



25 February 2009

Mr. John Abbott
State of West Virginia
Department of Administration, Purchasing Division
2019 Washington Street, East
Charleston, West Virginia 25305-0130

**Re: DEFK9015
A/E Services for the WVARNG; Buckhannon, WV**

Dear Mr. Abbott:

AMEC Earth & Environmental, Inc. (AMEC) and Bucharthorn are pleased to submit this Expression of Interest (EOI) in designing a Readiness Center for the West Virginia Army National Guard (WVARNG) in Buckhannon, West Virginia. The AMEC team has a long, successful history providing A/E services to the Army and Air National Guards (ARNG and ANG), including WVARNG; as well as a variety of other DOD agencies (Air Force, Navy, USAR, USACE). The State of West Virginia and WVARNG can have a high level of confidence in engaging AMEC and their team for this contract.

- The ARNG is one of our top 5 clients. AMEC has provided value-added, professional consulting services to the National Guard Bureau (NGB), including both the ARNG and ANG, since 1994. Throughout this 14-year service history, we have successfully completed more than 750 Delivery Orders totaling well over \$225M for the NGB, of which the majority has been for the ARNG.
- Since 1994, AMEC has worked in all 54 of the states and territories the ARNG serves. AMEC currently is working in 38 ARNG states, including West Virginia, and an additional 10 ANG states, providing on-going consulting services.
- The professional project team has the appropriate relevant experience with not only designing Readiness Centers but all design aspects the WVARNG may encounter on this project. Our team has a proven track record with the WVARNG, has more than adequate capacity to perform the services requested, and can initiate work immediately.

Our EOI is organized as follows:

- **Team Introduction** provides a brief introduction to the AMEC Team and our knowledge of Buckhannon and WVARNG.
- **Key Project Personnel** presents our proposed project organization, and introduces the key personnel who will be assigned to the project.
- **Similar Projects** consists of selected project examples that demonstrate our expertise.
- **Design Considerations** describes our impressions of the project challenges and our approach to developing a solution.
- **Bid Forms** includes the required RFQ forms and Purchasing Affidavit.

We look forward to the opportunity to put our expertise to work for the State of West Virginia and the WVARNG. Should you have any questions concerning our EOI, or if you would like to schedule a personal interview, please do not hesitate to contact us. We will make ourselves available at your convenience.

Respectfully,

Stevin A. Paznokas
AMEC Earth & Environmental
Army National Guard Program Manager

Enclosures: 2 Originals + 1 CD (single pdf) of proposal

Glenn DeWillie
Bucharthorn
Army National Guard Program Manager

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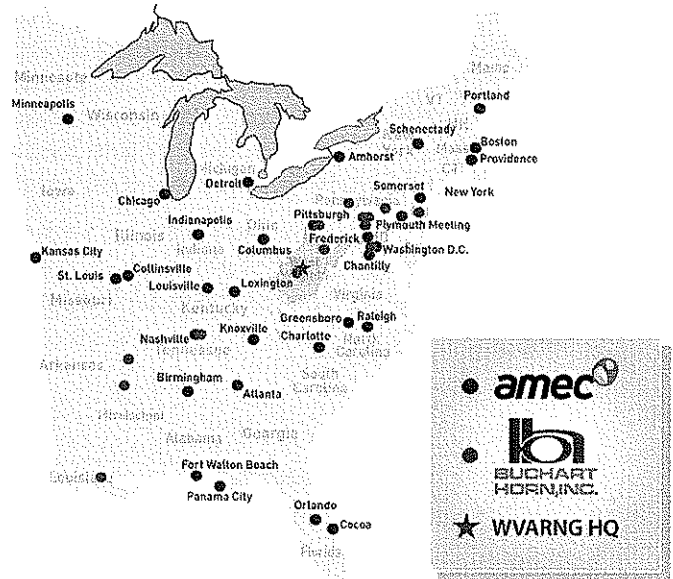
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WV PURCHASING
DIVISION

Team Introduction

AMEC Earth & Environmental, Inc. (AMEC) and Buchart Horn, Inc. (BHI) have assembled a first-class team to provide professional consulting services to the West Virginia Army National Guard (WVARNG) for the proposed Buckhannon Readiness Center. Our team has recent experience designing training and readiness centers for the Army National Guard, and we have current relevant experience working together on the design of a Rappelling Tower and Leadership Reaction Course at Camp Dawson for the WVARNG. As detailed in this EOI, the AMEC team has substantial experience in all aspects of facility design, a vast pool of skilled professionals and a local presence to ensure efficient and effective design execution and delivery. As you can see from the adjacent map, AMEC and BHI offices are conveniently located to provide responsive services to the WVARNG.



As the prime, AMEC will have responsibility for the success of the project and will provide overall project management as well as technical lead for the civil, structural, geotechnical and environmental engineering; permitting; and will support the architectural, mechanical, electrical, and plumbing engineering. AMEC can also provide construction management services if the WVARNG desires.

BHI will provide technical lead for the architectural; interior design; mechanical, electrical, and plumbing engineering; landscape architecture; and cost estimating services for the project.

AMEC Earth & Environmental, Inc. (AMEC)

AMEC's **breadth of services, technical expertise, and resources** will ensure successful delivery on this contract. AMEC is a **recognized world leader** in technical services and provides cost-effective architecture and engineering (A/E) services. According to rankings by Engineering News Record, we are **one of the largest international engineering services organizations in the world**. AMEC truly provides "World Skills at your Doorstep" through "Local Service, Global Reach."

With more than **4,000 employees throughout North America** and over **2,000 professionals in the U.S.**, AMEC has the qualified resources necessary to provide A/E services to the West Virginia Army National Guard (WVARNG). For the past **14+ years**, AMEC has been **providing nationwide engineering and environmental planning services to both the Army and Air National Guard**.



In particular, AMEC and its predecessors can demonstrate a long, successful history with the WVARNG. Over the years, AMEC has supported the WVARNG at Camp Dawson and a number of other locations across the state on a series of instrumental projects. The individuals assigned to this contract have first-hand knowledge of the topography, soil conditions, and site constraints that must be considered in designing the new readiness center. This is the same set of resources that has performed geotechnical and civil engineering services on several WVARNG projects at Camp Dawson including the Modified Record Fire Range (MRFR) shown in the Similar Projects section of this Expression of Interest (EOI). Our expertise on civil site layout saved millions in development costs.

AMEC-OEST, our building services arm, provides complete building design services from concept through final design and construction as well as post-design consultation. AMEC provides the necessary services for your project in-house, including:

- Feasibility studies
- Surveying
- Planning and programming
- Geotechnical engineering
- NEPA documentation
- Life cycle cost analysis
- Code research and analysis
- Permitting
- Architectural design
- Historic preservation
- Structural design / engineering
- Mechanical and plumbing design / engineering
- Electrical and lighting design / engineering
- Fire protection design / engineering
- Civil engineering
- Interior design
- Value engineering
- Bid document preparation, coordination, and evaluation
- Construction administration and monitoring
- Construction materials testing
- Construction management
- Design / Build project delivery
- Maintenance and operational planning
- Warranty review

AMEC has a corporate focus and commitment to sustainable development, and we have a growing Leadership in Energy and Environmental Design (LEED) practice. We intertwine the technological vision with a firm understanding of environmental and engineering principles. The governmental, commercial, and industrial worlds are in a constant state of growth, impacting the energy, water, and carbon "footprint" on our environment. A "Green Building" or LEED certified building can help keep those impacts within an acceptable level. The decisions we make today about the way our buildings are designed, operated, and maintained will not only impact the present, but the future, as well. AMEC has a distinct capability of being able to coordinate and synergize the different disciplines (heating and cooling, interior design, environmental, electrical engineering, process design and health and safety) that impact building design to bring ideas and past experiences together to create a building the client can be proud of, without straining the budget.



**Dow Jones
Sustainability Indexes**
Member 1004-07

In 2007, AMEC was listed as the industry leader for the support services sector in both Dow Jones World and Pan European sustainability index for the fourth straight year. We were presented a Silver Award to celebrate our outstanding performance. The annual review of the DJSI group is based on a thorough assessment of corporate economic, environmental and social performance. This prestigious index benchmarks the world's 2,500 largest companies and only the top 10 per cent of the best performing organizations are included in the index.

AMEC-OEST is part of a team that is providing services for the design of the **Regional Training Institute (RTI)**. The RTI project is being designed in a campus style with three 2-story dormitories, a dining facility, an educational facility, and an administrative building. LEED principles were applied to a proposed design for billet buildings (dormitories) for the RTI. Use of recycled materials was specified to recover them and the energy spent in their original manufacture. The building envelopes were designed with additional wall insulation to outperform energy codes by 25 percent annually. Waterless urinals were specified to save an annual 20 percent of the domestic water use projected. The building and landscaping were designed and specified to reduce the projected heat gain to the atmosphere.

Buchart Horn, Inc.

Buchart Horn Inc., a full-service architecture and engineering firm, has managed and successfully completed multi-disciplinary design projects throughout the eastern United States and Europe for more than 60 years. The firm has 18 operating offices, including Morgantown and Charleston, West Virginia.



The firm's tradition of delivering cost-effective, high quality projects has led to its current Engineering News Record ranking among the Top 100 Green Design Firms, and the nation's top 500 Design Firms. Buchart Horn has planned and designed projects worth more than \$2 billion and been responsible for numerous award-winning projects.

The BHI staff exceeds 300 and includes more than 70 registered engineers, architects, landscape architects, planners, and surveyors.

Buchart Horn's experienced staff is prepared to provide the following services to our team:

- Architectural design
- Interior design
- Electrical studies and analyses
- Interior and exterior lighting
- Power distribution
- Fire Detection and Security Systems
- Telecommunications and networking
- Automatic temperature controls
- Energy protection systems
- Fire suppression systems
- HVAC systems
- Plumbing and drainage systems
- Value engineering and life cycle analysis
- Ventilation heat recovery
- Landscape architecture
- Economic feasibility
- Utilities design
- Constructability analysis

BHI has the knowledge and experience to maximize a building's energy efficiency during its planning, design, construction, and operation. Buchart Horn's "Green Design team" includes 10 LEED[®] accredited professionals currently working on the following sustainable projects:

1. Downingtown Area School District New Middle School – will be designed for LEED[®] Silver Certification.
2. Trexler Environmental Center in Lehigh County. DD submitted and awaiting client response. Will be LEED[®] Certified.
3. Canaan Valley Institute Research Support Facility (WV) LEED[®] application submission. Project is LEED[®] registered, pending certification.

4. PA DGS Waynesboro Readiness Center – multiple sustainable design elements, but not pursuing LEED® certification
5. West Chester University Geothermal heat pump. When complete, this geothermal system will be among largest in the world.
6. Columbia River Park Green Project- day lighting, geothermal heat pump, no AC, recycled materials, and will be designed with green concepts.

For the U.S. Army Corps of Engineers (USACE), BHI completed four Sustainable Project Rating Tool (SPiRiT)-Certified Fort Indiantown Gap projects. The SPiRiT energy efficiency design process was the USACE equivalent of LEED®. The Corps began to transition to LEED® in 2006.

1. Stryker Battalion Training Complex
2. Mission Support Training Facility
3. Unmanned Aerial Vehicle Runway and Maintenance/Training Facility
4. Battalion Storage Facility

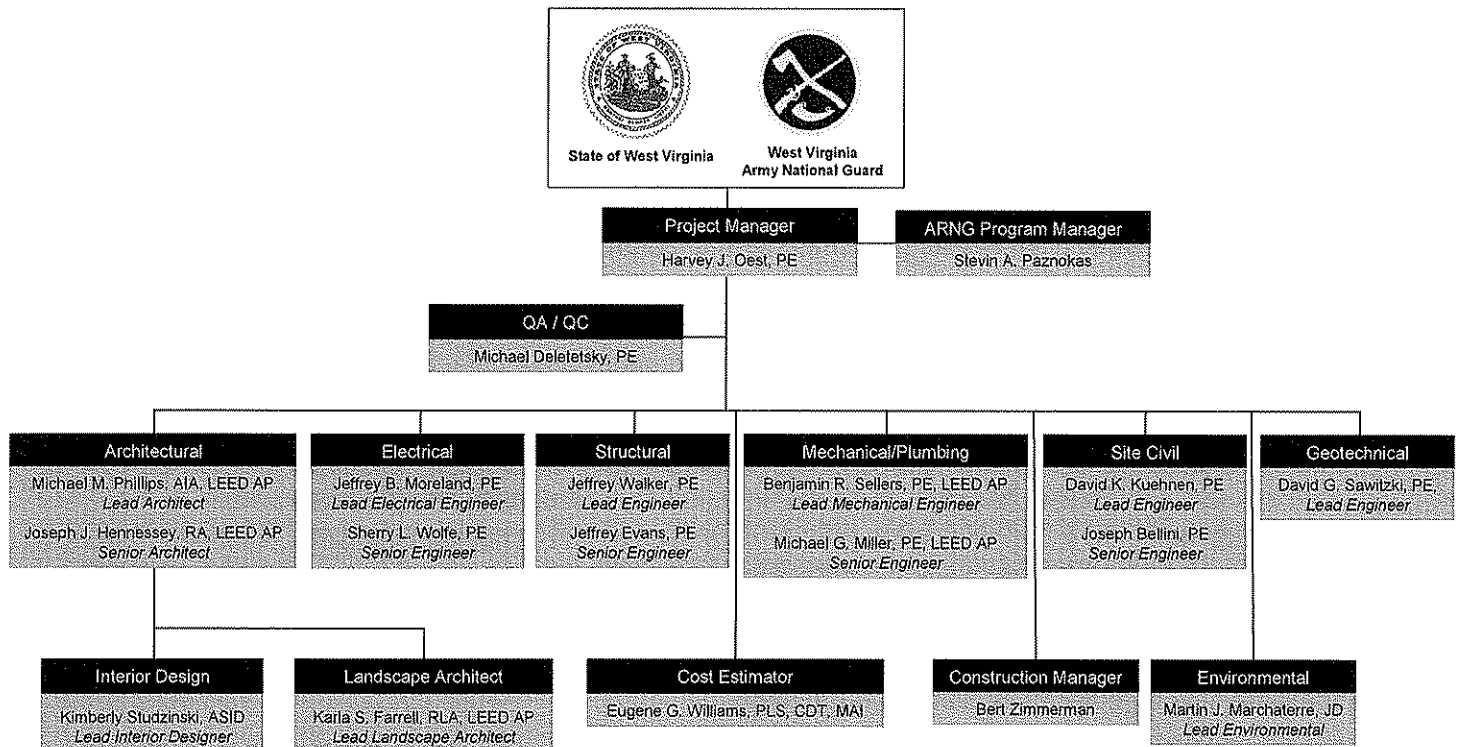
In addition, their team uses integrated planning and design within the area of Anti-Terrorism/Force Protection to ensure form and function are blended with the natural aesthetics of the site and facility. Their familiarity with the necessary design standards and regulations ensures each facility they design will comply with the necessary codes and requirements for its occupants.

Why Choose the AMEC / BHI Team?

The AMEC team offers unsurpassed architectural, civil, mechanical, electrical, plumbing, interior and landscape design, and construction cost estimating services to the WVARNG. Our team has experience with designing of Readiness Centers for the Army National Guard, as well as many other facilities for federal, state, and private clients. Our team's vast experience and deep bench of engineering talent will be brought to bear to support this very important project. AMEC will ensure the Buckhannon Readiness Center design project is successful through clear understanding of the WVARNG's needs and expectations, in-depth knowledge of the site and local conditions, careful planning, technically accurate and efficient data collection and assessment, consistent communication, development and adherence to a design schedule and budget, careful documentation, and accurate cost estimation. We have the experience, the knowledge and the desire to provide the WVARNG with a facility that not only meets all expectations, but exceeds them, by providing an architecturally compatible, fully functional, sustainable, and highly efficient design alternative.

Key Project Personnel

We have carefully selected our project team to provide the WVARNG with the highest quality, most experienced staff available. Each staff member has extensive experience in their designated areas of technical specialty as well as working for the ARNG. Following is our proposed project organization.



Key Personnel

Here is a brief introduction to the key members of our proposed project team. Resumes delineating their experience, qualifications, and education follow.

Program Manager, Stevin A. Paznokas, MBA has been a part of AMEC's National Guard Bureau (NGB) program for more than 8 years and has served as AMEC's Army National Guard (ARNG) Program Manager since 2004. As AMEC's ARNG Program Manager, his main responsibilities include program management, resource allocation, and client growth and satisfaction. He routinely interfaces with numerous states to understand project needs, allocate technical resources, develop cost estimates, and negotiate work assignments. In this role, he has worked with all of the staff we've proposed to make available on this contract. Steve will work closely with our proposed Project Manager, Harvey J. Oest to ensure seamless project delivery.

Project Manager, Harvey J. Oest, PE, will be responsible for all engineering designs, studies, and management of professional engineering services. He is involved with project development, quality control and the administrative presentation of public participation programs. He has gained a keen awareness of public involvement and is extremely sensitive to overall administration and public scrutiny projects. Mr. Oest has been principal-in-charge, project manager, project engineer and

resident inspector on a multitude of projects. Projects on which he has worked include planning and design of buildings and associated systems, environmental studies, comprehensive town planning programs, airport master plans, designs for municipal and industrial water supply, treatment and distribution systems, solid and liquid waste disposal systems and roadway construction design. Design duties have involved site planning, permitting and layout for road and parking access to residents of municipal and industrial complexes. He has worked with numerous clients in the federal, municipal, industrial and private sectors.

Quality Assurance / Quality Control Manager, Michael Deletetsky, PE, has more than 23 years of experience in construction, engineering design, drainage, roadway design, and permitting. He has worked as a civil project engineer, civil engineering designer, and as a field engineer. Typical projects have included design and construction supervision of roadways, utilities, and site development projects for municipal, industrial, private, commercial and utility clients and permitting at the state and local level. Mr. Deletetsky has the skills and qualifications necessary to evaluate building design and structural systems and serves as the firm's Quality Control Manager.

