategy; new aerial photography and digital mapping; and an extensive GIS system to support future development of the installation. The Master Plan is being used as the basis for programming, design, funding and construction of this complex.

The Master Plan identified specific facilities on the Muscatatuck site for renovation and conversion into the CACTF training facilities. Other facilities required for new construction to support the CACTF were also identified in the Master Plan (see illustration).

The CACTF will be a 23-building, \$16.1 Million complex constructed by renovating many of the existing buildings at the site. Eventually, as build-out of the entire site takes place, the CACTF will be one component of this complex, which is programmed to develop into a \$100 - \$200 Million training center of more than 400 buildings simulating various types of urban environments, each with automated targeting systems and special effects.

Outlying areas will simulate Middle Eastern, Sub-Saharan, Far Eastern and other settings to provide realistic settings for training.

## Training Site Master Plans, Camp Ravenna Joint Military Training Center and Camp Perry Joint Training Center

### Ohio Army National Guard | Columbus, OH

GRW was selected by the Ohio Army National Guard to complete Training Site Master Plans (TSMPs) for the Training Centers near Ravenna and Port Clinton, Ohio. The purpose of each master plan was to identify all of the missions, requirements, constraints, and conditions at both sites and to generate comprehensive, single source documents on how to best develop each site for use by federal, state, and local government agencies over the next twenty years.

Camp Ravenna is a 21,683 acre site that is used principally by National Guard units throughout Ohio and surrounding states, as well as other Reserve and Active Components. The site also provides a training venue for Homeland Defense, Emergency Response, Public Safety and other local, state and federal government agencies and civic groups. The installation was used in WWII for munitions manufacturing and was taken over from DA in the late 1990s by OHARNG with the goal of converting it to a viable military training site.

Camp Perry is approximately 579 acres on the southern shore of Lake Erie and is the primary location in Ohio and the surrounding region for small arms and simulation device training. Camp Perry includes the largest outdoor rifle range in the world and is the home of the National Rifle Association's National Rifle Matches. Its mission is to provide

facilities and authorized training center management for the conduct of weapons qualification, training exercise and DA supported marksmanship programs.

Each master plan was a comprehensive analysis of existing site conditions and opportunities for future development. The plans included an analysis of facilities, utilities, transportation, land use, and unit mission space requirements. Each plan described the installation real property and environmental stewardship requirements and the suitability of facilities to support mission training requirements. Project site plans were prepared that show the appropriate location of mission essential facilities.

To complete each plan, GRW participated in a series of meetings, planning charrettes and site visits with OHARNG planning staff and key installation stakeholders. Facility related requirements were quantified and verified using a two-step process where a survey questionnaire was distributed to all units and organizations that regularly use the facilities at each installation. Follow-up interviews were then held with the respondents to confirm their requirements. Each final master plan included an Executive Summary, Current Condition Assessment, Environmental Conditions and Development Constraints, Capital Investment Strategy, Alternative Development Plans and Selected Project Site Plans, and a Plan Summary.

## Joint Forces HQ Complex Planning/Programming Charrette

### Michigan Army National Guard | Lansing, MI

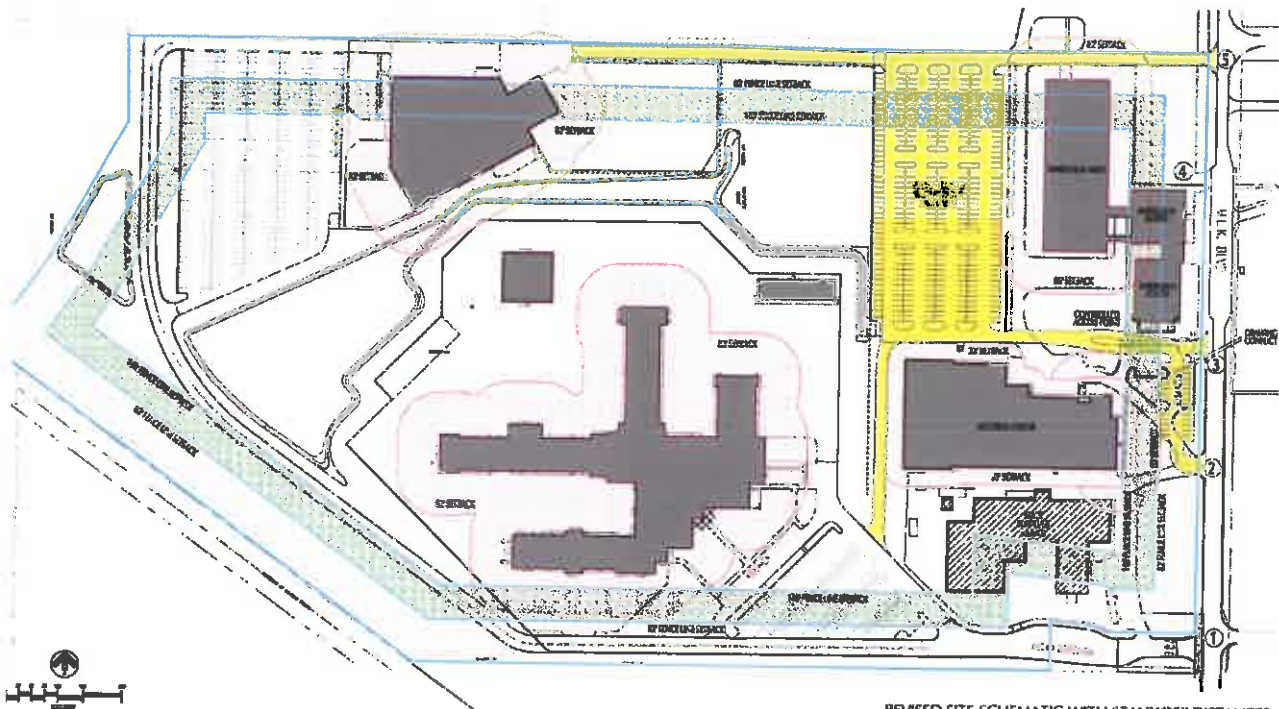
The Michigan Army National Guard (MI ARNG) acquired from the State of Michigan a 42-acre site in Lansing containing four buildings comprising 300,000 SF. The site includes former state office buildings and warehouses that were previously used by various state agencies. These agencies were relocated to other state-owned facilities in Lansing, and the site was made available for the MI ARNG and other state and federal agencies. During this property transition, the MI ARNG requested the assistance of GRW in preparing the DD Forms 1390/91 to secure federal funding for renovating the facilities to meet mission requirements.

First, GRW made a general evaluation of the size, condition, and capacity of the facilities proposed for occupancy by MI ARNG. All HVAC, telecommunications, and life/safety systems were evaluated. Structural condition and exterior materials of the facilities were assessed. Site layout, circulation and vehicular parking areas were addressed. A significant part of site planning was to ensure adherence to current Anti-Terrorism/Force Protection requirements.

The second task was to meet with each of the federal agencies that will move into the facilities and determine their space requirements and special needs. GRW conducted an on-site 3-day charrette with representatives of each agency. Their requirements, needs and desires were reviewed with the MI ARNG and documented. Following the charrette process, recommended locations for agencies were shown on existing floor plans. Special needs for secured areas and common space were documented on space criteria sheets.

Third, GRW estimated the costs associated with the renovation of the facilities. The cost estimates were prepared using the current version of PC-Cost Module, a Windows-based budget cost estimating software tool used in the Tri-Services Automated Cost Estimating System that is compatible with electronic DD 1390/1391 cost estimates for alteration and renovation projects.

And fourth, GRW double checked DD Forms 1390/91 and related documentation for submission to Congress. The DD Forms 1390s, 1391 and 1391c were completed for FY 2006 Guard and Reserve Military Construction to support a future Congressional Addition for this project.



REVISED SITE SCHEMATIC WITH STANDOFF DISTANCES

## U.S. Air Force Master Planning

### U.S. Air Force | Various Locations

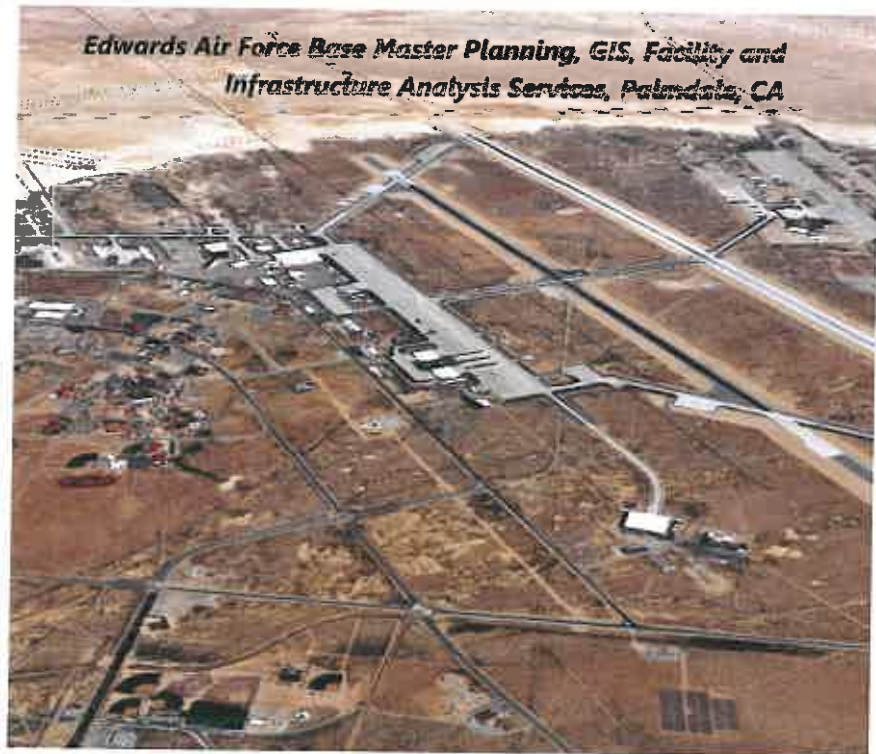
GRW has prepared base comprehensive plans and other planning products for several Air Force bases across the U.S. These bases have included:

- Minot AFB, North Dakota
- Barksdale AFB, Louisiana
- McConnell AFB, Kansas
- Chicago O'Hare ARF/Rockford Facilities Replacement Plan
- Willow Grove ARF, Pennsylvania
- Chicago O'Hare ARF, Illinois
- Pittsburgh AFRES, Pennsylvania
- Edwards AFB, California
- F.E. Warren AFB, Wyoming
- McClellan AFB, California
- Vandenberg AFB, California
- Nellis AFB, Nevada
- Robins AFB, Georgia (Mapping)
- U.S. Air Force Academy, Colorado
- Los Angeles AFB, California
- Brooks AFB, Texas

Each of these plans included a comprehensive and detailed examination of specific base development constraints and opportunities.

