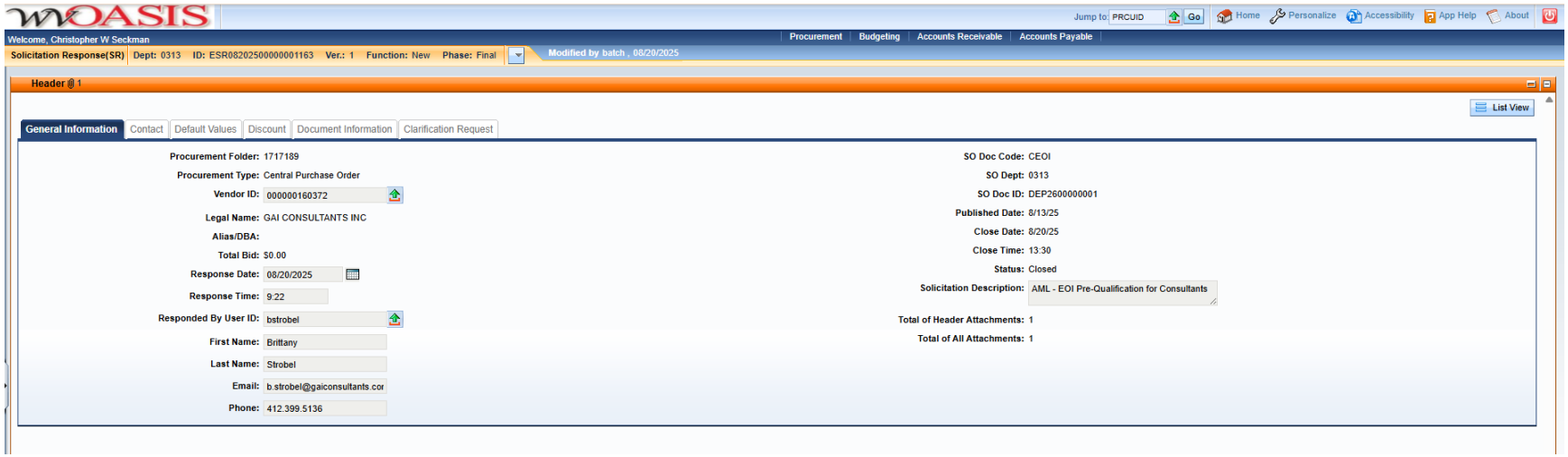
The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.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Procurement
Budgeting
Accounts Receivable
Accounts Payable
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Modified by batch , 08/20/2025
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Document Information
Clarification Request
Procurement Folder: 1717189
Procurement Type: Central Purchase Order
Vendor ID: 000000160372
Legal Name: GAI CONSULTANTS INC
Alias/DBA:
Total Bid: $0.00
Response Date: 08/20/2025
Response Time: 9:22
Responded By User ID: bstrobel
First Name: Brittany
Last Name: Strobel
Email: b.strobel@gaiconsultants.cor
Phone: 412.399.5136
SO Doc Code: CEOI
SO Dept: 0313
SO Doc ID: DEP2600000001
Published Date: 8/13/25
Close Date: 8/20/25
Close Time: 13:30
Status: Closed
Solicitation Description: AML - EOI Pre-Qualification for Consultants
Total of Header Attachments: 1
Total of All Attachments: 1

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

State of West Virginia
Solicitation Response

Proc Folder:	1717189
Solicitation Description:	AML - EOI Pre-Qualification for Consultants
Proc Type:	Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2025-08-20 13:30	SR 0313 ESR08202500000001163	1

VENDOR

000000160372
GAI CONSULTANTS INC

Solicitation Number: CEOI 0313 DEP2600000001

Total Bid: 0 **Response Date:** 2025-08-20 **Response Time:** 09:22:18

Comments: Expression of interest. Discount amounts to be provided in subsequent phase.

FOR INFORMATION CONTACT THE BUYER
Joseph (Josh) E Hager III
(304) 558-2306
joseph.e.hageriii@wv.gov

Vendor
Signature X **FEIN#** **DATE**

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

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	EOI Engineering Design Services				0.00

Comm Code	Manufacturer	Specification	Model #
81100000			

Commodity Line Comments: EOI. Bid amount not applicable at this stage

Extended Description:

EOI Engineering Design Services

gai consultants®

Charleston Office
500 Lee Street East, Suite 700
Charleston, West Virginia 25301
T. 304.926.8100
F. 304.926.8180

August 20, 2025

Joseph E. Hager III
Senior Buyer, State of West Virginia
Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, West Virginia 25305

Expression of Interest
Abandoned Mine Lands (AML) Engineering Design Services
CEOI 0313 DEP2600000001

GAI Project #R251374.00

Dear Mr. Hager:

GAI Consultants, Inc. (GAI) welcomes the opportunity to provide our Expression of Interest (EOI) to the West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Abandoned Mine Lands and Reclamation (WVDEP-DLR-AML) for the 2025 AML Contract in West Virginia. Our EOI addresses the issues indicated in the State's Solicitation No. CEOI 0313 DEP2400000002, dated August 7, 2025. GAI believes our team is qualified to meet the needs of this contract based on the following considerations:

- **Key Project Leadership:** GAI's proposed ***Project Manager, Jason Gandee,*** has over 18 years of project management and engineering experience. He has supported over 25 reclamation projects for the WVDEP-DLR-AML, where he was responsible for project management, site reconnaissance, monitoring subsurface exploration drilling, preliminary and final design drawings, technical specifications, engineer's cost estimates, and conducting pre-bid and pre-construction meetings with contractors. Mr. Gandee is currently the Project Manager for the Belle (Sneed) Drainage Project in Kanawha County for the WVDEP-DLR-AML. ***Project Advisor, Charles Straley, PE, PLS, MS,*** is a licensed Professional Engineer (PE) and Professional Licensed Surveyor (PLS) in West Virginia with over 30 years of experience specializing in project management and geotechnical engineering services for approximately 100 WVDEP mine reclamation projects throughout West Virginia.
- **Expertise in Acid Mine Drainage (AMD) Design Projects:** Since 1958, GAI has established itself as an engineering and environmental consulting firm providing a range of services and specializing in foundation and soil mechanics engineering. Our AMD experience includes design of passive drainage treatment systems, drainage conveyances, drainage channels, drainage structures, and drainage control measures; installation of mine drainage structures; diversion channel construction; mine portal reclamation; erosion and sediment control; landslide remediation; stream and wetlands restoration; highwall design; access road construction; permitting services; mapping and surveying; and revegetation.
- **Expertise in National Environmental Policy Act (NEPA) Projects:** GAI has supported numerous NEPA compliance projects throughout West Virginia for the West Virginia Department of Transportation, Division of Highways (WVDOH). GAI's NEPA compliance services include but are not limited to: preparation of programmatic agreements, Categorical Exclusion Evaluations (CEEs), Environmental Assessments (EAs), Environmental Impact Statements (EISs), reevaluations of NEPA documents, Section 4(f) analysis, Section 6(f) analysis, Section 106, Section 7 of the Endangered Species Act, noise and air quality analysis, and related surveys and documents.
- **Local Presence:** GAI has two offices located within the State of West Virginia, including Charleston and Bridgeport. GAI's Charleston Office is located within a 10-minute drive of WVDEP-DLR-AML's Headquarters, located in Downtown Charleston, West Virginia. GAI's Bridgeport Office is in the same complex as the WVDEP-DLR-AML's Bridgeport Office. We are familiar with the region and have a thorough understanding of AML projects. GAI's Charleston Office has provided the State with quality engineering services for the abatement of problems arising from AML since opening in 1985.

We look forward to the opportunity to work with the State of West Virginia and the WVDEP-DLR-AML on this important Contract. Should you have any questions or would like to speak with us about our EOI or services, please feel free to contact Project Manager, Jason Gandee, at 681.245.6484 or via email at J.Gandee@gaiconsultants.com.

Sincerely,
GAI Consultants, Inc.

Jason Gandee
Project Manager/Senior Technical Manager

Charles F. Straley, PE, PLS, MS
Project Advisor/Geotechnical Engineering Director

JG:CFS/mdw/bfh

Attachment: Expression of Interest - 2025 AML Engineering Design Services Contract

EXPRESSION OF INTEREST

2025 ABANDONED MINE LANDS (AML) ENGINEERING DESIGN SERVICES

Solicitation No.: CEOI 0313 DEP2600000001

August 20, 2025

GAI Project No. R251374.00

Prepared for:
State of West Virginia
Department of Administration,
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, West Virginia 25305-0130
Attn: Joseph E. Hager III, Senior Buyer

Prepared by:
GAI Consultants, Inc.
500 Lee Street East, Suite 700
Charleston, West Virginia 25301
304.926.8100 | gaiconsultants.com

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APPENDICES

1.0 COMPANY OVERVIEW

GAI offers a qualified team to provide services to the West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Abandoned Mine Lands and Reclamation (WVDEP-DLR-AML). Founded in 1958, GAI now has over 1,100 employees in 34 office locations throughout the United States, including offices in Charleston and Bridgeport, West Virginia. We currently have approximately 70 personnel working out of these two offices.

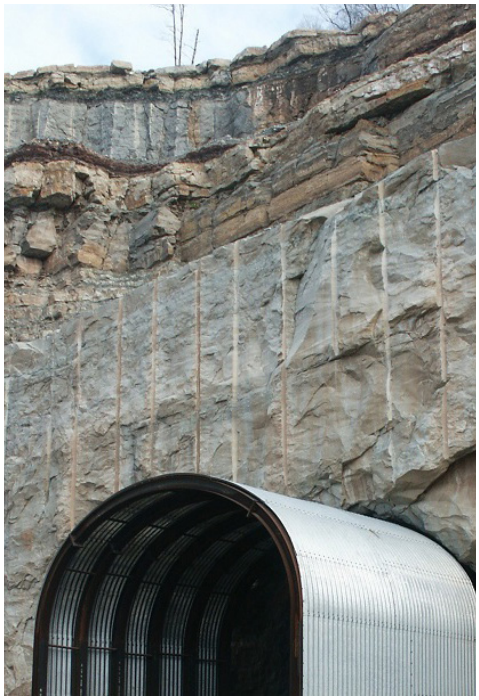
GAI has a long-standing history of supporting mining-related projects across West Virginia and the Northeastern U.S. Since 1985, we have provided mining engineering and environmental consulting services for over 100 Abandoned Mine Land (AML) projects in partnership with the WVDEP. Our work also extends to similar initiatives in Pennsylvania, Ohio, Maryland, and West Virginia.