Lead Architect, Michael M. Phillips, AIA, LEED® AP has a diverse background in project scale, type, and style and a strong record of successfully working within and integrating existing facilities into new designs and programs. The knowledge and experience gained from a strong background and practice in historic preservation and renovation bring a keen insight into dealing with adaptive reuse and recycling existing built elements. His wide-ranging experience has also helped fashion a working knowledge of resilient, lasting designs, structurally, functionally, and pragmatically as well as aesthetically. Mr. Phillips has also given his time, talent, knowledge, and leadership skills to the community by being a founding tutor, board member, and past Vice President of PRO-Kids, Inc., a non-profit tutoring organization for disadvantaged children. He was also a founding board member, Vice President, and past President of the Greater Kanawha Community and Economic Development, a non-profit corporation dedicated to renovating affordable housing. Mr. Phillips currently serves as Chairman of Mainstreet Ripley's design committee, volunteering in their efforts as well as spearheading their recent streetscape program.

Senior Architect, Joseph J. Hennessey, RA, LEED® AP has 40+ years of experience from client contact to final inspections and commissioning. He has instinctive creative abilities in forming new ideas and sensitivity to renovations and historic values. Strengths include large and small commercial facilities, industrial facilities, maintenance facilities, research and pharmaceutical renovations, hospital renovations, airport facilities, parking garages, municipal facilities, public and private schools.

Lead Electrical Engineer, Jeffrey B. Moreland, PE, is an electrical engineer with a solid background in process control and signal processing including a 25-year record of achievement in applying new and innovative technologies. His broad business experience ranges from applied research and development, software design, IT, and operations management to a variety of electrical design and project management functions.

Senior Electrical Engineer, Sherry L. Wolfe, PE, as Director of Buchart Horn's Electrical Engineering Group, provides administrative control of multi-discipline projects and coordinates architectural / engineering activities. Her 25 years of experience in industrial and facilities electrical engineering include lighting, electrical service, power distribution, emergency generator, instrumentation, process control, special systems design, project management, field commissioning, and management of personnel.

Lead Mechanical Engineer, Benjamin R. Sellers, PE, LEED® AP has more than five years of experience in mechanical engineering design, including energy conservation and green building design, cost estimating, load designs, and building surveys.

Senior Mechanical Engineer, Michael G. Miller, PE, LEED® AP is responsible for mechanical engineering projects design and quality control. In choosing economical and innovative plumbing, fire protection, and HVAC systems, Mr. Miller evaluates practicality of operation and application; energy conservation; compliance to building code, safety, and health issues; hygienic practice; energy reclamation devices and procedures; and estimates the economical construction, maintenance, and operating costs for life cycle value engineering analyses. He generates computer load-modeling to accurately project the value and feasibility of conservation alternatives. As Director of Buchart Horn's Mechanical Group, Mr. Miller oversees quality control checking of mechanical calculations, equipment and distribution systems, drawings, and specifications for conformance to orthodox industry standards and prudent engineering procedures.

Lead Structural Engineer, Jeffrey Walker, PE has 10 years of structural design experience. Project types include residential, low-rise commercial buildings, parking structures, municipal and governmental facilities, educational buildings, industrial design of light manufacturing, ship building, and electrical generation. Work also includes heavy construction support and design-build engineering.

Senior Structural Engineer, Jeffrey Evans, PE has 13 years of structural design experience in projects including residential, commercial, educational, governmental and industrial.

Lead Interior Designer, Kimberly Studzinski, ASID has more than 21 years of diverse interior design experience. Her abilities encompass all phases of interior design from conceptual design and feasibility studies through production of construction documents. Ms. Studzinski's experience includes several projects for federal and military clients that include lighting design, furniture and finish specification, rendered perspective drawings, programming, space analysis, and planning.

Civil Design Engineer, David K. Kuehnen, PE has 14 years of experience in civil and environmental engineering, completing projects for public and private clients. His work for the Federal government includes completing projects for the National Guard (including the WVARNG at Camp Dawson), Army Corps of Engineers and other agencies. Mr. Kuehnen's areas of expertise are in civil site design and site master planning. Additionally, he has 14 years of experience in Computer Aided Design and Drafting (CADD), as well as 13 years of experience with Inroads and Siteworks land development software.

Senior Civil Engineer, Joseph Bellini, PE, PH, has more than 19 years of experience specializing in hydrologic, hydraulic, and sediment transport analyses; flood hazard studies; flood control planning and design; stormwater management planning and design; urban drainage modeling and design; highway drainage and stormwater systems; erosion and sediment control design; wetland mitigation design; and site/infrastructure engineering. He is skilled with several computer software packages including HEC-1, HEC-2, HEC-6, HEC-RAS, HEC-HMS, HydroCAD, SWMM, FESWMS/SMS, WSPRO, HY8, TR-20, TR-55, FAN, PSUHM, PSRM, POND 2, KYPIPE, CYBERNET, Storm CAD, and. He has extensively used the SpecsIntact software to develop construction specifications based on Army, Navy, and Unified Master specifications.

Lead Geotechnical Engineer, David G. Sawitzki, PE has more than 19 years of multi-disciplinary engineering experience on numerous projects including slope stability analyses, retaining wall design, and shallow and deep foundation analyses. He has developed many subsurface exploration plans to define subsurface conditions and laboratory testing programs to evaluate soil properties for various types of projects. He has been involved in or directed the design of thousands of square feet of retaining walls and soil embankment applications. Mr. Sawitzki has performed slope stability analyses using programs UTEXAS2 and UTEXAS3, seepage analyses using 2D and 3D finite element programs including SEEP2D and FEFLOW, and also has experience conducting settlement, bearing

capacity and other types of geotechnical analyses related to the use of geosynthetic materials. Over 10 years working with AMEC, Mr. Sawitzki has worked closely with the proposed design team on multiple projects. He also has derived first-hand experience with local geotechnical soil conditions from several Camp Dawson projects, including the recent Modified Record Fire Range (MRFR) and South Gate Road Slip projects.

Environmental Planning and Permitting Manager, Martin J. Marchaterre, JD has over 19 years of environmental, regulatory, policy, and permitting experience working as a consultant to federal agencies, states, local governments, and private industry. He has managed projects concerning permitting, environmental assessments, transportation, storm water management, underground injection wells, biological assessments, land use, and pollution prevention. He has managed consulting service projects for the Army National Guard, U.S. Environmental Protection Agency, United States Army Corps of Engineers, United States Navy, Occupational Safety and Health Administration, Nuclear Regulatory Commission, Department of Housing and Urban Development, Kentucky Transportation Cabinet (KYTC), municipalities, and private corporations and utilities.

Lead Landscape Architect, Karla S. Farrell, RLA, LEED® AP has more than 25 years of diverse experience in the field of landscape architecture. She is responsible for managing projects as well as coordinating design teams. Her abilities encompass all phases of landscape architecture from conceptual design and master planning through production of construction documents. Ms. Farrell's experience includes open space planning, and recreational facilities master planning.

Cost Estimator, Eugene G. Williams, PLS, CDT, MAI is experienced in preparing both technical and non-technical project specifications and cost estimates from preliminary through final design phases. Mr. Williams has developed architectural and engineering cost estimates for numerous projects to ensure projects remain within budget using contemporary construction market and materials knowledge in focused geographical areas.

Construction Manager, Carter B. (Bert) Zimmerman has 12 years of increasing responsibilities in the construction profession. He is serving as a site superintendent responsible for the daily oversight of construction activities on projects throughout the United States. He served 12 years in the United States Air Force in Civil Engineering career fields and retired at the rank of Master Sergeant (E-7). He was very successful in senior leadership roles, construction and workforce management.

Following are resumes delineating our project team's experience, qualifications, and education.

Project Team Resumes

HARVEY J. OEST, PE 
Project Manager

Professional qualifications

Professional Engineer, ME; NY

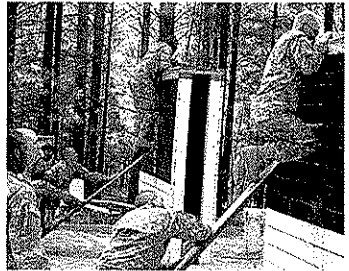
Education

BS, Civil Engineering, University of Rhode Island, 1967

Selected project experience



Maine Army National Guard - Regional Training Institute (RTI), Bangor, ME - Project principal for first phase of \$32 million dollar RTI. The RTI was designed in a campus style with three 2-story dormitories; dining facility; educational facility, and administrative building. AMEC-OEST also provided all site work, including environmental assessment, roadway design, site leveling, landscape architecture, and underground utilities design for 25-acre site situated on a 162-acre parcel. The site had to be designed to the military's Anti Terrorism and Force Protection (ATFP) Standards.



Maine Army National Guard - Operations and Maintenance Facility, Bangor, ME - Project principal for design of a 6,700 SF addition to the Army National Guard's Operations and Maintenance facility. The new facility will have a 7.5-ton overhead crane, radiant floor heating, vehicle warm-up spaces, vehicle exhaust extraction systems, and an upgraded electrical service.



Maine Army National Guard - Training Facility, Auburn, ME - Project principal for site plan for four proposed controlled humidity storage buildings. Also prepared the stormwater management plan and Site Location of Development Law permitting for the entire facility.



Maine Army National Guard - Vehicle Maintenance Facility, Bangor, ME - Project principal for design of a 3,000 SF addition to house support spaces such as administrative offices, restrooms, storage, and a lunchroom. An EIFAS study, permitting, and AT/FP regulations were also incorporated into the design.



Maine Air National Guard - Munitions Storage Complex, Bangor, ME - Performed full scope design services for this unique project. An underground, reinforced concrete arch 'igloo', weapons and munitions maintenance and inspection facility, and multiple above ground storage magazines were designed for the Air National Guard. AMEC-OEST was contracted to update the underground storage igloo definitive drawings used nationwide as the design basis for all underground storage igloos for the type of ordinance. AMEC-OEST's drawings passed the Department of Defense Explosives Safety Board (DDESB) review without comment. This project was signed, designed, bid, and awarded in less than eight months.





MICHAEL DELETETSKY, PE
Quality Assurance / Quality Control Manager

Professional qualifications

Professional Engineer, ME; NH; VT; MA

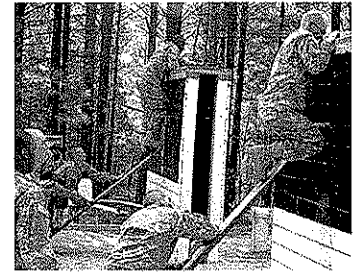
Education

BS, Civil Engineering, University of Maine, 1979

Selected project experience



Maine Army National Guard - Regional Training Institute (RTI), Bangor, ME - Provided QA/QC for the first phase of the \$32 million RTI. The RTI was designed in a campus style with three 2-story dormitories; dining facility; educational facility and administrative building. AMEC-OEST also provided all site work, including environmental assessment, roadway design, site leveling, landscape architecture, and underground utilities design for this 25-acre site situated on a 162-acre parcel. The site had to be designed to the military's Anti Terrorism and Force Protection (ATFP) Standards.



Maine Army National Guard - Operations and Maintenance Facility, Bangor, ME - Provided QA/QC for design of a 6,700 SF addition to the Army National Guard's Operations and Maintenance facility. The new facility will have a 7.5-ton overhead crane, radiant floor heating, vehicle warm-up spaces, vehicle exhaust extraction systems, and an upgraded electrical service.



Maine Army National Guard - Vehicle Maintenance Facility, Bangor, ME - Provided QA/QC for design of a 3,000 SF addition to house support spaces such as administrative offices, restrooms, storage and a lunchroom. An EIFAS study, permitting, and AT/FP regulations were also incorporated into the design.



Maine Air National Guard - Munitions Storage Complex, Bangor, ME - Served as QC manager for this fast-track design of an underground, reinforced concrete arch 'igloo', a weapons and munitions maintenance and inspection facility, and multiple above ground storage magazines. Provided expedited reviews at all submission dates to ensure AMEC-OEST submitted completed, high quality documents to our client. AMEC-OEST's drawings passed the Department of Defense Explosives Safety Board (DDESB) review without comment.



Maine Air National Guard - Detached Alert Complex, Bangor, ME - Participated in civil/site design for an F-15 alert complex including 20,200 SY of taxiway, apron, and associated lighting improvements; 2900 feet of access road with water and sewer lines, stormwater drainage and detention, site grading, and parking lot.

MICHAEL M. PHILLIPS, AIA, LEED® AP

Lead Architect

Professional qualifications

Registered Architect, WV, PA, VA, FL, TN

NCARB

LEED 2.0® Accredited Professional

Education

Bachelor of Architecture, Architecture, University of Tennessee, 1988

Selected project experience



Pennsylvania Air National Guard/171st ARW - Squadron Operations

Building 107 Repair, Coraopolis, PA - Senior architect responsible for field investigation and design for repair (by replacement) of HVAC systems, installation of a wet pipe sprinkler system in the facility, replacement of the domestic hot water heater, repair of select exterior features of the building (including roof replacement), renovation of select interior spaces, and modification of the electrical system for emergency power operations.



Pennsylvania Air National Guard/171st ARW - Combat Arms Training Simulator and Combat Arms Training and Maintenance Facility

Design, Coraopolis, PA - Senior architect responsible for conceptual through 100% design for a 2,800-square-foot Combat Arms Training Simulator (CATS) and Combat Arms Training and Maintenance (CATM) facility including administrative offices, classrooms, and maintenance and storage areas.



Pennsylvania Air National Guard/171st Air Refueling Wing - Aircraft Systems Maintenance Hangar Repair and Renovation, Building 304, Coraopolis, PA

- Senior architect responsible for repairs and renovations to Building 304, a dual-use aircraft systems maintenance hangar, including extensive interior and exterior repairs, creation of new office and tire shop, electrical and lighting upgrades, floor drains, ventilation and air breathing systems, and heating system modifications.



West Virginia Department of Transportation - Elkins Maintenance Facility, Randolph County, WV

- Study, design, and preparation of contract plans and related documents for construction of the Division of Highways' District 8 Equipment Shop Building located on US 219 north of Elkins.



JOSEPH J. HENNESSEY, RA, LEED® AP 
Senior Architect

Professional qualifications

Registered Architect, ME; NH; VT; MA; NY; MD; DE; VA; PA; NCARB

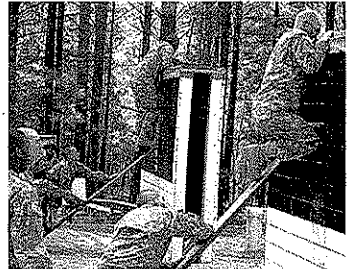
Education

BS, Architecture, Pennsylvania Institute of Technology, 1964

Selected project experience



Maine Army National Guard - Regional Training Institute (RTI), Bangor, ME - Project architect for the first phase of the \$32 million RTI. The RTI was designed in a campus style with three 2-story dormitories; dining facility; educational facility and administrative building. AMEC-OEST also provided all site work, including environmental assessment, roadway design, site leveling, landscape architecture, and underground utilities design for this 25-acre site situated on a 162-acre parcel. The site had to be designed to the military's Anti Terrorism and Force Protection (ATFP) Standards.



Maine Army National Guard - Operations and Maintenance Facility, Bangor, ME - Project architect for design of a 6,700 SF addition to the Army National Guard's Operations and Maintenance facility. The new facility will have a 7.5-ton overhead crane, radiant floor heating, vehicle warm-up spaces, vehicle exhaust extraction systems, and an upgraded electrical service.



USACE New England - Alteration of Building 44, SSC Natick, MA - Project architect for addition and renovation to existing Building 44, a single-story administrative office building, providing an additional 4,600 square feet of office space, state of the art conference room, and a more efficient office configuration.



USACE New England - Alteration of Building 32, SSC Natick, MA - Project architect for design for an addition and renovation to existing Building 32, a single-story banquet hall and lounge that included a new entry vestibule, an aesthetic upgrade to the exterior of the building, and replacement of all exterior doors and windows.



Maine Air National Guard - Munitions Storage Complex, Bangor, ME - Performed full scope design services for this unique project. An underground, reinforced concrete arch 'igloo', weapons and munitions maintenance and inspection facility, and multiple above ground storage magazines were designed for the Air National Guard. AMEC-OEST was contracted to update the underground storage igloo definitive drawings used nationwide as the design basis for all underground storage igloos for the type of ordinance. AMEC-OEST's drawings passed the Department of Defense Explosives Safety Board (DDESB) review without comment. This project was signed, designed, bid and awarded in less than eight months.





JEFFREY B. MORELAND, PE

Lead Electrical Engineer

Professional qualifications

Professional Engineer, WV, PA, TN, LA, MS, FL, GA
NCEES Record

Education

MS, Electrical Engineering, University of Pittsburgh, 1991
BS, Electrical Engineering, Carnegie-Mellon University, 1985

Selected project experience



Pennsylvania DGS/PAANG - Combined Army National Guard

Readiness Center, Waynesburg, PA - Senior contract administrator and lead electrical engineer responsible for design of lighting, power, emergency and standby generation, telecommunications, fire alarm, CATV, and intrusion detection systems. Design, bidding, and administration and review of construction phase services for construction of a combined 38,000-square-foot Readiness Center for the Pennsylvania Army National Guard.



Pennsylvania Air National Guard/171st ARW - Squadron Operations

Building 107 Repair, Coraopolis, PA - Senior electrical engineer responsible for field investigation and design for repair (by replacement) of HVAC systems, installation of a wet pipe sprinkler system in the facility, replacement of the domestic hot water heater, repair of select exterior features of the building (including roof replacement), renovation of select interior spaces, and modification of the electrical system for emergency power operations.



Pennsylvania Air National Guard/171st ARW - Combat Arms Training Simulator and Combat Arms Training and Maintenance Facility

Design, Coraopolis, PA - Senior contract administrator and lead electrical engineer responsible for design of lighting, power, emergency and standby generation, telecommunications, fire alarm, CATV, and intrusion detection systems. Conceptual through 100% design for a 2,800-square-foot Combat Arms Training Simulator (CATS) and Combat Arms Training and Maintenance (CATM) facility including administrative offices, classrooms, and maintenance and storage areas.



West Virginia Department of Transportation - Elkins Maintenance Facility, Randolph County, WV

- Study, design, and preparation of contract plans and related documents for construction of the Division of Highways' District 8 Equipment Shop Provided electrical lighting and power design for this 30,000 SF facility



SHERRY L. WOLFE, PE
Senior Electrical Engineer



Professional qualifications

Professional Engineer, WV, PA, MD, NJ, VA, DC, GA
NCEES Record

Education

BS, Electrical Engineering Technology, Pennsylvania State University, 1987

Selected project experience



**USPS, Eastern Facilities Service Office - IQC for A/E Services:
Repairs and Alterations and Small Standard Building**

**Design/Medium Standard Building Design, Baltimore and Capital
Districts, Greensboro, NC** - Indefinite quantity contract for repairs,
alterations, and small and medium standard building design services,
including adaptation of facilities to standard designs, which may comprise
site/civil design, arranging standard building modules to fit the site, and
architectural, structural, electrical, mechanical, plumbing, and HVAC
design.