Alternative development concepts were developed through the planning effort and team participation of GRW, the base and other interested parties.

GRW staff involved in these plans continue to work toward more streamlined processes to deliver increased quality and information from such planning efforts.





## U.S. Army Master Plans

GRW has been responsible for master planning at Army installations for the past 20 years. GRW has prepared several components of master plans for various Army installations, the most recent efforts conforming to AR 210-20 and related regulations.

Our efforts have included the following:

- Long Range Components
- Environmental Overlays/Assessments
- Tabulation of Existing and Required Facilities
- Capital Investment Strategies
- Land Use and Circulation
- Utility Systems/Infrastructure Planning
- Mobilization Master Plans
- Expansion Capability Plans
- Space Utilization Plans

GRW has completed army master planning at the following installations:

- Rock Island Arsenal, IL
- Ft. Bragg, NC
- Simmons Army Airfield, NC
- Camp Mackall, NC
- Ft. Buchanan, Puerto Rico
- Ft. Chaffee, AK
- Ft. Rucker, AL
- Ft. Knox, KY
- Ft. Campbell, KY
- Ft. Monroe, VA

## National Guard Bureau Master Planning

GRW has provided comprehensive master plans and associated digital mapping services to assess the existing physical character of 16 Air Force bases, 32 Air National Guard and Air Force Reserve installations, and 10 Army bases. The purpose of these planning efforts was to determine existing needs and potential, and to plan for an orderly and comprehensive future development to accommodate the current mission, programmed mission changes and probable future missions all within the context of local and regional development plans.

These master planning efforts have included the following:

- Long and Short Range Components
- Environmental Overlays/Assessments
- Tabulation of Existing and Required Facilities
- Capital Investment Strategies
- Land Use and Circulation Plans
- Utility Systems/Infrastructure Planning
- Mobilization Master Plans
- Expansion Capability Plans
- Space Utilization Plans
- Building/Facilities Site Plans
- Utilities Data
- Exterior Architecture and Landscaping Plans

## C. Additional West Virginia National Guard Projects

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

The West Virginia Air National Guard selected GRW to design modifications to the 167 Air Wing's 79,421 SF Corrosion Control Hangar, 80,700 SF Fuel Cell Hangar, and 80,751 SF Maintenance Hangar to support its mission change from C-5 to C-17 aircraft.

- **Corrosion Control Hangar** To adequately perform aircraft wash activities, facility components such as the fall protection, air systems, drop lights, drop electrical outlets, fire protection foam generators, water, aircraft jacking points, and other maintenance support systems require adjustment to accommodate the new aircraft. Foam generators and sprinkler piping will be reconfigured, and the system updated to meet current Air Force and ANG fire suppression criteria.
- **Fuel Cell Hangar** To adequately perform maintenance activities, facility components such as the fall protection, air systems, drop lights, drop electrical outlets, fire protection foam generators, water, aircraft jacking points, and other maintenance support systems require adjustment to accommodate the new aircraft. Foam generators and sprinkler piping will be reconfigured, and the system updated to meet current Air Force and ANG fire suppression criteria.
- **Maintenance Hangar** To adequately perform general purpose maintenance activities, facility components such as the fall protection, air systems, drop lights, drop electrical outlets, fire protection foam generators, water, aircraft jacking points, and other maintenance support systems require adjustment to accommodate the new aircraft. Foam generators and sprinkler piping will be reconfigured, and the system updated to meet current Air Force and ANG fire suppression criteria.

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

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

GRW was selected to provide evaluation and design services to repair the C-5 apron for the 167th Airlift Wing of the West Virginia Air National Guard located in Martinsburg. Due to suspected poorly draining base and sub base, moisture is being retained causing the concrete section to fracture and heave to the point that FOD (foreign object debris) is being produced, and plowing snow is causing damage to equipment and injuring personnel. Investigative services include a core drill of area to ascertain the

depth of excavation needed, and the amount and size of needed drainage improvements. The pavement repair of approximately 1,755 SY includes 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 will also be included.

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

### 167th Airlift Wing C-17 Composite Material Shop

#### West Virginia Air National Guard | Martinsburg, WV

The West Virginia Air National Guard selected GRW to design modifications to the 167 Air Wing's 2,744 SF Composite Material Shop to support its mission change from C-5 to C-17 aircraft. The existing facility is designed to repair fiberglass and aluminum parts. The new C-17 is composed of carbon fiber materials, and

the shop requires new technologies and environmental controls to meet the sensitive temperature requirements and reduce microscopic airborne fibers associated with carbon fiber. The following systems will also be modified or upgraded: HVAC, electrical, lighting, communications, security, and sprinklers.

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

## 130th Airlift Wing Building 107 Renovation | Charleston, WV

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

The project scope included:

- **Upgrade of mechanical and electrical systems** to meet current building codes and standards
- **Replacement of inadequate restrooms** and locker rooms
- Replacement of fire alarm and fire protection systems
- **Hardening of the front façade, replacement of windows**, and elimination of on-street parking to achieve ATEP compliance

- Construction of new interior spaces and renovation of existing shop areas to create necessary office, training, and support spaces

The completed building includes the following programmed spaces:

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

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



## 130th Airlift Wing Security Forces Squadron Facility Renovation & Expansion | Charleston, WV

GRW was retained to provide complete architectural and engineering Type A, B and C services, meeting LEED Silver, for renovating the existing 5,395 SF Security Forces Squadron facility and adding 2,500 SF of administrative and training space to the facility. This project uses MILCON/SRM split funding to deliver a renovated and expanded SFS facility, which provides increased space for command and administrative functions. A few relevant spaces and features include:

- Expanded command/administrative space
- Arms vault
- Training rooms
- SIPRNet
- ATFP building/site security
- ADA compliance
- Geothermal
- Split MILCON/SRM funding
- Extensive communications infrastructure

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

## 130th Airlift Wing Communications Duct | Charleston, WV

The 130th AW selected GRW to provide design and construction administration services for this project. A Concept Development Report was initially prepared as the first step in the design phase for this project and it represents the collaborative efforts to date by the 130th Design Working Group (DWG) and GRW to select a preferred concept for a new duct system for routing the base's communications network to a new Communications Facility.

With the construction of a new aircraft hangar and the planned future construction of a new communications building, the fiber optic cable for the base network will consist of two ITNs (Information Transfer Nodes). ITN-1 will be located in the new Communications Facility and ITN-2 will be located in the new hangar, Building 407. All fiber optic cables from the mid- and lower-level base buildings will be routed to the new Communications Facility, which is

to be built at the lower level, and all fiber optic cables from the upper area buildings will be routed to Building 407. The duct bank will carry fiber optic lines, television and coaxial cabling. The extended duct system will allow the current system to be looped and allow redundancy of assets.

A 4-duct and a 12-duct PVC conduit system with inter-duct, appropriately sized pre-cast manholes with reinforced foundation, is proposed. Sumps for drainage of infiltration will be installed in the manholes. The manhole lids will be lockable for security of the ducts. Once the ducts are constructed, the fiber optic cables will be installed by the Communications Squadron.

*After the Concept Development Report was completed, the base decided to transfer further design work to the Communications Squadron for execution of this project under the design-build project delivery approach.*

## Readiness Center Commissioning Projects | Buckhannon, WV

GRW has been contracted to provide LEED Fundamental Commissioning for four building construction projects: 1) the Buckhannon, WV AFRC - Phase I, 38,000 SF and \$13,150,000 construction cost, 2) the Morgantown, WV Readiness Center, 58,520 SF and \$20,500,888 construction cost, 3) the Moorefield, WV Readiness Center, 57,256 SF and \$17,725,351 construction cost, and 4) the Logan, WV Readiness Center, 58,520 SF and \$14,296,326 estimated construction cost.

The scope of services includes all commissioning required for LEED certification on the HVAC systems and networked controls, the lighting control systems and the domestic hot water distribution systems, including coordination with providing contractors, documentation of all installations and testing, coordination of owner training and assistance with LEED submittals. GRW has also proposed additional architectural and engineering construction oversight services on an as-needed basis.

