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General Information

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Procurement Type: Central Purchase Order

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Legal Name: Jacobs Engineering Group Inc

Published Date: 7/31/20

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Solicitation Description: Installation Energy and Water Plans

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

**State of West Virginia
 Solicitation Response**

Proc Folder : 762738
Solicitation Description : Installation Energy and Water Plans
Proc Type : Central Purchase Order

Date issued	Solicitation Closes	Solicitation Response	Version
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VENDOR
VS0000029839 Jacobs Engineering Group Inc

Solicitation Number: CEOI 0603 ADJ2100000004

Total Bid : \$0.00 **Response Date:** 2020-08-20 **Response Time:** 11:56:59

Comments:

FOR INFORMATION CONTACT THE BUYER
 Tara Lyle
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 tara.l.lyle@wv.gov

Signature on File	FEIN #	DATE
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All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Installation Energy and Water Plans				\$0.00

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description : Provide professional engineering consulting services per the attached documentation.

20 August 2020

Re: West Virginia Army National Guard Installation Energy and Water Plan (IEWP)

Solicitation Number: CEOI 0603 ADJ2100000004

Ms. Tara Lyle

We are pleased to have the opportunity to provide our qualifications for the above-referenced project. Jacobs is proposing an experienced team having the necessary expertise in the development of your Installation Energy and Water Plan (IEWP). For nearly 30 years, Jacobs has provided expertise in all areas of sustainability planning. Our Team has completed numerous planning and design services on multiple projects similar to yours, and brings strategic advantages to deliver informed decision making, practical and tangible solutions for resilience, and long-term energy and water performance and security options that are cost effective and reliable.

Jacobs is proposing a Team which includes our dedicated Strat Con Energy Solutions Group which brings proven technical expertise in the successful delivery of energy solutions such as energy master plans, energy audits and project development, as well as resiliency solutions such as microgrid systems including distributed generation integrated with renewable energy. For decades, our team has been helping our Federal clients navigate through the complex and evolving realm of federal energy policy and mandates while facing challenges such as improving energy resiliency and security, meeting energy reduction and renewable energy goals, limited natural resources, and a changing economic reality. In addition, we have demonstrated experience with development of facility planning, design and energy solutions with both local and national experience for the National Guard.

We stand ready to support the West Virginia Army National Guard and look forward to working with your Team. We look forward in developing this new relationship and building a foundation of professional services for future opportunities. Should you have any questions or require additional information, please feel free to contact us.

Sincerely,
JACOBS



James F. Kurtz, NCARB, AIA
Project Executive
Principal, National Guard Program
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Executive Summary

Jacobs provides over 50 years of experience as a full-service planning, programming, architecture, engineering, and construction firm, partnering with the Army National Guard to achieve your mission and objectives. Additionally, our team brings unique expertise and extensive experience in delivering A-E planning and design for National Guard projects having completed planning and design requirements for numerous energy projects similar to yours. With more than 52,000 employees worldwide, Jacobs is one of the largest and most diverse providers of technical planning. Our team understands how important each of your projects are in providing your warfighters the best possible environment in which to maintain a mission-ready status and respond rapidly to a diverse category of mission types. Over the course of the past decade, we have delivered one of the largest volumes of professional services in the U.S. and its territories related to Army National Guard requirements. We are intimately familiar with the NGB guidance for Installation Energy and Water Plans, and have completed plans IAW the July 2018 guidance.

An effective Energy and Water Plan includes many elements such as an effective funding strategy, policy, goals and objectives, staffing and training and requires continued input and support from all stakeholders from management levels to end-users. We understand how important it is to consider all these elements as part of an overall master plan while identifying critical infrastructure the plan will include.



While having an Energy and Water Plan in place is the first critical component of your organizations plan, the only way to meet the stated goals and objectives is to implement programs and execute projects. Our team has been providing our clients with energy efficiency, renewable energy, and resilient project solutions that reduce energy consumption, increase clean energy production, improve energy reliability, and have real cost savings. We identify and implement projects that are economically viable, operationally achievable, and capable of meeting your plan's end state. Rather than a one-time snapshot, our Energy and Water plans are dynamic tools that can be periodically updated as funding becomes available, as project and programs are implemented, and as regulatory and economic conditions change.

Over the past 15 years, Jacobs has successfully developed Energy and Water Plans for a wide variety of clients including Army National Guard, Air National Guard, NAVFAC, federal agencies, municipalities, major universities, regional health care organizations, and airports. The implementation of these plans has provided resilient infrastructure as well as significant reductions in energy consumption, water use, and greenhouse gas emissions through efficiency improvement and clean energy generation.

Recent changes in federal energy policy have shifted the focus of the energy market from reducing consumption to improving resiliency and security. Resiliency is briefly defined as the ability to recover quickly from any natural or manmade disaster. We have a broad experience completing tasks for the National Guard, as well as for other DoD and private sector clients, to improve their resiliency with a focus on redundancy, protecting and hardening. Redundancy is accomplished across the full spectrum at the component and subsystem levels or through a complete

duplicative system. Protecting and hardening includes cyber and physical security, siting and shielding from threats, preventative and conditions-based maintenance, and resistance to a broad range of environmental, physical and cyber threats.

In addition to our experience in developing a multitude of energy efficiency solutions, as an industry leader in microgrid applications, we have broad experience in resilient energy systems. We have a deep pool of talent with experience in distributed generation, power distribution systems, SCADA systems including industrial controls, renewable energy, and cyber security. We have completed large scale programs for energy and utility master planning, demand side management, central plant design, photovoltaic, microgrid and smart-grid studies and implementation. The resiliency tasks we have completed have involved the analysis of vulnerabilities, engineering analysis, development of corrective courses of action, and creation of parametric cost estimates to support decision making and funding justification for projects that improve the resiliency of mission critical systems such as aviation fuel systems, power generation and distribution systems, building automation and electronic security and technology systems.

Value Added

Our team provides planning expertise gained by delivering dozens of successful National Guard RPDP, SDP, MP, and IMP projects throughout the past decade. As your trusted partner, our team provides the expertise and experience to successfully deliver your RPDP in the most cost effective and efficient manner possible.

As indicated throughout this proposal, our Team of planning professionals is 100% dedicated to providing you with excellent service and high-quality plans. Our planning efforts build upon the analysis, documentation, and recommendations from previous nationwide ARNG planning and programming efforts which serve as a baseline for further exploring a range of planning alternatives. We benchmark these alternatives against industry planning standards (including other ARNG States) and establish planning lessons learned and best practices that help us fully optimize real property facilities, infrastructure, and resources. These project elements ensure your Energy and Water Plan is adaptable to your changing mission, force structure, and vision, which provides a solid foundation for transitioning your strategic vision and objectives into reality.

We realize the development of the Energy and Water Plan represents a significant undertaking, requiring long-term commitment to enable comprehensive planning in support of your missions and readiness. The IEWP poses a complex set of challenges towards creating a plan that will aid your leadership in making informed decision at a strategic level.

"The entire Jacobs design team is to be commended for their outstanding architectural design of a new \$16 million Regional Training Institute in less than 12 months. Due to their exceptional professionalism, this expedited MILCON project resulted in a successful construction contract award at 93% of budget; ...we truly are very appreciative at the level of professional expertise displayed by your entire team on this project as well as previous projects (for the MOARNG). When we knew we needed a strong team to accomplish this expedited design (in approx.) 12 months, it wasn't a question in our minds that Jacobs was who was needed to ensure this highly visible project be done on time, within budget, and at professional high standards."

– Paul L. Junkans, Deputy CFMO, MOARNG, Construction & Facilities Management Office of the Adjutant General

Project Approach

The IEWP is an important document that aligns energy and water initiatives for efficiency and resilience with capital improvement plans and the mission requirements of all tenants. It develops a baseline of energy and water consumption, and, with input from the WVARNG, will quantify mission critical utility requirements. Threats and hazards will be identified, and an assessment of the vulnerabilities will be completed to identify the risk to the mission. Conservation and efficiency opportunities will be evaluated, solutions will be generated to improve performance and enhance resilience, and a prioritized dynamic implementation plan will be prepared. Two separate IEWPs will be developed as identified in the statement of work:

- IEWP 1: Camp Dawson, near Kingwood, WV
- IEWP 2: West Virginia (-) minus, 7 Sites.

Kick Off, Visioning, and Mission Critical Facilities Session

A clear vision is important for creating a sustainable, resilient, and cost effective IEWP. This vision must be transparent, concise, and achievable. At the start of the project we will conduct a Kick-Off Charrette with WVARNG to discuss the vision and goals for the IEWP, define IEWP stakeholders and goals, and establish energy and water requirements for critical missions. At this meeting, we will also work to define critical facilities and loads and identify emergency energy and water needs and abilities of each installation.

The outcome of this exercise will be the development of program requirements and project needs that will define the planning direction for the IEWP. Our team is purposefully holistic so the developed project goals will be driven with an economically, environmentally, and socially responsive agenda.

Evaluate Existing Facilities and Establish Baseline

Following the adage “you can’t plan for what you don’t know”, we place a high importance on obtaining as much relevant information as possible. By spending the proper time gathering this information in the beginning, we are able to prevent the duplication of effort and eliminate options that aren’t feasible.

Gather Available Data. The first step in our information collection process is gathering the existing available data. Upon notice to proceed we will submit an initial data request for existing information, which includes, but is not limited to existing conditions and operations, utility consumption data, as-built drawings, and future development plans. The data will be used to confirm our understanding of each installation.

To complete the initial data gathering process we will conduct an interview process, meeting with relevant system operators and stakeholders to better understand system operation, constraints, problems, or operational issues. Staff interviews are critical to capturing and documenting the working knowledge of those most familiar with the installation information that is seldom catalogued and often lost over time.

Existing Data Analysis. It is critical that we spend time reviewing existing information and identify gaps where information is missing, outdated, or unreliable. This analysis will allow us to optimize time spent in the field by identifying areas that require more detailed assessment, focusing more time on areas that are more complex/critical.

Performance Metrics Review. A sustainability focused review framework will include Army National Guard facility compliance with Federal mandates, agency directives and department guidance related to operationalizing sustainability with an emphasis on environmental stewardship, high performing and efficient systems, and strengthening mission readiness.

Site and Critical Facility Assessments. The project team will visit each site to collect site-specific and critical facility data to support development of the IEWP. The assessments shall include examination of significant energy and water using systems at the facilities as well as the primary site utility systems. During the site visits we facilitate a Stakeholder Workshop and develop relationships with key personnel that can assist with the coordination and completion of the documentation including items such as critical facilities, emergency contacts, and spare part availability. While onsite, the team will also conduct interviews with WVARNG personnel to discuss current operations, existing conditions of facilities, equipment and systems, planned and ongoing projects, etc. to gain an overall understanding of each site.

Site visits will include surveys of sites and facilities identified for each IEWP and will also include an energy audit of each of the facilities listed in the SOW (see section ASHRAE Level II Energy Audits for additional information). Exact details of each site visit and associated logistics will be defined upon notice to proceed. For the purposes of this proposal, three separate trips are proposed as follows:

- East (Camp Dawson and nearby sites): During this trip, facilities at Camp Dawson, as well as other WVARNG facilities in Bridgeport and Buckhannon, WV, as listed in the SOW
- North (WV Minus, additional facilities): During this trip, the team will travel as needed to sites located in Williamstown and Wheeling, WV.
- South (WV Minus, additional facilities): During this trip, the team will travel as needed to sites located in Charleston, Red House and Glen Jean, WV.

Define the IEWP Baseline. Using our knowledge captured for each site, we will evaluate the existing systems and equipment and develop appropriate baseline system models and load growth projections. These models will establish current and future baseline performance and identify system limitations. At the end of this phase we will have a baseline and future base case profile.

The IEWP baseline will also include other planning components, including facility metering existing infrastructure conditions, availability of resources, and current operations.