**PA Air National Guard/USPFO for PA - Entry Control Gates and
Cantonment Fence, 193rd Special Operations Wing, Middletown, PA**
- Development and design of entry control gates and a cantonment fence
along a portion of the 193rd Special Operations Wing's mission aircraft
parking ramp to provide complete perimeter security.



**USACE/Defense Distribution Depot, - Energy Management Control
System Design, Susquehanna, PA** - Preparation of contract documents
for expansion of current energy management control system into a Depot-
wide system for water, wastewater, electric, and natural gas.



**Dallastown Area School District - Mechanical, Electrical, and
Plumbing Engineering Services for New Intermediate School,
Springfield Township, PA** - Senior electrical engineer responsible for all
calculations and design for electrical service, power distribution, exterior
and interior lighting, and special systems design. As consultant to
Crabtree, Rohrbaugh & Associates, provided electrical design services
including construction documents and preparation for installation of
primary power by Met-Ed.

BENJAMIN R. SELLERS, PE, LEED® AP
Lead Mechanical Engineer



Professional qualifications

Professional Engineer, PA, MD, MS, TN, FL, SC
LEED 2.0® Accredited Professional
NCEES Record

Education

BS, Mechanical Engineering, York College of Pennsylvania, 2000



Pennsylvania DGS/PAANG - Combined Army National Guard Readiness Center, Waynesburg, PA - Project engineer responsible for design of mechanical and HVAC systems for design, bidding, and administration and review of construction phase services for construction of a combined 38,000-square-foot Readiness Center for the Pennsylvania Army National Guard.



US Postal Service - Post Office Renovation and Addition, Ellicott City, MD - Complete HVAC and related engineering services for renovation and addition to Ellicott City Post Office, including a new retail area, box lobby, administrative offices, men's and women's locker rooms, break room, a portion of the workroom, building and grounds, and mechanical/electrical rooms.



USPS, Eastern Facilities Service Office - IQC for A/E Services: Repairs and Alterations and Small Standard Building Design/Medium Standard Building Design, Baltimore and Capital Districts, Greensboro, NC - Indefinite quantity contract for repairs, alterations, and small and medium standard building design services, including adaptation of facilities to standard designs, which may comprise site/civil design, arranging standard building modules to fit the site, and architectural, structural, electrical, mechanical, plumbing, and HVAC design.



Pennsylvania Air National Guard/171st ARW - Squadron Operations Building 107 Repair, Coraopolis, PA - Project engineer responsible for field investigation and design for repair (by replacement) of HVAC systems, installation of a wet pipe sprinkler system in the facility, replacement of the domestic hot water heater, repair of select exterior features of the building (including roof replacement), renovation of select interior spaces, and modification of the electrical system for emergency power operations.

MICHAEL G. MILLER, PE LEED® AP
Senior Mechanical Engineer



Professional qualifications

Professional Engineer, PA, MD
LEED 2.0® Accredited Professional

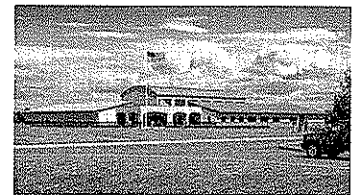
Education

AS, Engineering, Pennsylvania State University, 1967

Selected project experience



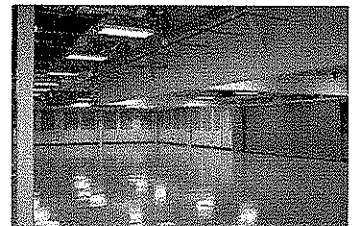
Pennsylvania DGS/PAANG - Combined Army National Guard Readiness Center, Waynesburg, PA - Senior mechanical engineer responsible for design of all mechanical and HVAC systems for design, bidding, and administration and review of construction phase services for construction of a combined 38,000-square-foot Readiness Center for the Pennsylvania Army National Guard.



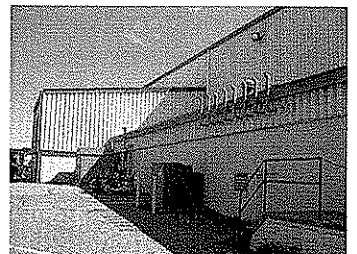
Pennsylvania Air National Guard/171st ARW - Squadron Operations Building 107 Repair, Coraopolis, PA - Director of mechanical engineering responsible for field investigation and design for repair (by replacement) of HVAC systems, installation of a wet pipe sprinkler system in the facility, replacement of the domestic hot water heater, repair of select exterior features of the building (including roof replacement), renovation of select interior spaces, and modification of the electrical system for emergency power operations.



USPFO for PA/ Ft. Indiantown Gap - Mission Support Training Facility Design, Annville, PA - Senior mechanical engineer responsible for QA/QC of all mechanical systems and Design Chief for all LEED®-related elements. Complete A/E design for a \$4 million, 24,000 SF C4I Training Facility for the National Guard's only Stryker Brigade. The facility, certified for the "Gold" level of USACE Sustainable Project Rating Tool (SPIRiT), serves as the command and control training facility centerpiece for the 28th Division's Stryker Brigade Combat Team.



Pennsylvania Air National Guard/171st Air Refueling Wing - Aircraft Systems Maintenance Hangar Repair and Renovation, Building 304, Coraopolis, PA - Quality assurance/quality control review for repairs and renovations to a dual-use aircraft systems maintenance hangar, including extensive interior and exterior repairs, creation of new office and tire shop, electrical and lighting upgrades, floor drains, ventilation and air breathing systems, and heating system modifications.



JEFFREY WALKER, PE 
Lead Structural Engineer

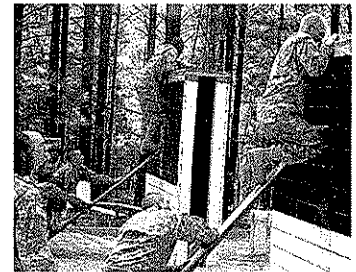
Professional qualifications
Professional Engineer, ME

Education
MS, Civil Engineering, University of Maine, 2001
BS, Civil Engineering, University of Maine, 1996

Selected project experience



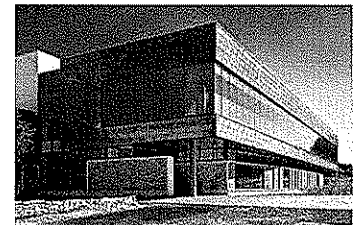
Maine Army National Guard - Regional Training Institute (RTI), Bangor, ME - Project architect for the first phase of the \$32 million RTI. The RTI was designed in a campus style with three 2-story dormitories; dining facility; educational facility and administrative building. AMEC-OEST also provided all site work, including environmental assessment, roadway design, site leveling, landscape architecture, and underground utilities design for this 25-acre site situated on a 162-acre parcel. The site had to be designed to the military's Anti Terrorism and Force Protection (ATFP) Standards.



Maine Army National Guard - Operations and Maintenance Facility, Bangor, ME - Project architect for design of a 6,700 SF addition to the Army National Guard's Operations and Maintenance facility. The new facility will have a 7.5-ton overhead crane, radiant floor heating, vehicle warm-up spaces, vehicle exhaust extraction systems, and an upgraded electrical service.

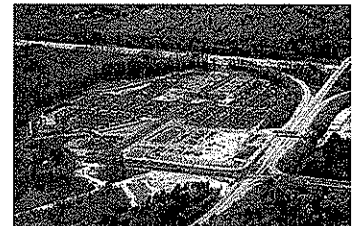


Student Recreation Center, University of Maine, Orono, ME - Structural engineer for design of a new 85,000 SF student recreation and fitness center at the University of Maine in Orono, Maine. This new recreation facility houses a recreational pool, jogging track, multi-use courts, weight training and fitness areas, locker rooms, lounges, support areas, and administrative offices.



Main Entrance, Brunswick Naval Air Station, Brunswick, ME - Structural engineer responsible for canopy design and guard house for this project entailing reconfiguration of the main entrance traffic. The project required active and passive barriers, islands, paving, lighting, signage, and markings in conjunction with a new guard house with canopy located along Fitch Avenue, the existing main entry access road, and relocation of the existing vehicle inspection facility.

Gateway at Scarborough, New England Expedition LLC, Scarborough, ME - Mr. Walker provided structural design for the Gateway at Scarborough, a mixed-use development located on 75 acres of land on Payne Road in Scarborough. The cornerstone of the project is a 138,000-square-foot Cabela's retail store; however, the development will also include space for smaller retail facilities, restaurants, office space and a hotel.



JEFFREY D. EVANS, PE 
Senior Structural Engineer

Professional qualifications

Professional Engineer, ME, PA, MA, DE, KY

Education

BS, Architectural Engineering, Drexel University, 1995

BS, Civil Engineering, Drexel University, 1995

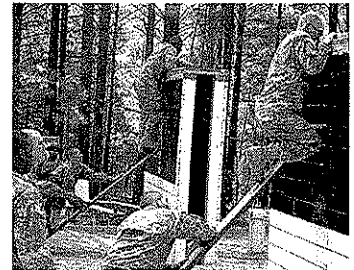
Selected project experience



Maine Army National Guard - Regional Training Institute (RTI),

Bangor, ME - Project architect for the first phase of the \$32 million RTI.

The RTI was designed in a campus style with three 2-story dormitories; dining facility; educational facility and administrative building. AMEC-OEST also provided all site work, including environmental assessment, roadway design, site leveling, landscape architecture, and underground utilities design for this 25-acre site situated on a 162-acre parcel. The site had to be designed to the military's Anti Terrorism and Force Protection (ATFP) Standards.



Building #18, Bath Iron Works, Bath, ME – Lead structural engineer for existing 16,000 SF industrial building retrofitted for a new process that required design of a new 2-story high bay for an upgraded 30-ton crane and supporting structure. Existing structure needed to be analyzed and upgraded to accommodate the load effects from the vertical building addition and had to meet the latest code requirements.

Gateway at Scarborough, New England Expedition LLC,

Scarborough, ME - Mr. Evans is providing structural engineering services for the Gateway at Scarborough, a mixed-use development located on 75 acres of land on Payne Road in Scarborough. The cornerstone of the project is a 138,000 SF Cabela's retail store; however, the development will also include space for smaller retail facilities, restaurants, office space, and a hotel.



Tuscarora Inn and Conference Center, Mt. Bethel, PA - The project consisted of an 18,000 SF multi-story conference center with cantilevered balcony. Mr. Evans performed gravity and lateral analysis; designed structural steel bents and framing members; analyzed existing structure for new loads; and designed concrete footings and flush masonry walls.

Portland International Jetport Terminal Expansion, City of Portland,

ME - Lead structural engineer for the \$75 million terminal expansion. This project consists of renovating the existing terminal and a 190,000 SF expansion. Seven new passenger gates, new security screening checkpoint, inline EDS outbound baggage handling system, revised inbound/outbound passenger circulation, bridged connection to the parking garage, food court, various retail spaces, and renovation of the existing terminal are all project components. LEED certification will be pursued for this project. Substantial completion is expected in November 2010.

KIMBERLY STUDZINSKI, ASID

Lead Interior Designer



Professional qualifications

ASID
NCIDQ

Education

MS, Architectural Interior Design, Drexel University, 1990
BS, Fine Arts, St. Joseph's University, 1986

Selected project experience



USPFO for PA/ Ft. Indiantown Gap - Unmanned Aerial Vehicle

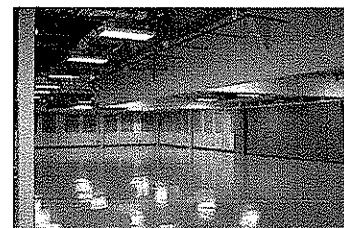
Runway and Maintenance / Training Facility Design, Annville, PA -

Design of 50' x 700' runway and supporting 5,600 square foot training and maintenance facility to conduct Unmanned Aerial Vehicle (UAV) flight and training operations. This project was SPiRiT Gold certified.



USPFO for PA/ Ft. Indiantown Gap - Mission Support Training

Facility Design, Annville, PA - Complete A/E design for a \$4 million, 24,000 SF C4I Training Facility for the National Guard's only Stryker Brigade. The facility, which is certified for the "Gold" level of USACE Sustainable Project Rating Tool (SPiRiT) certification, serves as the command and control training facility centerpiece for the 28th Division's Stryker Brigade Combat Team.



USPFO for PA, Ft. Indiantown Gap - Stryker Battalion Training

Complex, Annville, PA - Preliminary design of a \$21 million training complex including billeting, storage, maintenance, and administrative facilities. This project was SPiRiT Silver certified.



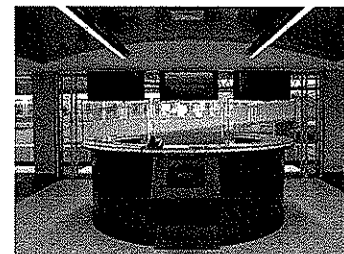
USACE - Main Lobby & Wing C Renovation, Command HQ, Building

11, Tobyhanna Army Depot, PA - Space planning and interior finish selection for repairs and renovations to the main entrance lobby and the second floor of Wing C in the Command Headquarters building consistent with design aesthetics previously developed by Buchart Horn for the adjacent Mission Operations facility.



USACE - Renovation of Department of Public Works, Tobyhanna

Army Depot, PA - Work flow analysis and interior design services for design of renovations to the Department of Public Works Building to include private and open office space, conference room, and support areas. This project will be phased and completed as a Design/Build project.





DAVID K. KUEHNEN, PE 
Civil Design Engineer


Professional qualifications
Professional Engineer, TN


Education
BS, Civil Engineering, University of Memphis, 1992


Selected project experience


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West Virginia Army National Guard - Modified Record Fire Range, Camp Dawson, WV: Civil engineer for design and plan production for a 16-lane firing-range located at the Briery Mountain training site. Due to the rugged terrain, a detailed line of sight analysis was completed to ensure each target could be seen from each firing point, minimize the earthwork to construct the range, and keep the project under budget.
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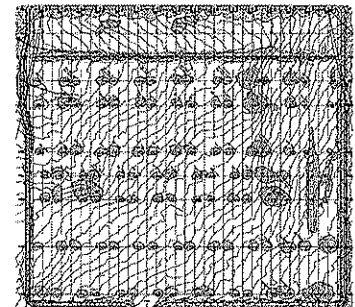
West Virginia Army National Guard – Planning Charrette for a Joint Armed Forces Reserve Center, Ripley, WV - Civil engineer for planning charrette and initial site layout for a new Joint Armed Forces Reserve Center. The project includes an approximately 50,000-square-foot, single-story building to house a drill hall, military postal training facility, maintenance shop, motor pool for military vehicles, and parking for civilian vehicles. The 10,000-square-foot maintenance shop and motor pool can either be attached or separate from the Reserve Center.
- 

West Virginia Army National Guard – Camp Dawson Boundary Fence - Civil engineer for design and plan production for a perimeter fence for the Camp Dawson cantonment. The project consisted of grading and drainage design for approximately 8,850 linear feet of security fence along the southeastern portion of the Camp Dawson cantonment area. Included in the design was preparation of the Stormwater Pollution Prevention Plan (SWPPP) and obtaining the land disturbance permit.
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West Virginia Army National Guard – Camp Dawson’s Pringle Training Area, Motor Pool Site - Civil engineer for design and plan production for a proposed motor pool on the Pringle Mountain tract for Camp Dawson. The project consisted of grading and drainage design for a 4.6-acre enclosed motor pool to support training activities on the Pringle Mountain training site. Included in the design was preparation of the SWPPP and obtaining the land disturbance permit.
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West Virginia Army National Guard – Camp Dawson Multi-Purpose Building - Civil engineer for design and plan production for a proposed 32,000-square-foot multi-purpose building at Camp Dawson. The design will include pad preparation, utilities, and required site improvements including parking and site drainage.
- 

U.S. Army Corps of Engineers, Huntsville – Ft. Carson Range Design, Fort Carson, CO - Civil engineer for design and plan production for six firing-ranges located on Fort Carson. Due to the rugged terrain, a detailed line of sight analysis will be completed to ensure each target can be seen from each firing point, minimize the earthwork to construct the range, and keep the project under budget.



JOSEPH BELLINI, PE, PH 
Senior Civil Engineer

Professional qualifications

Professional Engineer, WV, PA, VA, MD, ME, NY
Professional Hydrologist, American Institute of Hydrology

Education

MS, Civil Engineering (Hydraulics/Hydrology), University of Pittsburgh, 1993
BS, Civil Engineering, Pennsylvania State University, 1989

Selected project experience



US Army - Hanover Lake Dam Rehabilitation, Ft. Dix NJ –Quality control review for engineering design plans, specifications, and construction cost estimates. Rehabilitation was directed toward improving seepage controls through earthen embankment adjacent to the spillway.



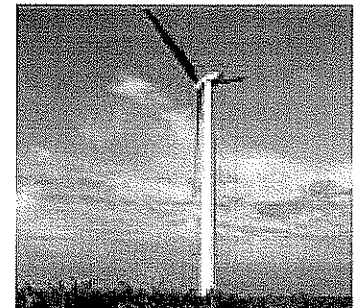
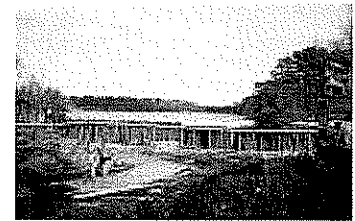
US Army - Range 59A & 59D Stormwater Design, Ft. Dix NJ – Designed three stormwater management systems, including infiltration and flood storage basin and pre-treatments bays, for improvements to two range sites in accordance with New Jersey Department of Environmental Protection, Pinelands Commission requirements. Design included requirements for erosion and sediment control during construction.

NedPower LLC – Mt. Storm Wind Energy Project Stormwater / Site Design, Grant County, WV - Horizontal and vertical geometric and grading design for approximately five miles of access roads, substation pad, and related disposal areas. The roads provide access to a proposed substation and 14 wind turbines. Developed drainage, stormwater management, and erosion and sediment control designs for 80-acre site, including 37 culverts, 111 channel segments, 6 stormwater ponds / dams, and 10 sediment traps. Acid mine drainage mitigation measures were incorporated into the design developed in accordance with West Virginia Department of Environmental Protection standards and WV National Pollutant Discharge Elimination System General Permit.