**Client Contact:** Lieutenant Colonel John Knabenshue, (304) 473-5253, john.knabenshue@us.army.mil

## 130th Airlift Wing Communications Facility | Charleston, WV

GRW provided Type A and Type B design services for a new \$3.6 million Communications Facility at Yeager Airport in Charleston, WV. This 13,100 SF (1,217 SM) **LEED Silver** facility was designed to provide a centrally located common user communications system for both intra-base and off-base communications. Various types of cable from the base transmitter and receiver as well as other base communications systems will be normally fed through this structure. Ground control of all ground point-to-point contact and air to ground point-to-point contact (such as radio, telephone, DISNET, etc.) may be exercised from this facility.

A few relevant spaces and features include:

- Administrative. Office space for communications officer and assistants, intra-base radio management, base message distribution center, crypto storage vault, crypto accounting, commercial communications offices & storage.

- Maintenance. Includes space for the chiefs of maintenance and systems (COM/COS), training of system/support flight personnel, training of maintenance and operations personnel and programming personnel.

The design of this facility also included AT/FP measures, fire detection and alarm, ADA compliance, landscaping, utilities (water, sewer, gas, electric, etc), special hazardous materials storage spaces, parking areas and exterior signage and lighting.

*The design was stopped at 65% complete at the convenience of the government due to the need to update the base's master plan and re-prioritize new capital improvements.*

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

## Basewide Sewer Line Repair | Martinsburg, WV

GRW provided design and construction administration services for this FY12 Sustainment, Restoration and Modernization (SRM) project for the 167th AW. A Concept Development Report was the first step in the design phase, and represented the collaborative efforts of the Design Working Group (DWG) and GRW to select a preferred design concept for the sanitary sewer system replacement. The report provided the basis of design for the replacement sewer system, including conceptual drawings, a project schedule and a construction cost estimate. An innovative approach – filling abandoned lines with

lightweight concrete – was developed to reduce project costs, compared to the traditional method of removing the lines and site restoration.

GRW completed Type B design services to prepare detailed plans and specifications for the replacement of the existing failing sewers, and provide adequate sewage lines to support the base's mission for 10 PAA C-5 aircraft. Construction administration services, including shop drawing reviews and inspections, was also provided by GRW.

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

## 130th Airlift Wing Aboveground Fuel Storage Dispensing Facility

### West Virginia Air National Guard | Charleston, WV

GRW provided multi-discipline A/E design services for a new \$227,500 aboveground fuel station for the installation's government-owned vehicles. Two new aboveground tanks (1 diesel, 1 unleaded gasoline) and a new dispensing system replaced an older fuel station that included underground fuel storage tanks.

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

## Joint Armed Forces Reserve Center and Area Maintenance Support Activity

### West Virginia Army National Guard | Charleston, WV

GRW participated in the Program Planning Document Charrette (PPDC) for WVARNG's Armed Forces Readiness Center (AFRC) in Ripley, WV. A three-day Planning Charrette was conducted in order to understand the needs of the end users of the AFRC. The AFRC will replace two local armories and a USAR center. The Eastern Star property in Jackson County, WV was selected as the preferred site for the AFRC. The site for the AFRC will be on the western portion of the property.

The Charrette Team evaluated site constructability issues. In addition, the Team assessed utilities, traffic issues, outdoor lighting, parking, AT/FP issues, and space planning. The end work product outlined two alternative overall site layouts and floor plans. A parametric cost estimate was prepared and a revised DD Form 1390/1391 was developed for a 60,927 SF AFRC and a 4,500 SF unheated storage facility.

Spaces and features in the preliminary plans for the complex include:

- Administrative areas: Private office suites, administrative common spaces, recruiting offices, family support offices
- Assembly hall with a full kitchen and chair and table storage, break room and vending area
- Physical fitness area
- Unit storage co-located within the AFRC will house caging, arms vault, and private offices.
- Unheated storage 6,000 SF will provide additional caged storage areas for the unit's users.

A separate Area Maintenance Support Activity (AMSA) 4,500 SF provides vehicle bays, flammable storage, controlled waste storage; battery room, parts storage room, tool rooms, supply rooms, and offices and supporting facilities

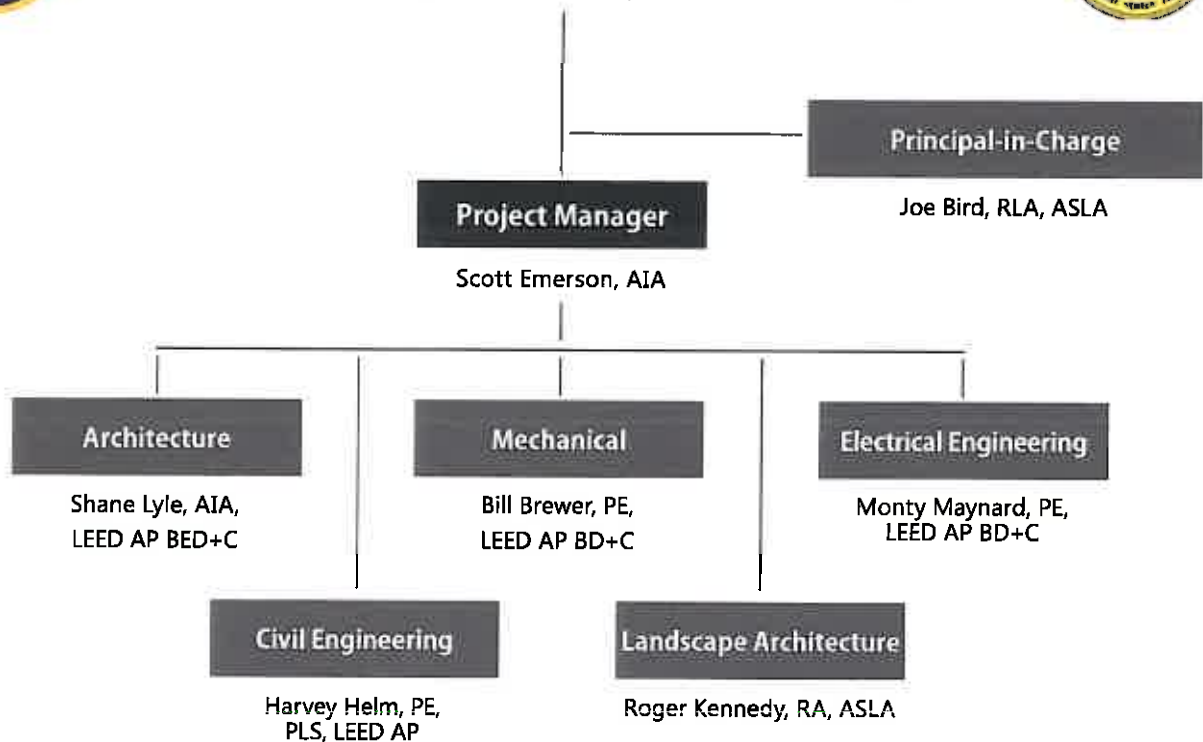
### 3.0 Staff Qualifications

When you work with a GRW team, you have access to some of the most reputable consultants in the industry, many with experience at Camp Dawson. From the design of personnel support facilities to security forces operations and training centers, our team members are experts in their fields. Furthermore, our team’s local knowledge and capacity has been strengthened by GRW’s acquisition of West Virginia-based Chapman Technical Group.

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



## West Virginia Department of Administration and West Virginia Army National Guard



## Joe Bird, PLA, ASLA | GRW Principal-in-Charge



### YEARS OF EXPERIENCE:

With GRW: 32

Total: 39

### EDUCATION

B.S., Landscape Architecture,  
1978, West Virginia University

### REGISTRATION

Professional Landscape  
Architect: WV, KY

### PROFESSIONAL AFFILIATIONS AND TRAINING

West Virginia Chapter of the  
American Society of Landscape  
Architects

Joe is a project manager and registered landscape architect. His experience ranges from large site development projects to the management of multidiscipline and architectural projects.

### RELEVANT PROJECT EXPERIENCE

**West Virginia Department of Highways District 1 Campus Master Plan, Charleston, WV** – Project Manager. Master plan for redevelopment of District 1 campus in downtown Charleston. Work included evaluation of several existing buildings to determine renovation/demolition status; preparation of phased development plan to prioritize demolition/renovation/new construction projects; development of parking and vehicular circulation patterns; and design of utility upgrades and stormwater detention system.

**West Virginia Department of Highways District 1 Smith Street Streetscape, Charleston, WV** – Project Manager. Streetscape design – including street lights, trees, and decorative brick bands – for entire block of Smith Street from Morris Street to Ruffner Street. Existing overhead utilities will be placed underground. On-site stormwater storage, bioswales, and stormwater infiltration and filtration design will mitigate impact of large storm events for area with history of frequent flooding.

**Canaan Valley Resort State Park Improvements, Canaan Valley, WV** – Project Manager. Upgrades include new tubing park featuring 12-lane tube run in excess of 800 feet long with vertical drop of 90 feet; tubing lodge with wood-burning fireplace, restrooms, concession stand, and outdoor patio; storage building; new beginners slope and ski school area; renovations at main ski lodge (Bear Paw Lodge); and wobble clay shooting range.

**Shepherdstown Pedestrian and Bicycle Trail, Shepherdstown, WV** – Project Manager. New, 4,000-foot pedestrian/bicycle trail parallel to WV 45. Required close coordination with local and state historic groups to maintain sensitive cultural heritage resources.

**Meadow River Rail Trail, Fayette & Greenbrier Counties, WV** – Project Manager. Pedestrian/bicycle trail over 16.7 miles of rail bed, including construction of decks on four railroad trestles, and design of trailheads at strategic locations.