Federal Mandate Gap Analysis. The first step in defining the path forward for the IEWP will be identifying the current projected performance compared to federal mandate requirements. The completion of the gap analysis will serve to inform project development as future utility and energy reduction requirements are defined.

Preliminary IEWP Report and Stakeholder Workshop #2. A preliminary (50%) report will be developed to document the baselines and define the goals of the IEWP for each site, based on the data gathering and analysis efforts. An onsite stakeholder workshop meeting will be conducted to present an overview of the preliminary report and allow for additional input prior to development of solutions and final IEWP. This will serve to establish stakeholder understanding and consensus on the basis of and path forward for development of the IEWP.

ASHRAE Level II Energy Audits

Although not specifically defined in the SOW, in order to support WVARNG in continuing to meet federal requirements, such as the Energy Independence and Security Act (EISA) of December 2007, facility energy, water, and condition improvement opportunity assessments will be conducted, similar to an ASHRAE Level 2 Energy Audit, to identify potential energy and water conservation measures (ECMs). The audits will include examination of all significant energy and water using systems; investigation of building level renewable energy opportunities; identification of building system repairs, replacements, modification, and operational improvements; and an onsite workshop. We will focus on identifying the most cost-effective ECMs based on our experience of energy auditing over 250 million square feet of buildings.

Findings from the Energy Audits will also provide additional detailed facility baseline and opportunity information beyond the IEWP site data collection effort that will be used to support development of the IEWP baseline and project opportunities.

Initial Data Gathering. We will initiate a data request in writing immediately upon notice to proceed for additional data required to prepare for the site work and support the analysis. Existing information to be requested includes but is not limited to floor plans and as-built drawings, building utility consumption data, utility rates, and facility manager contact information.

Site Visit. During the site and critical facility assessment visits, the team will concurrently conduct the site work to support the ASHRAE Level II energy audits at Camp Dawson and the seven WV state minus (-) facilities listed in the SOW.

The site work will include visual observation and condition assessment of all significant energy and water using systems at the facilities including, but not limited to, HVAC systems, lighting, building envelope, and domestic water systems. Non-intrusive field measurements (i.e. space temperatures, light levels, or similar) will be taken as needed to support development of identified ECMs. The team will also review facility related control systems and existing operational parameters (setpoints, schedules, and similar).

If travel limitations are in place preventing site access, Jacobs could deploy a desktop review. The desktop analysis would include review of as built documents, teleconference with operations personnel, and review of control systems and set points.

ECM Development. The primary goal of an energy audit is to identify cost-effective opportunities for energy and water savings at the building level. In order to evaluate the impact of the identified ECMs, a baseline operating case for each audited facility will be developed based on observed conditions and information provided during the site visit. Energy modeling software will be used to help estimate the break down energy consumption by end-use, helping to identify the areas with the greatest opportunities for improved efficiency.

A combination of calculation methodologies, including energy modeling and spreadsheets, will be used to estimate the energy savings potential for each ECM. Preliminary capital and operating costs for implementing the measures will be determined in order to estimate project simple payback periods for the purposes of prioritizing the recommendations.

Energy Audit Report. A technical report will be developed to summarize the assessment activities and findings and present the evaluation of potential opportunities for improvements or energy/water savings. The report will provide a prioritized list of recommended measures for implementation. Supporting descriptions, calculations, and cost estimates will be included with the report, developed to a level sufficient to justify project implementation. A list of observed deficiencies and recommended repairs will also be included. Our process will provide deliverables that will include a draft, draft-final and final report.

Energy and Water Project Development

Once the existing baseline and the projected gap to meeting energy and water goals is established, conservation measures can be developed and evaluated. The project development will be focused on a three-tiered approach: building, regional, and renewables. By developing and evaluating projects from three different perspectives with one holistic vision, we will be able to provide a solution that meets established goals in a cost effective and achievable manner.

Building Energy and Water Project Development. An important element of the IEWP will be reducing energy consumption at the building level. During the site visit week, we will focus on identifying energy conservation opportunities based on our experience of energy auditing over 250 million square feet of buildings. We will look to identify items including lighting fixtures and controls, HVAC control system upgrades, outside air control, system resets, equipment efficiency upgrades, plug load control, and water fixture replacement amongst others. By lowering the building consumption, we are able to not only reduce the energy intensity, but also reduce the alternative and clean energy required to meet resiliency goals and federal mandate requirements.

Resiliency Energy and Water Project Development. We will work to develop projects that correct vulnerabilities in the utility infrastructure to critical buildings that do not meet ARNG resiliency requirements. As part of that analysis we will look at various levels of resiliency projects and will include projects that are strictly for back up as well as projects that can be deployed to provide benefits year-round and not just during a utility outage. We will evaluate the cost and benefits of the projects to provide a recommendation on a general path forward for utilities and facilities.

Renewable Energy Project Development. Installations will be carefully analyzed for opportunities to tap renewable energy resources and implement cost effective renewable energy projects to provide resilient solutions. We will examine financing strategies, local regulations and generating capacity in order to determine the most effective means of successful implementation.

Energy and Water Security

We understand that military installations are at a high risk for both natural disasters and man-made threats. In addition to being a high-risk target, Installations must also sustain operations during a disaster or attack; having a proper Installation Energy and Water Security Plan which identifies and mitigates system vulnerabilities is critical. Our approach for sustaining operations is focused around three key areas: 1) protecting and hardening, 2) redundancy, or 3) rapid repair. Following is an overview of our approach for improving energy and water security for critical facilities.

Utility Resources Coordination. With a firm understanding of the critical utility needs, we will work with the WVARNG to dialogue with utility suppliers for each Installation to identify emergency needs for the installation as well as system capabilities and vulnerabilities from the utilities perspective.

Vulnerability Analysis. The most effective way of ensuring long term energy and water security is by removing single points of failure or areas that are considerably susceptible to outages. To reduce the high-risk areas, they first need to be identified which is why as part of the initial development we will complete a vulnerability analysis. The review will include a complete system analysis that will be conducted to evaluate the entire generation and distribution of the energy and water systems, from supplier to end use and prioritize the vulnerabilities.

System Failure Analysis. Following the critical facility assessment, a complete system analysis will be conducted to evaluate the entire generation and distribution of the energy and water systems, from supplier to end use. This analysis will identify where single points of failure in the system as well as areas with a higher vulnerability risk.

Mitigation Plan. For the mitigation plan we will utilize the vulnerability assessment with supplemental survey work to identify areas of deficiencies. We will then work with each installation to develop a prioritization metric that ensures the most critical needs from both operations and engineering perspectives are weighted correctly.

From the identification and prioritization of the mitigation actions we will provide a description of the work, rough order of magnitude cost estimate, and example implementation plan. All data will be input into a recommended implementation plan, identifying an action plan for the Installation that provides guidance on how and when to correct all major issues that could impact energy and water delivery to critical facilities.

Implementing the Plan

A successful master plan is determined by whether the plan is actionable, how well it meets the defined goals and how well it is implemented. Therefore, it is important to develop a feasible implementation plan and provide deliverables and tools that are aimed at successful implementation over the life of the plan.

Funding Analysis. Securing funding for energy and water projects can be difficult as different sources impose limits on project costs, scope or payback. We have an extensive knowledge of funding sources available for energy work, including capital improvements, alternative financing, repair/maintenance, special resource funds and other sources. We will evaluate the projects and preliminary identify the funding sources. We will also make recommendations for projects that based on our experience is a good project for submitting for ERCIP funding.

Final IEWP Reports. The reports will serve as a resource to provide guidance for proper implementation to meet energy and water goals. As the master plan is implemented, having a central database of information is necessary to better understand the development process. The reports will include the implementation plan detailing the schedule, funding, and savings for each project. The implementation plan will be completed in Excel with the dynamic master planning tool.

Dynamic Master Planning Tool. In addition to the report, we will deliver an intelligent, custom tool loaded with the projects developed in the master plan and goals along with supporting master plan documentation. This planning tool helps you determine and communicate important drivers, such as funding, to leadership, stakeholders, and other groups to facilitate decision making and get important energy projects online quicker.

FEDERAL ENERGY POLICIES, MANDATES AND ENERGY PLANNING EXPERTISE

We understand the National Guard along with the rest of the DoD is currently faced with the challenge of developing and executing plans to comply with Federal Policy and mandates including the Energy Policy Act of 2005, the Energy Independence and Security Act of 2007 and Executive Order 13834 *Efficient Federal Operations*. Our experience helping clients implement these requirements and reach goals for energy conservation, renewable energy and sustainability has positioned us to assist the National Guard in implementing energy resilience cost-effectively.

Our planning approach will take into consideration the current Federal mandates and guidance as well as the local environment's conditions such as climate, average temperatures, wind and precipitation conditions, infrastructure strategies, and regional resources to formulate a holistic energy strategy specific to each site. Our team of certified and accredited professionals provides "lessons learned" and "best practices" gained from similar projects, ensuring the evaluation and utilization of the latest cost-effective technologies to achieve your project's energy goals.

ENERGY CONSERVATION AND COST-EFFECTIVE STRATEGIES

As a matter of standard practice when developing National Guard Installation Master Plans and facility designs, our process includes the review of available energy conservation techniques that can be applied to the project.

We have a talented team of energy professionals capable of identifying and implementing energy conservation and energy efficiency measures in both new and existing facilities. We use energy modeling tools such as eQuest and IES in conjunction with life cost analysis to develop the most cost-effective approach to energy management. We routinely complete life cycle cost analysis in compliance with federal guidance including the application of escalation rates and factors from MIST Handbook 135 and its annual supplement.

Some examples of energy conservation techniques we can consider for various types of operations include: specifying high-efficiency motors, energy efficient lighting, lighting controls, and building control systems, mechanical system upgrades to include utilization of high-efficiency equipment, the latest metering technologies (including smart metering), targeted controls programming and sequencing enhancements, industrial processing enhancements, demand response improvements, and modern pumping and associated distribution systems.



NJARNG AASF Hangar Roof Mntd. PV Panels generate 207kW of power



Combat Air Brigade (CAB), Solar Array produces 2MW out of the 4.7MW total generated at Ft Carson

Energy conservation can also include the introduction of energy management software that could help in monitoring and tracking real time electrical use. This type of software helps manage electrical loads at backup generators, HVAC, and lighting systems. Another option we consider is reducing use of fossil fuels, such as natural gas or fuel oil, and the integration of alternative and/or renewable energy sources. Examples of renewable and resilient energy we typically investigate include wind power, solar photovoltaics and fuel cells. We have several renewable energy system designs/constructions underway at various NGB project sites (photovoltaics, wind turbines, and solar hot water heating systems) throughout the US. Considering energy conservation measures into the design will reduce the overall operating expenses of your facility. We will perform life cycle cost analyses (LCCA's) to determine the economic feasibility and will work with you on implementation of the most viable options for your facility. Through the utilization of these types of systems, you can track your entire infrastructure and collect data on utility usage, power factor charges, peak and non-peak billing factors, consumption, and demand. By applying such energy conservation techniques as described above, we will help you reduce your overall energy consumption for your facilities, reducing your annual operating costs.

Energy efficiency, sustainability and reliability are key components in all our planning and programming for National Guard and DoD installations. We view these as inherent and pervasive components of the planning process customizing strategies and long-term solutions for your project to support your performance goals, while maximizing savings in operational costs.

We fully understand the requirement contained in the Scope of Work. As indicated in our Project Approach, our experience in completing those critical elements essential to the successful completion of your IEWP are laid out to ensure no components of your IEWP are not included. The preliminary identification of your Critical Facilities and Mission List is essential in the development of your plan. Understanding those facilities and missions will ensure a realistic and executable plan is developed and aligned with those critical operations of your organization.