We are familiar with West Virginia's topography, geologic and mineral environments, and the challenges posed by legacy mining activities. Our team understands the regulatory approval process and applies practical, cost-effective, and innovative solutions to mitigate environmental impacts. With decades of experience serving both public and private sector clients, GAI is committed to delivering results that are both economically sound and environmentally responsible.

We are also highly experienced in the design of wetlands for the passive treatment of Acid Mine Drainage (AMD), and have developed innovative technologies for active treatment systems, including the design of a cutting-edge AMD treatment plant. In addition, GAI is nationally recognized for our expertise in coal combustion by-product utilization. We've partnered with multiple electric utility clients to develop projects that incorporate the beneficial use of coal ash in the reclamation of abandoned mine lands.

GAI has extensive experience addressing AML-related issues, including but not limited to:

- AML reclamation studies
- Mine subsidence issues, evaluations, and mine stabilization design
- Mine portal reclamation and mine shaft backfill remediation
- Burning coal refuse piles, coal seams, and underground mine fire investigation and abatement
- Stream restoration and wetlands replacement and development
- Hydrologic and hydraulic (H&H) design of erosion and sediment control
- Landslide investigations and repair
- Environmental liability assessments
- Soil analysis and revegetation plans
- Water quality surveys, feasibility reports, and water supply system designs
- Permitting for deep and surface mine applications
- Geophysical and Geotechnical investigations
- Underground ventilation studies
- Economic studies and risk assessments
- Risk assessments
- AMD remediation
- Design of active and passive AMD treatment facilities
- Evaluation, operation, monitoring, maintenance, and/or rehabilitation of existing passive and active AMD treatment systems
- Construction monitoring

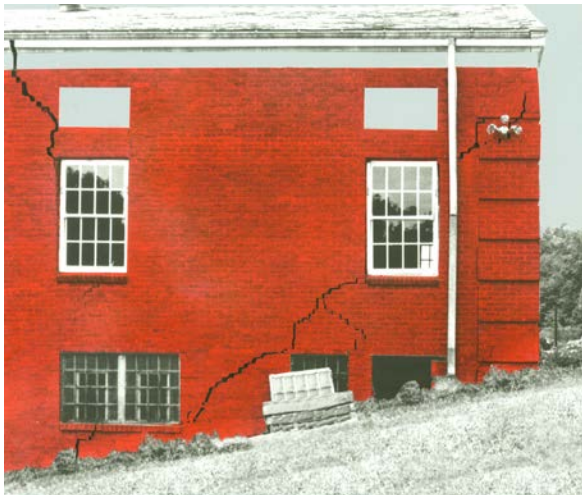


AML SPECIALIZED EXPERIENCE

GAI has provided a wide variety of services to governmental agencies related to the reclamation of mine land problems. We have also completed numerous projects for the Office of Surface Mining Reclamation and Enforcement (OSMRE) and AML programs in West Virginia, Pennsylvania, Ohio, Maryland, and Virginia. GAI staff has experience in all aspects of mining-related design engineering, geology, hydrogeology, environmental science, economics, transportation systems and land-use planning, structural engineering, engineering mechanics, agronomy, anthropology, archaeology, and various related professional disciplines.

GAI's reputation as one of the nation's foremost authorities on mine stabilization, mine fires, mine reclamation, and AMD remediation is the foundation for the solutions we provide to clients. For over 67 years, we have been delivering premier services: geotechnical investigations, overburden characterizations, mine subsidence evaluations and mine stabilization design, mine shaft backfill operations, underground ventilation studies, mine atmosphere gas characterization, economic studies, risk assessments, AML reclamation studies, and mine fire investigations and abatement.

GAI's broad range of mining engineering, geological, geotechnical, environmental, water, and health and safety related services for mining engineering projects is supported by a dedicated staff of engineers, geologists, hydrogeologists, and environmental specialists. Our design capabilities include mine seals, haul roads, dams and impoundments, sedimentation ponds, coal preparation plants, water control and treatment facilities, acid mine drainage treatment, and waste disposal areas.



WVDEP-DLR-AML PROJECT EXPERIENCE

GAI has provided the WVDEP with open-end and individual project contracts since the 1980s. A complete list of our WVDEP AML project experience is located in **Appendix A**. GAI's WVDEP-DLR-AML project experience includes the following:

- Drainage design and installation
- AMD evaluation and treatment
- Mine portal reclamation
- Burning coal refuse piles, coal seams, and underground mines
- Stream restoration
- Hydrologic/hydraulic design of erosion and sediment control
- Subsidence investigations and stabilization plans
- Coal refuse pile reclamation
- Coal refuse reprocessing evaluations
- Landslide investigations and repair
- Demolitions plans
- Wetlands replacement and development
- Environmental liability assessments
- Soil analysis and revegetation plans
- Water quality surveys and feasibility reports
- Water supply system reviews and designs
- Detailed reclamation plans
- Permitting for deep and surface mine applications
- Subsidence control plans
- Construction monitoring services

FOUNDATION AND SOIL MECHANICS EXPERTISE

Since 1958, GAI has established itself as a premier engineering and consulting firm specializing in foundation and soil mechanics engineering. Over the following years, GAI has amassed formidable experience in full-scale load testing of foundations, calibrating analytical models, and developing computer programs for designing foundations. Our geotechnical engineers and geologists are highly proficient in the fundamentals of engineering, soil and rock mechanics, foundation and slope engineering, seismic analyses, underground and surface mining, mine fires, and mine subsidence, as well as dam design and inspection.

When structures are built in areas where the uneven rise of expanding subgrades can occur, structural damage that was not anticipated can be a major concern. GAI investigates subgrade movements, determines their causes, and designs repairs that stabilize structures or eliminates the problem.

With proven foundation analysis and design capabilities, GAI also focuses on construction – using detailed quality control procedures to monitor the construction of all types of structures and foundations. As a matter of routine, we perform pile, pier, or plate load-testing, and vibration monitoring. We also conduct pre-blast or pre-driving surveys of facilities near a construction or demolition project to determine the presence of pre-construction damage.

Our specialists bring with them a wealth of knowledge from years of academic training, research, and practical field experience – knowledge that is bolstered by expertise from GAI staff members in other disciplines, such as structural engineering, groundwater engineering, and hydrologic/hydraulic engineering.

GEOTECHNICAL AND SOIL SCIENCE CAPABILITIES

- Drainage channel design and construction
- Geologic, subsidence, and landslide assessments
- Landslide and subsidence studies and remediation design
- Subsurface studies, investigations, and stabilizations
- Geologic studies and reconnaissance
- Site characterization and undisturbed soil sampling
- Soil borrow investigations
- Foundation recommendations, design, and research
- Foundation testing, analysis, and detailed design
- Geogrid Reinforced Soil and Mechanically Stabilized Earth (MSE) design
- Slope stability analysis and embankment and cut slope design
- Catastrophic damage inspection and analyses
- Stress capacity investigations
- Shop drawing review
- Soil, rock anchors, and nails
- Concrete, rock, grout, and cone penetrometer testing
- Pile and caisson drilling inspection
- Drilled shaft and grillage design
- Wastewater disposal and agricultural utilization
- Soil improvement techniques
- Geoarchaeology, geomorphology, and pedology
- Construction monitoring

PROTECTED SPECIES STUDIES

The conservation and natural resource permitting process can be complex without the right partner. GAI brings decades of experience navigating rare, threatened, and endangered (RTE) species consultations and critical issues analyses. Our environmental studies and ecological surveys span a wide range of RTE species—including bats—and are tailored to meet the needs of both linear and areal projects throughout West Virginia.

GAI's team of biologists supports these efforts through comprehensive environmental reviews, GIS-based habitat evaluation and spatial analysis, field habitat assessment, presence/absence survey, detailed reporting, and agency coordination and consultation at both preliminary and follow-up stages.

Across the Eastern United States, and particularly in West Virginia, the most commonly encountered species-related project concerns involve the Indiana bat *(Myotis sodalis)* and freshwater mussels. Our biologists conduct and coordinate surveys for these species, as well as for a broad array of terrestrial mammals, fish, birds, reptiles, amphibians, and plants listed as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) and various state agencies.

GAI's endangered species group is led by Mr. Adam Mann, a federally and state-permitted Indiana bat surveyor with extensive experience managing studies across the species' range. Under the Endangered Species Act (ESA), federally listed species are protected from intentional "take," which includes habitat modification. Projects with potential RTE habitat must carefully assess and address possible impacts.

GAI biologists have deep experience performing and coordinating studies that help clients avoid, minimize, or mitigate habitat impacts to meet federal and state wildlife protection requirements.

- GAI's solid reputation in environmental consulting is supported by our proven ability to conduct initial siting and red flag analyses, field habitat evaluations, presence/absence surveys, GIS mapping and spatial analyses, avoidance or mitigation planning, and agency coordination. We work with clients to obtain environmental clearance for new highway corridor or site development projects.
- GAI is committed to assisting the WVDEP with permitting issues related to bats and other listed species. Our biologists are dedicated to supporting project development, while at the same time, working to conserve natural habitats for plants and wildlife. From a few hours of consultation to total design and Environmental Impact Assessment (EIA) responsibility, our dedicated specialists are skilled in a broad range of disciplines. Whatever the required level of involvement, GAI delivers project services with continued success.

TECHNICAL SUPPORT AND GIS SERVICES

GAI maintains a comprehensive inventory of field sampling and laboratory analysis equipment to support most terrestrial and shallow-water natural resources survey needs. Our in-house resources include Surber samplers, D-frame and kick nets, seines, Ekman dredges, Kemmerer samplers, horizontal water samplers, water quality meters, water flow and current meters, soil sampling equipment, compound and dissecting microscopes, increment borers, transits, and handheld GPS units.