5J Energy Corporation - Charles Pointe Development Project Preliminary Site Design, Bridgeport WV - Preliminary design for 1,800-acre multi-use development, including residential, commercial / office, hotels, golf course, town center, civic center, hospital, school, conference center, and amphitheatre. Included roadways, waterlines, sewer lines, sanitary sewer lift stations, grading, drainage systems, stormwater management ponds, erosion and sediment control, and a pedestrian tunnel. Developed plan approval documents for the Harrison County site plan approval. This project also consisted of a preliminary engineering evaluation of the existing water and sanitary sewer systems in the City of Bridgeport and its ability to accommodate the new development.



West Virginia Department of Environmental Protection, Waterline Design, Fayette and Upshur Counties WV - Developed and calibrated hydraulic models for the existing and extended water distribution systems using KYPIPE at two sites. Performed flow tests and designed three stand-pipe storage tanks and two booster-pumping stations. Developed final construction documents for both water systems.




DAVID SAWITZKI, M.A.S.C., PE
Lead Geotechnical Engineer

Professional qualifications
Professional Engineer, FL, KY


Education

M.A.Sc., Civil Engineering, Geotechnical Engineering Program, University of Waterloo, 1989
B.S.E, Civil Engineering, Geological Engineering Program, Princeton University, 1988


Selected project experience

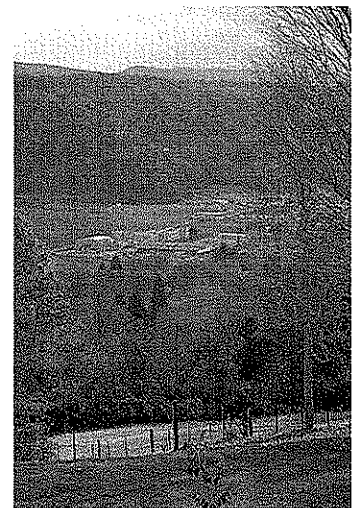
 **West Virginia Army National Guard – Modified Record Fire Range (MRFR) Geotechnical Study, Camp Dawson, WV** - Geotechnical study project manager for a new MRFR. Included site assessment and site preparation, pavement, and foundation recommendations for a 30+ acre range, supporting buildings and an access road on rough, hilly terrain. Provided layout support, geotechnical borings, laboratory testing, and geotechnical engineering recommendations for civil and structural design. Work completed to optimize rock and soil bearing foundations.




 **West Virginia Army National Guard - South Gate Road Slip, Camp Dawson, WV** - Geotechnical principal-in-charge for a slope repair to prevent South Gate Road from sliding into the Cheat River. Included advancing 10 borings to top of bedrock and into bedrock within a 300-foot failed slope area, surveying failed road and slope, thorough laboratory testing program, and developing a typical cross section describing the failing slope conditions. A series of slope repair design concepts were evaluated geotechnically and structurally and presented to the Owner for selection. Complete civil and structural plans and specifications were prepared for the selected repair option and prepared for contractor bidding.



 **West Virginia Army National Guard - Camp Dawson Hydrogeologic Groundwater Assessment** - Geotechnical principal-in-charge to study surficial / groundwater interaction within the 410-acre Camp Dawson cantonment area. Six borings and six monitor wells were installed to investigate subsurface conditions and measure alluvial soils subsurface transmissivity as well as bedrock beneath the site. Developed a computer model of the area using three-dimensional MODFLOW to evaluate several potential solutions to control high groundwater levels. A French drain system proved the most effective.



 **West Virginia Army National Guard – Joint Interagency Education and Training Center (JIETC) Geotechnical Study** - Geotechnical principal-in-charge for a planned 3- to 4-story, 150,000-square-foot JIETC. Structural loads of 300 Kips and 4.0 KLF for column and wall loads were considered. To develop recommendations for a foundation system to support this building on the relatively soft alluvial soils of the Cheat River Floodplain, 12 borings were advanced to bedrock and 6 were advanced up to 10 feet into bedrock, while an additional 6 borings were completed in parking areas. A deep foundation system consisting of auger cast-in-place piles was recommended to support the structure within the dense sands and gravels beneath the site.

MARTIN J. MARCHATERRE, JD
Environmental Planning / Permitting




Professional qualifications


Virginia Bar Association - Environmental Law Section, Military Law Section
District of Columbia Bar Association - Environmental, Energy and Natural Resources Section


Education


JD, Marshall-Wythe School of Law, College of William and Mary, Williamsburg, Virginia, 1988
BA, Williams College, Williamstown, Massachusetts, History and Political Science, 1985


Selected project experience

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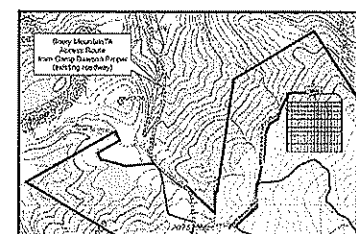
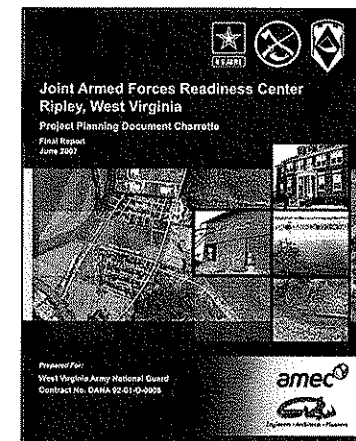
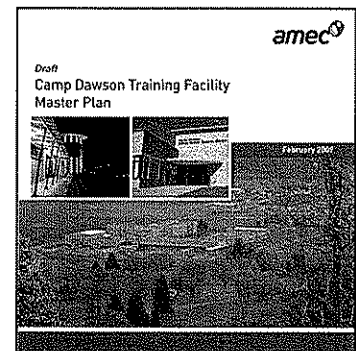
West Virginia Army National Guard - Training Site Master Plan, Camp Dawson, WV - Managed conceptual master plan preparation for Camp Dawson Cantonment Area and Volkstone Training Area. The plan assisted in setting strategic goals for the base mission and vision, and is the underpinning for a more detailed Training Facility Master Plan (TFMP) that is underway. The TFMP provides a foundation for future Camp Dawson development. AMEC helped identify current conditions, facility and site constraints, and opportunities for enhanced opportunities.
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West Virginia Army National Guard - Design, Mitigation, and Geotechnical Services for Modified Record Firing Range (MRFR), Camp Dawson, WV - Managed some MRFR design components. Provided technical review of environmental assessment (EA). Helped evaluate alternatives to minimize stream and wetlands impacts. Managed erosion and sedimentation controls development and coordination with state and federal agencies on mitigation and permitting issues. Oversaw target elevations optimization to minimize earthwork and geotechnical evaluations of the access road and range control facilities locations.
- 

West Virginia Army National Guard - Armed Forces Reserve Center (AFRC), Buckhannon, WV - Managing the EA for the Buckhannon AFRC. Conducted a site visit and record search to evaluate potential environmental constraints, such as 100-year floodplains along Brushy Fork Creek. Developed a pEA that evaluates environmental impacts on a 49-acre site and potential mitigation options for the proposed AFRC. The AFRC will replace a 48-year old armory and provide needed training facilities.
- 

West Virginia Army National Guard - Ripley Joint Armed Forces Center (JAFRC) Planning Charrette, Ripley, WV - Managed a three-day planning charrette for the proposed Ripley JAFRC. The charrette's purpose was to conduct a fact-finding mission, discuss project details with key installation stake holders, and review the 1391 construction cost estimate. The planning report outlined the charrette findings and outlined next steps for the project.
- 

West Virginia Army National Guard - Briery Mountain Range Development Plan EA, Camp Dawson, WV - Managing the EA for three proposed Briery Mountain Training Area ranges, which include a Live Fire Breach Facility, Hand Grenade Familiarization Range, and Urban Assault Course. Coordinating with WVARNG to evaluate potential constraints, such as stream impacts, and avoid and minimize environmental impacts.



KARLA S. FARRELL, RLA, LEED® AP
Landscape Architect



Professional qualifications

Registered Landscape Architect, PA, MD, VA
CLARB
LEED 2.0® Accredited Professional

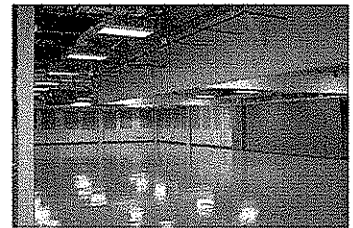
Education

BS, Landscape Architecture, Pennsylvania State University, 1984

Selected project experience



USPFO for PA/ Ft. Indiantown Gap - Mission Support Training Facility Design, Annville, PA - Complete A/E design for a \$4 million, 24,000 SF C4I Training Facility for the National Guard's only Stryker Brigade. The facility, certified for the "Gold" level of USACE Sustainable Project Rating Tool (SPIRiT), serves as the command and control training facility centerpiece for the 28th Division's Stryker Brigade Combat Team.



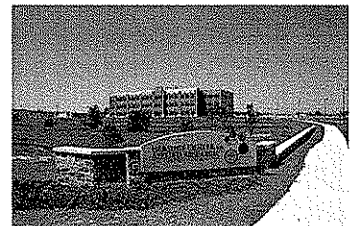
US Army Corps of Engineers - Carlisle Barracks Site Plan, Carlisle, PA - Senior landscape architect responsible for development of five conceptual site plans for multi-family dwelling units. Designed unique circulation pattern to de-conflict pedestrian and vehicular traffic. Site evaluation, road, and infrastructure layout options; building floor plans; and utility layout for multi-family dwelling units constructed as replacements for 175 undersized and outdated units in an existing residential area.



US Postal Service - Post Office Renovation and Addition, Ellicott City, MD - Complete architectural/engineering services for renovation and addition to Ellicott City Post Office, including a new retail area, box lobby, administrative offices, men's and women' locker rooms, break room, a portion of the workroom, building and grounds, and mechanical/electrical rooms.



Wexford Science and Technology LLC - Civil Engineering for Hershey Center for Applied Research Building 2, Derry Township, PA - Senior landscape architect responsible for preparation of land development plans and construction documents associated with site improvements for Building 2, including Englewood House and Barn proposed to be used respectively as a restaurant and an educational laboratory. Site improvements included additional grading, parking, and stormwater management controls.



EUGENE G. WILLIAMS, PLS, CDT, MAI

Cost Estimating



Professional qualifications

Professional Land Surveyor, PA

Education

Coursework, Civil Engineering Technology, Pennsylvania State University, 1966

Selected project experience



Combined Army National Guard Readiness Center, Pennsylvania DGS/PAANG, Waynesburg, PA. Assistant Division Director responsible for the preparation of cost estimates and specifications for the design, bidding, and administration and review of construction phase services for the construction of a combined 38,000 square-foot Readiness Center for the Pennsylvania Army National Guard.

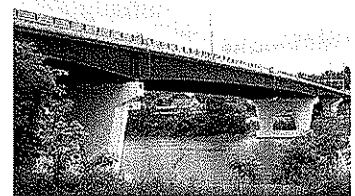


Testing Lab/Maintenance Facility Design, WVDOT, Charleston, WV.

New complex comprised of a 43,260 square foot materials control, soil and testing lab, a 21,645 square foot sign shop, and a 14,072 square foot operations building as well as final plans for roadway and site development. Senior Cost Estimator responsible for development of specifications and preparation of construction cost estimates.



Star City Osage Road Bridge and Highway Improvements, WVDOT, Star City, WV. Senior Cost Estimator responsible for development of specifications and preparation of construction cost estimates. Preliminary and final design of a five-lane 1,000-foot steel girder bridge replacement structure to carry US Route 19 over the navigable Monongahela River (as well as a railroad, State Route 100, and a hike and bike path) and the upgrade of a mile of US Route 19 from two to four lanes on the bridge approaches.



Transportation Security Administration Offices, Yeager Airport, Charleston, WV. Senior Cost Estimator responsible for development of specifications and preparation of construction cost estimates. Design services for secure administrative offices for the Central West Virginia Regional Airport Authority. The office accommodates the Transportation Security Administration, a division of the U.S. Department of Homeland Security, responsible for airport baggage screening.



West Virginia Route 9, WVDOT, Berkeley and Jefferson Counties, WV. Design to widen 1 mile section of Route 9 between Martinsburg and Charles Town to 4 lanes. Cost Estimator responsible for development of specifications and preparation of construction cost estimates.

CARTER B. (BERT) ZIMMERMAN
Construction Management

Selected project experience



Air Force Civil Engineer Support Agency - Construct Ground to Air Transmitting, Receiving (GATR) Communications Facility, Grand Forks AFB, ND

Mr. Zimmerman was responsible for ensuring all necessary coordination was conducted with applicable individuals and agencies and all work was accomplished according to project specifications. He conducted daily meetings with subcontractors and weekly meetings with the client to provide updates to the schedule, progress, and address any issues that may have developed. He updated the red line drawings daily and assisted with project closeout. Mr. Zimmerman ensured all safety requirements were met and conducted daily, weekly, and monthly safety meetings and inspections. Mr. Zimmerman also acted as the on-site QA/QC representative, ensuring the highest standards of quality were maintained.



Air Force Center for Environmental Excellence - Construct Shoppette/Car Care Center, Vandenberg AFB, CA

Mr. Zimmerman ensured all necessary coordination was conducted with applicable individuals and agencies, and ensured all work was accomplished according to project specifications. Additionally, he conducted daily meetings with subcontractors to ensure project was progressing toward completion.



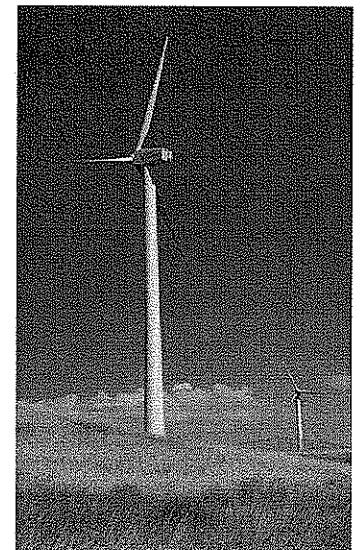
Air Force Civil Engineer Support Agency - Repair Mitchell Hall, Phase 2, United States Air Force Academy, ND

Phase two serves as the "backbone" of the remaining five phases, and replaces substantial portions of the facility electrical, mechanical, and refrigeration systems. Mitchell Hall serves approximately 4,400 meals 3 times per day, and must remain in operation during the construction process. Mr. Zimmerman was responsible for ensuring all necessary coordination was conducted with the Mitchell Hall Facility Manager and other agencies as appropriate to ensure all work was accomplished according to project specifications. He reviewed, logged, submitted, and tracked all project submittals in accordance with the submittal register; held daily meetings with subcontractors; and weekly meetings with the client to provide updates to the schedule, progress, and address any issues that may have developed. Mr. Zimmerman ensured all safety requirements were met and conducted daily, weekly, and monthly safety meetings and inspections. Mr. Zimmerman also acted as the on-site QA/QC representative, ensuring the highest standards of quality were maintained.



Inspector for the Installation of Two Wind Turbine Generators at F.E. Warren AFB, WY

Inspected assembly and installation of two wind turbine generators including coordinating efforts between the contractor and government agencies to ensure scheduled completion in accordance with contract specifications and drawings. The coordination efforts included not only base agencies but also the Federal Aviation Authority (FAA) to meet all FAA clearances and safety requirements.

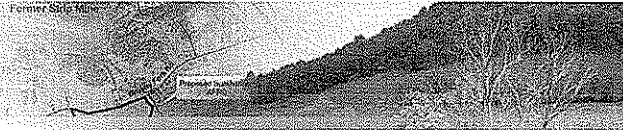




Our team brings value to the Buckhannon Readiness Center project through our recent relevant experience. Here is a quick-reference matrix describing selected relevant projects' features and the value our firms brought to each project. Full one-page project descriptions for each project follow.