"Jacobs is highly efficient in their methods, thorough in their recommendations, and conscientious about the quality of their customer interactions and final documentation...they have provided me with exceptional support"

- MAJ James L. Bunch, KSARNG

Team Organization and Key Personnel

EXPERIENCE AND TEAM ORGANIZATION OF KEY PERSONNEL

As illustrated in our team organization chart, we are proposing a team of experienced specialists who will be led by our Project Manager, Lee Feaster, PLA, SLA, APA, supported by our Project Executive, Jim Kurtz, NCARB, AIA and our ARNG Quality Manager, Jeff Turner, AEM, LTC (R). Lee, Jim, and Jeff will work hand-in-hand with our team to help ensure your IEWP meets your expectations and is delivered on schedule and within budget. Resumes for our key team members are provided on the following pages.

Lee Feaster, PLA, ASLA, APA – Project Manager

Lee Feaster is a licensed Landscape Architect with over 25 years of military facilities planning, site design, and land development experience for public and private sector clients. For nearly 20 years, Lee has focused on serving Department of Defense clients on various planning and design projects including mission analysis, requirements documents, large scale installation master plans, and construction documents. He has fine-tuned our planning process and teams of subject matter experts to address the complex requirements and nature of multi-use military installations and missions while integrating sustainable design, energy reduction, and resiliency into the final plan. His relevant National Guard experience includes planning & requirements document development for numerous Training Centers as well as design & construction administration services for numerous other facilities nationwide.

Jim Kurtz, NCARB, AIA – Project Executive

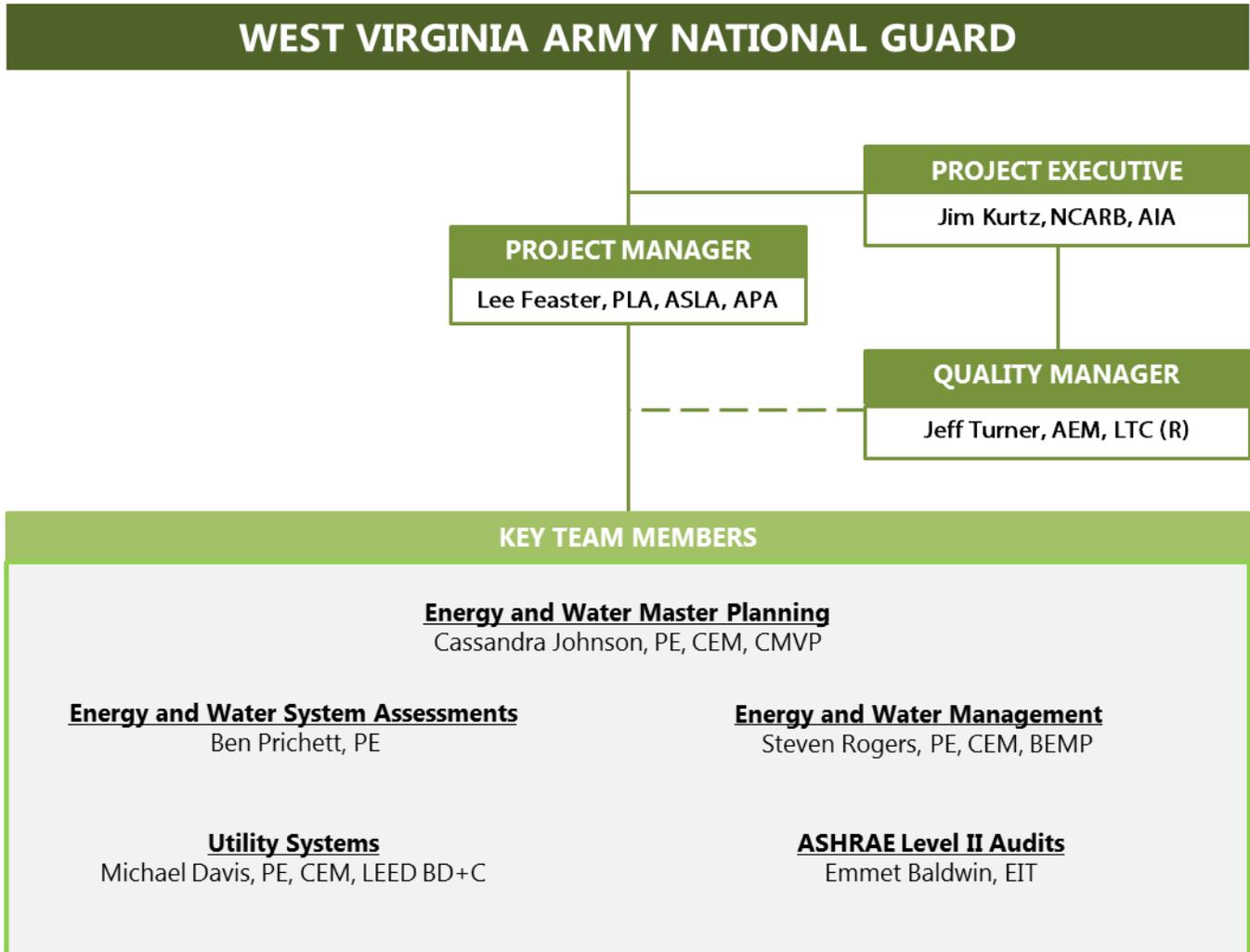
Jim Kurtz provides over 32 years of architectural and program management experience, with a heavy focus on the delivery of National Guard projects throughout the U.S. and its territories and representing diverse building types within construction. He has been responsible for the overall management of programs, as well as providing day-to-day management of multi-disciplinary teams. Supporting his qualifications as project executive of our team is his broad-based, nationwide experience across all National Guard facility types. As Project Executive, Jim provides expertise in all areas of planning, programming, design, and construction, including compliance, risk, and resource issues to provide successful project delivery in accordance with your expectations.

Jeff Turner, AEM, LTC (R) – Quality Manager

Bringing more than 30 years of military experience with the Army and Army National Guard, Jeff has had extensive experience with installations both as a customer and as a facility manager. He understands the rules and regulations that govern facilities like yours and has proven experience in identifying facility shortfalls based on training requirements and creatively solving budgetary challenges. As the former Construction and Facilities Management Officer (CFMO) for the Minnesota Army National Guard, he provides key insight during planning and programming and is able to drive valuable solutions from the CFMO perspective. He has focused on the delivery of National Guard projects throughout the U.S. and its territories on a diverse set of building types from planning and programming through design and construction. Jeff's experience includes both MILCON and SRM projects which resulted in numerous successful projects completed for MNARNG during his tenure.

TEAM ORGANIZATION CHART

We have organized our team to provide you with a single primary point of contact and responsibility in Lee Feaster. Jim Kurtz is available any time as your secondary point of contact as is Jeff Turner. Lee and his team of professionals, with Jim’s and Jeff’s support, will provide the resources, focus, commitment, and reliability that you can count on to achieve success on your design project. Our approach provides you with a depth of highly qualified professionals with current and relevant experience.



The following resumes are provided for the key staff for the planning process. These resumes include the education, years of experience with Jacobs, total years of experience and office location.

Lee Feaster, RLA, CLARB – Project Manager

B.L.A. – Landscape Architecture

Tenure with Jacobs – 20 years

Total experience – 25 years

Lee Feaster provides 25 years of project management and site master planning experience with a heavy focus on National Guard and military multi-use installations. Over the past 20 years, he has helped deliver more than 30 National Guard planning projects, providing specialized experience in military planning, training site master planning, readiness center capacity analysis, pavement design, Base utility and infrastructure design, DoD AT/FP, security, permitting, surveying and mapping, sustainability, NEPA process, and ESRI GIS. As your Project Manager, Lee will work in concert with Jim Kurtz and Jeff Turner to help ensure we meet your programmatic, budgetary, and schedule goals, and will be responsible for the primary communications between your staff and our planning team.

Installation Master Plan, Fort William Henry Harrison, Helen, MT.

Provided full A-E planning, programming, and developed a long-range vision and planning strategy for the Ft. Harrison Training Site. Developed Sustainable Component Plan for the Training Site Master Plan.

Size: 776,000 SF / 29,500 acres. Role: Project Manager.

Installation Master Plan, Camp Atterbury-Muscatatuck, Edinburg, IN.

Provided planning and programming for the Installation Master Plan of the entire complex including two geographically separated units. The project included several additional studies and reports including field survey and sampling for the Atterbury-Muscatatuck Training Sites.

Size: 2.9M SF/35,000 acres. Role: Project Manager.

Installation Master Plan, Camp Smith Training Site, Peekskill, NY.

Provided full A-E design, planning, programming, and developed a long-range vision and planning strategy for the Camp Smith Training Site, in any portion of which includes energy efficiency or conservation.

Size: 525,000 SF / 1,618 acres. Role: Project Manager.

Real Property Development Plan, Arizona Army National Guard, Phoenix, AZ.

Produce a RPDP for the State of Arizona which includes a UFC 2-100-01 compliant Master Plan for Camp Navajo, Site Development Plans (SDP) for Papago Park Military Reservation (PPMR), Florence Military Reservation (FMR) and Silver bell Army Heliport, and a proponent strategy concept recommendation and prioritized project list for all Readiness Centers, Surface Maintenance Shops, and the Buckeye Training Site.

Size: Statewide. Role: Landscape Architect.

Jeff Turner, AEM, LTC(R) – Quality Manager

M.E.M. – Engineering Management

B.S. – Industrial Engineering

Tenure with Jacobs – 2 years

Total experience – 32 years

Jeff Turner provides over 30 years of military experience. He is a retired Lieutenant Colonel, LTC (R), and former CFMO with the State of Minnesota. His experience in facilities management, real property planning, programming and lifecycle facility management provide key insights and direction in our planning, analysis and design to drive valuable solutions and usable data from the CFMO perspective. He has focused on the delivery of National Guard projects throughout the U.S. and its territories on a diverse set of projects from planning/programming, through design and construction. Supporting his qualifications is his broad-based, nationwide experience across all National Guard facility types. Jeff has been engaged with Installation Master Plans in CA, WV, PR, MT, NC, CT and MN.

Installation Energy and Water Plan, Fort Pickett, Blackstone, VA.

Responsible for the Quality Management of the Fort Pickett Installation Energy and Water Plan. Worked directly with client Project Manager in the current development of an Energy Resilience and Conservation Investment Program (ERCIP) project that was generated from the energy requirements of the IEWP.

Size: 41,000 acres. Role: Quality Manager.

Installation Master Plan, Stones Ranch Training Site, Camp Niantic, CT.

Responsible for the development of Stones Ranch Training Center Installation Master Plan at Camp Niantic, Connecticut. Training center consists of three separate training areas including Stones Ranch, Camp Niantic and East Haven Rifle Range. Worked with Senior Leaders and installation users to develop a plan as a Level IV Training Center for future requirements of transient and tenant users at all three sites. Presented a preferred course-of-action to the Adjutant General that was approved and developed as the future Master Plan.

Size: 394,753 SF. Role: Program Manager.

Installation Master Plan, Camp Dawson, Kingwood WV.

Responsible for the development of the Camp Dawson Installation Master Plan. As a Level IV Training Center, Camp Dawson is comprised of seven individual sites. Worked with Senior Leaders and installation users to develop a plan for current and future requirements incorporating all seven locations to maximize available opportunities. Presented a preferred course-of-action to the Adjutant General that was approved.

Size: 371,309 SF. Role: Program Manager.

Nationwide National Guard Bureau Readiness Center Transformation Master Plan, Multiple States.

Assigned to 12 states as one of four NGB RCTMP Project Managers. Worked directly with each state to complete requirement in data collection, course-of-action development, course-of-action selection by the Adjutant General, state final reports and the national report submitted to Congress. Completed all 12 state reports on time and within budget and successfully integrated all state reports into the National Report to Congress.

Size: N/A. Role: Project Manager/Team Leader.