**Lewisburg L&R Trail, Phase I, Lewisburg, WV** – Landscape Architect. Phase I of multi-use trail at historic L&R Railroad no longer in service. First phase starts in downtown Lewisburg and winds through residential neighborhoods before ending at highway. Future phases will continue trail toward Ronceverte.

**West Virginia State Parks Picnic Shelters** – Project Manager. Concept design for picnic shelters to be constructed at multiple locations around state. Each shelter is designed for over 100 people and will include warming kitchen and restrooms.

**Lewis County Courthouse Conditions Report and Roof Area Restoration, Weston, WV** – Principal. Preparation of report to identify and evaluate existing conditions, prioritize recommendations for restorations of building envelope and structure, and provide construction cost estimates.



**Upshur County Courthouse Renovations, Buckhannon, WV** – Principal. Award-winning design and construction of several improvement and restoration projects including accessibility modifications (lift installed and plaza renovated to make original courthouse accessible), dome and clock tower completely restored, portico stonework was restored.

**Tucker County Courthouse and Jailer's Residence Restoration, Parsons, WV** – Principal. Report included conditions assessment, recommendations for stabilization and restoration, and prioritized budget. First design phase included refurbishment, repointing, and stabilization of chimneys.

**Frankfort Plant Board Administration Building, Frankfort, KY** – Landscape Architect. New three-level, 46,000 SF administration building on 30-acre site.

**Marshall University Women's Softball Field, Huntington, WV** – Project Manager. Design of NCAA regulation softball field featuring subsurface drainage and professional infield soil mix for quick-drying playing surface. Also included above-ground dugouts, storage building, press box, and electronic scoreboard.

**Upper Big Branch Miners Memorial, Whitesville, WV** – Principal. Award-winning memorial designed to honor the memory of 29 miners who died in a 2010 mining disaster. The memorial's centerpiece is a 48-foot long, 8-foot high, granite monument cut to reflect the mountains of West Virginia and etched with silhouettes to represent the lost miners. Designed to be visible from highway; also provides intimate spaces for quiet contemplation and opportunities for learning about West Virginia's coal heritage.

**Covington 6th Street and Scott Boulevard Improvements, Covington, KY** – Landscape Architect. Planning and design services for reconstruction of approximately one mile of city streets, encompassing primarily West Sixth Street and Scott Boulevard. LPA project included placing electric and communications utilities underground, sidewalk replacement, and overall streetscape beautification including curb bump outs and rain gardens.

**Ripley Main Street Kayak Access Ramp, Ripley, WV** – Project Manager.

**Scottsville West Main Streetscape, Scottsville, KY** – Landscape Architect. Design and construction administration services for streetscape improvements along north side of two blocks west of Heart of Scottsville's downtown square.

**St. Albans High School Girl's Softball Field, Charleston, WV** – Project Manager. Design of girls' softball field located between St. Albans High School athletic track and Belvil Athletic Annex. Required demolition and renovation of portions of Belvil Athletic Annex to provide sufficient outfield. Schematic drawings were provided for dugouts and concessions stand area with press box and restrooms.

## Scott Emerson, RA | GRW Project Manager



### YEARS OF EXPERIENCE:

With GRW: 13  
Total: 33

### EDUCATION

Bachelor of Architecture, 1976,  
Virginia Polytechnic Institute  
and State University

### REGISTRATION

Registered Architect: KY  
Construction Documents  
Technologist (CDT)

Scott has extensive architectural experience, and has designed military, industrial, commercial and institutional projects for state, federal and private clients. His experience includes space planning, code review, schematic and design development, bid/contract preparation and construction administration. Scott has also been cross trained as a construction project manager responsible for complete project delivery including bid evaluation/award through punch list and project turn-over.

### RELEVANT PROJECT EXPERIENCE

**West Virginia ARNG Camp Dawson Ranges, Kingwood, WV** – Project Manager. 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.

**West Virginia ARNG Camp Dawson Volkstone Training Area Utility Upgrade, Kingwood, WV** – Project Manager. Expansion of sewer, water and electric 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.

**Wendell H. Ford Regional Training Center Master Plan Update, Greenville, KY** – Project Manager. Master plan update for the entire facility covering training center located on 8,500 acres and including barracks and quarters for nearly 500 troops, live-fire ranges, maintenance facilities for military equipment, and 4,200-foot grass runway. Work for master plan update includes expansion analysis of utilities and buildable sites for areas such as the cantonment, range facilities areas and training barracks facilities.

**Tennessee ANG Memphis Master Plan Update, Memphis, TN** – Architect. Engineering services for updating a master plan to present a physical plan, implementation strategy, and Capital Improvements Program (CIP) to allow the 164th Airlift Wing, Tennessee Air National Guard, to smoothly transition from operating C-141B aircraft to at least eight C-5 aircraft at their current location, replacing substandard facilities, consolidating related functions, enhancing a campus-like atmosphere in the cantonment area, and providing a back-up plan to accommodate C-17 aircraft, while minimizing capital investment.

**Tennessee ANG Nashville Master Plan Update, Nashville, TN** – Architect. Master planning services updating a guide for short and long-range facilities planning decisions, presenting solutions for present and potential future mission changes, promoting orderly future physical development, with an approved Capital Improvement Program. Considerations included unifying the installation, accommodating eight C-130J "stretch" aircraft in the short term and up to ten "wide body" aircraft in the long term, improving vehicular circulation and parking, replacing substandard facilities, and improving force protection and visual security.

**District of Columbia Air National Guard Space Utilization Study, Andrews AFB, MD** – Architect. Architecture and engineering services performing a Space Utilization Study for the 113th Wing of the District of Columbia Air National Guard at Andrews Air Force Base to serve as a basis for identifying steps aimed to increase efficiency and effectiveness and consider alternative development concepts considering future flexibility and expandability in response to mission changes. Used as a guide for short- and long-range facilities development decisions, the plan includes: consideration for functional consolidation of related functions to eliminate redundancy; options to ensure expandability and flexibility where possible; support for refined space standards compliance; improved security; renovation and demolition candidate spaces / buildings; potential for joint armed forces utilization; architectural standards in context.

**Michigan ARNG Joint Forces HQ Complex Planning/Programming Charrette, Lansing, MI** – Project Manager. Evaluation of size, condition, and capacity of facilities (42-acre site with four buildings comprising 300,000 SF) acquired from State of Michigan proposed for occupancy by MI ARNG. Included on-site 3-day charrette to determine space requirements and special needs of users. Developed cost estimates associated with renovation of facilities, and reviewed DD Forms 1390/91 and related documentation.

**Indiana ANG 122nd Fighter Wing Security Forces Operations and Training Facility, Fort Wayne, IN** – Architect. Conceptual design for design-build bridging document for a new \$3.86 million (FY07), 18,494 SF Security Forces Operations and Training Facility, including a Combat Arms Training and Simulator/Combat Arms Training Maintenance (CATS/CATM) area, providing offices for the Flight Chief, open office area for the base security forces, classrooms, workout room, locker room, weapons simulator room and weapons storage areas. Site work included grading, drainage and stormwater controls, new utilities, roads and parking areas and AT/FP measures.

**Illinois ANG 126th Air Refueling Wing Aerospace Ground Equipment Shops/Storage and General Purpose Maintenance Shops, Scott AFB, IL** – Project Manager. Design for 5,241 SF of aerospace ground equipment (AGE) shops and storage and 46,202 SF of general purpose maintenance shops for a major relocation of Illinois Air National Guard air refueling wing operations and KC-135E aircraft from O'Hare International Airport to Scott Air Force Base.

**Blue Grass Army Depot Satellite Fire Station, Richmond, KY** – Project Manager. Design-build renovation of a warehouse into a satellite fire station to provide rapid response to under-served areas at campus.

**Blue Grass Army Depot Main Entry Control Facility and Battlefield Memorial Highway Revisions, Richmond, KY** – Architect. Design and construction administration services for design-build project at main entry control facility (ECF).

**Nevada Air National Guard Relocation, Phase I & II, Reno, NV** – Design Team Coordinator.

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



### YEARS OF EXPERIENCE:

With GRW: 28

Total: 34

### 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

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

Member / Past Officer - UK  
College of Architecture Alumni Association

Life Member - UK Alumni Association

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

### RELEVANT PROJECT EXPERIENCE

**Wendell H. Ford Regional Training Center Master Plan Update, Greenville, KY** – Principal. Master plan update for the entire facility covering training center located on 8,500 acres and including barracks and quarters for nearly 500 troops, live-fire ranges, maintenance facilities for military equipment, and 4,200-foot grass runway. Work for master plan update includes expansion analysis of utilities and buildable sites for areas such as the cantonment, range facilities areas and training barracks facilities.

**West Virginia ARNG Camp Dawson Volkstone Training Area Utility Upgrade, Kingwood, WV** – Principal. Expansion of sewer, water and electric 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.

**West Virginia ARNG Camp Dawson Ranges, Kingwood, WV** – Principal. 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.

**West Virginia ARNG Joint Armed Forces Reserve Center and Area Maintenance Support Activity, Ripley, WV** – Architect. 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.

**West Virginia ANG 167th Airlift Wing C-5 Apron Repair, Martinsburg, WV** – Principal. 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 includes 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 will also be included.

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

**West Virginia ANG 130th Airlift Wing Security Forces Squadron Facility Renovation and Expansion, Charleston, WV** – Principal. 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) will increase space and improve 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 will meet LEED Silver design criteria, and all AT/FP and ADAAG requirements.