Our Information Technology department consists of professionals who provide responsive support to both in-house and field staff via a dedicated help desk line. Each employee is equipped with a desktop computer running a variety of software packages and operating systems. Tablets and laptops are also available for field use, as needed.

Additionally, our Environmental Services Group includes a team of GIS specialists who utilize state-of-the-art equipment and software, including ArcGIS, to support spatial data analysis and mapping needs.

CULTURAL RESOURCES

GAI's Cultural Resources Group has provided Section 106 services to a diverse clientele of West Virginia's private, state, and federal agencies for over 30 years. GAI's Cultural Resources Management Group of approximately 20 full-time employees and 40 field technicians have demonstrated a successful performance record for meeting critical project schedules, avoiding delays, submitting timely recommendations, employing innovative techniques, and producing high-quality professional reports. The ability of our staff to quickly mobilize and conduct concurrent projects allows GAI to effectively manage a number of task orders while providing quality deliverables to our clients on time and within budget.

GAI's work force is thoroughly experienced with the state and federal document and permitting requirements, and with the WVDEP's directives, specifications, design procedures, and project requirements. Over the past 30+ years, GAI has prepared Integrated Cultural Resource Management (CRM) Plans, Historic Preservation Plans, Historic Structure Reports, Criteria of Effects Evaluations (CEEs), Environmental Assessments (EAs), Environmental Impact Statements (EIS), Phase I, II, and III Archaeological Investigations, Historic Structure Surveys and Determination of Eligibility Reports, Historic American Engineering Record (HAER) and State-level Recordations, Criteria of Effects Evaluations, Programmatic Agreements, and Memorandum of Agreements, and Section 4(f), Section 6(f) and supporting documents and reports.

GAI's Cultural Resource Services include Phase I/II/III Archaeological Excavations, National Environmental Policy Act (NEPA) Documentation, GIS Archaeological Predictive Modeling, Section 4(f) Evaluations, Geomorphological Surveys/Soil Surveys, Historic American Buildings Survey (HABS) and Historic American Engineering Record (HAER) Recordations, Architectural Surveys, Determination of Eligibility and Criteria of Effects Evaluations, National Register Evaluations and Nominations, Artifact Analysis, and Public Outreach Programs—Lesson Plans, Brochures, and Popular Reports.

In addition to providing standard historical and archaeological services for the West Virginia agencies, GAI has provided CRM services for a wide variety of local, county, and state governments, as well as private industry, resulting in cost-effective products of exceptional quality that are submitted in a timely manner. Because GAI has conducted cultural resources investigations throughout the State of West Virginia for over 30 years, we have earned extensive experience in the history and prehistory of all 55 West Virginia counties.

PREHISTORIC & HISTORICAL ARCHAEOLOGY

The cultural resources staff at GAI is intimately familiar with the rich archaeological resources and history of the Mid-Atlantic, Southern, and Midwestern U.S. Our Group is well versed in Phase IA sensitivity modeling through Phase III site mitigation. GAI's dedicated professionals clear the way for our clients to effectively manage prehistoric and historic-period cultural resources on their projects. GAI routinely streamlines archaeological investigations by conducting preliminary studies and reconnaissance surveys prior to subsurface investigations. Our clients favor this cost- and time-saving approach, which meets the guidelines of both federal agencies and State Historic Preservation Offices (SHPOs). GAI has completed numerous Phase I, Phase II, and Phase III investigations, ranging from the study of Archaic to Adena, and Fort Ancient sites to rural and urban sites of the nineteenth and early twentieth century. Our artifact analyses are complemented by an integrated database management system that streamlines the regulatory compliance process so that we can efficiently review and share large volumes of data with our clients, SHPOs, and other agencies.

ARCHITECTURAL SURVEYS

Section 106 of the National Historic Preservation Act of 1966 requires aboveground historic buildings, structures, sites, districts, and objects to be considered during the planning stages of federal undertakings. GAI assists both private and government clients to identify architectural and historical resources to move their projects forward. With proven expertise in identifying, evaluating, and mitigating historic resources throughout the U.S., GAI's architectural historians conduct documentary research

and author historic resource surveys and determination of eligibility reports. Out staff architectural historians have prepared thousands of Historic Property Inventory Forms for numerous clients throughout West Virginia. Should historic resources be present, we often prepare criteria of effect evaluations and, as necessary, treatment plans and mitigation. Our architectural surveys are supported by state-of-the-art GIS and software capabilities, including the preparation of photo-simulations (SketchUp Pro and Photoshop) to assess potential effects to historic buildings and districts.

GEOARCHAEOLOGY, GEOMORPHOLOGY, AND PEDOLOGY

GAI reconstructs the activities of past cultures using geoarchaeology, geomorphology, and pedology to analyze soil, geographic, and sediment data. Our specialists in these fields work alongside our archaeologists on investigations from Phase IA sensitivity assessments through Phase III site mitigations to develop a framework for assessing and evaluating cultural resources effectively. GAI's geoarchaeology program is tailored to each client's project-specific needs. We provide background and field evaluations as part of Phase IA sensitivity assessments and determine soil properties during backhoe excavations and deep testing on Phase IB projects. By conducting geomorphological reconnaissance studies, GAI identifies disturbed settings in a project's Area of Potential Effect (APE) that can be eliminated from subsurface survey and can determine whether any valley bottom settings may require deep testing to locate buried sites. Incorporating geomorphology reconnaissance into field projects typically leads to significant cost savings during Phase I archaeological survey. On Phase II projects, we develop detailed soil profiles and conduct site-specific background research to enhance our understanding of the depositional context and importance of the site. GAI's Phase III mitigation work involves intensive soil sampling and geomorphic evaluations. We study the site's geomorphological features and characteristics to help reconstruct its depositional history and integrity.

STATE, FEDERAL, AND TRIBAL COORDINATION

GAI personnel have worked on numerous projects requiring coordination with SHPOs, Native American tribes, and federal and state agencies throughout the Mid-Atlantic, Southern, and Midwestern U.S. GAI's Cultural Resources Group has built and maintained strong relationships with SHPO staff in these regions where we have established a reputation for successfully obtaining agency concurrence in a timely manner expediting cultural resources clearances for our clients. Our work has also included extensive tribal consultation with the WVDOH, Federal Highway Administration (FHWA), and the SHPO in the preparation of a Programmatic Agreement relating to a nearby Native American village site containing numerous burials for a project located in Kanawha County, West Virginia.

LABORATORY PROCESSING

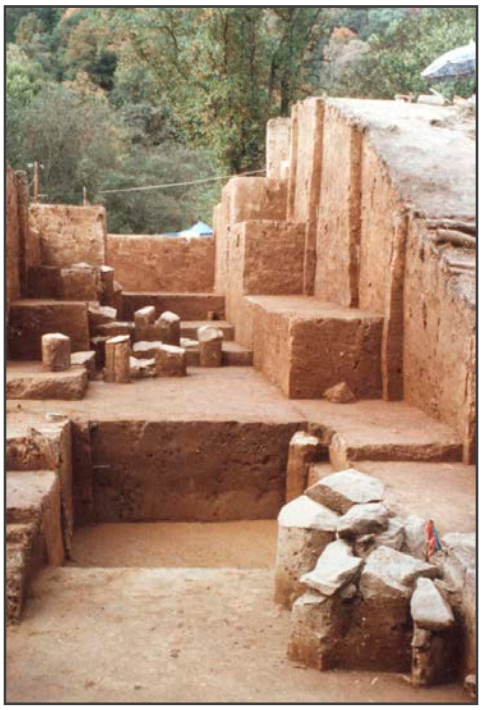
GAI's Cultural Resources Group includes a 1,000 SF lab and office space designed for secure cultural resource management. It also maintains over 7,500 SF of storage facilities for both long-term and temporary artifact curation, equipped with shelving and equipment areas.

The lab features natural and artificial lighting, worktables, sinks, computers, and ample storage. The office area includes drafting tools, computer equipment, and a specialized archaeology library. A Flote-tech machine supports soil flotation sample processing, and portable shelters and heaters enable winter fieldwork.

GAI also houses an in-house library of ~10,000 volumes and subscribes to numerous technical journals and reference services, offering quick access to additional research materials.

PUBLIC OUTREACH

GAI has a long history of engagin the public and local communities with outreach and educational programs, conveying the benefits of cultural resource efforts on behalf of our clients. We have been involved with hundreds of public outreach meetings and lectures, created websites, authored reader-friendly handouts and reports, prepared posters, and organized hands-on educational programs and lesson plans for students.



STREAM RESTORATION & WETLAND MITIGATION

GAI's first step in stream or wetland investigations is to evaluate sites to determine suitability, potential environmental impacts, and engineering constraints. Aquatic resource delineations are conducted in accordance with United States Army Corps of Engineers (USACE) protocols and appropriate state guidelines. Our staff is familiar with federal Section 404 regulatory requirements and state regulatory needs. We have successfully obtained permits for thousands of projects requiring individual or nationwide permits.

Regarding mitigation, GAI initially works with clients to avoid and lessen impacts to streams and wetlands in an effort to eliminate or reduce mitigation requirements. Nonetheless, when viable avoidance options are unavailable and when regulatory drivers necessitate mitigation, GAI will work with clients presenting available options with costs and risks identified, providing our clients with the most up-to-date information to make the most informed decision regarding mitigation. Our environmental specialists help clients find practical solutions for projects that affect streams or wetlands; terrestrial and aquatic biota; and/or RTE plant and animal species. GAI has access to several state and federal resource layers to conduct GIS desktop analysis first, to increase time efficiency in the field.