Cassandra Johnson, PE, CEM, CMVP – Energy and Water Master Planning

B.S. – Mechanical Engineering

Tenure with Jacobs – 3 years

Total experience – 16 years

Cassandra Johnson is a professional mechanical engineer in the Strategic Consulting Energy Solutions Group, located in Knoxville, TN. As a CEM, she has expertise in energy management and energy auditing for government and DoD specific clients, as well as water/wastewater treatment facilities. Ms. Johnson has experience working with energy savings performance contracts (ESPCs) for Federal clients including preliminary assessment and investment grade audit phases as well as measurement and verification. She also has experience in HVAC and plumbing design for industrial, government, and municipal clients. Her responsibilities include preparing Design-Build (BD) RFPs and contract documents and providing construction phase document review. She also has experience in construction-phase commissioning, as well as identifying and solving HVAC, indoor air quality, and moisture intrusion problems to improve building performance.

Program Technical Leader/Energy and Utility Auditor, Energy Efficiency Projects and Services IDIQ, NAVFAC.

Under the NAVFAC Engineering and Expeditionary Warfare Center (EXWC) Energy IDIQ, serves as the Technology Leader for energy and water audits. Establishes process standards for Certified Energy Managers and energy auditing support staff, reviews latest Federal legislative mandates (such as EO 13834) and identifies new technology opportunities for energy/water conservation. Also develops recommended strategies for identified measures in accordance with required guidelines.

Size: 101 task orders. Role: Technology Leader.

Energy Consultant; Large Scale Solar PV Feasibility Study, Marine Corps Support Facility, Jacksonville, FL.

Evaluated the feasibility of installing large scale solar PV on site in order to support the renewable energy goals outlined by Secretary of the Navy Instruction 4101.3 Chief of Naval Operations as well as the energy security goals defined in the Facilities Engineering Command Policy P-602, 3 Pillars of Energy Security, June 2017. Investigated several options for solar PV including covered parking as well as floating arrays, performed life cycle cost analysis and solar performance modeling to identify the most feasible option. The proposed PV system consisted of /fixed-tilt floating structures rated for 1000 Megawatts direct current connected to an energy storage system to provide resiliency and to leverage the system output for demand management. Prepared audit report including site visit findings, O&M items, and development of LCCA and support documents for energy projects.

Size: NA. Role: Energy Consultant

Energy Consultant; Chiller Plant Feasibility Study, Altus AFB, Altus, OK.

Investigated feasibility of implementing a central chiller plant for 21 buildings at the installation, including field assessment of existing facility operations and conditions. The study investigated several options including a new central chiller plant, virtual chiller plant using existing equipment and replacement of existing equipment with high efficiency units to determine feasibility based on the energy savings and economic analysis. Prepared a technical report and conceptual level design drawings.

Size: 21 Facilities. Role: Energy Consultant

Ben Prichett, PE – Energy and Water System Assessments

B.S. – Mechanical Engineering

Tenure with Jacobs – 3 years

Total experience – 8 years

Mr. Ben Prichett is a professional mechanical engineer in the Strategic Consulting Energy Solutions Group, located in the Knoxville, Tn office. He has experience in energy management and energy auditing for government and DoD specific clients, as well as lighting and construction design and implementation for commercial and industrial clients. He has worked on facilities including hotels, hospitality facilities, food processing facilities, water/wastewater treatment facilities, and university and municipal buildings.

Energy and Utility Auditor; Energy Audits, NAVFAC.

Was part of audit teams performing Level II energy assessments at over 260 buildings. Prepared energy reports detailing opportunities for energy conservation and DD Form 1391 documents. Installations visited included NAVSTA Norfolk, NSA Mechanicsburg, NSA Hampton Roads, NSS Norfolk Naval Shipyard, and NAS Oceana. Developed energy and water conservation projects with an estimated utility savings of \$1.1M per year.

Size: 260 Buildings. Role: Auditor

Energy Consultant; Energy Audits, Florida and Mississippi, NAVFAC.

Was part of a four-person team and performed Level II energy assessments at over 60 buildings on seven installations (NCBC Gulfport, NAS Key West, NAS Orlando, NAS Pensacola, NAS Panama City, NAS Whiting Field, NAS Jacksonville), totaling approximately 1.75M SF. Approximately \$4.42M in proposed projects were developed with an associated estimated savings of approximately \$490,00 in annual utility cost savings.

Size: 1.75M SF. Role: Energy Consultant

Mechanical Engineer; Investment Grade Audit, Yokota Air Base, Air Force Civil Engineer Center, Yokota, Japan.

Participated in an investment grade audit for Yokota Air Base. Over 300 buildings, totaling 3M SF were audited. Used data gathered to create energy models and calculations for proposed energy projects, totaling around \$96M.

Size: 3M SF. Role: Auditor

SmartWatt Energy; Turnkey Lighting Projects, FedEx, Southeast Region.

Led the Southeast Region for the national FedEx Rollout project under SmartWatt energy. Over 100 FedEx ship centers were audited for energy efficient lighting upgrades. As Southeast Region lead managed construction and implementation of lighting upgrades during his role as Project Engineer.

Size: 100 Ship Centers. Role: Project Engineer

SmartWatt Energy; Daintree, Turnkey Lighting Projects, FedEx.

Was the first Daintree Commissioning Agent within SmartWatt Energy. Commissioned over \$10M in advanced lighting controls in more than 20 buildings. Facilities included Bridgestone, Pepsi, Perdue, FedEx, USCold and others.

Size: 20 Buildings. Role: Commissioning Agent

Steven Rogers, PE, CEM, BEMP – Energy and Water Management

B.S. – Mechanical Engineering

Tenure with Jacobs – 7 years

Total experience – 14 years

Mr. Rogers is a registered professional mechanical engineer with Jacobs Strategic Consulting Energy Solutions Group in Atlanta, Georgia. Currently he performs U.S. and international energy audits and calculates savings to determine Return on Investment (ROI). He also performs life cycle cost analysis for proposed Energy Conservation Measures (ECMs) including maintenance costs and savings and salvage value of existing equipment to provide a building project's "total cost of ownership". Mr. Rogers is a LEED Accredited Professional with an Operations and Maintenance specialty and has experience working on LEED project for high-performance buildings.

BUILDER Sustainment Management System Implementation; GAARNG, Various Locations, Statewide.

Conducted facility assessments at multiple Georgia Army National Guard installations and facilities. The project required detailed visual assessments of all building systems and equipment. Mr. Rogers conducted Architectural, Conveyance, Electrical, Fire Protection, Plumbing, and HVAC assessments.

Size: 1.7M SF. Role: BUILDER Assessor

Georgia Army National Guard Energy Audits; GAARNG, Various Locations, Statewide.

Mr. Rogers led a team that performed field surveys of requested buildings at GAARNG installations. He identified energy conservation measures (ECMs), estimated cost savings, and performed life cycle cost analysis. He used eQuest to model potential energy savings, and he wrote the energy audit report.

Size: NA. Role: Assessment Team Leader

Southeast Energy Audits; Multiple Locations, NAVFAC.

Led a team that performed field surveys of requested buildings at Southeast Bases. He identified energy conservation measures (ECMs), estimated cost savings, and performed life cycle cost analysis for requested buildings. He used eQuest to model potential energy savings, and he wrote the energy audit report. Field surveys were conducted in Jacksonville, FL; Key West, FL; Meridian, MS; Orlando, FL; Panama City, FL and Whiting Field, FL.

Size: 6 Locations. Role: Audit Team Leader

North Dakota Air National Guard Energy Audits.

Performed energy analysis and energy audits at North Dakota Air National Guard Base. Developed baseline and energy conservation opportunity (ECO) models using eQuest to determine cost effectiveness and payback periods for potential ECOs. The energy audit included 11 buildings totaling approximately 220,000 SF. The ECOs are calculated to achieve \$53,274 in annual energy cost savings at an investment cost of \$188,620 for a total project simple payback of 3.6 years.

Size: 220,000 SF. Role: Auditor

Michael Davis, PE, CEM, LEED BD+C – Utility Systems

B.S. – Mechanical Engineering

Tenure with Jacobs – 3 years

Total experience – 20 years

Michael Davis has 20 years of experience as a mechanical engineer, specializing in energy management activities as well as energy efficiency/sustainability aspects of facility and infrastructure design. In addition, Michael has design experience in HVAC design and natural gas distribution in both design-bid-build and design-build projects. Michael has performed services for the commercial sector, but the majority of his experience is on projects for the federal government. Most recently, Michael has performed Business Case Analyses for the USN and USMC for the standardization of HVAC control systems.

Energy and Water Management Plan; Federal Installations, Various Locations.

Mr. Davis has developed seven Installation Energy and Water Management Plans for federal installations that captured and categorized the installations' total energy and water consumption. Analyzed energy and water consumption against federal and agency energy / water / renewable drivers and presented a road map for the installations to meet and exceed all applicable goals. The plan included a tracking tool to estimate energy and water consumption associated with upcoming construction / demolition/ renovation projects. From his direct effort, 10 energy projects identified as part of the energy audits were selected for further development. The projects were biddable documents and in many cases were awarded and executed, resulting in energy and water savings for the installation.

Size: NA. Role: Energy and Water Planner

Mission Assurance; Utility Infrastructure, NAVFAC.

Assessed utility infrastructure (water, wastewater, natural gas, fuels, steam, and compressed air) at 3 NAVFAC installations to evaluate system performance and identify issues. Based on findings, assessed the overall resiliency of each system and identified potential vulnerabilities to critical assets on the installation. Recommended solutions to mitigate identified vulnerabilities for mission assurance.

Size: 3 Installations. Role: Assessor

BUILDER Sustainment Management System Implementation; GAARNG, Various Locations, Statewide.

Project Manager for BUILDER assessments for GAARNG. BUILDER assessments were conducted using BUILDER SMS for 3 sites with 80 buildings totaling 927,488 Square Feet. In addition to Project Management, Mr. Davis is familiar with the BUILDER SMS program from field assessments, BRED input, and Work Planning.

Size: 927,488 SF. Role: Project Manager

Energy Management and Design Services; Multiple Facilities, NAVFAC.

Mr. Davis has participated in multiple design projects, including the development of basic energy models with Carrier HAP or eQuest to evaluate specific energy conservation measures and develop design-build RFP packages for several facilities. Activities included sizing systems, laying out ductwork, specifying outside air flow rates, and specifying equipment performance requirements.

Size: NA. Role: Mechanical Engineer

Emmet Baldwin, EIT – ASHRAE Level II Audits

B.S. – Mechanical Engineering Technology

Tenure with Jacobs – 3 years

Total experience – 5 years

Emmet Baldwin is part of a team that utilizes his keen eye for details, his educational background in applied energy management, and his skill at data analytics to achieve clients' project objectives. His responsibilities include creating facility and campus energy plans, determining energy conservation measures, providing engineering calculations for implementation decisions and Level II Audits of existing facilities. Mr. Baldwin's attention to detail and ability to spot patterns is a great asset to the team.

Blount Island Energy Audit; Marine Corps Support Facility, Jacksonville, FL.

Mr. Baldwin led onsite field work and data gathering for energy and water conservation measures. Working with the team, he provided energy conservation strategies and energy storage recommendations for the 315,000 SF vehicle assembly plant. He provided implementation cost and potential savings calculations. He was responsible for the final report of the Energy Audit.

Size: 315,000 SF. Role: Audit Lead

Marshall Space Flight Center, Huntsville, AL.

Mr. Baldwin developed a planning tool to help NASA centers organize and document their plan to meet energy, water, and other sustainability goals set forth in federal regulatory requirements, including Executive Order 13693, Planning for Federal Sustainability in the Next Decade.

Size: NA. Role: Auditor

Georgia Army National Guard Energy Audits; GAARNG, Various Locations, Statewide.

Mr. Baldwin was responsible for creating an equipment inventory, energy auditing, and assessing of building systems for 161 buildings comprising of 859,669 SF. He analyzed and compiled data using US Army Corps of Engineers developed software for building asset lifecycle management.