Project Name	Relevance	Value Add
Regional Training Institute (RTI), Maine Army National Guard (MEARNG), Bangor, ME	<ul style="list-style-type: none"> ▫ ARNG design standards ▫ ARNG training facility ▫ Design charrette ▫ Dormitories ▫ Landscape ▫ AT/FP design ▫ LEED design 	Use of recycled materials was specified to recover them and the energy spent in their original manufacture. The building envelopes were designed with additional wall insulation to outperform energy codes by 25% annually. Waterless urinals were specified to save an annual 20% of the domestic water use projected. The building and landscaping was designed and specified to reduce the projected heat gain to atmosphere.
Combined Readiness Center, Pennsylvania Army National Guard, Waynesburg, PA	<ul style="list-style-type: none"> ▫ ARNG design standards ▫ Masonry/steel frame construction ▫ Design charrette ▫ Assembly hall ▫ Locker rooms and showers ▫ Storage areas ▫ AT/FP design ▫ Security lighting and fencing ▫ Parking ▫ LEED design 	<p>Facility serves as a model Readiness Center for the Reserves in PA</p> <p>State of the art multi-purpose training spaces.</p> <p>Features sustainable, energy efficient materials and systems.</p>
Elkins Maintenance Facility, West Virginia Department of Transportation, Elkins, WV	<ul style="list-style-type: none"> ▫ Locker rooms and showers ▫ Storage areas 	Special focus on environmental controls related to safe material storage for parts and flammable supplies. Features energy efficient materials and systems

Project Name	Relevance	Value Add
Mission Support Training Facility Design, U.S. Property & Fiscal Office, Department of Military & Veterans Affairs, Ft. Indiantown Gap, Annville, PA	<ul style="list-style-type: none"> ▪ ARNG design standards ▪ Precast concrete sandwich panel with steel frame construction ▪ Multi-purpose training center ▪ Reconfigurable open space ▪ Conference rooms ▪ Barracks ▪ Storage areas 	<p>Scheduled for "Gold" level USACE Sustainable Project Rating Tool (SPiRiT) certification</p> <p>State-of-the-art training spaces</p>
Stryker Battalion Training Complex, U.S. Property & Fiscal Office, Department of Military & Veterans Affairs, Ft. Indiantown Gap, Annville, PA	<ul style="list-style-type: none"> ▪ Design charrette ▪ Barracks ▪ Storage areas ▪ LEED design 	<p>Designed to the "Silver" level of LEED certification</p> <p>Use of pre-cast components to streamline construction.</p>
Planning Charrette for Armed Forces Reserve Center, Ripley, WV	<ul style="list-style-type: none"> ▪ WVARNG project ▪ Design charrette 	<p>Gained valuable information regarding WVARNG needs for the facility.</p>
Modified Record Fire Range, West Virginia Army National Guard (WVARNG), Camp Dawson, WV	<ul style="list-style-type: none"> ▪ WVARNG project ▪ Design charrette 	<p>AMEC was able to expedite the design, including the range and support facility footprints, utility connections, and access roads, while ensuring environmental impacts were minimized and fully addressed and mitigated within the NEPA document in accordance with applicable Federal laws</p>
Rappel Tower, West Virginia Army National Guard (WVARNG), Camp Dawson, WV	<ul style="list-style-type: none"> ▪ WVARNG project 	<p>Project being expedited through early consensus development.</p> <p>Pre-engineered structures sited to meet constraints including Airfield Height Restrictions and potential flood risks.</p>
The Gateway at Scarborough, New England Expedition, LLC, Scarborough, ME	<ul style="list-style-type: none"> ▪ 75-acre land development 	<p>Developed LEED certifiable Business Park</p> <p>Met new low impact design standards for environmentally sensitive stormwater systems</p>
Student Recreation Center, University of Maine, Orono, ME	<ul style="list-style-type: none"> ▪ Locker rooms 	<p>Achieved LEED Silver certification for New Construction</p>

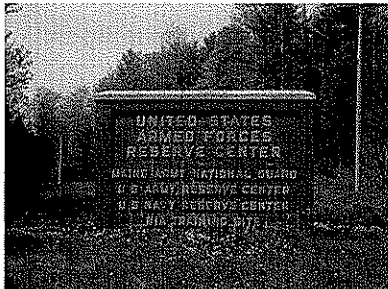


Project Name	Relevance	Value Add
Caterpillar Sales & Service Facility, Southworth Milton, Inc., Clifton Park, NY	<ul style="list-style-type: none"> ▫ Site selection service 	<p>Completed three months ahead of schedule</p> <p>\$250,000 under the approved budget</p> <p>Won the 2001 American Buildings Company Design / Build Award.</p>
Schoodic Education and Research Center, National Park Service, Acadia National Park, Winter Park, ME	<ul style="list-style-type: none"> ▫ Two design charrettes ▫ Conference room ▫ State-of-the-art communication systems ▫ Grand entrance / lobby 	<p>LEED design</p> <p>Reused existing building footings and foundations</p>
Maine Army National Guard (MEARNG) Munitions Storage Complex, Bangor, ME	<ul style="list-style-type: none"> ▫ ARNG design standards ▫ ARNG munitions storage facility 	<p>Drawings passed DDESB review without comment. (review requires 3 reviews, in series, at 3 different Guard bases nationwide.</p> <p>The project signed, designed, bid, and awarded in less than eight months.</p>
United States Embassy, Michael Singer, Inc., Athens, Greece	<ul style="list-style-type: none"> ▫ Landscape 	<p>Use of recycled building materials; minimizing travel distances for construction products; and educating the public on environmental issues such as water conservation, storm water treatment, and use of recycled building materials.</p>
Design and Construct Kabul Military Training Center Facilities and Infrastructure, Phase II, Kabul, Afghanistan	<ul style="list-style-type: none"> ▫ Design of 21 new buildings ▫ Auditorium ▫ Simulation training building ▫ Barracks ▫ Storage facility 	<p>AMEC conducted a design charrette, and then designed and constructed K-Span buildings to provide the facilities needed within a very rapid time. AMEC performed UXO clearance and de-mining operations, site work, erected four K-Span buildings (each approximately 37.5 by 25 meters), and connections to all KMTC utilities. AMEC completed all facilities within 30 days – two times faster than the ANA expectations.</p>

Project Name	Relevance	Value Add
Marine Special Operations Command, Camp Lejeune, NC	<ul style="list-style-type: none"> ▪ Barracks ▪ LEED design 	
556 th Red Horse Squadron Beddown Construction and Engineering Activities, Hurlburt Field, FL	<ul style="list-style-type: none"> ▪ Offices ▪ Locker rooms and showers ▪ Parking 	<p>AMEC fast tracked the construction schedule to complete the bulk of the construction activities while the 823rd RHS was deployed in the Middle East, breaking ground before final 100% plan approval by Air Force Reserve Command (AFRC), but after the 65% Review had been completed.</p>

Similar Projects

Regional Training Institute (RTI) Maine Army National Guard (MEARNG) Bangor, Maine



The safety of our military personnel is based on the equipment they have and the education they are prepared with. This tremendous amount of education and equipment training takes place at Regional Training

Institutes (RTI). The Maine Army National Guard (ARNG) selected AMEC-OEST and Burns&McDonnell for the first phase of the \$35 million dollar RTI. The RTI is being designed in a campus style with three 2-story dormitories, dining facility, educational facility, and an administrative building.

Like AMEC-OEST, the ARNG uses a team approach to their designs. Before the first lines were drawn on paper, the entire design team and the end users gathered for a three-day design charrette. User needs were carefully logged and preferences for the buildings were listed.

The average life of a military facility is 67 years, and the military is very interested in producing a facility that will stand the test of time and be sustainable. In fact, the military now requires all of their new structures and major renovations to meet the Leadership in Energy and Environmental Design (LEED) silver rating. With LEED certified professionals on staff, AMEC-OEST is well-equipped to meet the military's goals.

AMEC-OEST is providing architecture; mechanical, electrical, plumbing, fire protection, civil, and structural engineering; survey; AT/FP design; landscape architecture and environmental assessment services. AMEC-OEST is also providing all of the site work, including environmental assessment, roadway design, site leveling, landscape architecture, and underground utilities design for this 25-acre site situated on a 162-acre parcel. The site also had to be designed to the military's Anti Terrorism and Force Protection (ATFP) Standards.



LEED principles were applied to the design for Billet Buildings (Dormitories) for the RTI. Use of recycled materials was specified to recover them and the energy spent in their original manufacture. The building envelopes were designed with additional wall insulation to outperform energy codes by 25 percent annually. Waterless urinals were specified to save an annual 20 percent of the domestic water use projected. The building and landscaping was designed and specified to reduce the projected heat gain to atmosphere.

Relevance to Services Required	
✓	ARNG Training Center
✓	Design charrette
✓	LEED design
✓	Architecture
✓	Mechanical, electrical, and plumbing engineering
✓	Structural engineering
✓	Survey
✓	AT/FP design
✓	Landscape architecture
✓	Site / civil engineering
✓	Environmental assessment



Combined Readiness Center Pennsylvania Army National Guard Waynesburg, PA

Buechart Horn designed a \$7.7 million, 122-person Readiness Center in Waynesburg, Greene County, Pennsylvania. The 38,000 square-foot center serves the peacetime missions of the assigned unit, permitting personnel to perform tasks necessary to improve the unit's readiness posture. The facility serves as a model Readiness Center for the Reserves in the Commonwealth, and leverages Buechart Horn's sustainable design engineering experience.

Space programming for the facility includes:

- **Assembly hall:** 6,200 SF meeting and assembly area with sound system and energy efficient lighting
- **Training device simulation area:** Advanced simulations training space to support the Bradley Full Crew Interactive Skills Trainer (B-FIST)
- **Unit storage and vault area:** Secure storage space for unit equipment and sensitive / high value items
- **After Action Review (AAR) and Classroom Areas:** Multipurpose training spaces with advanced audiovisual circuitry and capability to perform individual or collective training
- **Individual Mechanical / Electrical and Communication rooms**
- **Kitchen, scullery and food service area:** Provides food service capability for up to 150 soldiers
- **Workout center, latrines, showers and locker room areas:** Provides training space and personal hygiene areas for soldiers participating in physical fitness training



The Readiness Center is designed in accordance with current Army National Guard design standards (Design Guide 415 series) and is employing a LEED® certification process for sustainable design. The building consists of a simple split faced block cavity wall system, low maintenance aluminum window and door frames, innovative site design, and high efficiency / DDC-controlled HVAC systems. The building also incorporates locally-produced materials and emphasizes reused and recycled material throughout the facility.

All required physical security measures and anti-terrorism/force protection (AT/FP) measures are included. Sustainable principles were integrated into the design, development, and construction of the project in accordance with Executive Order 13123 and other applicable laws and Executive Orders.

Major Type A and Type B planning and design tasks for the Readiness Center include:

- Conducting site utilities layouts, topographic surveying, and geotechnical investigations.
- Developing site and environmental plans to address erosion and sediment control, stormwater management, and impacts on existing base air/water environmental permits
- POV and Military Vehicle Parking areas and landscaping; AT/FP controls and standoff management
- Conducting interdisciplinary design charrette to develop preferred floor plan and layout
- Incorporating LEED-based sustainable design features to enhance building envelope and energy related systems
- Energy saving standing seam metal roof system with cavity wall and split faced block construction
- Providing energy efficient HVAC system equipped with Direct Digital Controls
- Providing adequate safety features for maintenance training and hazardous materials storage
- Providing future options for communications installation and network development within the building and connected to base system.

Relevance to Services Required	
✓	Site civil plans; force protection
✓	Geotechnical investigations
✓	Project planning (engineering and environmental)
✓	Engineering analysis
✓	Surveying
✓	Sustainable building and site design
✓	Specifications and cost estimates
✓	Value engineering studies

Elkins Maintenance Facility West Virginia Department of Transportation Elkins, WV

Buchart Horn provided architectural, civil, structural, mechanical and general engineering services for this project. Construction and bid documents have been completed and the project is slated for a 2009 construction start.

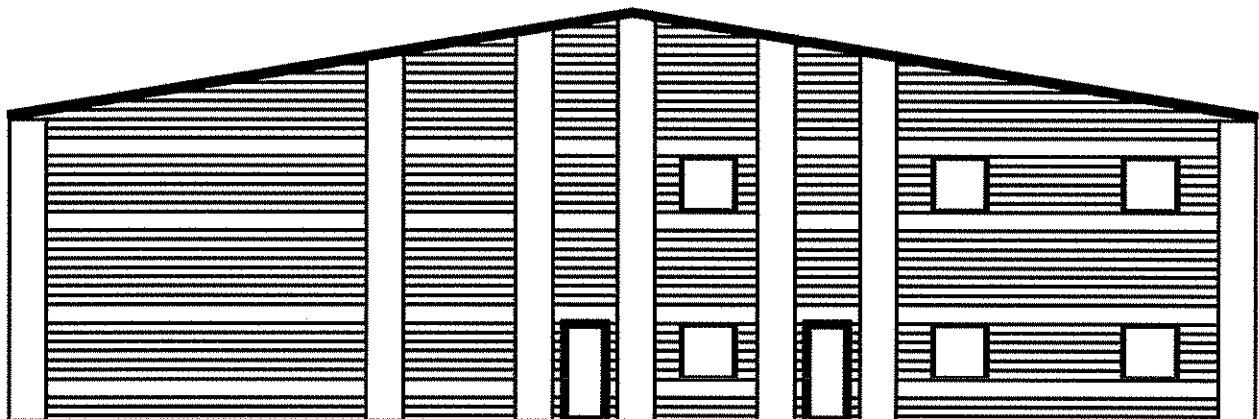
The two-story facility consists of approximately 22,500 square feet on the main level and 8,300 square feet on a second level for a total of 30,800 square feet of maintenance bays as well as administrative support and storage areas.

The building envelope is a combination of split face block veneer and steel sandwich panels with a pre-engineered structural frame. Second-story floors are precast concrete planks with interior block masonry walls. Capping the facility is a low-sloping Energy Star standing seam metal roof.

The facility includes 5 heavy equipment service bays with two 5-ton rolling cranes, 5 light equipment service bays with lifts, machine shop, tire shop, tool shop and welding shop as well as office suites and staff crew rooms and shower and locker room facilities. The second floor includes parts storage with a freight elevator for access. The designs also include a new campus phone system, infrared radiant heating system, oil separator equipment, compressor systems and other amenities.

Special attention was focused during the planning and design phase toward environmental controls and safe material storage for parts as well as flammable supplies. Optional services for Buchart Horn include bidding assistance as well as construction administration services to assist on the review of submittals and associated construction process Requests for Information.

Relevance to Services Required	
✓	Architectural planning and design
✓	Project planning (engineering and environmental coordination)
✓	Engineering analysis
✓	Pre-engineered steel structure
✓	Space planning and programming
✓	Specifications and cost estimates
✓	Sustainable building design



Mission Support Training Facility Design U.S. Property & Fiscal Office, Department of Military & Veterans Affairs Ft. Indiantown Gap, Annville, PA

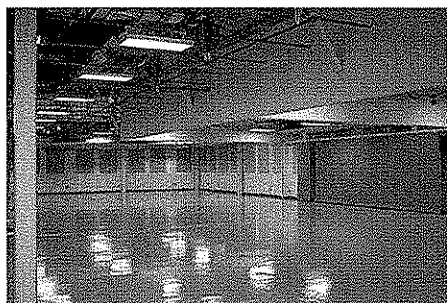
Background. Pennsylvania has fielded the Army's only National Guard Stryker Brigade, and the primary training location for this brigade is at Ft. Indiantown Gap, PA. The facilities requirements of the Stryker Brigade Combat Team (SBCT) are numerous, including: barracks buildings, HQ buildings, administrative, training, and storage facilities. Buchart Horn, Inc. was contracted to design a 24,000 SF Mission Support Training Facility (MSTF) located at Fort Indiantown Gap, Pennsylvania.

Project Description. This facility serves as the command and control training facility training centerpiece for the 28th Division's SBCT. Units may conduct individual automation training and up to brigade-sized, classified command and control training exercises. This facility is able to handle all of the Stryker Brigade's advanced and extremely sophisticated telecommunications needs.

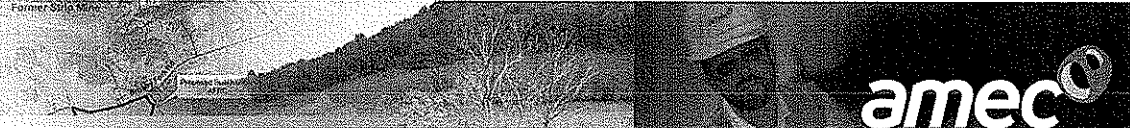
The MSTF is designed with adaptive reuse potential in mind, but optimized for today's simulation training needs. The MSTF includes:

- **Secure room** capable of processing and storing classified information and incorporates Secret Internet Protocol Router Network (SIPRNET) communication connectivity
- **Force Battle Command Brigade and Below (FBCB2) Simulation Area** (reconfigurable open space with overhead cable trays to allow flexible C4I equipment and workstation configuration)
- **Higher Control (HICON) Area** (dedicated area for configuring, testing, and administering simulation exercises)
- **Administrative Area** is an open space area outfitted with modular furniture for contracted support staff
- **After Action Review (AAR) Areas** provide flexible swing space for conducting AARs or for use in supporting simulation and collective C4I training exercises
- **Individual office areas, a break/kitchenette area, conference room, and latrines** are also provided within the facility. The existing utilities of neighboring facilities required deliberate planning and routing to minimize disruptions, and encroachments while providing full service to the MSTF.

Relevance to Services Required	
✓	Site civil plans; force protection
✓	Geotechnical investigations
✓	Project planning (engineering and environmental)
✓	Engineering analysis
✓	Surveying
✓	Sustainable building and site design
✓	Specifications and cost estimates
✓	Value engineering studies



The facilities were designed in accordance with the latest Army and National Guard sustainable design standards and International Building Code (IBC) 2003. Our team employed innovative structural design concepts to maximize open bay space and minimize construction costs. In addition, the building is scheduled for the "Gold" level of USACE Sustainable Project Rating Tool (SPiRiT) certification, leveraging an Energy Star compliant standing seam metal roof system, sandwich construction pre-cast concrete wall panels, Kalwall ambient lighting systems in the endwalls, innovative site design, and high energy efficiency using Johnson controls for its HVAC systems.



Stryker Battalion Training Complex U.S. Property & Fiscal Office, Department of Military & Veterans Affairs Ft. Indiantown Gap, Annville, PA

The Pennsylvania National Guard has fielded one of the Army's unique Stryker Brigades, and the primary training location for this unit is at Ft. Indiantown Gap, PA. The 28th Regiment Stryker Brigade Combat Team (SBCT) required a beddown and administrative support area for its soldiers during training exercises. Buchart Horn designed the battalion-sized complex to the 15% conceptual level for design-bid-build contracting.

This centralized administrative and beddown complex houses a full battalion of soldiers and their associated personal equipment. Buchart Horn led the SBCT through a two-day charrette to plan and program each portion of the complex. Upon conclusion of the charrette, the unit was given a full program of individual buildings, planned spaces, approximate sizes, and level of quality. Cost estimates were compiled to compare with the client's 1391 budgets. Floor plan layouts, space programming, and personnel circulation patterns were laid out. Mechanical plant comparisons and energy analyses were conducted to allow the client to select the best alternatives for heating and cooling and increase the sustainable design elements of the project. The site was designed with a high level of force protection in mind, including suitable standoff distances and innovative building approaches masked by terrain and landscaping.

While the Battalion Complex is designed with a future adaptive reuse potential in mind, it is optimized for today's administrative and beddown needs. The complex includes:

- **Barracks facilities:** Four company-sized facilities at 15,900 square feet each, consisting of 2-story barracks buildings (bay style), company HQ, and storage areas
- **Senior Quarters:** Two double-story facilities for housing 20 senior personnel in individual rooms. Each set of quarters is 13,000 square feet
- **Dining Facility:** Battalion-sized facility at 12,400 square feet to feed up to 800 personnel
- **Battalion HQ:** Two-story facility for battalion commander and staff workspace at 3,800 square feet
- **Battalion classroom:** Single-story classroom area to accommodate company sized training at 6,000 square feet
- **Maintenance building:** Single-story support facility with three adjacent 20' X 60' "pull thru" bays

The facilities were designed in accordance with the latest Army and National Guard sustainable design standards and International Building Code (IBC) 2003. Our team employed innovative structural design concepts to maximize open bay space and minimize construction costs. In addition, the building is designed to the "Silver" level of LEED certification, leveraging an Energy Star compliant standing seam metal roof system, sandwich construction pre-cast concrete wall panels, innovative site design, and high energy efficiency using Johnson DDC controls for its HVAC systems.