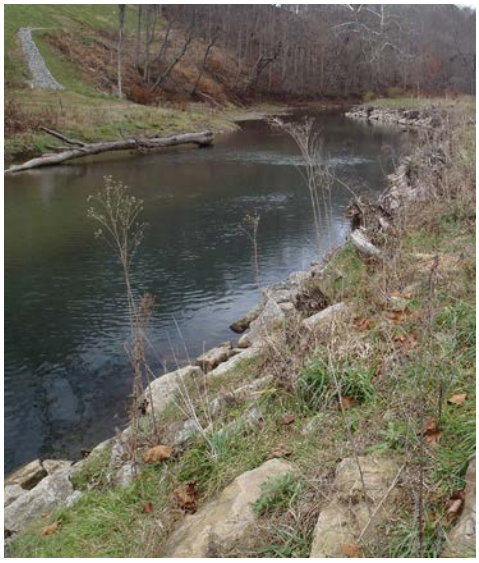
In preparing site-specific plans, GAI assists with site selection and land acquisition, ultimately developing conceptual mitigation plans for clients and then agency review and approval that meet sustainable requirements. We conduct resource delineations and functional assessments to assess the quality of existing conditions and predict future function and potential improvement. Overall mitigation strategies and processes involve hydrology assessments, hydraulic engineering, habitat design, permitting, construction monitoring and management, and performance standard monitoring for release and ultimate closure of a site.

Our extensive mitigation work has cultivated an experienced and multi-disciplined team of biologists, environmental scientists, and engineers that work closely with clients to move projects forward. GAI's staff have Rosgen Level IV training and experience in applying Natural Channel Design (NCD) techniques as standalone stream restorations or in conjunction with wetland mitigations. One of the most difficult goals in designing wetlands is maintaining a reliable water supply. GAI's hydrologists and hydraulic engineers work closely with our biologists preparing water budgets, conducting required hydrologic and hydraulic analysis, and assessments of soil, groundwater, and bedrock conditions to create sustainable hydrology for thriving wetlands.

After design, GAI's qualified Team will prepare construction bids and hold mandatory on-site bid meetings to select a qualified contractor. GAI's Team will then work with contractors to verify that resources are built in accordance with specifications and guidelines in the approved permits. Our expert monitoring team will conduct long-term monitoring of restored, enhanced, and newly created wetlands and streams to effectively identify and resolve any emerging issues.

STREAM RESTORATION & WETLAND MITIGATION CAPABILITIES

- Stream delineation and wetland identification
- Aquatic resource delineations
- Cost and risk analysis
- Baseline condition assessments
- Hydrologic and hydraulic analysis and modeling
- Stream restoration and wetland design
- Conceptual and compensatory mitigation plans
- Corrective action plans
- Federal, state, and local permitting
- Construction observation and pre-construction stakeout
- Topographic, geomorphic, and as-built survey
- Habitat conservation and mitigation plans
- Wildlife habitat evaluations
- Annual monitoring and reporting



HAZARDOUS WASTE MANAGEMENT

GAI has been developing industrial and hazardous waste treatment solutions for more than 50 years. Our range of hazardous and industrial waste management services includes construction inspection and management. We support the efforts of federal and state agencies, as well as public and private owners in energy, manufacturing, and industry.

Environmental problems that stem from waste are the result of improper disposal and management. GAI understands the problems industrial waste generators face and the liability that accrues from faulty waste management practices. Our experience investigating problems and designing solutions is extensive and diverse. We apply in-depth knowledge and creative techniques to developing sound waste management plans.

GAI's integrated approach to waste management is supported by a diverse staff of professionals who bring a unique perspective to the environmental, geologic, hydrogeologic, regulatory, economic, and social aspects of each project. We evaluate, plan, design, and manage installation of secure hazardous and industrial waste facilities. GAI also identifies and develops procedures to help mitigate difficulties at existing sites.

GAI conducts field investigations to gather as much site data as possible at the lowest cost to the client, and our field specialists are trained in health and safety according to Occupational Safety and Health Administration (OSHA) requirements. Our subsurface investigations comprise soil gas vapor surveys, drilling, test pit excavation, and soil, rock, and water sampling and testing.

A successful remedial site investigation requires the following plans be in place before the investigation starts: Preliminary Work Plan, Quality Assurance Project Plan, Field Sampling Plan, and Health and Safety Plan. If the presence of hazardous or industrial waste is determined, GAI conducts a feasibility study to evaluate remediation alternatives for protecting public health and the environment.

For each remediation, GAI reviews the most suitable technologies, balancing effectiveness, ease of implementation, and cost. Often, we combine two or more technologies, some of which include in-situ vacuum extraction, biodegradation, isolation and containment, soil washing, excavation and treatment, fixation, stabilization, and groundwater collection and treatment. Once GAI determines a suitable remediation alternative, we work closely with the client to develop a technical design plan that includes detailed documentation of the process.

CONSTRUCTION ENGINEERING AND INSPECTION EXPERIENCE

GAI monitors the daily activities and building materials that are critical to Construction Engineering and Inspection projects with the following in mind—client service, construction integrity, and a successfully completed project. Whether GAI provides transportation construction monitoring, construction engineering and inspection for development, or construction management services for massive energy facility projects, our pool of resident engineers and construction specialists skillfully address the distinct construction challenges of clients in all industries.

GAI's construction professionals test construction material quality, inspect workmanship, and monitor on-site construction safety. Our services often include progress and materials reporting, shop drawing review, plan interpretation, pay request administration, claims and disputes resolution, and more. We follow each stage of construction to verify that the work is executed in accordance with the contract documents, and administer concrete, bituminous material, steel, and soil sample testing.

GAI provides quality control and cost protection throughout the building process so the work meets or exceeds quality standards. GAI's project portfolio includes construction services for major highways and bridges, large-scale site developments, wastewater treatment plants, industrial facilities, and power plants. We specialize in complex, multiphase construction projects for state agencies, municipalities, institutions, private developers, and power providers. Our repeat success is based on building trusted relationships with clients and contractors and helping them meet their project goals.

COMPANY WORKLOAD AND STAFF AVAILABILITY

GAI is a multi-office firm with numerous active projects at any time. The majority of GAI's senior and supervisory staff have been employed with the firm from 10 to 25+ years, providing a stable staff and work environment. Because we maintain a large staff, we can respond to client needs quickly. It is standard procedure for the assigned Project Manager to oversee a project from inception to completion, from assigning personnel to writing and submitting required reports. Our available staffing will accommodate the anticipated workload for this Contract.

For this assignment, Jason Gandee has been designated as the Project Manager for the overall, statewide AML program. Mr. Gandee will oversee the work of each individual project and serve as the primary point of contact for WVDEP-DLR-AML throughout. To facilitate multiple, concurrent projects statewide, we have also identified the following key team members as Assistant Project Managers with the experience and capacity to manage individual projects:

- Lee McCoy, PE (Charleston Office)
- Shane Fisher, PE (Bridgeport Office)
- Jeremy Young, PE, MS (Charleston Office)
- David Blake, PE (Cranberry, Pennsylvania Office)

See the proposed Organization Chart and key team member bios in **Section 2. Key Personnel** for additional information about these and other team members. Resumes of GAI's Project Management and Discipline Leads are located in **Appendix B**.

GAI TEAM STRENGTHS

WEST VIRGINIA PRESENCE

EXPERT TEAM

OPEN COMMUNICATION

PROJECT UNDERSTANDING

2.0 KEY PERSONNEL

Our proposed Team is particularly well-suited for this Contract due to our AML experience and expertise. GAI's key personnel for this Contract specialize in mine reclamation projects. Please see **Figure 1** below for GAI's proposed Project Organizational Chart. Resumes of GAI's Project Management and Discipline Leads are located in **Appendix B**.

FIGURE 1 - PROJECT ORGANIZATIONAL CHART

Project Manager
Jason Gandee (*Charleston*)●+

Health & Safety
Matthew J. Guard, CSP, ASP+

Project Advisors | QA/QC
Charles Straley, PE, PLS, MS (*Charleston*)●+
John Klamut, PE, CFM, MS+
Blaise Genes+

Assistant Project Managers
Lee McCoy, PE (*Charleston*)●+
Shane Fisher, PE (*Bridgeport*)●+
Jeremy Young, PE, MS (*Charleston*)●+
David Blake, PE+

Technical Personnel/Services

Geotechnical
Abeera Batool, PhD, PE*+
Keith Schoon, PE, MS
David Blake, PE+

Environmental Studies
Valerie Clarkston, CE, CWB®, MS (*Charleston*)●*+
Adam Mann, MS+
Jason Wells (*Bridgeport*)●
Lindy Bowles (*Bridgeport*)●
Rheagan Bean (*Martinsburg*)

Roadway & Traffic Engineering
Michael Holbert, PE (*Bridgeport*)●*+
Steph Hartman, PE (*Bridgeport*)●
Michelle Kinder (*Charleston*)●

Geology/Mining
Chelsea Lyle, PG, MS*+
Andy Savill, PG, LEED® AP BD+C
Angelica Haney (*Bridgeport*)●
Blaise Genes+

Cultural Resources
Kelly Hockersmith, RPA, MA (*Charleston*)●*+
Kathleen Walsh (*Bridgeport*)●
Paula McClain (*Bridgeport*)●
Henry Alexander (*Charleston*)●

GIS/Mapping
Michael Owens, GISP® *+
Amanda Wasielewski, MS

Civil Engineering
D. Ian Webster, PE (*Charleston*)●*+
Shane Fisher, PE (*Bridgeport*)●
Jeremy Young, PE, MS (*Charleston*)●
Kaleb Acree, PE (*Charleston*)●
Reuben Haught, PE (*Bridgeport*)●
Alexander Harvey, EIT (*Bridgeport*)●
Nathan Morton, EIT (*Charleston*)●

Computer Aided Design
Ed Mayhood*+
David Workman (*Charleston*)●
Joseph Chiaverini, Sr.
Kevin Apel
Ted Sayres
Rhoda Trusty
Ben Stemple
Roger Hull

H&H Engineering/ Streams & Wetland Restoration
Mary Beth Berkes, PE, MS*+
Adam Scheller, PE, MS, MBA
Kevin Bortz, PE, MS

Construction Management
JT Sutton (*Bridgeport*)●*+
Terry Queen (*Charleston*)●
Anson Cline (*Charleston*)●
Joe Bob Mullooly (*Bridgeport*)●
Kyle Marsh (*Bridgeport*)●

Construction Materials Testing
Geotechnics, Inc.