Size: 859,669 SF. Role: Auditor

BUILDER Sustainment Management System Implementation; GAARNG, Various Locations, Statewide.

Mr. Baldwin was responsible for creating an equipment inventory, energy auditing, and assessing of building systems for 372 buildings comprising of 1.7M SF. He analyzed and compiled data using US Army Corps of Engineers developed software for building asset lifecycle management.

Size: 1.7M SF. Role: BUILDER Assessor.

BUILDER Sustainment Management System Assessments; U.S. Army Fort Carson.

Mr. Baldwin conducted facility assessments at the U.S. Army Fort Carson Installation which included multiple vehicle maintenance/assembly facilities. The project required visual assessments of all building equipment and systems. Inspections included Architectural, conveyance, Electrical, Fire Protection, Plumbing and HVAC.

Size: NA. Role: BUILDER Assessor.

Relevant Project Experience

VAARNG State Military Reservation Installation Energy and Water Plan, Virginia Beach, VA

The Virginia State Military Reservation (SMR) Installation Energy and Water Plan (IEWP) has unique mission areas, functions, and criteria that require it to be a resilient, self-sustaining installation. Jacobs developed a master plan and design solutions to provide energy surety and resiliency of other operational infrastructure during emergency events. Our plan supports 2,000 personnel for 60 days during Category 3 hurricanes and smaller to provide uninterrupted recovery support as directed by the Commonwealth of Virginia. In addition, the VAARNG has a memorandum of understanding with the Federal Emergency Management Agency (FEMA) to operate SMR as an emergency response and readiness training and staging facility during natural disasters and other national emergencies. The SMR Energy and Water Plan Update includes the following tasks:

- Energy surety design consists of the strategic Energy Alignment Plan (EAP) and the Dynamic Power Model. The EAP addresses the present-state energy economics of the facility and describes strategic recommendations for power system improvements accompanied by project financial projections to justify funding for those improvements through organization-specific channels based on organization-specific investment priorities. The Dynamic Power Modeling provides a load flow analysis to ensure that the system would maintain satisfactory standards for adequate voltage, thermal loading, and service reliability levels in the event of a Category 3 hurricane while power is supplied by a generator.
- Conceptual design of critical facility infrastructure outlines a master plan for SMR to have 24/7 resilient capability, to island itself and be self-sufficient for the utilities of: electrical power, potable water, fuel supply (natural gas and diesel), communications, sanitary sewer, and protection against electromagnetic pulse (EMP) for up to 2,000 personnel for 60 days, in the event of a man-made or natural disaster.

The energy and infrastructure upgrades recommended in this report will provide the VAARNG the ability to operate SMR independently during the time of natural disaster and other national emergencies. The recommendations for power generation will allow SMR to operate independently from the power grid. The upgrades to the existing infrastructure network will allow the SMR to support 2,000 personnel for up to 60 days.

Jacobs involved QC methods by engineering disciplines to confirm an integrated team approach for design solution development. We led an onsite review meeting, which accomplished an effective comment review/response process for the final submittal. The team was able to visit existing facilities in question and obtain clarification from facility management and energy personnel.

Using the recommendations from this study, VAARNG is competing for Military Construction (MILCON) in the Energy Resilience and Conservation Investment Program (ERCIP) to implement all energy-related improvements for the SMR. As a separate project, Jacobs is currently working with the VAARNG to update the previously published SMR Energy and Water Plan to support 1,000 soldiers for a 14 day period.

VAARNG Fort Pickett Installation Energy and Water Plan, Blackstone, VA

The Fort Pickett Installation Energy and Water Plan (IEWP) provides a roadmap for achieving increased security, resilience, readiness, and mission assurance, while also meeting federal and Department of Defense (DoD) requirements. The Fort Pickett IEWP provides goals, strategies, tasks, timelines, and responsible parties for the next 5 years of energy and water management. The planning process and resulting roadmap follow Army and DoD guidance. The primary goals of the Fort Pickett IEWP are:

- Ensure the ability of Fort Pickett to sustain critical missions in the event of an energy and/or water service disruption.
- Reduce the risk to all critical missions from energy and water (including wastewater) disruptions, with priority given to the 1600 billeting area, the RTI area, the Fire Station and the Headquarters building.
- Reduce use of energy and water resources across the installation.
- Increase installation operational efficiency.

During the development of these goals, Fort Pickett leadership developed strategies that consider the following:

- Provide cost-effective alternatives to generators (e.g., storage, photovoltaics (PV), demand-response).
- Help to manage response from the electric utility to reduce load under an interruptible tariff notice.
- Leverage alternative funding to support project implementation.
- Leverage Privatized Utility Capital Improvement Plan project for smart modernization.
- Consider the operations and maintenance (O&M) requirements of recommended solutions.

The Fort Pickett IEWP provides an overview of the critical mission facilities on Fort Pickett, the energy and water security baseline and deficiencies identified, and strategies for achieving installation goals and addressing those deficiencies. Priority tasks aligned with these strategies are summarized as part of the plan through the implementation plan.

The Fort Pickett IEWP is a living document, structured around a prioritized list of tasks over a 5-year planning horizon. The Fort Pickett DPW has primary ownership of this plan but requires the assistance of other directorates and mission owners to ensure tasks are completed. Fort Pickett will review the IEWP each year and adjust it as needed. A full plan update will occur every 5 years.



MTARNG Ft. Harrison Training Site Master Plan and Sustainable Component Plan, Helena, MT

Jacobs developed the UFC 2-100-01 compliant Master Plan for Ft. Harrison for the MTARNG. The plan encompassed both Ft. Harrison and the Limestone Hills Training Area as a geographically separated unit of the complex. The plan has received both Tier I and II compliance from NGB. The planning effort including a Vision Plan, Capital Investment Strategy, and Planning Digest along with an integrated Environmental Assessment. Ft. Harrison provides the primary training resource for the MTARNG with real property over 29,000 acres. The plan is providing the road map for facility renovation, development and investment for the future. In addition, the task order included a Net Zero Plan that became a Sustainable Component Plan of the Master Plan that developed resource optimization and security recommendations and tools for the CFMO office to use while implementing the overall Master Plan.

The task developed a supporting Excel based Sustainable Component Plan dynamic tool to identify efficiency improvements. The tool identified significant water usage for irrigation and several major buildings with high energy uses. These findings guided development priorities and facility renovations, repurposing, and development in the Capital Investment Strategy and Implementation process. Key outcomes of our integration of the Sustainable Component Plan into the planning process included:

- A landscape plan was developed to reduce the irrigation requirements and the framework to conduct Ag Extension research to identify the proper prairie/grassland seeding blends and rainwater harvesting for landscaping.
- Several facility renovations increasing the insulation and envelope improvements were recommended with efficiency measurements automated with the tool used to develop priorities.
- A significant geothermal project was identified that would provide enhanced efficiency and significant resiliency for the installation. Due to the climate in Montana the heating of the buildings is a significant risk to operations. The recommended Geothermal project would provide all mission critical facilities to have the required 14-day backup with reduced fuel use.

Fort Harrison Dynamic Sustainable Component Planning Tool JACOBS



United States Military Academy Microgrid Master Plan, West Point, NY

Jacobs completed a utility master plan for the Cantonment Area of the United States Military Academy. The master plan included the completion of energy modeling, microgrid, and life cycle and economic analysis for the Cantonment Area. The master plan evaluated the entire utility infrastructure of the campus including steam, chilled water, electricity, natural gas, potable water, and sanitary sewer. The plan evaluated different technologies including



hot water conversion, combined heat and power, geothermal, solar, and smart grid control system. The plan identified an optimized infrastructure scenario that will improve the efficiency, safety and reliability of utility services while positioning them for the next 40 years. West Point is a planned Net Zero pilot installation; our service will help West Point transition to be a Net Zero installation.

NJARNG Sea Girt Microgrid Feasibility Study, Sea Girt, NJ

The National Guard Training Center (NGTC) at Sea Girt, a training center located on the east coast of New Jersey, was severely impacted by natural disasters, such as Superstorm Sandy. The prolonged power outage had negative impacts on the mission. We completed a microgrid feasibility study to improve resiliency and provide energy security. This included:



- **Energy Security:** Provided resiliency and energy security to allow NJARNG to execute its mission under adverse conditions.
- **Energy Efficiency and Financial Responsibility:** Moved the NJARNG toward Net Zero energy consumption.
- **Electrical Distribution Resiliency and Automation:** The distribution system was dated and in need of replacement. Jacobs recommended a complete distribution system upgrade to improve system resiliency by strengthening the distribution components and implement a self-healing grid to isolate system faults. Also, the distribution system required automation that will allow for the quick isolation of the local community of Sea Girt's grid from electrical utility grid.
- **Energy Storage:** To bring stability to the renewable energy planned for Sea Girt, a 5 MWH energy storage system was recommended. The battery was sized to provide generation redundancy and maximize the economics.
- **Smart Grid Control System:** The control system will provide the integrated intelligence for centralized and remote microgrid operation. The controls integrate buildings, distribution system, and generation assets allow for optimized resources.

NJARNG Power Plant Building (PPB), Hurricane Sandy Recovery, Sea Girt, NJ

Jacobs performed full A-E services for the design and construction of a new 1.5-megawatt (MW) back-up power generation facility for the Power Plan Building (PPB). In response to the damage sustained during Hurricane Sandy in October 2012, the New Jersey Army National Guard replaced several facilities at the National Guard Training Center in Sea Girt, NJ to support their current training and readiness missions. This project required the rapid delivery of services in response to damage sustained from Superstorm Sandy; we provided both initial planning and design services under accelerated schedules. The new facility is 2,070 GSF and is located at the Sea Girt National Guard Training Center. The Power Plant distribution utilizes high voltage underground conduits, cabling and transformers that are separate from, however, integrated with the existing utility providers' substation feed (Stockton Substation) infrastructure, and with the existing and proposed (future master planned) facilities on the installation. Alternate design options were investigated/considered during the preliminary design phases, such as: bio-Fuel engine type, independent prefabricated walk-in type generator enclosures(s), and pre-engineered building structures. The PPB facility also



incorporates planned upgrades from the local utility authority which will be a transition from 4160 V to the 13.2 kV. Functional areas with the PPB include space allocation of the 2 generators with reserved interior floor space for future generator growth, and integration with alternate energy systems within the National Guard Training Center installation (Photovoltaic, wind, storage) using parallel switchgear and control interfaces.

Kennedy Space Center Energy and Water Five year Master Plan, NASA, Cape Canaveral, FL



Jacobs developed a complete energy and water master plan for Kennedy Space Center. The plan included documentation of existing energy use and energy conservation activities, as well as evaluating the Center utilities and developing additional opportunities for the Center to reduce consumption. Completed an evaluation of the Center's compliance with federal mandates and recommendations for how to ensure Center compliance in the next five years. Analyzed the utility billing of the Center and other potential utility purchasing methods. Proposed additional opportunities for improving the central utility infrastructure and renewable energy resources.

New Jersey Transit Microgrid, Newark, NJ

Jacobs completed the planning and optimization and is developing the design as Owner's Engineer for the largest microgrid undertaking in the U.S. – The New Jersey Transit Grid. This \$577M project will implement a 140 MW microgrid capable of providing reliable power for critical transit infrastructure supporting rail systems operated by NJ TRANSIT and the National Railroad Passenger Corporation (Amtrak).



To run electrified trains, the Transit Grid will have a new central power plant for on-site power generation that operates safely and reliably in grid-connected mode as well as in islanded mode (disconnected from the utility). In grid connected mode, the system imports and exports power to optimally manage costs and risk. In islanded mode, the system is capable of meeting the electrical demand while maintaining adequate voltage and frequency as required by the supported rolling stock. Transit Grid will include the transmission and distribution in New Jersey Transit's right of way to connect to the commercial grid as well as substations for each of the three systems.