**West Virginia ANG 130th Airlift Wing Communications Facility, Charleston, WV** – Project Manager. Design (Type A and B, 65%) for a new \$3.6 million, 13,100 SF Communications Facility at Yeager Airport in Charleston for West Virginia Air National Guard, designed for LEED Silver rating, to provide a centrally located common user communications system for both intra-base and off-base communications, with ground control of all ground point-to-point contact and air to ground point-to-point contact (such as radio, telephone, DISNET, etc.). Design paused at 65% to enable base's master plan and re-prioritize new capital improvements.

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

**California ARNG Infantry Platoon Battle Course, Camp Roberts, CA** – QA/QC. Design for a new, \$2.7 million infantry platoon battle course providing stationary and moving infantry and armor targets (RF controls, battery power operation), machine gun observation bunkers, tactical trenching obstacles and mortar simulation devices in six separate obstacles.

**California ARNG Infantry Squad Battle Course, Camp Roberts, CA** – QA/QC. Design and engineering for a \$1.78 million infantry squad battle course for Camp Roberts, including Range Operations and Control Area (ROCA) and support facilities providing stationary and moving infantry and armor targets, machine gun observation bunkers, tactical trenching obstacles, mortar simulation devices in six separate obstacles, and targets using RF controls and battery power operation.

## Bill Brewer, PE, LEED AP BD+C | GRW Mechanical Engineer



### YEARS OF EXPERIENCE:

With GRW: 18

Total: 46

### EDUCATION

B.S., Mechanical Engineering,  
1967, Case Western Reserve  
University

### REGISTRATION

Professional Engineer: KY, CA,  
OH, NC, TN, NH, WV, IN, TX, MS,  
GA, VA, MI, PA, KS

NCEES Member, allows  
reciprocity with other states

LEED Accredited Professional,  
Building Design + Construction

### PROFESSIONAL AFFILIATIONS AND TRAINING

American Society of Mechanical  
Engineers

American Society of Heating,  
Refrigeration and Air  
Conditioning Engineers,  
Bluegrass Chapter

American Institute of  
Aeronautics and Astronautics

International Code Council

Society of Fire Protection  
Engineers

International Ground Source  
Heat Pump Association

U.S. Green Building Council

American Council of  
Engineering Companies

Certified Energy Auditor

Simplex-Grinnell Clean Agent

Training: "Clean and Green -  
Ansul Sapphire and Inergen Fire  
Suppression Agents"

Bill's vast engineering experience has involved the design, application and trouble-shooting of a wide range of environmental and process systems, particularly HVAC, plumbing and fire protection systems. His experience has encompassed mechanical engineering design for dozens of water and wastewater treatment plant systems, and pumping stations. Bill also regularly works on projects involving GRW's educational, municipal, state, and federal clients.

### RELEVANT PROJECT EXPERIENCE

**West Virginia ARNG Readiness Center Commissioning Projects** – Project Manager. LEED Fundamental Commissioning for four building construction projects: the Buckhannon, WV AFRC - Phase I, 38,000 SF and \$13,150,000 construction cost, the Morgantown, WV Readiness Center, 58,520 SF and \$20,500,888 construction cost; the Moorefield, WV Readiness Center, 57,256 SF and \$17,725,351 construction cost, and Logan, WV Readiness Center, 58,520 SF and \$14,296,326 estimated construction cost. Scope includes 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.

**West Virginia ANG 130th Airlift Wing Aboveground Fuel Storage Dispensing Facility, Charleston, WV** – Mechanical Engineer. 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.

**West Virginia ANG 130th Airlift Wing Communications Facility, Charleston, WV** – Mechanical Engineer. Design (Type A and B, 65%) for a new \$3.6 million, 13,100 SF Communications Facility at Yeager Airport in Charleston for West Virginia Air National Guard, designed for LEED Silver rating, to provide a centrally located common user communications system for both intra-base and off-base communications, with ground control of all ground point-to-point contact and air to ground point-to-point contact (such as radio, telephone, DISNET, etc.). Design paused at 65% to enable base's master plan and re-prioritize new capital improvements.

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

**Indiana ARNG Combined Arms Collective Training Facility Project, Planning Design Charrette, Muscatatuck, IN** – Mechanical Engineer. Design and engineering consulting to conduct a multi-agency collaborative Project Planning Document Charrette (PPDC), for development of a Combined Arms Collective Training Facility (Muscatatuck CACTF) and to validate a \$16.1 million project award estimate, involving senior leadership, key staff, other stakeholders, ARSC-TPIO-Live, USACE Huntsville Division MCX (CEHNC), and DAMOTRS. Confirmed project development cost and facilities needs and recommended major renovation / conversion of 23 of 70 existing buildings and new construction.

**Ohio ARNG Regional Training Institute, USP&FO Office/Warehouse and Combined Support Maintenance Site (Phase 2) Construction Services, Columbus, OH** – Project Manager. Commissioning services and construction observation/documentation services for a 123,000 SF, \$13.9 million Regional Training Institute, a 69,880 SF, \$7.5 million USP&FO Office/Warehouse, and Phase 2 of a 97,635 SF, \$19.3 million Combined Support Maintenance Site, all located at the Defense Supply Center Columbus (DSSC).

**Kentucky ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop, Paducah, KY** – Mechanical Engineer. Engineering design for design / build delivery of a \$14.7 million complex of over 83,300 SF total in three buildings, meeting LEED Silver sustainable design rating, serving both Kentucky Army National Guard and U.S. Army Reserves.

**California ARNG Infantry Platoon Battle Course, Camp Roberts, CA** – Mechanical Engineer. Design for a new, \$2.7 million infantry platoon battle course providing stationary and moving infantry and armor targets (RF controls, battery power operation), machine gun observation bunkers, tactical trenching obstacles and mortar simulation devices in six separate obstacles.

**California ARNG Infantry Squad Battle Course, Camp Roberts, CA** – Mechanical Engineer. Design and engineering for a \$1.78 million infantry squad battle course for Camp Roberts, including Range Operations and Control Area (ROCA) and support facilities providing stationary and moving infantry and armor targets, machine gun observation bunkers, tactical trenching obstacles, mortar simulation devices in six separate obstacles, and targets using RF controls and battery power operation.

**Air Force Special Operations Command C-130 Hangar Complex, Cannon AFB, NM** – Mechanical Engineer. Concept design and Design-Build RFP to construct two of the first facilities supporting C-130 aircraft to be built at a new AFSOC base at Cannon AFB (NM), including a Corrosion Control Hangar (\$22 million, 57,700 SF) and a Fuel Cell Hangar (\$23 million, 31,100 SF).

**Colorado ANG 140th Air Wing Add/Alter Weapons Release Facility, Buckley AFB, CO** – Mechanical Engineer. Upgrade and expansion of existing Building 805 (from 12,100 SF to 16,200 SF) to support new missions: 18 PAI F-16 aircraft and Air Sovereignty Alert (ASA). Involved extensive modifications to existing floor plan and interior finishes, space allocated for training additional personnel and mission support equipment, increased energy efficiency through upgraded HVAC and lighting, and received new roof and new building envelope. Project received LEED Silver certification.

**Crane NSA Depot Operations Field Office (Building 3530), Crane NSWC, IN** – Mechanical Engineer. Design and construction administration services for design-build of new Depot Operations Field Office which included 2,800 SF pre-engineered metal building. Functional areas include private and shared offices, common multi-use area, break room, computer kiosk bank of seven computers with field scanner docking stations, storage and equipment room, restroom/locker rooms, and mechanical/utility space. Also included ABA compliant parking and sidewalks, designated ATRP standoffs from new building.

## Monty Maynard, PE, LEED AP BD+C | GRW Electrical Engineer



### YEARS OF EXPERIENCE:

With GRW: 21

Total: 40

### EDUCATION

B.S., Electrical Engineering, 1978,  
University of Kentucky

### REGISTRATION

Professional Engineer  
(Electrical): KY, WV, IN, GA, TN,  
TX, NV, NC, MS, MI, AL, CA, DC,  
FL

NCEES Member allows  
reciprocity with other states

LEED Accredited Professional,  
Building Design + Construction

Certified Healthcare Contractor

### PROFESSIONAL AFFILIATIONS AND TRAINING

National Fire Protection  
Association

International Society of  
Automation

American Institute of Architects

American Council of  
Engineering Companies

National Council of Examiners  
for Engineering and Surveying

Air National Guard Civil  
Engineering Association Life  
Member (Associate)

Society of American Military  
Engineers

American Water Works  
Association

Kentucky Society of Healthcare  
Engineers

Monty's experience with electrical design, process instrumentation and control design, and project management is extensive. He has been involved with the design of building systems for more than 300 projects with total construction values as high as \$984 million. His areas of technical expertise include electrical power distribution, substation design, alarm systems, communications, lighting, lightning protection, power quality, energy efficiency and code compliance.

### RELEVANT PROJECT EXPERIENCE

#### **West Virginia ARNG Joint Armed Forces Reserve Center and Area Maintenance Support Activity, Ripley, WV** – Electrical Engineer.

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.

**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 in Charleston for WV ANG, designed for LEED Silver rating, to provide a centrally located common user communications system for both intra-base and off-base communications, with ground control of all ground point-to-point contact and air to ground point-to-point contact (such as radio, telephone, DISNET, etc.). Design paused at 65% to enable base's master plan and re-prioritize new capital improvements.

**West Virginia Division of Corrections Lakin Correctional Center Lightning Protection Improvements, West Columbia, WV** – Project Manager. Lightning protection system ground study and improvements at 166,000 SF, medium-security, women's correctional facility. Services included study of power distribution deficiencies, grounding study, as well as design and construction administration services for recommended new system.