Erosion & Sediment Control
D. Ian Webster, PE (*Charleston*)●*+
Lindy Bowles (*Bridgeport*)●

Subsurface Drilling
Abeera Batool, PhD, PE*+
David Blake, PE+
EnviroProbe●
PennDrill
Terra

Survey
Vincent Paparella, PS, PLS*+
Louis Romano, PS●
Matthew Lenox (*Charleston*)●
Doug Nelson (*Charleston*)●

Notes: GAI has approximately 500 personnel across its West Virginia and Pennsylvania offices, and can draw from a broader network of around 1,100 engineering and technical professionals across 34 offices to support multiple, concurrent AML project needs for the WVDEP as they arise.

GAI's capabilities also include disciplines not represented on this organizational chart, including but not limited to mechanical, electrical, and structural engineering; landscape architecture; and public outreach services.

KEY
● WV Office Staff and Subcontractors
* Designated Discipline Lead
+ Resume provided

TEAM LEADERS

Jason Gandee – Project Manager
T. 681.245.6484 | E. j.gandee@gaiconsultants.com

Mr. Gandee is our proposed Project Manager for this Contract. ***He is a Senior Technical Manager with GAI and has over 18 years of experience specializing in civil engineering design. He has managed and/or been the project engineer for over 25 reclamation projects for the WVDEP-DLR-AML, and is currently the Project Manager for the Belle (Sneed) Drainage Project.*** Mr. Gandee's responsibilities have included project management, site reconnaissance to determine the scopes of projects, subsurface monitoring and exploration drilling, preliminary and final design drawings, technical specifications, engineer's cost estimates, and conducting pre-bid and pre-construction meetings with contractors. He also has regulatory agency permitting experience for AML projects, including National Pollutant Discharge Elimination System (NPDES) construction stormwater permits and United States Army Corps of Engineers (USACE) regional permits. His experience with special reclamation projects includes developing construction plans to eliminate highwalls, providing H&H design to manage stormwater on sites, designing ponds for active treatment, and providing design to regrade refuse piles. Mr. Gandee will serve the WVDEP's interest by coordinating and managing fiscal and personnel aspects of the Contract. He will also coordinate public participation tasks, talking to Project stakeholders and answering general comments from the public. Mr. Gandee has a thorough understanding of WVDEP guidelines, specifications, and project expectations. He received his BS in Civil Engineering Technology from West Virginia University Institute of Technology.

Charles Straley, PE, PLS, MS – Project Advisor | QA/QC

Mr. Straley will serve as a Project Advisor and provide Quality Assurance/Quality Control (QA/QC) services for this Contract. ***He has managed and participated in the design and development of reclamation plans and feasibility studies for approximately 100 WVDEP AML projects.*** He has over 39 years of engineering experience, is a licensed Professional Engineer in West Virginia and seven other states, and a Professional Licensed Surveyor in West Virginia. Mr. Straley specializes in geotechnical engineering, including drainage design, landslide investigations, subsurface exploration, foundation and embankment design, slope stability, material and construction specifications, laboratory testing, and construction administration, management, and monitoring. His management experience, combined with his geotechnical engineering expertise, will aid in the successful completion of GAI's work in support of the WVDEP's schedule and budget. Mr. Straley is a native of West Virginia and holds an MS in Geotechnical Engineering and a BS in Civil Engineering from The University of Akron.

John Klamut, PE, CFM, MS – Project Advisor | QA/QC

Mr. Klamut will serve as Project Advisor and provide QA/QC services for this Contract. He is a licensed Professional Engineer in West Virginia and numerous other states with over 26 years of environmental engineering and water resources experience. Mr. Klamut specializes in permitting and design of water resource and environmental projects, such as Coal Combustion Residual (CCR) disposal impoundments, CCR landfills, bottom ash settling ponds, municipal solid waste landfills, earthen dams, flood control structures, constructed wetlands, lined evaporation ponds, sediment basins, mine tailings impoundment closures, mine overburden stockpile closures, groundwater monitoring, and NPDES permitting and reporting for industrial facilities. ***Mr. Klamut has managed numerous projects for the Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation (PADEP-BAMR), including the West Newton Refuse Embankment Stabilization Project, the Shawville North Project, and is currently the Project Manager for the Hanover Reservoir Mine Fire Project.***

Blaise Genes – Project Advisor | QA/QC

Mr. Genes will serve as Project Advisor and provide QA/QC services for this Contract. ***He has over 37 years of experience and has contributed to numerous PADEP AML projects, including the West Newton Refuse Embankment Stabilization Project, Shawville North (Remedial) Project, Walkertown Coal Refuse Exploration Drilling Project, Hanover Reservoir Mine Fire Project, and the Bens Creek Coal Refuse Drilling Project, providing technical leadership and quality oversight throughout each phase.*** His experience includes implementing in-situ field and laboratory testing programs to characterize and develop undrained shear strength and consolidation properties of hydraulically-placed tailings, ash/sludge, soil and rock materials, and performing seismic hazard assessments, and static and seismic liquefaction triggering analyses of upstream-constructed coal refuse and ash/sludge impoundments. Mr. Genes routinely develops detailed field and laboratory testing programs, and estimates static and dynamic soil, rock, coal refuse and power plant ash waste material properties. He provides slope, foundation, retaining wall and ground improvement engineering designs, and prepares geotechnical reports, construction drawings and technical specifications. Mr. Genes holds a BS degree in Civil Engineering Technology from Point Park University.

ASSISTANT PROJECT MANAGERS

Lee McCoy, PE – Assistant Project Manager

Mr. McCoy is licensed Professional Engineer in West Virginia, Kentucky, and Ohio with over 28 years of experience in civil engineering, water resources engineering, and project management. ***He served as Project Manager for six AML sites in West Virginia, overseeing projects for the WVDEP-DLR-AML***. He has experience managing and designing complex projects, including solar fields, electric substations, service centers, and call center complexes. His expertise spans grading, drainage, SWM, E&SC, and permitting. Lee has successfully led projects with a wide variety of clients ranging from Power/Industry to Commercial Development and AMLs, demonstrating his skills in site layout, hydraulic and hydrologic studies, and construction administration. He is proficient in using CAD software, hydraulic modeling programs like EPANET, HEC-RAS, and GIS for mapping and analytics. Mr. McCoy is also an active member of professional organizations such as the American Society of Civil Engineers (ASCE), the Society of American Military Engineers, and the Association of State Flood Plain Managers. Mr. McCoy received his BS degree in Civil Engineering from West Virginia Institute of Technology.

Shane Fisher, PE – Assistant Project Manager / Civil Engineer

Mr. Fisher is a licensed Professional Engineer in West Virginia and nine other states, bringing ***over 20 years of civil engineering experience in AML infrastructure projects. His extensive background includes the design and cost estimation of AML and industrial wastewater systems, with a strong focus on environmental permitting across federal, state, and local regulatory agencies.*** Mr. Fisher manages erosion and sediment control, and construction stormwater and roadway permitting projects for GAI. His experience includes designing and analyzing drainage systems, roadways, bridge structures, and sanitary and industrial water and wastewater systems. His recent experience includes managing stream restoration and wetland mitigation projects in West Virginia and Wisconsin. He also has experience meeting Federal Emergency Management Act (FEMA) requirements, including flood mapping, flood compliance, and construction monitoring for disaster-related funds. Mr. Fisher received his BS in Civil Engineering Technology from Fairmont State University.

Jeremy Young, PE, MS – Assistant Project Manager / Civil Engineer

Mr. Young is a seasoned Project Manager with over 15 years of experience and a licensed Professional Engineer in West Virginia. ***His background includes providing engineering services to the WVDEP, where he contributed to numerous AML projects such as Oldfield Branch Drainage, Laurel Run Point, Wheatley Branch Portals and water feasibility studies in Beckley, West Virginia.*** Mr Young specializes in site studies and developing design solutions tailored to complex environmental and infrastructure projects. Earlier in his career, Mr. Young interned with the WVDOH within the Planning Division's Geographic Information Systems (GIS) Section. During this time, he collected Global Positioning Survey (GPS) data for mapping and spatial analysis efforts. He brings strong technical proficiency in a range of software platforms, including ArcGIS, Bentley MicroStation, Bentley WaterCAD, and AutoCAD Civil 3D. Mr. Young holds a MS in Engineering Management and a BS in Civil Engineering from Marshall University.

David Blake, PE – Assistant Project Manager / Subsurface Drilling

Mr. Blake is a licensed Professional Engineer in West Virginia and six other states, with 14 years of experience in mining and civil engineering, particularly in AML projects and subsurface hazard reduction. ***His recent efforts include the Hanover Reservoir Mine Fire Project in Luzerne County, Pennsylvania, where he played a key role in developing a grouting strategy and defining mitigation zones to suppress a long-burning underground fire.*** He also conducted field assessments of mine subsidence in Clarksburg, West Virginia, identifying historic mining features and drafting contingency plans for geotechnical drilling near flooded workings. Mr. Blake has supported karst hazard response planning and civil site design for substation development, and holds Black Hat mining certifications in both West Virginia and Ohio. He received his BS in Mining Engineering from West Virginia University.

KEY TECHNICAL PERSONNEL

Abeera Batool, PhD, PE – Lead Geotechnical Engineer / Subsurface Drilling Lead

Dr. Batool is a licensed Professional Engineer in California with over 18 years of experience specializing in various aspects of geotechnical engineering, including site characterization, developing geotechnical design parameters, design of shallow and deep foundations, retaining walls, and support of excavation. Her expertise includes advanced seepage and loading rate analyses of upstream constructed tailings dams, including stability and seismic evaluations. She also has experience in design of landslide remediations, management of geotechnical information for green infrastructure projects, and providing on-site construction supervision. ***Dr. Batool has contributed to a wide range of AML initiatives for the PADEP BAMR, where she has played a key role in drilling coordination, gathering supplementary geotechnical data, and drafting Geotechnical Engineering Reports.*** Her background also includes work at mine refuse disposal sites in West Virginia, where she managed the development and assessment of field and lab testing programs. She delivered both written documentation and oral briefings of the findings to clients and regulatory bodies. She holds a PhD and MS degree in Civil Engineering from Virginia Polytechnic Institute and State University, and a BS degree in Civil Engineering from University of Engineering and Technology (UET).