The micro grid is expected to be capable of supplying highly-resilient power during critical times when storms or other events compromise the regional electric grid. The new microgrid will consist of a central, natural gas fired power plant and associated substations, four acres of solar photovoltaic and transmission and distribution lines to substations that electrify the tracks and operating controls for critical portions of the NG TRANSIT and Amtrak systems.

US Air Force Microgrid and PV Array with Energy Storage, Wake Island

Jacobs completed a feasibility study and full design-bid-build design of a 1.2 MW DC PV array with battery storage for integration into the Air Force power system and microgrid at Wake Island. The 1.2 MW DC solar PV system size and a 1 MW battery storage system that is charged by the solar PV system was optimized for the particular site loads and generation assets. The battery storage system can be used as spinning reserve to allow one generator to be shut down for extended periods of time. This greatly reduces fuel consumption, engine hours and maintenance requirements while providing high quality power to support the mission. Areas of evaluation specific to this project and its remote site include:

- Estimated PV performance on Wake Island based on meteorological data
- PV array and energy storage optimization
- Interconnection options
- Evaluation of battery back-up system costs, payback and maintenance
- Shipping costs, methods, and timing to Wake Island
- Manpower and equipment costs on Wake Island
- Methods to minimize PV system maintenance during life of system
- Methods to support warranty requirements of PV products
- Evaluation of marine environment impacts on system components
- Reflectivity and glare concerns for aviation functions
- Optimization of array anchoring
- Inverter selection

Facility Energy and Water Audits – NAVFAC, Worldwide

Under the NAVFAC Engineering and Expeditionary Warfare Center (EXWC) Energy Program IDIQ, Jacobs has provided energy and water audits at over 200M SF of worldwide Naval Facilities since 2011. The Navy has multiple bases across the globe that are all subject to the same Federal mandates and goals for energy efficiency, resiliency and sustainability, regardless of location or mission. Our energy audit teams are comprised of experienced Professional Engineers (PEs) with certifications as CEMs that have extensive facility design and construction experience. Use of PEs leads to better analysis of energy conservation measures (ECMs) and more confidence in their technical viability; thereby, assuring ECM projects that are awardable and meet the necessary ROI.

We established the Navy Energy Audit program through our understanding of their unique requirements for audit deliverables and funding documentation. We developed a programmatic approach tailored to the needs of the Navy, which includes the entire energy audit process from conducting the site work to analyzing results and developing the final report, including calculation tools, cost estimate development, and project planning and programming documents. This methodology allowed us to provide a consistent set of deliverables, analyses and results that are applied across all facilities.

Our energy team consistently reviewed new technologies and assessed the applicability and affordability for use as ECM recommendations. We identified 2,000 viable ECMs resulting in a cost savings of \$95M annually for an average simple payback of 10 years. This is over \$865M in energy and water conservation projects for the Navy.

As a follow-on the Energy Audit projects, we also developed Design-Build Request for Proposal documents for nine energy projects developed from the results of the energy audits. These projects included varying scopes including lighting upgrades, water efficient fixture replacements, refrigeration heat recovery, high efficiency heating, ventilation, and air conditions (HVAC) upgrades, chiller replacement and plant improvements, steam decentralization, direct digital control upgrades, and an airfield apron lighting upgrade.

Replace Wind Turbines, Ascension Island Auxiliary Airfield (AAAF)



Ascension Island is a remote Island entirely owned by the British Government. The United States leases land for a variety of military and cyber operations, and power is supplied through a microgrid managed by the US Air Force. Power quality and resiliency is of the highest priority. Jacobs developed 35% design, 100% specifications for the decommissioning and removal of existing older non-functional wind turbines and replacement with new wind turbines, and energy storage system and integration into the US Air Force Base microgrid. The project includes the investigation into existing conditions, environmental permitting review, analysis of multiple options relative to size and type of wind turbines and energy storage

systems and evaluation and reporting of construction logistics. To provide energy security and meet all demand loads, the AAAF powerhouse currently utilizes two primary power engine generators at an average loading rate of 50%. With the inclusion of wind power there is a concern that running two engine generators will mean that they are running for extended periods of time at 40% load rate or lower.

Previous and current service contracts

VAARNG State Military Reservation Installation Energy and Water Plan, Virginia Beach, VA.

P.O.C. – Wilson Palmore

Address – Virginia Army National Guard, CFMO Office Building 316 Ft. Pickett, Blackstone, VA 23824

Phone – 434.294.2345

Dates of service contract – November 2019 to February 2020

Critical Mission Overview – Ft. Pickett located in Blackstone Virginia is the home of the Army National Guard Maneuver Training Center. The Training and Cantonment District as depicted in the Fort Pickett Real Property Master Plan, Installation Development Plan dated May 2018, written by Louis Berger, consolidates the primary training mission and services that directly support that mission. This district includes the Maneuver Training Center (MTC), Headquarters (HQ), housing, supply and administration organized into battalion (BN) sets, troop support activities including Directorate of Logistic (DOL) and Directorate of Public Works (DPW) functions, and life support activities.

To establish the garrison’s ability to sustain its critical missions with E&W resources, and to manage risk of E&W utility disruptions, critical mission areas are mapped to facilities and infrastructure. For this mapping, key facility definitions are critical and non-critical.

- Critical – A facility that is directly tied to a critical mission and requires energy and/or water to support that mission.
- Non-Critical – A facility that is important to the overall installation operations, but utility interruption would not have a significant impact on critical missions.

It was determined that the smaller microgrid area centered on the Training and Cantonment District includes the RTI area, 1600 housing area, Gym, Fire Station and the HQ Building which were to remain operational during an emergency. Additional isolated area that were t remain operational included airport buildings 49, 50 and Tuas Hangar, Building 316, Ammunition Supply Plant, Waste Treatment Plant, Water Treatment Plant, Fuel Station 1, 2 and 3, Lift Station and Building 3001.



PRARNG Camp Santiago Joint Training Center Resilient Emergency Power Report.

P.O.C. – LTC Raul Cordero

Address – 100 Calle General Estevez, San Juan, PR 00901

Phone – 787.289.1400 ext 1076

Dates of service contract – March 2018 to September 2018

Project Description – The National Guard Bureau contracted Jacobs Engineering to assess the hurricane damage at installations throughout Puerto Rico and the USVI. An optional task to include an assessment of what could be done to provide more reliable emergency power for a longer duration at Camp Santiago was included. The key planning factor for this task is the assumption that electrical power from PREPA, Puerto Rico’s utility company, will be down for over 90 days as a result of a future storm, and the National Guard will need to respond to support the Commonwealth.

Hurricane Maria took down the PREPA grid in the Camp Santiago region for a duration of 92 days. The existing emergency generators did not provide reliable power for the long duration of the outage, and an inadequate number of buildings were equipped with emergency generators. In addition, refueling the generators quickly became a logistics challenge.

The report provided concepts for the development of a microgrid at CSJTC. The proposed microgrid solution incorporates renewable energy, energy storage and on-site diesel power generation. This solution provides resilient, sustainable infrastructure to support the important missions of the PRNG under adverse conditions for an extended period of time. It is compliant with the new Puerto Rico Regulations on Microgrid development.

Recommendations to enhance the energy resilience at CSJTC can be summarized as follows:

- Upgrade the existing primary distribution to 13.8kV.
- Provide underground, concrete encased duct banks throughout the cantonment area for power and telecommunications distribution.
- Construct a central power plant with multiple, EPA Tier 4 compliant Prime Rated Power generators.
- Combine MATES fuel storage with fuel storage for the central power plant.
- Repair the solar photovoltaic array, eliminate the net metering program, directly use solar generated power.
- Upgrade the energy storage system





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: 762738

Doc Description: Installation Energy and Water Plans

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2020-07-31	2020-08-20 13:30:00	CEOI 0603 ADJ2100000004	1

BID RECEIVING LOCATION

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

VENDOR

Vendor Name, Address and Telephone Number:

FOR INFORMATION CONTACT THE BUYER

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

Signature X

FEIN #

DATE

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

ADDITIONAL INFORMATION:

The West Virginia Purchasing Division, for the agency, the West Virginia Army National Guard, Construction and Facilities Management Office, is soliciting Expressions of Interest from qualified firms to provide professional consulting services to develop two (2) Installation Energy and Water Plans, for the West Virginia Army National Guard, per the attached documentation.

INVOICE TO		SHIP TO	
DIVISION ENGINEERING & FACILITIES ADJUTANT GENERALS OFFICE 1707 COONSKIN DR		DIVISION ENGINEERING & FACILITIES ADJUTANT GENERALS OFFICE 1707 COONSKIN DR	
CHARLESTON	WV25311	CHARLESTON	WV 25311
US		US	

Line	Comm Ln Desc	Qty	Unit Issue
1	Installation Energy and Water Plans		

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description :

Provide professional engineering consulting services per the attached documentation.

ADJ2100000004	Document Phase Draft	Document Description Installation Energy and Water Plans	Page 3 of 3
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ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

EXPRESSION OF INTEREST
CEOI ADJ21*4 - Installation Energy and Water Plans (IEWP)

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2. **Section One: General Information**
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5. **Section Four: Vendor Proposal, Evaluation, and Award**
6. **Section Five: Terms and Conditions**
7. **Certification and Signature Page**

SECTION ONE: GENERAL INFORMATION

1. **PURPOSE:** The Acquisition and Contract Administration Section of the Purchasing Division (“Purchasing Division”) is soliciting Expression(s) of Interest (“EOI” or “Bids”) for West Virginia Army National Guard, Construction and Facilities Management Office (“Agency”), from qualified firms to provide planning/consulting services (“Vendors”) as defined herein.
2. **PROJECT:** The mission or purpose of the project for which bids are being solicited is to provide professional consultant services to develop two (2) Installation Energy and Water Plans, one plan for Camp Dawson and the other for multiple locations across the state (see Section 3: Project Specifications of this EOI for a list of those locations). Providing the roadmap for supporting Army National Guard installations in achieving increased security, resilience, readiness, and mission assurance. (“Project”). **The award, execution and completion of this contract is contingent upon receipt of Funding.**

3. SCHEDULE OF EVENTS:

Release of the EOI.....	07/31/2020
Expressions of Interest Opening Date.....	08/20/2020
Evaluation Committee List of Three Highest Qualified Firms Provided.....	TBD
Estimated Date for Interviews of Three Firms.....	TBD
Price Negotiations Commence with Highest Ranked Firm	TBD

EXPRESSION OF INTEREST
CEOI ADJ21*4 - Installation Energy and Water Plans (IEWP)

SECTION TWO: INSTRUCTIONS TO VENDORS SUBMITTING BIDS

Instructions begin on the next page.

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. REVIEW DOCUMENTS THOROUGHLY: The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

2. MANDATORY TERMS: The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

3. PREBID MEETING: The item identified below shall apply to this Solicitation.

A pre-bid meeting will not be held prior to bid opening

A **MANDATORY PRE-BID** meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one individual is permitted to represent more than one vendor at the pre-bid meeting. Any individual that does attempt to represent two or more vendors will be required to select one vendor to which the individual's attendance will be attributed. The vendors not selected will be deemed to have not attended the pre-bid meeting unless another individual attended on their behalf.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing.

Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting
Revised 01/09/2020

are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. VENDOR QUESTION DEADLINE: Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are nonbinding.

Submitted e-mails should have solicitation number in the subject line.

Question Submission Deadline: N/A

Submit Questions to: Tara Lyle, Buyer Supervisor
2019 Washington Street, East
Charleston, WV 25305
Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)
Email: Tara.L.Lyle@wv.gov

5. VERBAL COMMUNICATION: Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

6. BID SUBMISSION: All bids must be submitted electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile.

The bid delivery address is:
Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

SEALED BID:
BUYER:
SOLICITATION NO.:
BID OPENING DATE:
BID OPENING TIME:
FAX NUMBER:

The Purchasing Division may prohibit the submission of bids electronically through wvOASIS at its sole discretion. Such a prohibition will be contained and communicated in the wvOASIS system resulting in the Vendor's inability to submit bids through wvOASIS. Submission of a response to an Expression or Interest or Request for Proposal is not permitted in wvOASIS.