**Indiana ARNG Combined Arms Collective Training Facility Project, Planning Design Charrette, Muscatatuck, IN** – Electrical Engineer. Design and engineering consulting to conduct a multi-agency collaborative Project Planning Document Charrette (PPDC), for development of a Combined Arms Collective Training Facility (Muscatatuck CACTF) and to validate a \$16.1 million project award estimate. Confirmed project development cost and facilities needs and recommended major renovation / conversion of 23 of 70 existing buildings and new construction.

**Edwards Air Force Base Comprehensive Base Master Plan, Palmdale, CA** – Electrical Engineer. Comprehensive master planning, GIS development, natural and cultural resources services, environmental, and facility and infrastructure analysis services over a 7-year period, totaling \$16 million in professional services fees, at a 470-square-mile California air base, integrating the interests of myriad Air Force organizations, government agencies of multiple levels, civic and community organizations, and neighboring military installations, to guide installation development decisions.



**Nevada Air National Guard Relocation, Phase I & II, Reno, NV** – Electrical Engineer.

**Nevada ANG Two Squadron Operations & Training Facilities and 20 Other Facilities for Relocation of 152nd Airlift Wing, Reno/Tahoe IAP, NV** – Electrical Engineer.

**Georgia ANG 116th Wing B-1B Bomber Beddown and Composite Aircraft Maintenance Hangar Complex, Robins AFB, GA** – Electrical Engineer. Fast-track design for a new 76,000 SF B-1B bomber hangar complex comprising two bays, 2-story office administration areas with shop and maintenance service areas located on the ground floor, space for aircraft fuel system maintenance, corrosion control program activities, and the needed utilities and special systems required, with expansion capability to house C-17 aircraft. Separate hangar bays (50' height) house fuel cell and corrosion control functions, each requiring specialized humidity, vapor removal, and shop and breathing air utilities.

**Marshall University Weisberg Family Engineering Laboratory, Huntington, WV** – Electrical Engineer. A/E design for a new, 16,000 SF Engineering Laboratory Building on the main campus providing laboratories for materials, soils, hydraulics, structural, and environmental studies, classrooms and faculty offices. Building security systems included access control and CCTV. HVAC systems feature rooftop VAV systems with variable electric reheat.

**Indiana ARNG 76th Brigade Combat Team Readiness Center, Lawrence, IN** – Electrical Engineer. Planning, design and construction administration services for a new 109,555 SF, 2-story Readiness Center and 8,300 SF unheated storage facility.

**Kentucky ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop, Paducah, KY** – Engineering Manager. Engineering design for design / build delivery of a \$14.7 million complex of over 83,300 SF total in three buildings, meeting LEED Silver sustainable design rating, serving both Kentucky Army National Guard and U.S. Army Reserves. Provided: administrative areas; education space, 6 vehicle maintenance bays; assembly hall with kitchen; storage for general, flammable material, and controlled waste; security systems; and energy management and control systems. Site work included new grading and drainage improvements, stormwater detention, entry control point, roads, parking areas, vehicle wash rack, perimeter fencing and barriers, and AT/FP measures.

**Indiana ANG 122nd Fighter Wing Security Forces Operations and Training Facility, Fort Wayne, IN** – Principal-in-Charge. Conceptual design for design-build bridging document for a new \$3.86 million (FY07), 18,494 SF Security Forces Operations and Training Facility, including a Combat Arms Training and Simulator/Combat Arms Training Maintenance (CATS/CATM) area, providing offices for the Flight Chief, open office area for the base security forces, classrooms, workout room, locker room, weapons simulator room and weapons storage areas. Site work included grading, drainage and stormwater controls, new utilities, roads and parking areas and AT/FP measures.

## Harvey Helm, PE, LEED AP, PLS | GRW Civil Engineer



### YEARS OF EXPERIENCE:

With GRW: 43

Total: 43

### EDUCATION

B.S., Civil Engineering, 1977,  
University of Kentucky

### REGISTRATION

Professional Engineer: KY, KS,  
TN, IN, OH, MS, GA, NC, AL, AR,  
WV, NY, VA

LEED Accredited Professional  
Professional Land Surveyor: KY

### PROFESSIONAL AFFILIATIONS AND TRAINING

National Society of Professional  
Engineers

Kentucky Society of Professional  
Engineers

Soil and Water Conservation  
Society

Harvey's experience as a civil engineer is broad and encompasses land surveying, drainage facilities, streets and roads, site development and site utilities. He is very proficient in the technical elements that make up civil engineering projects of all sizes and has the management skills to produce quality and efficient projects. Harvey's federal government experience includes site development for projects in excess of \$180 million, as well as small task orders under indefinite delivery/indefinite quantity contracts. Harvey has completed more than 50 projects for the U.S. Army Corps of Engineers, Bureau of Prisons, National Guard Bureau and the U.S. Air Force.

### RELEVANT PROJECT EXPERIENCE

**West Virginia ARNG Camp Dawson Ranges, Kingwood, WV** – Civil Engineer. 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.

**West Virginia ANG 130th Airlift Wing Communications Facility, Charleston, WV** – Civil Engineer. Design (Type A and B, 65%) for a new \$3.6 million, 13,100 SF Communications Facility at Yeager Airport in Charleston for West Virginia Air National Guard, designed for LEED Silver rating, to provide a centrally located common user communications system for both intra-base and off-base communications, with ground control of all ground point-to-point contact and air to ground point-to-point contact (such as radio, telephone, DISNET, etc.). Design paused at 65% to enable base's master plan and re-prioritize new capital improvements.

**West Virginia ANG 167th Airlift Wing C-5 Apron Repair, Martinsburg, WV** – Project Manager. 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 includes 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 will also be included.

**West Virginia ANG Yeager Airport Pavement Design, Charleston, WV** – Project Manager. Pavement investigation/analysis, subsurface investigation, and design for grade, drain and surfacing construction plans for all air base pavements. Work included replacement of approximately 9,000 SY of taxiway and 33,000 SY of apron pavement; 27,000 SY of new perimeter taxiway for future expansion as an aircraft apron; and 10,600 SY of new apron/holding pad capable of providing two C-130 H aircraft for preflight check operations.

**Wendell H. Ford Regional Training Center Master Plan Update, Greenville, KY** – Civil Engineer. Master plan update for the entire facility covering training center located on 8,500 acres and including barracks and quarters for nearly 500 troops, live-fire ranges, maintenance facilities for military equipment, and 4,200-foot grass runway. Work for master plan update includes expansion analysis of utilities and buildable sites for areas such as the cantonment, range facilities areas and training barracks facilities.

**Edwards Air Force Base Non-Point Discharge and Stormwater Master Plan, Edwards Air Force Base, CA** – Project Manager. Engineering services for development of a stormwater management plan for a California air base encompassing 670 square miles. Identified and assessed current and potential sources of stormwater pollution, developed practices and controls to reduce the amount of pollutants entering the stormwater discharges, and developed a monitoring program to measure effectiveness of stormwater management practices.

**USACE, Louisville District Indefinite Delivery Contract for Real Property Master Planning, KY** – Civil Engineer. Military master planning, architecture, and civil, mechanical and environmental engineering to accomplish Expansion Capability Studies (Campbell Army Airfield, Destiny Heliport and Sabre Heliport, Ft. Campbell, KY); Long Range Development Plan and Environmental Overlay (Rock Island Arsenal, IL); Capital Investment Strategy (Rock Island Arsenal, IL); Site Planning at Rock Island Arsenal for Central Heating Plant Coal Stockpiles; Northeast Sector Stormwater Master Plan, Ft. Campbell, KY; and Boundary Survey, Ft. Campbell, KY.

**Arkansas Air National Guard Master Plan, Little Rock, AR** – Civil Engineer. Comprehensive master planning and digital mapping services to assess the existing physical character of the installation, to determine the ANG's existing needs and potential, and to plan for an orderly and comprehensive future development to accommodate the current mission, programmed mission changes, and probable future missions.

**Alabama Air National Guard Master Plan, Birmingham, AL** – Civil Engineer. Master planning and digital mapping services to assess the existing physical character of the installation, to determine the ANG's existing needs and potential, and to plan for an orderly and comprehensive future development to accommodate the current mission, programmed mission changes, and probable future missions.

**Tennessee ANG Master Plans for 118th Airlift Wing (Nashville), 164th Airlift Wing (Memphis) and 134th Air Refueling Wing (McGhee Tyson/Knoxville),** – Civil Engineer. Engineering consulting preparing web-based planning documents at 3 Tennessee Air National Guard bases.

**Army Master Plans, Various Locations,** – Civil Engineer. Master planning services at U.S. Army installations in Illinois, North Carolina, Puerto Rico, Alaska, Alabama, Kentucky and Virginia, spanning two decades, preparing a broad range of plan components with the most recent efforts conforming to AR 210-20 and related regulations.

**Ohio ARNG Joint Armed Forces Reserve Center and Field Maintenance Shop Complex, Springfield, OH** – Civil Engineer. Project Planning Document Charrette and design for new LEED Silver Certified 85,865 SF complex serving both Ohio Army National Guard and U.S. Army Reserves.