Relevance to Services Required	
✓	Site civil plans; force protection
✓	Geotechnical investigations
✓	Project planning (engineering and environmental)
✓	Engineering analysis
✓	Energy management systems analysis
✓	Sustainable building and site design
✓	Cost estimates
✓	Value engineering studies

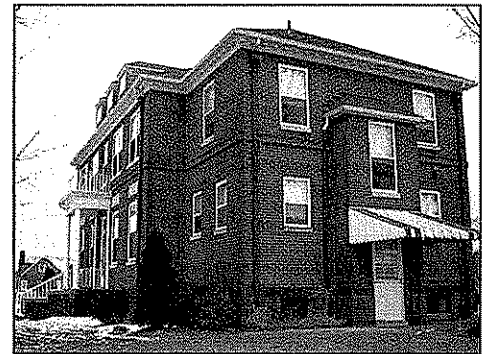
Planning Charrette for Armed Forces Reserve Center Ripley, West Virginia

For the West Virginia Army National Guard, AMEC conducted a planning charrette to understand end users' needs for the proposed Armed Forces Reserve Center (AFRC) in Ripley, West Virginia. The AFRC will replace the Spencer Armory and the Ripley US Army Reserve (USAR) Center. The Spencer Armory and Ripley USAR Center currently lack adequate space for training, administration, and storage. There is also limited military vehicle and off-street parking space. Other deficiencies include inadequate heating, plumbing, and electrical systems.

Relevance to Services Required	
✓	Armed Forces Reserve Center
✓	Design Charrette

This project included a three-day on-site planning charrette workshop and a site visit. AMEC conducted a fact-finding mission and held discussions on the project details with key installation stake holders and reviewed the existing 1391 construction cost estimate. AMEC provided representatives for the following technical disciplines:

1. Charrette Facilitator/Team Leader
2. Civil/Site Engineer
3. Architect
4. Electrical Engineer
5. Cost Estimator
6. NEPA Specialist
7. GIS Technician



During the charrette, detailed discussions with the stake holders focused on site utilities, site drainage, access, traffic, parking, and lighting designs and needs. Special focus and attention was given to geotechnical and environmental considerations of the proposed site. Geotechnically, discussions focused on subsurface stability and soil types. Environmental discussions focused on a historic residence, archaeological sites, stream and wetland mitigation issues, threatened and endangered species, and noise concerns for nearby neighborhoods, and a gas well onsite. Space planning analysis provided valuable insight into

designing the AFRC. Using the information obtained during the planning charrette, a project schedule and revised cost estimate were developed for the WVARNG.

Cost: \$40,000



Modified Record Fire Range (MRFR) West Virginia Army National Guard (WVARNG) Camp Dawson, WV

AMEC is working on the final design, specifications and a cost estimate, as well as providing comprehensive, integrated environmental support, for a 16-lane, MRFR.

Scope of Work. AMEC completed environmental investigations, National Environmental Policy Act (NEPA) analysis, site planning and selection, public involvement, design charrette, geotechnical investigations, and final design. We used Microstation and in-house, non-proprietary Line of Sight (LOS) software to complete final design.

Challenges and Solutions. A typical MRFR does not require significant earthwork. However, this project presented significant civil engineering challenges due to extremely mountainous terrain and property limits that would not contain the standard surface danger zone (SDZ). There were also major concerns with the earthwork, since the location is difficult to access and fill material is not readily available. Both factors significantly impact construction cost and it was imperative to minimize and optimize earthwork and ensure balanced cut and fill.

AMEC engineers developed design alternatives that reduced earthwork and used existing terrain as a backstop while ensuring line of sight from each firing point to target. We developed 3D digital terrain models (DTM) for the existing and proposed terrain, and compared them to determine estimated earthwork volumes. AMEC developed two alternatives WVARNG submitted to the Armament Research Development and Engineering Center (ARDEC) for further SDZ analysis. Both alternative designs significantly reduced earthwork, and the line of sight analysis indicated the existing terrain would allow for a truncated SDZ.

AMEC's environmental scientists worked closely with our design engineers throughout the design process, from planning, site screening, and selection, through several design iterations, through the final design.



AMEC's environmental scientists worked closely with our engineers to ensure each design change was appropriately assessed within the NEPA analysis, and environmental resources such as wetlands, streams, and potentially significant cultural resources sites discovered during AMEC's Phase I on-site cultural resources survey, were avoided to the maximum extent possible. Through our institutionalized practice of closely integrating environmental and engineering design services, AMEC was able to expedite the design, including the range and support facility footprints, utility connections, and access roads, while ensuring environmental impacts were minimized and fully addressed and mitigated within the NEPA document in accordance with applicable Federal laws.

Extension of Design. At the 65% review meeting, it was determined a large borrow pit would be required to serve as a large fully functional pond after construction. The design included hydrologic and hydraulic calculations for safe conveyance of the 100-year storm event, an emergency spillway sized for the 100-year storm event, and a stable dam embankment keyed into the existing ground as necessary. AMEC's environmental scientists and engineers fully coordinated this element to provide on-site wetland/surface water mitigation for unavoidable impacts to an on-site stream. AMEC integrated this extension of design within the environmental analysis and mitigation (NEPA process) in consultation with the West Virginia Department of Natural Resources (WVDNR) and USACE (Pittsburgh District). Both time and money were saved through fully and successfully integrating the environmental and engineering requirements of this proposal.

Relevance to Services Required	
✓	Site civil plans
✓	Geotechnical investigations
✓	Project planning (engineering and environmental)
✓	Engineering analysis
✓	Surveying
✓	Construction plans
✓	Specifications and cost estimates
✓	Value engineering studies

Rappelling Tower and Leadership Reaction Course West Virginia Army National Guard (WV ARNG) Camp Dawson, WV

AMEC and Buchart-Horn are currently working on the design of a Rappelling Tower and Leadership Reaction Course at Camp Dawson, WV for the WV ARNG.

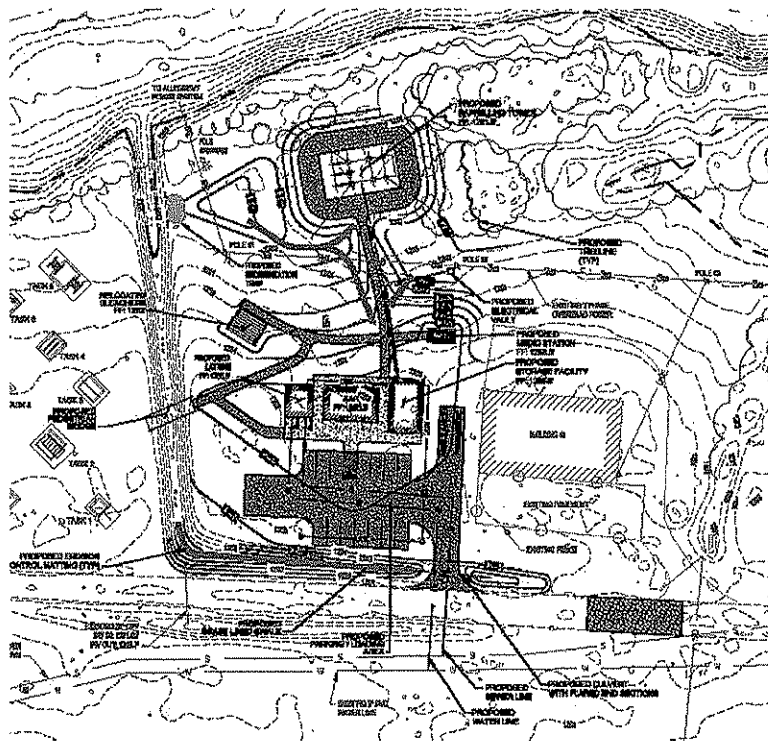
The project includes architectural and engineering design of an AAR Shelter, medical pavilion, training class room, storage areas, latrine, parking lots, lighting systems, a new airfield crossing, as well as siting and coordination of site improvements required to accommodate the pre-engineered Rappelling Tower and Leadership Course Stations with WV ARNG's selected vendor. The initial phase of this project began with a planning charrette conducted by AMEC and Buchart Horn, which was used to further develop the conceptual design of the Rappelling Tower and Leadership Reaction Course. This meeting allowed the design team and WV ARNG to efficiently identify and reach consensus regarding the facility requirements including general site layout and location, individual building needs, vehicular and pedestrian access requirements, and safety requirements, while addressing WV ARNG objectives of for this and future projects.

The proposed site is adjacent to an active airfield located along the Cheat River. A particular challenge to selecting the appropriate layout was locating the Rappelling Tower in such away that it is able to meet Airfield Height Restriction Requirements as well as reduce the potential risk of flood damage to a level WV ARNG deemed acceptable. Because the majority of the structures are pre-engineered, the preponderance of design includes site planning, grading, stormwater management,

Relevance to Services Required	
✓	Architecture
✓	Civil engineering
✓	Structural engineering
✓	Mechanical, electrical and plumbing design
✓	Permitting

erosion and sedimentation pollution control, pavement, structural, architectural, electrical, and geotechnical design. The final deliverables for this phase of work include 100% construction documents including construction plans, design report, final specification and bid package, and corresponding engineer's cost estimate. WV ARNG will use the design package to solicit bids from contractors. Future phases of work may include support of the bidding and construction phase including addressing bidder technical questions, reviewing shop drawings, evaluating contractor's and / or supplier's changer order proposals, bids, and preparing record drawings of as-built conditions.

Services provided by AMEC and Buchart Horn include: architecture; civil, structural, mechanical, electrical and plumbing design; and permitting.





The Gateway at Scarborough New England Expedition, LLC Scarborough, ME

AMEC-OEST is providing full architectural and engineering services for the Gateway at Scarborough, a mixed-use development located on 75-acres of land on Payne Road in Scarborough. The cornerstone of the project is a 138,000-square-foot Cabela's retail store; however, the development will also include space for smaller retail facilities, restaurants, office space, and a hotel.

AMEC-OEST has coordinated all of the permitting with entities such as Maine Department of Transportation, Town of Scarborough, Department of Environmental Protection, and the Army Corps of Engineers. AMEC-OEST's survey team is providing topographic and property survey on more than 50 acres of high end retail property. This project includes using global positioning system (GPS) and verifying existing data from prior surveys.

The project also includes location of wetlands and hydrographic survey of an existing 6-acre pond on the site.

Services provided by AMEC-OEST include: architecture; civil, structural, mechanical, electrical and plumbing engineering; permitting; and survey. OEST served as construction manager and general contractor for all retail shops.

Relevance to Services Required	
✓	Architecture
✓	Surveying
✓	Site / civil engineering
✓	Mechanical, electrical, and plumbing engineering
✓	Permitting
✓	Construction management



**Student Recreation Center
University of Maine
Orono, ME**



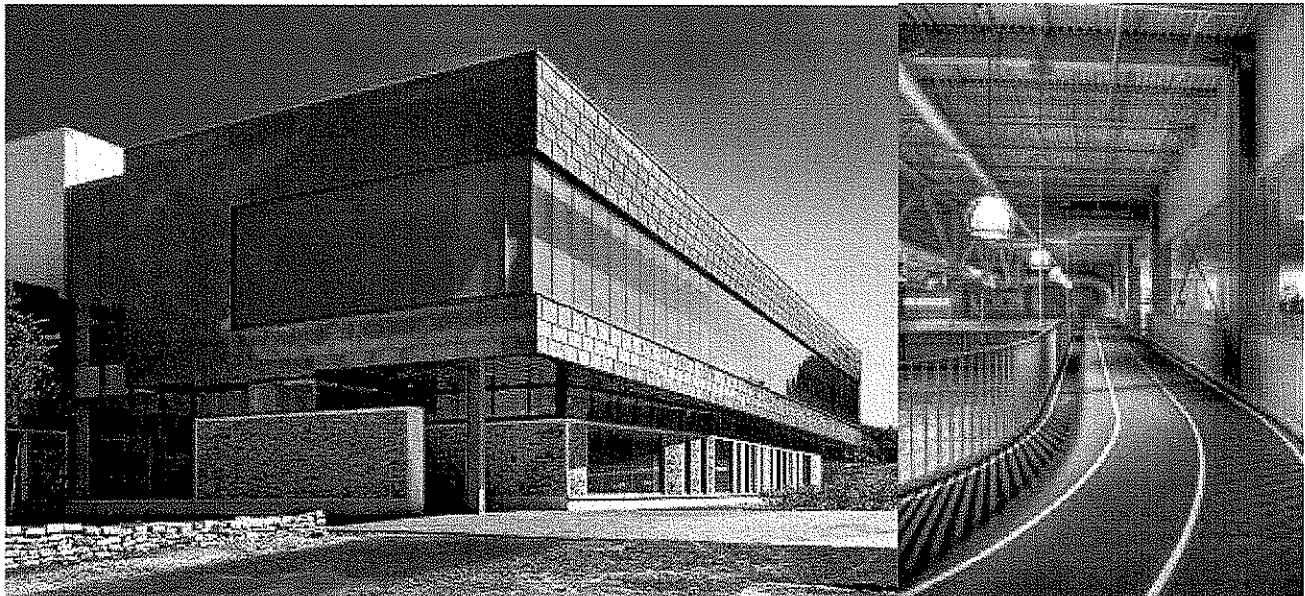
AMEC-OEST and Cannon Design coordinated with the University to develop the project to best achieve the design objectives while incorporating spaces for a three-court gymnasium with a raised jogging track, two-level fitness center, locker rooms and rest rooms, and an administrative center.

Relevance to Services Required	
✓	Structural engineering
✓	Civil engineering
✓	Bidding and construction documents
✓	Construction administration

The design for this project incorporated multiple structural systems including moment steel frames and wood glulam construction. The building skin is primarily composed of glass, precast concrete panels, and copper cladding to create an overall design that opens the building to the scenic woods to the north. On the interior, materials include stone flooring, wood features, and sculptural stairs.

The new 90,000 GSF Student Recreation Center, opened in fall 2007, offers a multitude of options for current students. The building design also gives the University many options to expand in the future.

AMEC-OEST completed structural and civil engineering, prepared the bidding and construction documents, and served as the primary construction administrator.



**Caterpillar Sales & Service Facility
Southworth Milton, Inc.
Clifton Park, NY**



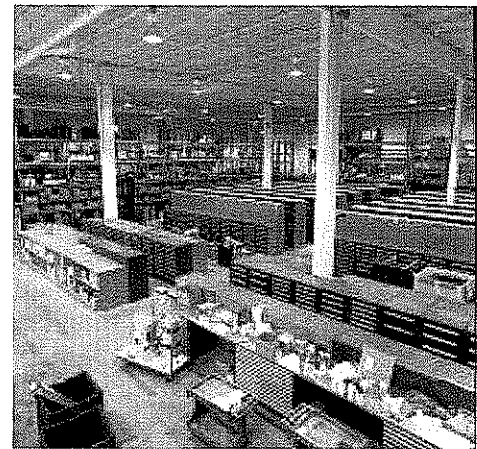
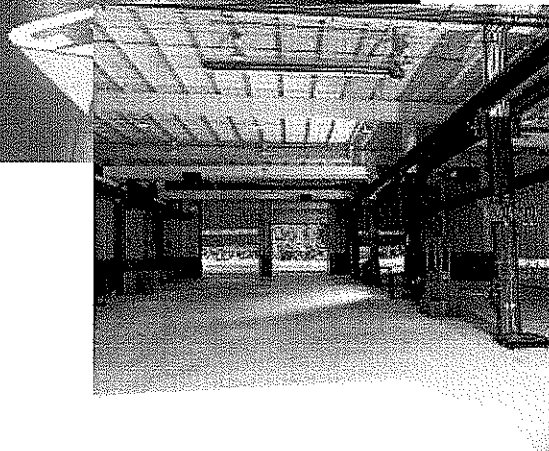
AMEC-OEST provided complete design and construction services for a new sales and maintenance facility in the Saratoga area of New York State. AMEC-OEST contributed in the site selection process, including locations, compatibility for use, utility requirements and availability, zoning, and environmental permitting.

Relevance to Services Required	
✓	Architectural design
✓	Construction administration
✓	Site selection assistance

The new facility is a campus plan design, with initial planning and design for two buildings to be constructed. The main building is a metal building of approximately 65,000 SF and will house approximately 15,400 SF of sales and administrative support area; approximately 16,700 SF of warehousing; approximately 17,700 SF of truck maintenance and support; and 14,600 SF of large equipment maintenance. The main building is also designed to support a future second floor of approximately 8,000 SF. There is also a 10,500 SF utility building adjacent to the main structure. The site is designed to support a yet-to-be determined future structure as well.



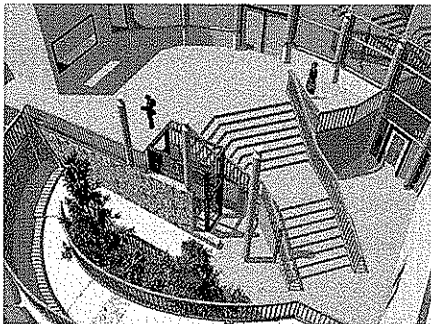
This project was completed three months ahead of schedule, \$250,000 under the approved budget, and won the 2001 American Buildings Company Design / Build Award.



**Schoodic Education and Research Center
National Park Service, Acadia National Park
Winter Park, ME**

AMEC-OEST has provided programming, schematic design, and estimating services for the National Park Service's Schoodic Education and Research Center (SERC). The SERC project has involved re-use of former Naval facilities in the Winter Harbor area of Acadia National Park. AMEC-OEST has been involved in three projects: rehabilitation of the dormitory and dining facility into the SERC Lodge, reuse of the commissary as the SERC Meeting Hall, and improvements to information technology infrastructure in the area.

Relevance to Services Required	
✓	Design charrette
✓	Programming
✓	Schematic Design
✓	Estimating
✓	Conditions Survey and Code Analysis
✓	Grand entrance design



For the SERC Lodge project, AMEC-OEST performed an existing conditions survey and an accessibility code analysis, and facilitated value engineering of all renovation options for this former 50,000 SF Naval dormitory and dining facility. The facility is to be converted to a combined lodge and dining area to serve the users of the SERC, which will include educators, students, researchers, seminar and workshop participants, and National Park Service employees. The three-month programming effort led to clarification of all requirements, which included internal vertical circulation improvements, fire separation upgrades, barrier-free bathrooms, automatic fire suppression and detection systems, and secondary egress upgrades. The design also provided a new grand entrance / lobby that centralizes internal circulation and provides a sense of arrival to guests.