For Request For Proposal (“RFP”) Responses Only: In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus one (1) convenience copies of each to the Purchasing Division at the address shown above. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: (This only applies to CRFP)

Technical

Cost

7. BID OPENING: Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date and Time: August 20, 2020 at 1:30 pm

Bid Opening Location: Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

8. ADDENDUM ACKNOWLEDGEMENT: Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

9. BID FORMATTING: Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

10. ALTERNATE MODEL OR BRAND: Unless the box below is checked, any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the

equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

This Solicitation is based upon a standardized commodity established under W. Va. Code § 5A-3-61. Vendors are expected to bid the standardized commodity identified. Failure to bid the standardized commodity will result in your firm's bid being rejected.

11. EXCEPTIONS AND CLARIFICATIONS: The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

12. COMMUNICATION LIMITATIONS: In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

13. REGISTRATION: Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the \$125 fee, if applicable.

14. UNIT PRICE: Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

15. PREFERENCE: Vendor Preference may be requested in purchases of motor vehicles or construction and maintenance equipment and machinery used in highway and other infrastructure projects. Any request for preference must be submitted in writing with the bid, must specifically identify the preference requested with reference to the applicable subsection of West Virginia Code § 5A-3-37, and must include with the bid any information necessary to evaluate and confirm the applicability of the requested preference. A request form to help facilitate the request can be found at:

<http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf>.

15A. RECIPROCAL PREFERENCE: The State of West Virginia applies a reciprocal preference to all solicitations for commodities and printing in accordance with W. Va. Code § 5A-3-37(b). In effect, non-resident vendors receiving a preference in their home states, will see that same preference granted to West Virginia resident vendors bidding against them in West Virginia. Any request for reciprocal preference must include with the bid any information necessary to evaluate and confirm the applicability of the preference. A request form to help facilitate the request can be found at: <http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf>.

16. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES: For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or

minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

17. WAIVER OF MINOR IRREGULARITIES: The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

18. ELECTRONIC FILE ACCESS RESTRICTIONS: Vendor must ensure that its submission in wvOASIS can be accessed and viewed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately accessed and viewed at the time of the bid opening (such as, encrypted files, password protected files, or incompatible files) to be blank or incomplete as context requires, and are therefore unacceptable. A vendor will not be permitted to unencrypt files, remove password protections, or resubmit documents after bid opening to make a file viewable if those documents are required with the bid. A Vendor may be required to provide document passwords or remove access restrictions to allow the Purchasing Division to print or electronically save documents provided that those documents are viewable by the Purchasing Division prior to obtaining the password or removing the access restriction.

19. NON-RESPONSIBLE: The Purchasing Division Director reserves the right to reject the bid of any vendor as Non-Responsible in accordance with W. Va. Code of State Rules § 148-1-5.3, when the Director determines that the vendor submitting the bid does not have the capability to fully perform, or lacks the integrity and reliability to assure good-faith performance.”

20. ACCEPTANCE/REJECTION: The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.5. and § 148-1-6.4.b.”

21. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor’s entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled “confidential,” “proprietary,” “trade secret,” “private,” or labeled with any other claim against public disclosure of the documents, to include any “trade secrets” as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

22. INTERESTED PARTY DISCLOSURE: West Virginia Code § 6D-1-2 requires that the vendor submit to the Purchasing Division a disclosure of interested parties to the contract for all contracts with an actual or estimated value of at least \$1 Million. That disclosure must occur on the form prescribed and approved by the WV Ethics Commission prior to contract award. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

23. WITH THE BID REQUIREMENTS: In instances where these specifications require documentation or other information with the bid, and a vendor fails to provide it with the bid, the Director of the Purchasing Division reserves the right to request those items after bid opening and prior to contract award pursuant to the authority to waive minor irregularities in bids or specifications under W. Va. CSR § 148-1-4.6. This authority does not apply to instances where state law mandates receipt with the bid.

EXPRESSION OF INTEREST

CEOI ADJ21*4 - Installation Energy and Water Plans (IEWP)

SECTION THREE: PROJECT SPECIFICATIONS

- 1. Location:** Agency is located at WVARNG, Joint Forces Headquarters, Construction and Facilities Management Office, 1707 Coonskin Drive, Charleston, WV 25311 and the Project will be completed at the following locations.
 - A.** Camp Dawson, near Kingwood, WV (One Plan will be produced for this location)

(One Plan will be produced for the following locations)
 - B.** Charleston-Joint Forces Headquarters, Charleston, WV
 - C.** Williamstown-Army Aviation Support Facility #1(AASF1), Williamstown, WV
 - D.** Wheeling- Army Aviation Support Facility #2(AASF2), Wheeling, WV
 - E.** Eleanor-Armed Forces Reserve Center(AFRC), Red House, WV
 - F.** Buckhannon-United States Property & Fiscal Office(USPFO), Buckhannon, WV
 - G.** Glen Jean- Armed Forces Reserve Center(AFRC), Glen Jean, WV
 - H.** Bridgeport- Fixed Wing Army Aviation Training Site(FWAATS), Bridgeport, WV
- 2. Background:** The Agency is seeking the services of a qualified professional architectural and engineering or consulting firm to develop two (2) Installation Energy and Water Plans for the West Virginia Army National Guard, Construction & Facilities Management Office located in Charleston, WV. The firm will provide this management tool in support of overall installation mission objectives.
- 3. Qualifications and Experience:** Vendors should provide information regarding its employees, such as staff qualifications and experience in completing similar projects; references; copies of any staff certifications or degrees applicable to this project; proposed staffing plan; descriptions of past projects completed entailing the location of the project, project manager name and contact information, type of project, and what the project goals and objectives were and how they were met.
- 4. Project and Goals:** The project goals and objectives are listed below. Vendors should discuss any anticipated concepts and proposed methods of approach for achieving each of the listed goals and objectives:
 - 4.1.** Provide, in consultation with Agency personnel and following all applicable guidelines and requirements laid out in the Department of the Army Guidance for IEWPs dated 26 July 2018, Army Regulations, Department of Defense (DOD) standards, and Unified Facilities Criteria (UFC), develop two (2) Installation Energy and Water Plans, for the locations identified in Section 3: Project Specifications, that incorporates and coordinates with the Real Property Master Plan and Installation Development Plan, where available.

EXPRESSION OF INTEREST

CEOI ADJ21*4 - Installation Energy and Water Plans (IEWP)

4.2. Consulting-engineering service tasks will include but not limited to; experience in Army mission requirements, energy and water supply, distribution, and use planning, system design, master planning, energy and water efficiency, including on-site data collection and workshop style events that engage the major stakeholders from each installation.

5. Oral Presentations/Interviews: The Agency has the option of requiring oral presentations of three vendors that are determined to be the most qualified to provide the required service. If this option is exercised, it would be listed in the Schedule of Events (Section 1.3) of this EOI. During oral presentations, Vendors may not alter or add to their submitted proposal, but only clarify information. A description of the materials and information to be presented is provided below:

5.1. Materials and Information Required at Oral Presentation:

“Evaluation and Award Process” will be conducted with the three (3) firms selected as the most qualified by the WVARNG-CFMO selection committee. The Committee will schedule the interviews.

The format for the interviews will be a 15-30 minute Power-Point presentation consisting, at a minimum, of the following:

- A) Corporation/Personnel experience as it relates to the project(s)
- B) Proposed project management plan
- C) Key personnel available for the proposed work
- D) Proposed subcontractors
- E) Product quality control
- F) Project cost control

EXPRESSION OF INTEREST

CEOI ADJ21*4 - Installation Energy and Water Plans (IEWP)

SECTION FOUR: VENDOR PROPOSAL, EVALUATION, & AWARD

1. **Economy of Preparation:** EOI's should be prepared simply and economically, providing a straightforward, concise description of firm's abilities to satisfy the requirements and goals and objectives of the EOI. Emphasis should be placed on completeness and clarity of content. The response sections should be labeled for ease of evaluation.
2. **BIDS MUST NOT CONTAIN PRICE QUOTATIONS:** The State shall select the best value solution according to §5G-1-3 of the West Virginia State Code. In accordance with the Code requirements, no "price" or "fee" information is requested or permitted in the bid response.
3. **Evaluation and Award Process:** Expressions of Interest for projects estimated to cost \$250,000 or more will be evaluated and awarded in accordance with West Virginia Code §5G-1-3. That Code section requires the following:
 - 3.1. **Required Elements of EOI Response:** The director of purchasing shall encourage such firms engaged in the lawful practice of the profession to submit an expression of interest, which shall include a statement of qualifications, and performance data and may include anticipated concepts and proposed methods of approach to the project.
 - 3.2. **Public Advertisement:** All EOI requests shall be announced by public notice published as a Class II legal advertisement in compliance with the provisions of West Virginia Code §59-3-1 et seq.
 - 3.3. **Selection Committee Evaluation & Negotiation:** A committee comprised of three to five representatives of the agency initiating the request shall:
 - 3.3.1. Evaluate the statements of qualifications and performance data and other material submitted by the interested firms and select three firms which in their opinion are the best qualified to perform the desired service.
 - 3.3.2. Conduct interviews with each firm selected and conduct discussions regarding anticipated concepts and the proposed methods of approach to the assignment.
 - 3.3.3. Rank in order of preference no less than three professional firms deemed to be the most highly qualified to provide the services required, and shall commence scope of service and price negotiations with the highest qualified professional firm.

EXPRESSION OF INTEREST

CEOI ADJ21*4 - Installation Energy and Water Plans (IEWP)

If negotiations are successful, the contract documents will be forwarded to the WV Purchasing Division for review and approval, and then to the WV Attorney General's office for review and approval as to form. Once approved, a formal contract will be issued to the Vendor.

Should the agency be unable to negotiate a satisfactory contract with the professional firm considered to be the most qualified, at a fee determined to be fair and reasonable, the agency will then commence price negotiations with the second most qualified firm, and so on, until an agreement is reached, or the solicitation is cancelled.

3.4. **Three Firm Evaluation Rankings:** The Agency will evaluate the three firms that have been determined most qualified to perform the desired service. The evaluation criteria is defined in the Procurement Specifications section and based on a 100 point total score. Points shall be assigned based upon the Vendor's response to the evaluation criteria as follows:

- Qualifications and experience (40) Points Possible
- Approach and methodology for meeting Goals and Objectives (20) Points Possible
- Proposed project management, Quality & Cost control plans (20) Points Possible
- Oral interview (20) Points Possible

Total 100

EXPRESSION OF INTEREST
CEOI ADJ21*4 - Installation Energy and Water Plans (IEWP)

SECTION FIVE: TERMS AND CONDITIONS

Terms and conditions begin on the next page.

GENERAL TERMS AND CONDITIONS:

1. CONTRACTUAL AGREEMENT: Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

2. DEFINITIONS: As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

2.1. "Agency" or "Agencies" means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

2.2. "Bid" or "Proposal" means the vendors submitted response to this solicitation.

2.3. "Contract" means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

2.4. "Director" means the Director of the West Virginia Department of Administration, Purchasing Division.

2.5. "Purchasing Division" means the West Virginia Department of Administration, Purchasing Division.

2.6. "Award Document" means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

2.7. "Solicitation" means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

2.8. "State" means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

2.9. "Vendor" or "Vendors" means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. CONTRACT TERM; RENEWAL; EXTENSION: The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

Term Contract

Initial Contract Term: This Contract becomes effective on _____ and extends for a period of _____ year(s).