## Roger Kennedy, PLA, ASLA | GRW Landscape Architect



### YEARS OF EXPERIENCE:

With GRW: 27

Total: 28

### EDUCATION

B.S., Landscape Architecture,  
1990, West Virginia University

### REGISTRATION

Professional Landscape  
Architect: WV, KY

### PROFESSIONAL AFFILIATIONS AND TRAINING

Trustee, WV Chapter, American  
Society of Landscape Architects  
Past President, St. Albans Rotary  
Member, Sigma Lambda Alpha  
Honor Society of Landscape  
Architects

WV Division of Highways  
Engineering Excellence Award,  
WV Route 10 (2013, 2011, 2000);  
Corridor H (2013)

Roger has a diverse background in landscape architecture and over the years has developed expertise in roadway design, stormwater management, erosion and sediment control, streambank stabilization, and recreation trail design. He has been involved in major site development projects as well as smaller projects such as culvert designs. Roger also has expertise in the design of boating and fishing facilities and has designed boat ramps and docks for recreational boating, as well as docks for sternwheelers. He has also designed accessible fishing piers and has even assisted in the construction of a fishing pier.

### RELEVANT PROJECT EXPERIENCE

**Chief Logan State Park Cabin Access Road, Logan, WV** - Project Landscape Architect for a new 1700-foot access road serving three new cabins for the West Virginia Division of Natural Resources. The project included utility design, stormwater management, and extensive erosion and sediment control.

**Meadow River Trail, Greenbrier and Fayette Counties, WV** - Project Landscape Architect for a multi-use rail trail being developed by the Greenbrier and Fayette County Commissions in West Virginia as a Recreation Trail Project administered by the West Virginia Division of Highways. The project includes the rehabilitation of 17 miles of compacted aggregate trail and six railroad trestles, which will be rebuilt to accommodate pedestrian, bicycle and equestrian traffic. After the initial design was complete, seasonal floods damaged the existing trail. Working with FEMA and the County Commissions, the project scope was expanded to include flood damage repair.

**Lewisburg L&R Trail, Phase I & II, Lewisburg, WV** - Landscape Architect. Phase I of multi-use trail at historic L&R Railroad no longer in service. First phase starts in downtown Lewisburg and winds through residential neighborhoods before ending at highway. Future phases continue trail toward Ronceverte.

**Blennerhassett Boat Dock, Parkersburg, WV** - Project Landscape Architect for the development of a boat dock facility for the Island Belle sternwheeler at the Blennerhassett Historic State Park. The project included not only the design of the boat dock, but also U.S. Army Corps of Engineers permitting, and coordination of archaeological and biological studies and permits.

**Shepherdstown Pedestrian and Bicycle Trail, Shepherdstown, WV** - Landscape Architect. New, 4,000-foot pedestrian/bicycle trail parallel to WV 45. Required close coordination with local and state historic groups to maintain sensitive cultural heritage resources.

**St. Albans High School Girl's Softball Field, Charleston, WV** - Landscape Architect. Design of girls' softball field located between St. Albans High School athletic track and Belvil Athletic Annex. Required demolition and renovation of portions of Belvil Athletic Annex to provide sufficient outfield. Schematic drawings were provided for dugouts and concessions stand area with press box and restrooms.

## 4.0 Project Management and Quality/Cost Control

### Project Management

Our approach to managing your project is straightforward:

- Assemble the best and brightest design talent with knowledge about Camp Dawson and/or national guard/military projects;
- Bring an open mind and fresh perspectives; and
- Remain accountable to you throughout the process for cost control/budget.

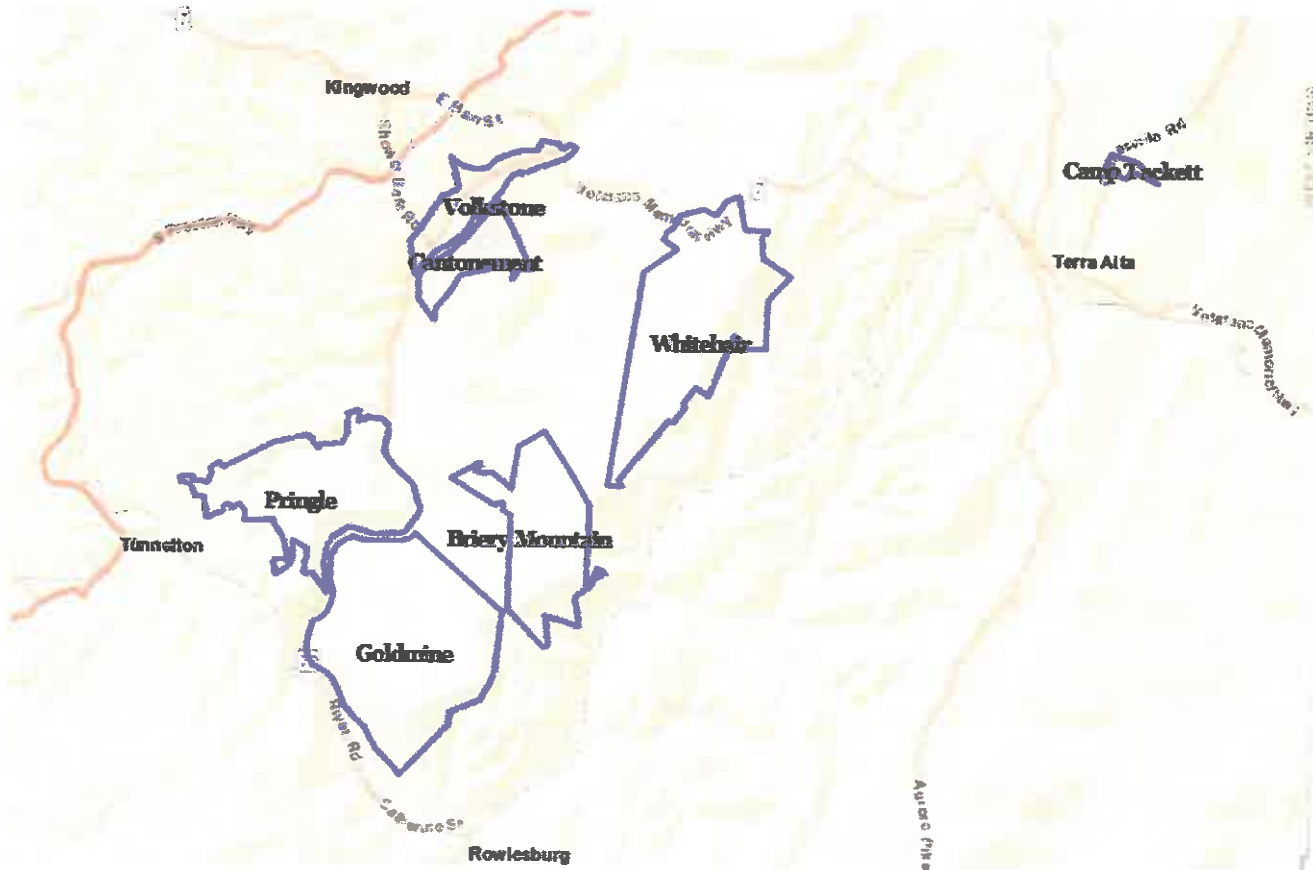
The relationship between you and your chosen design consultant is critically important. The cornerstone of the GRW design approach is collaboration. Communicating in an open dialog, where ideas can be freely explored and considered, helps to vest everyone in the project's success, and is a vital prerequisite to ensuring buy-in from all project stakeholders. The following provides a general overview of our process.

### Kickoff/Charrette/Visioning

One of the earliest tasks in the work program is a kick-off meeting with the Project Staff and User Groups to:

- Identify all uses and functions by area
- List goals, objectives and expectations – needs and guiding principle identification
- Establish an order-of-magnitude budget where possible
- Prioritize uses, functions and expectations
- Initialize the Project Schedule by targeting milestone dates

The outcome of this meeting is crucial to **understanding** expectations to insure our process, with intermediate deadlines, **delivers** the intended expectations. This is the beginning of determining the decision drivers for the Master Plan.



Subsequent meetings with stakeholders identifies usage and growth trends that lead to programming criteria, operational modifications and strategic directives to optimize the facilities within budget limitations.

The work product of every meeting is a written record of the discussions, directions and priorities for the overall Master Plan.

## Existing Conditions Analysis

We will take stock of the existing facilities and infrastructure within each Master Plan area through examination of existing documentation and field research including interviews.

At the conclusions of this step we will create a report that outlines the condition of each Master Plan area's components and systems that need to be addressed in the Master Plan based on the values and vision identified during the Kick-off and follow-on meetings.

## Concept Development

Using the information from the Kickoff/Charrette/Visioning meetings and the subsequent analysis of existing conditions, we will proceed with a concept development plan for each area, following the principles found in **NGR 210—20, "Real Property Development Planning for the Army National Guard"** (20 July 2004); **Unified Facility Criteria 2-100-01** (15 May 2012), as well as other project-specific and National Guard-specific criteria acquired/used during the master planning process. Further, we will acquire/use **NG Pam 415-12** (January 2015) during the master planning process.

The concept plan will include viable options for consideration, again based on the evaluation criteria from the documented Stakeholders, User Group meetings, and WVARNG reference criteria.

We will present this concept to you through the use of drawings, product cut sheets and written narratives. After your review of the report, we will confer with all decision-makers to determine a preferred or recommended development plan.

We will document each step of the process with thorough meeting minutes.



## Draft and Final Master Plans

Building on and refining the approved concept development documents, the GRW team will proceed with preparation of the Draft Master Plan for review and approval prior to printing and issuing the Final Master Plan document.

The Draft issue is the final check of conditions, analysis, needs and requirements developed from the investigative work and option testing by the entire team up to this point. While the preliminary ideas for phasing and implementation are introduced during the development and review meetings, an action plan or implementation strategy are added at this point. Ideas without action bear no fruit. The implementation plan may also include lease actions for property acquisition or disposal of non-performing assets to better manage the resources of each Master Plan area.

After review and approval of the Draft Master Plan, final edits are made and the Final Master Plan documents are printed for issue.