Chelsea Lyle, PG, MS – Lead Geologist

Ms. Lyle is a licensed Professional Geologist in Pennsylvania with over 10 years of experience specializing in engineering geology. Her background spans site reconnaissance, subsurface boring and sampling, geologic mapping, and selecting core samples for lab testing. She has contributed to a diverse array of infrastructure initiatives, such as transmission lines, substations, compressor stations, pipelines, bridges, roadways, landslide evaluations, and efforts to address mine subsidence. ***Ms. Lyle's mining-related expertise includes managing stabilization activities during the installation of a water transmission line in Westmoreland County, Pennsylvania, where she tracked borehole drilling and concrete injection to reduce subsidence hazards. She also performed exploratory drilling and authored reports for a confidential coal mine grouting verification project.*** Ms. Lyle holds an MS degree in Geology from Kent State University and a BA degree in Geological Sciences from State University of New York.

D. Ian Webster, PE – Lead Civil Engineer / Erosion & Sediment Control (E&SC)

Mr. Webster is a licensed Professional Engineer in West Virginia and four additional states with over 12 years of experience in the analysis, design and review of WVDOH drainage projects. His experience includes, but is not limited to bridges, stormwater systems, retention and sediment ponds, roadway drainage and natural stream design. Mr. Webster prepares H&H design and reports, Federal Emergency Management Agency (FEMA) no-rise floodplain certificates, NPDES permits, and roadway and Right-of-Way (ROW) plans. ***He was responsible for H&H analysis and installation of drainage channels, underdrains, and stormwater management to safely convey water off-site for the WVDEP Belle (Sneed) Drainage Project in Kanawha County, West Virginia.*** Mr. Webster holds a BS in Civil Engineering with a Mathematics Minor from West Virginia University Institute of Technology, where he graduated magna cum laude.

Mary Beth Berkes, PE, MS – H&H Engineering/Stream & Wetland Restoration Lead

Ms. Berkes is a licensed Professional Engineer in West Virginia and five additional states and has over 16 years of experience specializing in H&H analyses and modeling, inundation studies and investigations, Natural Channel Design (NCD), stream restoration and bank stabilization for protection of utilities, property and resources, geomorphic surveys, and field assessments. She serves as GAI's Engineering Lead for Stream and Wetland Mitigation Design. She has completed the Rosgen Levels I through IV courses and her training resume also includes formal courses relating to multi-dimensional hydraulic modeling for stream restoration, advanced HEC-RAS modeling and scour analysis, and H&H permitting and procedures.

Her design experience specific to stream and wetland mitigation includes over three miles of stream restoration design for two mitigation sites in West Virginia; restoration and stabilization design for headwater stream restoration projects across West Virginia; stream relocation within a FEMA floodway; significant experience involving bank stabilization on large rivers and small streams through bio-engineering methods, hard armoring, or a hybrid approach; and design and hydrologic assessments for wetland mitigation sites. ***Ms. Berkes was the Project Manager for WVDEP's UNT #1 of Teter Creek ILF Project located in Barbour County, West Virginia.*** Deliverables included design and hydraulic modeling for over 5,700 linear feet of Level 1 Restoration or Establishment; 4,900 linear feet of Level 3 Restoration; and 2,500 linear feet of enhancement. She received her MS in Civil Engineering from Oregon State University, and a BS in Civil Engineering from the University of Pittsburgh.

Valerie Clarkson, CE, CWB®, MS – Environmental Studies Lead

Ms. Clarkston is a distinguished Assistant Environmental Manager known for her leadership on complex, multidisciplinary projects throughout the Southeast, Mid-Atlantic, and Midwest regions, with a strong presence in West Virginia. She holds dual certifications as a Certified Ecologist (CE) and Certified Wildlife Biologist (CWB®), and brings over 15 years of experience in Environmental Site Assessments (ESAs), endangered species consultation, and hazardous materials management. ***Her fieldwork in West Virginia includes a broad spectrum of wildlife survey methodologies and compliance strategies tailored to the region's ecological and industrial contexts.*** Known for her collaborative approach and technical precision, Ms. Clarkston consistently delivers results that align environmental integrity with project objectives. Her ability to navigate complex permitting processes and build strong relationships with local agencies and stakeholders has been instrumental in advancing sustainable development across the state. Ms Clarkson holds MS and BS degrees in Wildlife Science from Purdue University.

Adam Mann, MS – Environmental Studies Lead

Mr. Mann has over 25 years of experience specializing in endangered species studies. His experience includes working with a variety of aquatic and terrestrial fauna such as reptiles, birds, mammals, fish, and freshwater mussels; however, he is most noted for his work with endangered Indiana and Northern long-eared bats. ***Mr. Mann is a federally-permitted bat biologist and a state permitted bat biologist and approved bat surveyor in West Virginia.*** He will coordinate endangered species investigations for the WVDEP, including consultation with the West Virginia Division of Natural Resources (WVDNR) and the United States Fish and Wildlife Service (USFWS), performance and/or supervision of biological survey teams, and production of necessary reporting or follow-up documentation. ***He is currently the Lead Bat Biologist for the PADEP-BAMR Hanover Reservoir Mine Fire Project where is responsible for providing updated bat studies at mine portals associated with the project.*** Mr. Mann received his MS in Biology from Marshall University, and his BS in Biology from Thomas More College.

Kelly Hockersmith, RPA, MA – Cultural Resources Director

Ms. Hockersmith is a Registered Professional Archaeologist (RPA) and manages cultural resources projects throughout the United States in various federal, state, municipal, and private sectors. ***Her qualifications exceed those set forth by the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716-42).*** Her areas of specialization include managing open-end agreements with a focus on staffing, scheduling, quality and cost controls, technical report preparation, and SHPO and Native American consultation. She has more than 20 years of experience conducting and managing historical archaeology and Section 106 and 110 [National Historic Preservation Act (NHPA)] compliance investigations. This includes the completion of NEPA, NHPA, Section 4(f), and Federal Energy Regulatory Commission (FERC) compliance documents, feasibility studies, Phase I, Phase II, and Phase III archaeological investigations, criteria of effect evaluations, programmatic and memorandum of agreements, integrated cultural resources management plans, and historic preservation plans. Ms. Hockersmith is also familiar with the Native American Graves Protection and Repatriation Act (NAGPRA), Archaeological Resources Protection Act (ARPA), and USACE permitting. She holds an MA in Applied Anthropology from University of South Florida and a BA in Anthropology and Psychology from Heidelberg University.

JT Sutton – Construction Management Lead

Mr. Sutton has over 35 years of experience in environmental and construction management, with a strong focus on protecting West Virginia's natural resources. ***He leads a team of construction inspectors who monitor construction projects across West Virginia and Ohio for regulatory compliance.*** He works closely with clients on permitting, project planning, and post-construction activities, and communicates environmental concerns identified during inspections. Mr. Sutton also conducts site visits to track ongoing compliance with state and federal regulations. As a direct liaison between WVDEP inspectors and project teams, he helps facilitate clear communication and timely resolution of issues. Mr. Sutton earned his BA in Anthropology from West Virginia University.

Michael Holbert, PE – Roadway & Traffic Engineering Lead

Mr. Holbert is a licensed Professional Engineer in West Virginia, Pennsylvania, and Maryland, currently serving as Assistant Engineering Director within GAI's Transportation group. With 29 years of experience in transportation and roadway engineering, he offers expertise in preparing plans, specifications, and cost estimates, as well as leading design studies, preliminary engineering, and final design for a broad range of bridge and roadway projects. ***His portfolio includes work for prominent public agencies and institutions such as the WVDOH; City of Morgantown; Marshall University; Virginia Railway Express; and ENSR.*** He holds a BS in Civil Engineering from West Virginia University, where he graduated summa cum laude.

Michael Owens, GISP® – Senior GIS Manager

Mr. Owens is a Senior GIS Manager and certified Geographic Information Systems Professional (GISP) with over 20 years of experience in designing and managing GIS solutions using Esri ArcGIS for Desktop and ArcGIS Enterprise—including Server, Portal, and SDE databases. ***He leads GAI's development and QA/QC of production mapping, spatial data workflows, and web and mobile GIS applications.*** As a skilled user, developer, and administrator of ArcGIS Enterprise (Portal), ArcGIS Online, Field Maps (Collector), and Survey123, Mr. Owens delivers tailored geospatial solutions that support complex project needs. His IT background strengthens his ability to implement client-specific data standards, streamline data collection and analysis, and uphold technical quality across more than 200 gas pipeline, electric transmission, renewable energy, and infrastructure projects.. Mr. Owens received his BS degree in Information Science from University of Pittsburgh.

Vincent Paparella, PS, PLS – Lead Surveyor

Mr. Paparella is Professional Surveyor (PS) in West Virginia and Professional Land Surveyor (PLS) in six states. ***He has over 30 years of experience managing survey projects, from small boundary surveys to large oil and gas projects throughout West Virginia.*** His expertise includes the construction management, routing, surveying, and mapping of major water body crossings for energy and transportation clients. His project experience ranges from utility work, pipeline work, transmission lines, oil and gas pads, Topographic Surveys, Boundary Surveys, ALTA Surveys, Route Surveys, Utility Surveys, Control Surveys, Volumetric Surveys, and Construction Stakeout. Mr. Paparella is also experienced at providing AutoCAD Drafting (topographic mapping and subdivision plans), preparing legal descriptions, reducing and plotting survey data, and providing boundary determination and calculations. Mr. Paparella holds an AS degree in Civil Engineering from Hagerstown Community College.