Conversion of the former Naval commissary (grocery store) into a flexible meeting facility with state-of-the-art telecommunications and computer stations began with a three-day design charrette, in which four alternative designs were considered. One alternative was recommended for final design through a value analysis process. The SERC Meeting Hall is planned for meeting, classroom, and conference space. The recommended alternative includes a terraced media / lecture space with fixed seating for 125 people, media / lecture space with movable seating for approximately 80 people, and several support spaces.



The information technology improvements project is in an early design stage, and has begun with analysis of existing utilities and a development of anticipated use requirements. All projects are being designed to LEED certification standards.



**Maine Army National Guard (MEARNG)
Munitions Storage Complex
Bangor, ME**

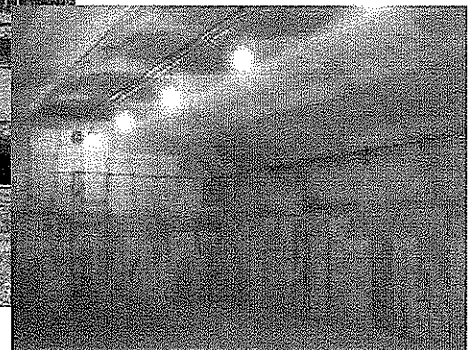


AMEC-OEST performed full scope design services for this unique project. An underground, reinforced concrete arch "igloo," a weapons and munitions maintenance and inspection facility, and multiple above ground storage magazines were designed for this project for the Air National Guard.

Relevance to Services Required	
✓	Architecture
✓	Site / civil engineering

AMEC-OEST was contracted by the Guard to update the underground storage igloo definitive drawings. These drawings are used nationwide as the design basis for all underground storage igloos for the type of ordinance.

Failure to receive a satisfactory review by the Department of Defense Explosives Safety Board (DDESB) or a slip in the schedule would have meant a loss of the funding for the project. **AMEC-OEST's drawings passed the DDESB review without comment.** This review requires three separate reviews, in series, at three different Guard bases nationwide. **The project was signed, designed, bid, and awarded in less than eight months.**



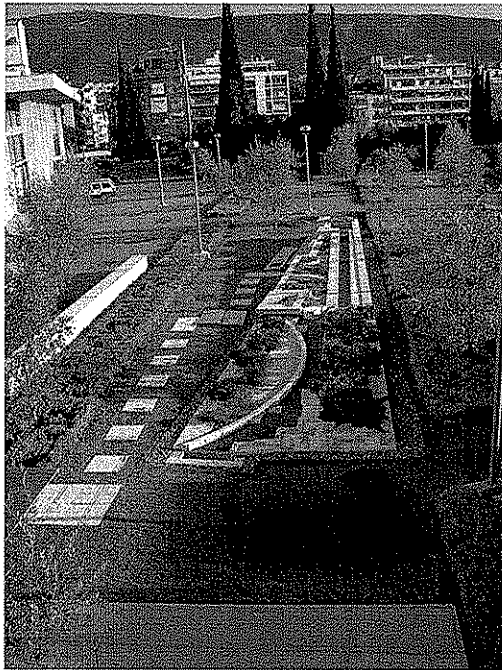


**United States Embassy
Michael Singer, Inc.
Athens, Greece**

World renowned sculptor, environmental artist, and planner Michael Singer was asked to create a sculpture for the United States Embassy in Athens, Greece. AMEC-OEST performed the engineering for the sculpture. Two AMEC-OEST engineers were sent to Athens for a month as construction managers to ensure schedule, budget and success of this unique project,

Relevance to Services Required	
✓	Landscape construction management

The sculpture required cast-in-place reinforced concrete footings, Vermont granite, Grecian marble, plantings, a unique water feature, and a full irrigation system that prevents algae growth.

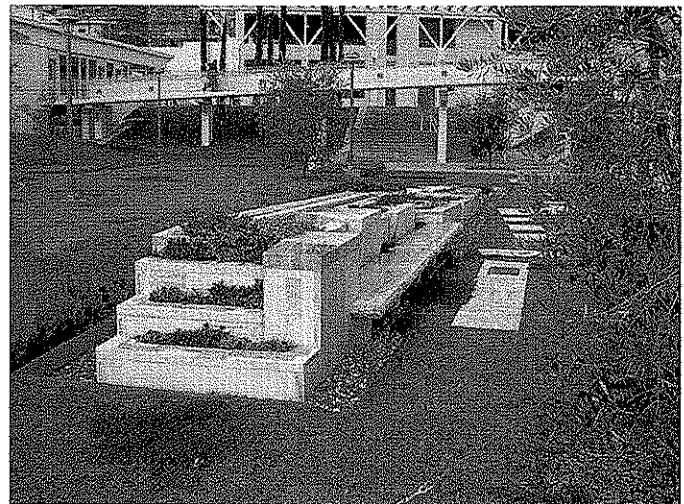


AMEC-OEST coordinated with State Department engineering management teams and Greek laborers to complete the design and installation.

Challenges included maximizing the use of recycled building materials, creating a foundation that would accept precisely cut stones on-site from Vermont and Greece, providing engineering documents that specified locally-available materials, and an engineering design that ensured compatibility with the local building trades.

Michael Singer and AMEC-OEST have been working together since 1999. AMEC-OEST has provided foundations, structural steel support members, wood design, and numerous other materials in support of Mr. Singer's art installations. His designs are shown globally, and his environmental conservation efforts have affected thousands of people worldwide.

The Singer/AMEC-OEST team specifies and promotes using recycled building materials; minimizing travel distances for construction products; and educating the public on environmental issues such as water conservation, storm water treatment, and use of recycled building materials.



Design and Construct Kabul Military Training Center (KMTTC) Facilities and Infrastructure Phase II Kabul, Afghanistan

Overview. AMEC implemented an extensive program to design and construct student barracks, dining facility, and gymnasium for 14,000 Afghan troops at the Afghan National Army's KMTTC. AMEC completed the following major scope elements:

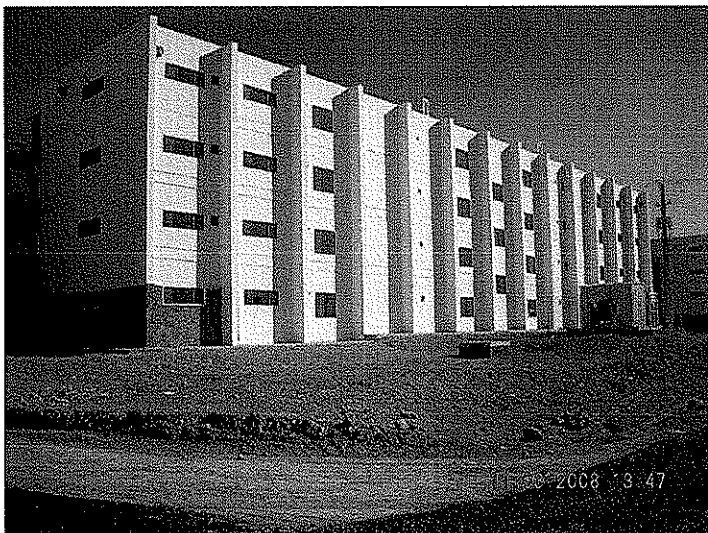
- Construction of 16,800-SM of barracks; 7,800-SM classrooms; 600-SM offices; 500-SM shopette; 1,000-SM theater; 3,800-SM dry storage facility; 2,800-SM MP Garrison; and 2,200-SM library
- Addition of 2 MW to the existing Power Plant for KMTTC to maximize power output
- Development of Operation and Maintenance manuals in both English and Dari languages and one-month of classroom and on the job training for all onsite equipment
- Construction of wastewater collection system and water treatment plant upgrades to sustain an additional 4,000 personnel

Relevance to Services Required	
✓	Site civil plans
✓	Architecture
✓	Structural engineering
✓	Mechanical and electrical engineering
✓	High/Low Voltage Electrical Generation and transmission
✓	Water/Sewer Systems
✓	Roads, Bridges, Civil Works
✓	Communication Systems

AMEC has designed all facilities and infrastructure consistent with the KMTTC Cantonment Comprehensive Master Plan, the Central Command (CENTCOM) Contingency and Long Term Base Camp Facilities Standards, "Sandbook", UFC, Host Nation codes, and other standards including the IBC.

Innovations/Technologies. AMEC provided Value-Engineering by streamlining the design process and improved construction efficiency with a substitution of material for a wastewater equalization tank. This tank was originally designed as a bolted steel tank, but AMEC identified an alternative reinforced concrete tank that also met contract requirements. By implementing this innovation, AMEC not only accelerated the project schedule, but also saved the government money.

Schedules. AMEC achieved challenging schedule requirements through strategic design and selection of building materials. For example, when new facilities to accommodate 1,000 soldiers were needed within 60 days, AMEC selected a modular K-span steel pre-engineered building (PEB)



design, verified supplier availability to deliver the steel, and trained operators to run the coil stock, and cut the arched panels. This approach achieved schedule goals, with structures completed and ready for occupancy within 30 days.

Quality Control. To provide the client with best value, AMEC audited the K-span fabrication facility to verify credentials, quality, and workmanship. AMEC performed QC checks throughout all stages of project planning, construction, installation, and testing and commissioning, in accordance with the approved AMEC QC Plan submitted prior to the start of construction.

Marine Special Operations Command Camp Lejeune, NC

Background

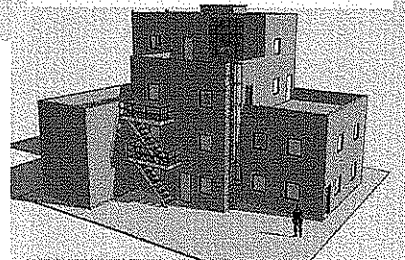
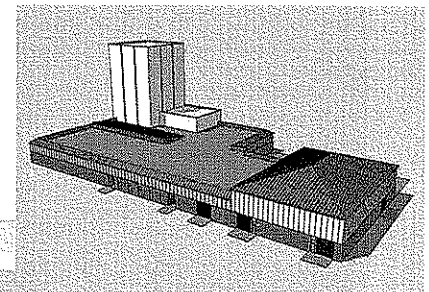
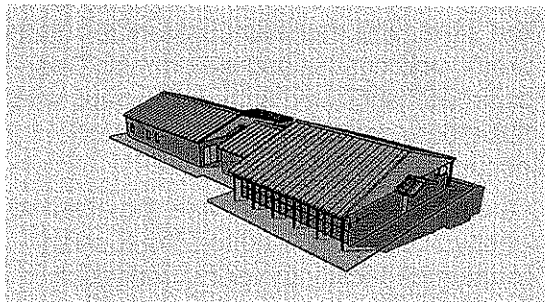
The Marine Special Operations Command (MARSOC) was the Naval Facilities Engineering Command's (NAVFAC)'s largest and most innovative 2007 Design/Build project. This \$217M multi-year appropriation consists of a design / build team of multiple designers that will design and construct 41 new structures comprising nearly one million square feet along with utilities and site infrastructure to support approximately 2,000 MARSOC Marines.

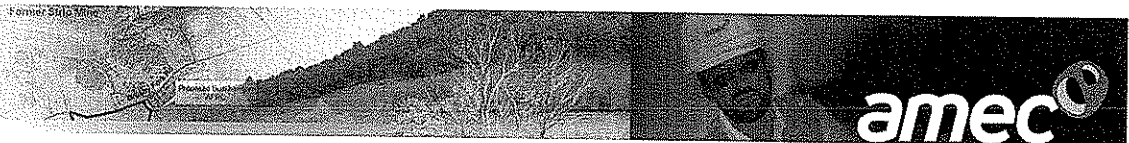
Relevance to Services Required	
✓	Site civil plans
✓	Architecture
✓	Structural Engineering
✓	Mechanical Engineering
✓	Electrical Engineering
✓	Communications Systems

Scope of Work

The project includes barracks, administrative facilities, educational facilities, dining facilities, industrial / warehouse facilities, ranges, operational / training facilities, site utilities and infrastructure. Upgrades to local utilities include potable water, sanitary sewer, LS gas, electrical power, and telecommunications are also included in the Scope of Work, with the addition of realigning a road around the MARSOC compound to flow existing and future traffic around the MARSOC site. This build-to-budget project includes Leadership in Energy and Environmental Design (LEED) Silver facilities and numerous LEED-certified and LEED-certifiable facilities.

The design of the new facilities and pavements is configured to avoid low-lying ravines and embankments. Some filling of upland ditches and lower elevations is required to provide sufficient contiguous land for the required facilities; however, the fill, and consequential impact of delineated wetlands, has been minimized. Utilities include LP gas to support heating requirements at new facilities using LP gas-fired boilers or direct-fired equipment. Electrical power is being obtained from the local Jones / Onslow Power Company, and power lines are being re-fed and distributed to new and existing facilities. All power distribution is overhead, except where it must be run underground similar to the headquarters and parade field due to a helipad. Telecommunications include design and construction of a new switch and telephone exchange building along with relocating the existing SONET ring loop feeding building.





556th Red Horse Squadron Beddown Construction and Engineering Activities Hurlburt Field, Florida

AMEC is providing engineering and construction services in support of the 556th Red Horse Squadron (RHS) Beddown at Hurlburt Field, Florida. The 556th is being beddown in the 823rd RHS Compound. AMEC obtained government-provided concepts and developed them into full construction drawings and specifications, preparing 35%, 65%, and 100% construction packages and participating in review meetings on site at Hurlburt Field, FL and Lackland AFB, TX.

Relevance to Services Required	
✓	Construction drawings and specifications
✓	Construction Management

AMEC fast tracked the construction schedule to complete the bulk of the construction activities while the 823rd RHS was deployed in the Middle East, breaking ground before final 100% plan approval by Air Force Reserve Command (AFRC), but after the 65% Review had been completed. AMEC used a competitive bidding process with local subcontractors to provide best value to our client during the execution of this CPFF Contract. As the result of our competitive bidding process, AMEC has used more than 25 subcontractors, acting as a true general contractor to reduce cost and improve quality control of the final construction deliverable. The objectives of the task order are as follows:

- Construct a 1,000 SF addition to the RHS Logistics Building, Bldg. 91099 – included offices, as well as meeting space and work stations.
- Construct a 1,700 SF addition to the RHS Civil Engineering Building, Bldg. 91101 – included offices, large work stations, and a meeting space.
- Renovate portions of the RHS headquarters (HQ) interior office space, Bldg. 91114 – renovations included the existing men’s and women’s restrooms in the 823rd’s portion of the building and the hallway leading into the new addition for the 556th.
- Construct a 1,950 SF addition to the RHS HQ, Bldg. 91114 - addition included new offices for six personnel, including the Commander and Deputy Commander of the 556th RHS. It also included new shower facilities and an administrative area to support the Non-commissioned Officer in Charge (NCOIC).
- Construct a 2,500 SF addition to the RHS Airfields Building, Bldg. 91140 - addition included offices, work stations, meeting space, and lockers for airfield personnel.
- Construct a 2,400 SF addition to the RHS Supply Warehouse, Bldg. 91151 - addition included erection of a pre-engineered metal building, relocation of a light pole, and installation of an automatic overhead rolling door. This new space will be used by the 823rd for mobility assets.
- Construct a 1,500 SF addition to the RHS Operations Building, B. 91155 - addition included eight offices and a training area.
- Construct a 2,800 SF mezzanine in the RHS Cantonment Shop, Bldg. 91120 - fully enclosed mezzanine included 7 offices and meeting space for the various trade organizations working in the Cantonments shop.
- Expand the non-organizational parking lot in the RHS compound - parking lot renovations incorporated new striping and pavement to accommodate new 556th personnel.
- Alter 750 SF in the RHS Mobility Warehouse, Bldg. 91147 - renovations included offices, a customer service counter, and two new bathrooms complete with showers.

Design Considerations and Overview

The AMEC team appreciates the opportunity to work with the State of West Virginia, Division of Engineering and Facilities, and the West Virginia Army National Guard to provide design services for the Buckhannon Readiness Center. We are uniquely qualified to provide the West Virginia Army National Guard with successful design that will meet or exceed expectations. The AMEC team has experience in designing military facilities, with specific experience designing Readiness Centers, in accordance with DG-415, Design Guide for Readiness Centers. Our team has significant Army National Guard design experience in several states, including West Virginia (Modified Record Fire Range, Camp Dawson; Rappel Tower and Associated Facilities, Camp Dawson), Pennsylvania (38,000 SF Combined Readiness Center, Waynesburg), and Maine (47,500 SF Regional Training Institute, Bangor; Munitions Storage Complex, Bangor). The AMEC team has also successfully designed many other facilities for various government entities, including West Virginia Department of Transportation (22,500 SF Elkins Maintenance Facility, Elkins), Department of Military and Veterans Affairs (Design of 24,000 SF Mission Support Training Facility, Ft. Indiantown Gap, PA; Concept Design (15%) for 50,000 SF Stryker Battalion Training Complex, Ft. Indiantown Gap, PA), Naval Facilities Engineering Command (Marine Special Operations Command Facilities including barracks, administration, educational, dining, range, and storage facilities, Camp Lejeune, NC) and National Park Service (Concept Design and Cost Estimating for Schoodic Education and Research Center, Acadia National Park, ME). Finally, the AMEC team has significant facility design experience for commercial / industrial / institutional clients, including retail stores (at Scarborough Retail Store on 75-acre site, Scarborough, ME), University of Maine (90,000 SF Student Recreational Center, Orono, ME) and Caterpillar (15,500 SF Sales and Service Facility, Clifton Park, NY) to name a few.



As demonstrated by these projects, and many others not listed here, the AMEC team has significant experience designing nearly any type of facility or associated structure, and offers this knowledge and expertise on this project. Whether the design elements include drill halls, recruiting centers, office space, locker rooms, fitness centers, dining facilities, conference rooms, sleeping accommodations, storage, or any other building element, the AMEC team has design professionals capable of providing such services to the WVARNG.