## Flexibility

These procedures are not cast in concrete, as GRW prides itself on being an organization which seeks to simplify and expedite procedures that otherwise might impede the work. Based on the size of the project; procedures are streamlined or more formalized for larger projects but at all times they remain flexible to accommodate the needs of our clients.

## Quality & Cost Control

At GRW, cost control, scheduling and value engineering are daily components of design rigor. The impact of our decisions regarding project planning, design and construction are assessed in weekly project meetings with all A/E disciplines to assure that budgets and schedules are met. During these sessions, project status is discussed to determine adequate resources are directed to meet the project schedule. The issues tracking list we create is reviewed to ensure all problems are resolved before they can affect the schedule or budget. Our vision as your full-service architectural and engineering design firm is to offer services that simplify the design and construction process. We will partner with you each step of the way.

### Quality Control

Scott Emerson, our Project Manager, will have primary responsibility for the daily management and coordination of the project team. With over 30 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 course of the project. This focus includes our communication with you and your stakeholders, with the Contractor, and with our internal design team members. Key to this effort is our use of Newforma project information management software, which allows the storage, sharing, and retrieval of project information both internally and externally.

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

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

common understanding of the goals and objectives among all project partners. These issues will be reviewed and the work plan will be discussed in detail. Lines of communication and coordination will be established. Regular meetings will then be scheduled throughout the project to report on project progress and to review technical issues. These meetings will provide a forum for discussion regarding any concerns or ideas. The assigned Project Manager will be 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 correction and resolution. A checklist controlled by the Project Manager is used to track the resolution of issues from meeting-to-meeting.

**SCHEDULE MANAGEMENT:** No QA/QC process can succeed with allocating sufficient time for internal review. The Project Manager will develop a proposed internal design schedule at the beginning of the project that incorporates appropriate time for internal review. These internal reviews will typically occur at the normal design submittal stages 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 daily basis within the company. Impromptu meetings to discuss specific issues take place almost daily, and are typically facilitated by the Project Manager. Scheduled reviews that take place before each interim design submittal. 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 leveraging close

collaboration early in the design stage, options can be quickly developed and evaluated to understand design impacts on cost 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 those original criteria.

### Cost Control

**PROJECT BUDGET ACCOUNTABILITY:** As public officials, you are accountable to the public for the expenditure of public monies. The GRW team understands your obligation and stands prepared to help deliver a project that is cost-effective and that represents an efficient and appropriate use of public funds. Rarely do projects have sufficient budget to accommodate everything on the

programmatic *wish list*. Assessing the project budget relative to the program must be 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, and it will be discussed openly and frankly 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 for 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 revisions to help further reduce the construction cost and give you the most construction value for your dollar.



**GRW provided design and construction phase services for the WV ANG's 130<sup>th</sup> 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).**



## 5.0 References

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

### **West Virginia Air National Guard**

**130th Airlift Wing**  
1679 Coonskin Dr.  
Charleston, WV

Capt. Harry Netzer  
Deputy BCE  
(304) 341-6649  
harry.g.netzer.mil@mail.mil

**167<sup>th</sup> Airlift Wing CES**  
222 Sabre Jet Blvd.  
Martinsburg, WV

Maj. Emerson C. Slack  
Deputy BCE  
(304) 616-5233  
emerson.c.slack.mil@mail.mil

### **West Virginia Division of Corrections**

1409 Greenbrier St  
Charleston, WV

Philip Farley, II  
Director of Engineering and Construction  
(304) 558-2036  
Philip.K.Farley@wv.gov

### **Ohio Army National Guard**

Adjutant General's Department  
2825 W. Dublin-Granville Rd  
Columbus, OH

George McCann  
Project Manager  
(614) 336-7413  
george.c.mccann@us.army.mil

### **West Virginia DOH Division of Highways**

1900 Kanawha Boulevard, East  
Building 5, Room A-350  
Charleston, WV 25305

Nyle Fisher, Maintenance Division  
(304)-558-9289  
Nyle.L.Fisher@wv.gov

### **Kentucky Army National Guard Department of Military Affairs**

Boone National Guard Center  
100 Minuteman Pkwy, Building 162  
Frankfort, KY

David M. Parker, PE, LSIT, LEED AP  
Master Planner  
(502) 607-1770  
david.m.parker147.nfg@mail.mil



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: 364242

Doc Description: CAMP DAWSON MASTER PLAN EOI DESIGN

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2017-08-10	2017-08-31 13:30:00	CEOI 0603 ADJ1800000002	1

**RECEIVING LOCATION**

RECEIVING CLERK  
 DEPARTMENT OF ADMINISTRATION  
 PURCHASING DIVISION  
 2019 WASHINGTON ST E  
 CHARLESTON WV 25305  
 S

**ENDORSEMENT**

Endor Name, Address and Telephone Number:

GRW  
 200 Sixth Avenue  
 St. Albans, WV 25177  
 Joe Bird, RLA, ASLA  
 (304) 727-5501

**FOR INFORMATION CONTACT THE BUYER**

Crystal Rink  
 (304) 558-2402  
 crystal.g.rink@wv.gov

Signature X

FEIN # 61-0665036

DATE 8/29/2017

Offers subject to all terms and conditions contained in this solicitation

**ADDITIONAL INFORMATION:**

THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA ARMY NATIONAL GUARD, CONSTRUCTION AND FACILITIES MANAGEMENT OFFICE, IS SOLICITING EXPRESSIONS OF INTEREST FROM QUALIFIED FIRMS TO PROVIDE PROFESSIONAL DESIGN SERVICES TO DEVELOP A MASTER PLAN FOR THE CAMP DAWSON TRAINING CENTER, AT CAMP DAWSON IN KINGWOOD, WV, PER THE ATTACHED DOCUMENTATION.

**\*\*ONLINE RESPONSES WILL NOT BE ACCEPTED FOR THIS SOLICITATION \*\*\***

VOICE TO		SHIP TO	
STATE FINANCE ADJUTANT GENERALS OFFICE 703 COONSKIN DR  CHARLESTON WV25311-1085		FACILITY MAINTENANCE MANAGER CAMP DAWSON ARMY TRAINING SITE 240 ARMY RD  KINGWOOD WV 26537-1077	
US		US	

Line	Comm Ln Desc	Qty	Unit Issue
	CAMP DAWSON MASTER PLAN DESIGN		

Comm Code	Manufacturer	Specification	Model #
1101508			

**Extended Description :**

THE OWNER IS SEEKING THE SERVICES OF A QUALIFIED PROFESSIONAL ARCHITECTURAL/ENGINEERING FIRM TO PROVIDE MASTER PLANNING FOR THE CAMP DAWSON TRAINING CENTER LOCATED AT CAMP DAWSON NEAR KINGWOOD, WV

<b>ADJ180000002</b>	<b>Document Phase</b> Final	<b>Document Description</b> CAMP DAWSON MASTER PLAN EOI DESIGN	<b>Page 3</b> <b>of 3</b>
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**ADDITIONAL TERMS AND CONDITIONS**

See attached document(s) for additional Terms and Conditions

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

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

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

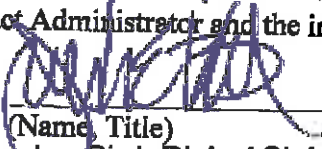
**3. PRE-BID MEETING RESPONSIBILITIES:** The Architect/Engineer shall be available to attend any pre-bid meeting for the construction or other work resulting from the plans, drawings, or specifications prepared by the Architect/Engineer.

**4. AIA DOCUMENTS:** All construction contracts that will be completed in conjunction with architectural services procured under Chapter 5G of the West Virginia Code will be governed by the AIA A101-2007 and A201-2007 or the A107-2007 documents, as amended by the Supplementary Conditions for the State of West Virginia, in addition to the terms and conditions contained herein. The terms and conditions of this document shall prevail over anything contained in the AIA Documents or the Supplementary Conditions.

**4A. PROHIBITION AGAINST GENERAL CONDITIONS:** Notwithstanding anything contained in the AIA Documents or the Supplementary Conditions, the State of West Virginia will not pay for general conditions, or winter conditions, or any other condition representing a delay in the contract. The Vendor is expected to mitigate delay costs to the greatest extent possible and any costs associated with Delays must be specifically and concretely identified. The state will not consider an average daily rate multiplied by the number of days extended to be an acceptable charge.

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

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



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

Joe Bird, RLA, ASLA, Vice President

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

200 Sixth Avenue, St. Albans, WV 25177

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

(304) 727-5501 / (304) 727-5580

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

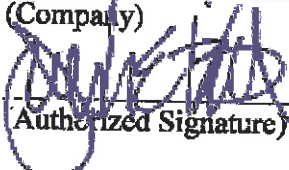
jbird@chaptech.com / info@grwinc.com

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

Joe Bird, RLA, ASLA, Vice President

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

08/30/2017

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

(304) 727-5501 / (304) 727-5580

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

**ADDENDUM ACKNOWLEDGEMENT FORM  
SOLICITATION NO.:**

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: Not Applicable / No Addenda Issued  
*(Check the box next to each addendum received)*

- |   |  |
|---|--|
| <input 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 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.

\_\_\_\_\_  
Company

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date

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

STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

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

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

**DEFINITIONS:**

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

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

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

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: GRW

Authorized Signature:  Date: 8/29/2017

State of Kentucky

County of Shelby, to-wit:

Taken, subscribed, and sworn to before me this 29 day of August, 2017

My Commission expires 7-6, 2018

AFFIX SEAL HERE

NOTARY PUBLIC 