Ed Mayhood – Senior Design Manager

Mr. Mayhood brings extensive expertise in grading design and the development of construction documents, as-built drawings, master plans, surveys, and permit applications. His work includes the creation and refinement of conceptual and construction details. He is highly proficient in AutoCAD Civil3D, AutoTURN, Bluebeam PDF Revu, Adobe Photoshop, MicroStation, and Acrobat. Mr. Mayhood uses CAD software to produce surveys, design site layouts and grading plans, and generate construction drawings, sections, and technical details. ***As the Senior Lead Project Designer, he has directed complex AML mine fire mitigation and water management projects throughout the Northeastern United States. Notable efforts include the PADEP BAMR Percy Mine Fire Project in Fayette County, Pennsylvania; the PADEP BAMR Mine Water Use in the Susquehanna River Project in the Susquehanna River Basin, Pennsylvania; and the PADEP BAMR Tamaqua Mine Water Problem Study in Tamaqua, Pennsylvania.*** He received his AST in Computer Drafting and Design from ITT Technical Institute.

Matthew Guard, CSP, ASP – Health & Safety Lead

Matthew Guard serves as Senior Director of Health and Safety, bringing more than 25 years of experience in fostering safety-driven environments across diverse industries. He holds Certified Safety Professional (CSP) and Associate Safety Professional (ASP) credentials, along with multiple specialized certifications that underscore his deep expertise. ***As a certified Mine Safety and Health Administration (MSHA) New Miner Training Instructor for Surface Coal and Non-Metal, Matthew plays a key role in advancing safety education for AML projects.*** At GAI, he leads the creation and implementation of safety programs, delivers focused training, and oversees regulatory compliance for both office and field operations. His responsibilities include managing incident investigations, conducting audits, and working closely with project teams to develop customized safety strategies. Matthew's proactive, hands-on leadership reflects a strong dedication to employee well-being, risk mitigation, and continuous improvement in safety culture. He received his BS in Industrial Health and Safety from Pennsylvania State University.

3.0 PROJECT UNDERSTANDING & APPROACH

PROJECT UNDERSTANDING

GAI understands that WVDEP-DLR-AML is soliciting Expressions of Interest from qualified firms to provide architectural/engineering services for statewide AML contracts in West Virginia. The subsequent contracts are anticipated to be "full service" Architectural/Engineering (A/E) design, planning, realty, and construction services, which include, but are not limited to: Civil, Geological, Hydrological, Survey (mapping), NEPA services, etc., as applicable.

GAI understands that Project goals and objectives are as follows:

1. **NEPA tasks and Infrastructure Investment and Jobs Act (IIJA) compliance.**

   GAI has assisted numerous clients with successfully completing NEPA documents and supporting studies. Our staff of ecologists, environmental and cultural resources specialists, planners, geologists, hydrologists, engineers, and support staff offer a complete range of NEPA project experience throughout West Virginia.

   GAI's goal is to assist our clients in satisfying the environmental policy goals for each of their projects. NEPA requires agencies to identify and consider potential impacts of their proposed action and inform the public before making a final decision. Our specialists are experienced in establishing matrices to identify the appropriate agencies, regulations, and Executive Orders in order to create a schedule for each project. Our proposed staff will analyze the proposed action and define a range of alternatives, including a "No Action" alternative that is in true contrast to the proposed action. GAI will justify the proposed action through a comparison of its alternatives in order to justify an agency's authorization.

   GAI analyzes the impacts of the proposed action with regard to each coordinating agency's policies and statutory requirements, presenting design changes and mitigation measures to help gain authorization. GAI provides field surveys and feasibility studies for the following:

   - **Water Resources:** Conduct and assess wetland, stream, and aquatic surveys
   - **Protected Plant and Animal Species:** Section 7 consultation for threatened and endangered species, as well as state consultation
   - **Socioeconomic and Environmental Justice:** Provide baseline conditions and potential impacts from construction, operation, and maintenance
   - **Air:** Modeling, analysis, and permitting
   - **Historic Properties and Cultural Resources:** Conduct Phase I surveys and Phase II National Register evaluations
   - **Stormwater Design and Land Development Engineering:** Planning, design, permitting, and construction for a wide range of projects that fulfill Leadership in Energy and Environmental Design (LEED) requirements

   GAI is familiar with the IIJA and the Draft Guidance on the Bipartisan Infrastructure Law (BIL), which addresses energy and power infrastructure, water infrastructure, and more. GAI understands that NEPA documents need to comply with the BIL. GAI is very familiar with NEPA compliance with Environmental Justice laws and disadvantaged communities.

2. **Determine legal ownership of properties & provide legal documentation to substantiate legal ownership findings (if any).**

   GAI surveyors will perform field surveys, office computations, and computer aided drafting in accordance with West Virginia, Title 23, Series 5, Section 23-5-7, "Minimum Standards for Surveys." We will research and review current available public record documentation for the one parcel and adjacent parcels and easements affecting the parcels. We will search for boundary evidence on the ground, and we will survey the location of found evidence. We will reconcile the evidence with the public record research to determine relevant property boundary ownership and easement locations.

3. **Develop construction plans and technical specifications to reclaim mine portals, drainage controls and systems, slope stabilization, coal refuse reclamation, stream restoration, subsidence repair, stormwater and erosion and sediment control, regrade and revegetation, and all other conditions encountered on the project sites.**

   GAI understands that we are to develop construction plans and technical specifications for AML projects. GAI's reputation as one of the nation's experts on mine stabilization, mine fires, mine reclamation, and AMD remediation is the foundation for the solutions we provide to clients. We have been delivering services to clients for over 65 years, including geotechnical investigations, overburden characterizations, mine subsidence evaluations and mine stabilization design, mine shaft backfill operations, underground ventilation studies, mine atmosphere gas characterization, economic studies, risk assessments, AML reclamation studies, and mine fire investigations and abatement.

   GAI's design capabilities for mine facilities includes mine seals, haul roads, dams and impoundments, sedimentation ponds, coal preparation plants, water control and treatment facilities, AMD treatment, and waste disposal areas.

4. Obtain, maintain, and release required permits.

GAI guides clients through the complexity of federal, state, and local agency environmental and permitting regulations. Our established agency relationships and study processes advance small projects as well as large regional efforts. Whether new gas and electric corridors, infrastructure rehab, or brownfield redevelopment, GAI conducts detailed environmental studies in the initial project planning stages to keep permitting, planning, and construction on schedule.

We conduct comprehensive assessments that address impacts to wetlands and floodplains, terrestrial and aquatic natural systems, vegetation and wildlife, cultural resources and socioeconomics, air and water quality, noise levels, aesthetics, and geologic and hazardous conditions. Our professionals identify issues to avoid and minimize impacts where possible, prepare permit applications, and develop mitigation plans for unavoidable impacts. We develop cost-effective solutions to meet regulatory requirements while supporting client schedules. With advanced GIS capabilities, GAI streamlines the NEPA process through large-volume data sharing that optimizes the regulatory review process. We work extensively with regulatory agencies to obtain permits and clearances for many types of projects.

5. Provide resident project representative, quality assurance/quality control certification, and prepare daily field activity logs summarizing construction activities.

GAI's engineering and inspection services cover the building process, and our pool of resident engineers and construction specialists skillfully address the distinct construction challenges associated with AML projects. GAI construction specialists evaluate each construction project before it begins, tailoring staff and resources to fit the need, and setting a tone of cooperation and close communication. GAI uses pre-construction meetings with clients, owners, contractors, and subcontractors to outline communication methods, detail change order and pay request processes, and emphasize milestone completion dates. We believe successful pre-construction conferences are the basis for the successful start of a project.

GAI specializes in complex, multi-phase construction projects for state agencies, municipalities, institutions, private developers, and power providers. Our construction professionals test construction material quality, inspect workmanship, and monitor on-site construction safety. Our services often include progress and materials reporting, shop drawing review, plan interpretation, pay request administration, claims and disputes resolution, and more. We follow each stage of construction to observe that the work is executed in accordance with the contract documents, and administer concrete, bituminous material, steel, and soil sample testing.

For construction activities, GAI construction professionals will observe work being performed during construction and write activity reports summarizing field activities and testing performed. Daily field logs will be submitted weekly to WVDEP-DLR-AML for review.

GAI understands the importance of implementing public information processes that keep project stakeholders well informed. After construction is complete, we submit a report to the client, summarizing overall performance and including an evaluation of the established goals and objectives.

PROJECT APPROACH AND METHODOLOGY

GAI strives to perform as an extension of our Client's staff with a service-oriented approach. Our approach is focused on regular and effective communication to keep WVDEP-DLR-AML informed of progress and to address Project challenges as they arise. GAI has set forth a number of communication, management, and monitoring systems to handle this Contract and we look forward to implementing them on WVDEP-DLR-AML's behalf. GAI's Project Management Plan (PMP) will be used to manage and communicate the Project scope, schedule, and budget to promote the successful implementation of this Contract. This PMP includes: Project Approach, Coordination and Scheduling, Health and Safety Plan Implementation, and Quality Assurance/Quality Control. An overview of GAI's PMP is presented as **Figure 2 Project Management Plan (PMP) Overview** below.

PROJECT APPROACH

Project Management will be provided by Mr. Jason Gandee who works out of GAI's Charleston Office. He will be responsible for the day-to-day management and performance of these Projects. Mr. Gandee will review the WVDEP-DLR-AML work directive and prepare the Scope of Services and Cost Proposal. A written Proposal, including a detailed cost estimate, (man hours and expenses associated with the Project) will then be prepared and submitted to WVDEP-DLR-AML for review. Upon WVDEP-DLR-AML's approval of GAI's Proposal, Mr. Gandee will arrange for the start of the work. Included will be Project staffing, arrangement and detailing of the Scope of Services to be provided by GAI, and review of the Project budget and schedule.

Mr. Gandee will generally supervise the work in progress and review work products at intermediate points prior to the submittal to WVDEP-DLR-AML and will be responsible for serving as the liaison with the WVDEP-DLR-AML Project Manager, including Project status reports, as required. Additionally, he will oversee the IIJA program in coordination with WVDEP-DLR-AML.