Project Overview

The project mission is to provide all architectural and engineering design services for a 39,000-square-foot multi-use readiness center with supporting facilities for military units of the West Virginia Army National Guard (WVARNG) in Upshur County, WV. Per the information contained in the Request for Proposal, services will include, but not necessarily be limited to, architectural, civil, structural, mechanical, electrical, geotechnical, landscape, and interior design. The building may include offices, conference room, garage, locker room, shower facilities, limited sleeping, and large open space (assembly hall). The facility grounds may include parking, attached or detached storage, fueling station, landscape, security lighting and fencing, and a unique entry.

As described by the Army National Guard Design Guide for Readiness Centers (DG 415-1), a Readiness Center is a facility that houses one or more units of the State Army National Guard. Its primary function is to provide administrative, training, and material storage areas for the assigned military unit(s). Its secondary function is to provide support of state functions such as disaster relief

and policing actions in case of civil disturbance. Tertiary functions provide for public social functions, generally on a rental basis. The functional layout should provide the appropriate compartmentalization.

Architectural Compatibility

The AMEC team appreciates the importance and need for the proposed Readiness Center to be compatible with the architectural plan for Buckhannon and the surrounding area. We also understand the need to incorporate Anti-Terrorism and Force Protection (AT/FP) requirements into the site and building layout. AMEC will pay special attention to the entry, creating a clearly visible, welcoming, weather shielded transition to the interior spaces. AMEC will work closely with the WVARNG to ensure all architectural components of the new facility are aesthetically pleasing while also remaining fully functional and in compliance with all AT/FP requirements.

The AMEC team of architects and interior designers are experienced in clearly identifying client needs and program requirements at the project start and developing responsive design solutions from that knowledge. Through the design charrette, design reviews, and client interaction, as well as the extensive knowledge base within the AMEC team's multiple disciplines, our architects, interior designers, and landscape architects excel in working together to deliver an effectively functional, aesthetically pleasing, and AT/FP compliant building design.

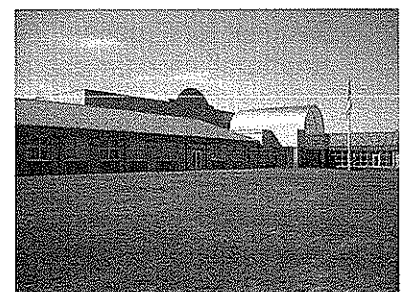


The existing Buckhannon Army National Guard Armory, located on a 16.9-acre parcel approximately 2.5 miles southeast of the new site, is a bi-level building constructed by the WVARNG in 1950. Other buildings on this parcel include the United States Property and Fiscal Office (USPFO) and the Field Maintenance Shop (FMS). There is a small amount of open land directly surrounding the armory and mixed residential and commercial lands outside of this area. The Buckhannon Country Club is located just southeast of the armory. Buckhannon sits among the western foothills of the Appalachian

Mountains surrounded by gently rolling land with numerous hills and valleys. The town itself is characterized by its small-town, historic feel. The armory is located in an area of more urban development surrounding the historic downtown.

The town architecture is predominantly Federal and Greek Revival, then Victorian, with some Craftsman and bungalows. The existing armory has flat, unadorned concrete walls, horizontal louvers (both metal and concrete), and vertical concrete entrance. The armory style is unique to the city of Buckhannon, and differs from most armories within West Virginia and the country.

Appreciating the significance of the existing architecture of the armory and surrounding area, AMEC will explore the possibility of incorporating design elements from the old armory into the new Readiness Center. AMEC will also look at possibly including elements of the Glen Jean and Summersville area styles. AMEC has done this on other projects with a great deal of success and client satisfaction.



Sustainable Design

As a member of the US Green Building Council, AMEC and its design partners remain dedicated to creating environmentally-conscious design. The AMEC team has 30 LEED-Accredited Professionals (LEED APs) in all disciplines of design, including architecture; mechanical, electrical, structural, and civil engineering; and interior design, who work toward implementing sustainable design features into all of our projects. Our LEED professionals have demonstrated expertise in employing the LEED process from the outset of the project through completion to ensure all criteria are achieved. Our philosophy regarding sustainable building design is to approach the entire project as a system rather than simply trying to meet LEED through product specification. We use various strategies to analyze and coordinate all activities to provide our clients with a project that creatively affords improved life cycle costs while meeting all client needs and available budget. Items our design team considers for any new building design include:



- **Energy:** Building insulation, energy efficient windows, and building heating systems are the most important design features of a sustainable building project.
- **Materials Selection:** Proper selection of building materials will have a very positive effect on indoor air quality. The AMEC team is well-versed in selecting finishes and furniture with low volatile organic compounds (VOCs) such as paints and carpets.
- **Natural Light:** The AMEC architectural team reviews client needs and makes every attempt to maximize natural light, which has numerous benefits for employees.

AMEC also continues to work with alternative energy sources such as combined heat and power; geothermal, solar arrays; photovoltaic panels; and hydrogen. Our experience with these types of energy sources allows us to make realistic recommendations about whether alternative energy sources are the right choice for your project.

Project Design-to-Cost Control

The AMEC team understands the importance of designing this project so it can be constructed for less than the Construction Cost Limit (CCL). This process begins in the initial design phases, typically at the design charrette. AMEC team cost engineers develop parametric Preliminary Cost Estimates (PCE) for the various options being considered by the design team, so design objective trade-offs can be made early. The PCE is developed by discipline using unit costs for components. Standard pricing sources (i.e., R.S. Means) are combined with recent construction project data and local economy data to develop accurate costs. During each successive design submittal, the PCE is refined, updated, and shared with both the client and the design team. Significant design review comments are quickly reviewed for potential impact on the construction cost. If a significant impact is noted, the AMEC team develops options for reducing the impact (i.e., material changes, design changes, etc).

As an example, during the design of a Military Working Dog Kennel for Oscan Air Base, Korea, the original project requirements from the base called for an HVAC system that would provide 15 air turns per hour. When the estimated cost of the project came in over the CCL, AMEC developed an alternate HVAC strategy of 10 air turns per hour that significantly lowered the anticipated project cost. AMEC reviewed the potential impacts on temperature, odor, energy usage, and capital cost with the Base veterinarian, Base HVAC manager, and Base Civil Engineering staff, then incorporated the alternate HVAC system into the overall design.

Geotechnical

Site subsurface conditions can cause significant construction problems, potentially more than any other factor. While no geotechnical study can reveal all that is hidden, the more comprehensive a subsurface study, the more information it provides. A well planned subsurface exploration program, interpreted by experienced geotechnical professionals, helps reduce the risk of unanticipated conditions during construction while also decreasing unnecessarily conservative recommendations. AMEC will carefully develop a detailed geotechnical investigation program necessary to provide quality and value for the project, incorporating our in-depth understanding of the subsurface conditions at this site.



Design Quality Management

The AMEC team has an established Design Quality Management Plan (DQMP) that results in quality project documents. This plan includes specific guidelines for defining responsibility, writing / reviewing documents, performing / checking design calculations and other analytical tasks, preparing plans, maintaining files, and other activities to ensure a quality finished product.

Plan Objective

The object of the DQMP is to achieve an optimum level of quality in all aspects of planning, analysis, and design. Specific quality program requirements must be implemented at all levels of the work effort from the project manager to the support staff. A "total team" approach will be used. The foundation of a total quality approach is that each team member is responsible for the quality of their work and for performing work in accordance with project guidelines and other governing documents of the WVARNG.

Communication

The project manager will be the primary point of contact for all correspondence between AMEC and the WVARNG. The WVARNG will be continually briefed on the project by the AMEC project manager via regular verbal and e-mail communication.

Meetings & Schedule

The design will begin with the planning and design charrette. The charrette will include the design leads and all key WVARNG stakeholders. The meeting will be facilitated by AMEC with open dialogue discussing the major components of the project (i.e. architectural, site layout, electrical, mechanical, plumbing, etc.).

AMEC will establish a design time line at the beginning of the project, and it will be reviewed weekly for compliance. AMEC team members will meet weekly to review project status, discuss outstanding issues, and resolve any concerns. AMEC will provide updates to the WVARNG regarding the project's progress.

Design Quality Requirements & Reviews

AMEC requires that quality be designed into projects from the start of work, with design leaders critiquing their disciplines' work for:

- Compliance with scope of services, special client needs, and other items identified at the charrette and subsequent design review meetings
- Compliance with codes, regulations, client criteria
- Consideration of potential alternatives and selection of cost-effective solutions
- Design constructability and coordination
- Compliance with construction cost limitations

Internal reviews will be made for each design phase with an interdisciplinary review when a design phase is approximately 75% complete and before each design submission (15%, 65%, 95% Draft Final and 100% Final). Revisions will be made as necessary, and corrected documents prepared. Design documents are provided to the quality control manager for review about 7-10 days prior to the end of each phase, including a constructability review and independent check of cost estimates. Concerns will be identified and corrected before each submission is delivered to the WVARNG. Final documents will be properly reviewed by discipline leads to ensure concerns have been properly addressed and final documents are technically accurate prior to distribution to the WVARNG.

At a higher level, designs undergo AMEC's formal Project Review process. Project review is a risk management measure to ensure both WVARNG and AMEC standards are achieved. Prior to submittal, deliverables (including correspondence, studies, progress reports, design packages, construction specifications/drawings, schedules, and cost estimates) undergo a formal peer review overseen by the Project QA/QC Manager. This multi-disciplinary review checks for compliance with the statement of work, design basis, and any previous client comments; and evaluates the overall quality of the deliverable as well as verifying that the applicable discipline checks have been completed.

Key Success Factors

The AMEC team will ensure the following key success factors are part of the Buckhannon Readiness Center design:

- **Scope of Deliverables:** Every team member will be provided a written scope of deliverables. The scope of deliverables will match the scheduled submission dates.
- **Design Schedule:** The design schedule will be reviewed at each weekly meeting and updates will be provided to the WVARNG, as appropriate.
- **Budget:** Every technical discipline will be provided a copy of their discipline's estimated budget for the project. This allows staffing requirements estimates and progress monitoring by each technical discipline lead to ensure the established budget is maintained.
- **Project Documentation:** Documenting project decisions is one of the most important tasks for a design project manager. This process includes reviewing and initialing drawing and calculation worksheets, taking accurate meeting minutes, and maintaining accurate phone conversation notes.
- **Understanding the End Product:** Every line and word on an engineering drawing affects the construction project scope, schedule, and budget. AMEC understands the importance of accurate and efficient design and bid documents in assuring accurate cost estimates and, ultimately, accurate and cost effective construction bids.
- **Construction Cost Estimating:** AMEC understands that, at the end of the day, the project must provide a design meeting WVARNG's needs while also satisfying the CCL budget. AMEC will update the construction cost estimate at each of the detailed design phases. This will ensure the final design supports a construction project that can be implemented within the established CCL budget and the construction phase can move forward without the budgetary delays all too common in design/bid/build projects.
- **Design Submission Due Dates:** All too often, design teams focus on the submission date to the client as the due date for deliverables. The AMEC design team establishes dates based on when the documents need to be submitted to the quality control reviewer to provide appropriate time for a proper quality review before submittal to the WVARNG.

Fork Creek. Brushy Fork Creek serves as the southern boundary for the proposed site, and an existing drainage ditch runs through the eastern portion of the property. One important consideration identified through our research is that the southern quarter of the site along the Brushy Fork Creek appears to be located in a 100-year flood zone. Additionally, there are several utility providers currently with services on or near the site, including natural gas (Mountaineer Gas), electric (Allegheny Power), potable water (City of Buckhannon) and sanitary (City of Buckhannon). AMEC will confirm this information as part of our design data collection and incorporate it into our preliminary design as appropriate.

After gathering and reviewing available boundary, topographic, and utility information, AMEC will supplement this data, as required, with a field survey. The survey will confirm existing conditions, including topography, site features, utilities, roads, etc. and will provide the base map for the site plan. This task will be performed by a surveyor licensed in the State of West Virginia under AMEC's direction.

AMEC will gather readily-available subsurface information for the site selected for development as well as structural and other design information critical to the building construction. Once this information is obtained, a field program will be developed that will generally include soil borings, rock coring, groundwater documentation (including piezometers if necessary), soil sampling, surveying, inspection / inquiry of other existing buildings for foundation types and performance, and geophysical techniques as the project may require. Subsequently, a thorough laboratory analysis of the soil and rock samples will be completed and the data combined with the field information to characterize the site subsurface conditions. Finally, engineering analyses and assessments will be used to determine the most appropriate foundation types, capacities, and provide other geotechnical related recommendations

Task 3 – Conceptual Design

AMEC will develop a more detailed conceptual design (15% design) based on the BOD and preliminary layout(s) developed during the charrette, supplemented with the site survey and geotechnical investigation results. The conceptual design will take the preliminary site layout and advance it to the conceptual design phase, including conceptual design plans, 15% BOD document, outline of the proposed specifications, and a list of applicable permits. Following WVARNG review and comment, the AMEC team will attend a conceptual design review meeting to address any comments and / or questions the Guard may have.

Task 4 –Detailed Design

Following the conceptual design review meeting, AMEC will incorporate comments, as appropriate, and advance the design through the various phases of detailed design, including 65%, 95% Draft Final, and 100% Final design. Each phase will incorporate revisions based on the WVARNG's review of the previous phase, and will include additional levels of detail commensurate with each design phase. The 65%, 95% Draft Final, and 100% Final submittals will include the design plans, BOD document, specifications, and construction cost estimate based on the latest design. The AMEC team has significant experience preparing project technical specifications in both CSI and UFGS formats, and can support either format based on the WVARNG's needs / preference.

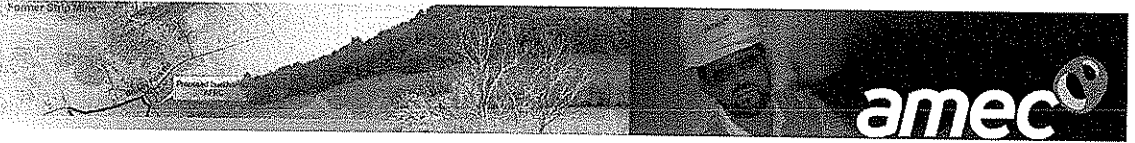
AMEC will hold periodic design review meetings and "over the shoulder" reviews as deemed appropriate to support the design schedule. Through this process, AMEC will ensure the WVARNG remains fully informed and engaged as the project design develops. AMEC highly values clear and consistent communication with the client, and believes a formalized system significantly contributes to project success.

Task 5 – Bid-Phase Services

AMEC will provide bid-phase services to support the WVARNG in obtaining construction bids for the project. AMEC will respond to Requests for Information (RFIs) from contractors, attend site visits and bid meetings, and support the WVARNG in all bid-phase activities. The AMEC team will also assist in reviewing construction bids and determining the best value contractor.

Task 6 – Construction Oversight and QA/QC Testing

Once a contractor is under contract to complete the work, AMEC will provide construction oversight and QA/QC testing services to ensure construction methods and materials meet the design intent and specifications, and components are properly installed. The AMEC team has energetic, fully trained construction managers, field engineers, and technicians capable of oversight for a project of this magnitude. In essence, AMEC functions as an extension of the owner's staff to manage and oversee the construction work to protect the owner's interest.



Bid Forms

Following are the required Request for Quotation forms and Purchasing Affidavit.



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

Request for Quotation

RFQ NUMBER
 DEFK9015

PAGE
 1

ADDRESS-CORRESPONDENCE TO ATTENTION OF
 JOHN ABBOTT
 304-558-2544

VENDOR

RFQ COPY
 TYPE NAME/ADDRESS HERE
 AMEC Earth & Environmental, Inc.
 11003 Bluegrass Parkway, Suite 690
 Louisville, KY 40299

SHIP TO

DIV ENGINEERING & FACILITIES
 ARMORY BOARD SECTION
 1707 COONSKIN DRIVE
 CHARLESTON, WV
 25311-1099 341-6368

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
02/11/2009				

BID OPENING DATE: 02/26/2009 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		906-00-00-001		
ARCHITECT/ENGINEERING SERVICES, PROFESSIONAL CONTRACT TO PROVIDE ARCHITECT & ENGINEERING SERVICES FOR THE WEST VIRGINIA ARMY NATIONAL GUARD, BUCKHANNON READINESS CENTER, UPSHUR COUNTY, WEST VIRGINIA, PER THE ATTACHED DOCUMENTATION. NOTICE A SIGNED BID MUST BE SUBMITTED TO: DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130 THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED: SEALED BID BUYER: JOHN ABBOTT----- RFQ. NO.: DEFK9015----- BID OPENING DATE: 02/26/2009-----						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE <i>Steve Day</i>	TELEPHONE (502) 267-0700	DATE 2/25/09	
TITLE Nat'l Army Prog Mgr	FEIN 91-1641772	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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

Request for Quotation

RFQ NUMBER:
 DEFK9015

PAGE:
 2

ADDRESS CORRESPONDENCE TO ATTENTION OF:
 JOHN ABBOTT
 304-558-2544

RFQ COPY

TYPE NAME/ADDRESS HERE

AMEC Earth & Environmental, Inc.
 11003 Bluegrass Parkway, Suite 690
 Louisville, KY 40299

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DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
02/11/2009				

BID OPENING DATE: 02/26/2009 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
BID OPENING TIME:				1:30 PM-----		
PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:						
				(502) 267-5900		
CONTACT PERSON (PLEASE PRINT CLEARLY):						
				Steve Paznokas		
***** THIS IS THE END OF RFQ DEFK9015 ***** TOTAL: _____						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE (502) 267-0700	DATE 2/25/09
TITLE Natl Army Prog Mgr	FEIN 91-1641772	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

STATE OF WEST VIRGINIA
Purchasing Division**PURCHASING AFFIDAVIT****VENDOR OWING A DEBT TO THE STATE:**

West Virginia Code §5A-3-10a provides that: 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 the debt owed is an amount greater than one thousand dollars in the aggregate.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:

If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the *West Virginia Code*. The vendor **must** make said affirmation with its bid submission. Further, public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the *West Virginia Code* and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the *West Virginia Code* may take place before their work on the public improvement is begun.

ANTITRUST:

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will 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 the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:

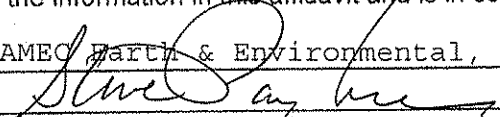
Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:

The vendor agrees that he or she 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/noticeConfidentiality.pdf>.

Under penalty of law for false swearing (*West Virginia Code* §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

Vendor's Name: AMEC Earth & Environmental, Inc.

Authorized Signature:  Date: 2/25/09