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to _____ successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Alternate Renewal Term – This contract may be renewed for _____ successive _____ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

Fixed Period Contract: This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

Fixed Period Contract with Renewals: This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that maintenance, monitoring, or warranty services will be provided for _____ year(s) thereafter.

One Time Purchase: The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

Other: See attached.

4. NOTICE TO PROCEED: Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

5. QUANTITIES: The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

Open End Contract: Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

Service: The scope of the service to be provided will be more clearly defined in the specifications included herewith.

Combined Service and Goods: The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

One Time Purchase: This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

6. EMERGENCY PURCHASES: The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute a breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

7. REQUIRED DOCUMENTS: All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

BID BOND (Construction Only): Pursuant to the requirements contained in W. Va. Code § 5-22-1(c), All Vendors submitting a bid on a construction project shall furnish a valid bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

PERFORMANCE BOND: The apparent successful Vendor shall provide a performance bond in the amount of 100% of the contract. The performance bond must be received by the Purchasing Division prior to Contract award.

LABOR/MATERIAL PAYMENT BOND: The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable. Notwithstanding the foregoing, West Virginia Code § 5-22-1 (d) mandates that a vendor provide a performance and labor/material payment bond for construction projects. Accordingly, substitutions for the performance and labor/material payment bonds for construction projects is not permitted.

MAINTENANCE BOND: The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

LICENSE(S) / CERTIFICATIONS / PERMITS: In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits upon request and in a form acceptable to the State. The request may be prior to or after contract award at the State's sole discretion.

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications regardless of whether or not that requirement is listed above.

8. INSURANCE: The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below and must include the State as an additional insured on each policy prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed in this section.

Vendor must maintain:

Commercial General Liability Insurance in at least an amount of: \$1,000,000.00 per occurrence.

Automobile Liability Insurance in at least an amount of: \$1,000,000.00 per occurrence.

Professional/Malpractice/Errors and Omission Insurance in at least an amount of: \$1,000,000.00 per occurrence. Notwithstanding the forgoing, Vendor's are not required to list the State as an additional insured for this type of policy.

Commercial Crime and Third Party Fidelity Insurance in an amount of: _____ per occurrence.

Cyber Liability Insurance in an amount of: _____ per occurrence.

Builders Risk Insurance in an amount equal to 100% of the amount of the Contract.

Pollution Insurance in an amount of: _____ per occurrence.

Aircraft Liability in an amount of: _____ per occurrence.

WV Statutory requirement- WV Code §23-4-2 (Mandolidis)

** PLEASE MAKE INSURANCE CERTIFICATE HOLDER TO READ AS FOLLOWS*** WV Army National Guard 1707 Coonskin Drive, Charleston, WV 25311

Notwithstanding anything contained in this section to the contrary, the Director of the Purchasing Division reserves the right to waive the requirement that the State be named as an additional insured on one or more of the Vendor's insurance policies if the Director finds that doing so is in the State's best interest.

9. WORKERS' COMPENSATION INSURANCE: The apparent successful Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. [Reserved]

11. LIQUIDATED DAMAGES: This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

N/A _____ for N/A _____

Liquidated Damages Contained in the Specifications

12. ACCEPTANCE: Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

13. PRICING: The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification. Notwithstanding the foregoing, Vendor must extend any publicly advertised sale price to the State and invoice at the lower of the contract price or the publicly advertised sale price.

14. PAYMENT IN ARREARS: Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.

15. PAYMENT METHODS: Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)

16. TAXES: The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

17. ADDITIONAL FEES: Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

18. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

19. CANCELLATION: The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.

20. TIME: Time is of the essence with regard to all matters of time and performance in this Contract.

21. APPLICABLE LAW: This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.

22. COMPLIANCE WITH LAWS: Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

23. ARBITRATION: Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

24. MODIFICATIONS: This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

25. WAIVER: The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

26. SUBSEQUENT FORMS: The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

27. ASSIGNMENT: Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.

28. WARRANTY: The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

29. STATE EMPLOYEES: State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

30. PRIVACY, SECURITY, AND CONFIDENTIALITY: The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/default.html>.

31. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

32. LICENSING: In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

33. ANTITRUST: In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

34. VENDOR CERTIFICATIONS: By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein.

Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

35. VENDOR RELATIONSHIP: The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

36. INDEMNIFICATION: The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

37. PURCHASING AFFIDAVIT: In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State, Vendors are required to sign, notarize, and submit the Purchasing Affidavit to the Purchasing Division affirming under oath that it is not in default on any monetary obligation owed to the state or a political subdivision of the state.

38. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE: This Contract may be utilized by other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts (“Other Government Entities”), provided that both the Other Government Entity and the Vendor agree. Any extension of this Contract to the aforementioned Other Government Entities must be on the same prices, terms, and conditions as those offered and agreed to in this Contract, provided that such extension is in compliance with the applicable laws, rules, and ordinances of the Other Government Entity. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

39. CONFLICT OF INTEREST: Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

40. REPORTS: Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.requisitions@wv.gov.

41. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision. The State reserves the right to prohibit a service provider’s employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Revised 01/09/2020

Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

42. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS: Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
- c. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
- d. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

43. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a

“substantial labor surplus area”, as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

44. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$1 million, the vendor must submit to the Agency a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-award interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

45. PROHIBITION AGAINST USED OR REFURBISHED: Unless expressly permitted in the solicitation published by the State, Vendor must provide new, unused commodities, and is prohibited from supplying used or refurbished commodities, in fulfilling its responsibilities under this Contract.

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

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

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

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

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

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

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

Toni Ndika [REDACTED]

(Name, Title)

Toni Ndika, Contract Manager

(Printed Name and Title)

1100 N Glebe Rd Ste 500 Arlington, VA

(Address)

(Phone Number) / (Fax Number)

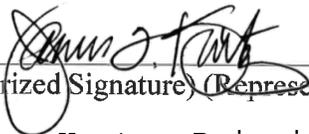
Toni.ndika@jacobs.com

(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.

Jacobs Engineering Group Inc

(Company)



James F. Kurtz, Principal

(Authorized Signature) (Representative Name, Title)

James Kurtz, Principal

(Printed Name and Title of Authorized Representative)

08/19/2020

(Date)

314-409-5675

(Phone Number) (Fax Number)

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

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

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

DEFINITIONS:

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: _____

Authorized Signature: _____ Date: _____

State of _____

County of _____, to-wit:

Taken, subscribed, and sworn to before me this ____ day of _____, 20__.

My Commission expires _____, 20__.

AFFIX SEAL HERE

NOTARY PUBLIC _____



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
08/18/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER LIC #0437153 Marsh Risk & Insurance Services CIRTS_Support@jacobs.com 633 W. Fifth Street Los Angeles, CA 90071	1-212-948-1306	CONTACT NAME: PHONE (A/C, No. Ext): E-MAIL ADDRESS:	FAX (A/C, No): 1-212-948-1306
INSURED Jacobs Engineering Group Inc. C/O Global Risk Management 1000 Wilshire Blvd., Suite 2100 Los Angeles, CA 90017		INSURER(S) AFFORDING COVERAGE INSURER A: ACE AMER INS CO INSURER B: INSURER C: INSURER D: INSURER E: INSURER F:	
		NAIC # 22667	

COVERAGES

CERTIFICATE NUMBER: 60021124

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> CONTRACTUAL LIABILITY GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			HDO G71452694	07/01/20	07/01/21	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 1,000,000 PRODUCTS - COMP/OP AGG \$ 1,000,000 \$
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY			ISA H25307306	07/01/20	07/01/21	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			WCU C67460340 (OHIO Only)	07/01/20	07/01/21	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER
A	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	Y/N	N/A	SCF C67460388 (WI)	07/01/20	07/01/21	E.L. EACH ACCIDENT \$ 1,000,000
A	If yes, describe under DESCRIPTION OF OPERATIONS below			WLR C67460303 (AOS)	07/01/20	07/01/21	E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
A	PROFESSIONAL LIABILITY "CLAIMS MADE"			EON G21655065 011	07/01/20	07/01/21	PER CLAIM/PER AGG \$ 1,000,000 AGGREGATE DEFENSE INCLUDED

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

PROJECT MGR: Lee Feaster. CONTRACT MGR: Toni Ndika. RE: INSTALLATION ENERGY AND WATER PLANS. CONTRACT END DATE: 8/31/2021. PROPOSAL NUMBER: CEOI ADJ21-4. SECTOR: Public. *\$2,000,000 SIR FOR STATE OF: OHIO. State of West Virginia is added as an additional insured for general liability & auto liability as respects the negligence of the insured in the performance of insured's services to cert holder under contract for captioned work. *THIS IS A SAMPLE CERTIFICATE ONLY*. THE ACTUAL CERTIFICATE FOR THE PROPOSED PROJECT WILL COMPLY WITH THE TERMS AND CONDITIONS NEGOTIATED IN THE FINAL CONTRACT, CONSISTENT WITH POLICY TERMS AND CONDITIONS.

CERTIFICATE HOLDER

WV ARMY NATIONAL GUARD
1707 COONSKIN DRIVE
CHARLESTON, WV 25311
USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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ACORD 25 (2016/03)

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nyumdo_newgalexey
60021124

SUPPLEMENT TO CERTIFICATE OF INSURANCE

DATE
08/18/2020

NAME OF INSURED: Jacobs Engineering Group Inc.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
08/18/2020

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PRODUCER LIC #0437153 Marsh Risk & Insurance Services CIRTS_Support@jacobs.com 633 W. Fifth Street Los Angeles, CA 90071	1-212-948-1306	CONTACT NAME: PHONE (A/C, No. Ext): E-MAIL ADDRESS: INSURER(S) AFFORDING COVERAGE INSURER A: ACE AMER INS CO	FAX (A/C, No): 1-212-948-1306 NAIC # 22667
INSURED Jacobs Engineering Group Inc. C/O Global Risk Management 1000 Wilshire Blvd., Suite 2100 Los Angeles, CA 90017		INSURER B: INSURER C: INSURER D: INSURER E: INSURER F:	

COVERAGES

CERTIFICATE NUMBER: 60020790

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> CONTRACTUAL LIABILITY GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			HDO G71452694	07/01/20	07/01/21	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 1,000,000 PRODUCTS - COMP/OP AGG \$ 1,000,000 \$
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY			ISA H25307306	07/01/20	07/01/21	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
A	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY <input type="checkbox"/> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/> N	N/A	WCU C67460340 (OHIO Only)	07/01/20	07/01/21	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
A	<input checked="" type="checkbox"/> PROFESSIONAL LIABILITY "CLAIMS MADE"			EON G21655065 011	07/01/20	07/01/21	PER CLAIM/PER AGG \$ 1,000,000 AGGREGATE DEFENSE INCLUDED

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

PROJECT MGR: Lee Feaster. CONTRACT MGR: Toni Ndika. RE: WVARNG Statewide Installation Master Plan. CONTRACT END DATE: 8/24/2021. PROPOSAL NUMBER: CEOI-ADJ21-3. SECTOR: Public. *\$2,000,000 SIR FOR STATE OF: OHIO. State of West Virginia is added as an additional insured for general liability & auto liability as respects the negligence of the insured in the performance of insured's services to cert holder under contract for captioned work. *THIS IS A SAMPLE CERTIFICATE ONLY*. THE ACTUAL CERTIFICATE FOR THE PROPOSED PROJECT WILL COMPLY WITH THE TERMS AND CONDITIONS NEGOTIATED IN THE FINAL CONTRACT, CONSISTENT WITH POLICY TERMS AND CONDITIONS.

CERTIFICATE HOLDER

WV ARMY NATIONAL GUARD

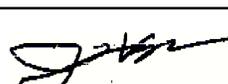
1707 COONSKIN DRIVE

CHARLESTON, WV 25311

USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE


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SUPPLEMENT TO CERTIFICATE OF INSURANCE

DATE
08/18/2020

NAME OF INSURED: Jacobs Engineering Group Inc.