GAI's Charleston office is approximately a 10-minute drive to WVDEP-DLR-AML's Headquarters, located in Downtown Charleston, West Virginia. Engineering design work will be performed out of GAI's offices in Charleston, West Virginia; Bridgeport, West Virginia; Pittsburgh, Pennsylvania; and Southpointe, Pennsylvania, as required. GAI's offices in Charleston and Bridgeport will allow for ready access to project sites. GAI's Bridgeport Office is also conveniently located, as it is in the same complex as the WVDEP-DLR-AML's Bridgeport Office.

PROPOSED SUBCONSULTANTS

EnviroProbe Integrated Solutions - Subsurface Drilling Services

GAI is proposing to use EnviroProbe Integrated Solutions (EnviroProbe) for Subsurface Drilling Services and to assist in engineering and testing services. Founded in 2006, EnviroProbe is a woman-owned small business located in Morgantown and Nitro, West Virginia. EnviroProbe's diverse staff includes engineers, environmental professionals, geologists, scientists, Licensed Remediation Specialists, well drillers, equipment operators, inspectors/field technicians, and laborers. EnviroProbe's experienced operators have provided direct-push, environmental drilling, and geotechnical drilling services since 1995. EnviroProbe's staff values safety, holding high standards for both employee and jobsite safety. EnviroProbe is a member of ISNetworld, Avetta, PEC Safety, and SafeLandUSA.

PennDrill - Pennsylvania Drilling Company (PennDrill) – Drilling

Pennsylvania Drilling Company (PennDrill) is a family-owned and operated business headquartered in Imperial, Pennsylvania, with roots dating back to 1900. PennDrill specializes in drilling for foundation investigations. They train their crews in the use of double- and triple-tube coring systems for maximum recovery in all standard sizes. For caisson concrete verification borings, they carry triple tube wireline core barrels with 3.270" core diameters, and conventional barrels in 4.00" and 6.00" core sizes for maximum recovery. PennDrill routinely drills into open mine voids, encounters Slickenside layers, Karst formations, and the deep sand and gravels of river valleys. Additionally, their crews frequently collaborate with the U.S. Army Corps of Engineers on projects related to the construction, restoration, and maintenance of the numerous locks and dams in the region.

Terra Testing - Drilling

Terra Testing, Inc. (TTI), located in Washington, Pennsylvania is a privately owned corporation, specializing in geotechnical (Test Boring & Exploratory Drilling) and environmental (Monitoring & Recovering Wells) drilling since 1972. A corporation since 1981, TTI has successfully completed thousands of projects for the private sector, governmental and industrial owners. The majority of TTI's work is in Pennsylvania, Ohio, West Virginia, and Virginia, though they have traveled much further on client requested. TTI employs ten full-time drilling crews, most with over 15 years of experience and each capable of handling your most difficult project. TTI possesses a vast array of company and driller licenses and certifications, making them qualified to handle your drilling projects safely, proficiently, and in accordance with local and state requirements

Geotechnics, Inc. - Construction Materials Testing Services

Geotechnics, Inc. (Geotechnics) will perform Construction Material Testing Services to support projects, as needed. Their geotechnical laboratories are equipped to handle many testing needs. From a few samples with basic classification tests to several hundred samples with a complex series of characterization, compaction, consolidation, strength, and permeability tests. Their facilities enable them to perform a range of tests simultaneously on samples of varying size and their geotechnical laboratories are home to some of the most comprehensive test equipment in the country. The Geotechnics testing laboratory is recognized as being in compliance with NQA-1-1994 Edition Quality Assurance Requirements for Nuclear Facility Applications.

FIGURE 2 - PROJECT MANAGEMENT PLAN (PMP) OVERVIEW

GAI develops a PMP for our projects regardless of size or complexity. The PMP will be distributed to all key Project Team members, including the WVDEP-DLR-AML. The GAI PMP contains the following nine elements:

1. **Project Objective:** A short project objective will be developed based on a cost, schedule, and performance matrix
2. **Scope of Work:** The Scope of Work will be broken down into tasks to sufficient detail as to monitor and manage the scope, schedule, and budget
3. **Schedule:** A milestone or bar chart schedule will be developed in coordination with WVDEP-DLR-AML
4. **Financial Plan (Cost Control):** Continuous monitoring of labor hours/payroll cost, expenses, and percent of hours and dollars expended
5. **Team Organization:** Development of a project organizational chart with more than sufficient resources to meet WVDEP-DLR-AML project needs
6. **Quality Control Process:** Develop a specific QA/QC program to meet the needs of both GAI and WVDEP-DLR-AML. Fundamentals of this program include:
   - Establishing and reviewing design criteria and project design objectives for viability, constructability, and cost effectiveness
   - Checking analyses, designs, drawings, specifications, and text by independent staff
7. **Change Management Process:** Establish plan for effectively managing changes in scope, budget, or personnel
8. **Communication Plan:** Establish contact list and signing authority
9. **Contingency and Risk Management Planning:** Identify potential problems and develop a plan to prevent/manage contingency

Mr. Charles Straley, PE, PLS, MS, will act as the Project Advisor, where he will provide his expertise in AML design projects and in the areas of geotechnical engineering, design of drainage conveyances, subsurface investigations, mining, soil and rock mechanics, subsidence exploration, foundation and embankment design, slope stability and landslide engineering, impoundment engineering, acid mine drainage, water feasibility studies, access for construction, and material construction specifications. Mr. Straley has managed or provided engineering design services for over 100 AML projects for WVDEP.

GAI's large number of experienced staff and range of capabilities permits us to respond quickly, providing flexibility, and includes input to the Project's staff from in-house experts. GAI's method of staffing projects, as evidenced by our performance on prior projects for WVDEP-DLR-AML, is to assign a team with a skill set that aligns with the Project requirements in support of the Client's Project goals and budget. Should it be necessary, the GAI Team can draw on the expertise available within GAI's 1100+ personnel in our 34 office locations.

COORDINATION AND SCHEDULING

PROJECT INITIATION

GAI will meet with WVDEP-DLR-AML personnel and appropriate Project stakeholders for a kick-off meeting to review the field safety and property access protocols, schedule, points of contact, and coordination and communication systems.

PROJECT COMMUNICATION

GAI will participate in routine (typically bi-weekly) conference calls with WVDEP-DLR-AML and Project stakeholders, as required. GAI's Project Manager can lead the calls if requested. GAI will provide a conference call phone number to support the conference calls, which can be conducted using Microsoft Teams, which will allow sharing of the desktop to display data for discussion. During the calls, GAI will update WVDEP-DLR-AML regarding the status of the Project and to identify information needs or items that may affect the Project schedule and/or cost.

PROJECT SCHEDULING

GAI uses either Primavera, Microsoft Project, or Excel scheduling spreadsheets for critical path scheduling, which tracks deliverables, schedule, and budget. GAI will work with WVDEP-DLR-AML to build a baseline schedule. The baseline schedule is then updated on a periodic basis, typically weekly or monthly, depending on the pace of the Project.

HEALTH AND SAFETY PLAN IMPLEMENTATION

Health and Safety Plans are required to be developed and implemented whenever project staff are expected to conduct fieldwork, as well as whenever site reconnaissance activities expose employees to hazards that must be controlled. The purpose of the Health and Safety Plan is to identify, investigate, and mitigate potential hazards and unsafe conditions en route to/from and at the project site. The Health & Safety Plan defines the specific project tasks and appropriate control measures for safe completion of project tasks through the use of a Job Hazard Safety Analysis process. It also contains information about project personnel; required personal protective equipment; mandatory project staff training; and emergency response information and procedures. This procedure applies to GAI staff as well as GAI subcontractors.

QUALITY ASSURANCE/QUALITY CONTROL

PROJECT ACCOUNTING

GAI has established a Project Accounting Group to monitor cost and manage reporting. This group utilizes Deltek Vantagepoint, GAI's enterprise management software, to monitor the cost of each project. GAI Project Managers work with Project Accountants to establish baseline budgets for each project and associated task(s) in Deltek Vantagepoint based on the agreed upon scope and budget. These budgets establish the baseline to monitor and measure project progress and financial performance as the project evolves.

INVOICE MANAGEMENT

To track and manage Project budgets, GAI Project Managers utilize Deltek Vantagepoint, with Project Accounting assistance. GAI incorporates budgets in Vantagepoint on a weekly basis. Vantagepoint allows our Project Managers and Accountants to evaluate many different project metrics to include the awarded value for each task, approved change order amounts, current invoice amount, amount invoiced to date, remaining amounts approved, and physical percent complete. To manage and document the Projects' scope, if activities are determined to be required that are not part of this scope (change orders), GAI will provide work plans to be approved. GAI will incorporate these change orders into Deltek Vantagepoint as they are approved. GAI's proposed routine conference calls will include a review of the Project budget and change orders, as needed.

QUALITY MANAGEMENT SYSTEM

GAI understands the importance of providing our clients with on-time, cost-effective, quality professional services. The continued success of our firm is directly related to our ability to continue to support the cost, quality, and schedule requirements of our projects. We achieve this goal through our experienced professional staff and by utilizing our QMS. GAI's QMS is based upon a continuously improving project delivery strategy that reflects our client's needs and utilizes current technology. The Project Delivery System provides the quality assurance and quality control functions from project inception through project closeout. The Project Delivery System incorporates processes and procedures that describe how professional services are planned, executed, checked, verified, and delivered to our clients. The system is flexible so that it allows GAI to meet the needs of individual clients.

DATA MANAGEMENT

GAI will store digital information on corporate servers, including Microsoft Office documents, GIS shape files, CAD files, and PDFs of mapping. GAI will provide a means to share large files with WVDEP-DLR-AML through the use of a password protected FX site or by providing direct links to files on the server through the use of GAI's Newforma or SharePoint System.

ASSUMPTIONS AND UNDERSTANDINGS

GAI's EOI has been prepared based on the following assumptions and understandings:

1. WVDEP-DLR-AML will give GAI prompt notice whenever it observes or otherwise becomes aware of any development that affects the scope or timing of GAI's performance.
2. WVDEP-DLR-AML will examine and provide comments and/or decisions with respect to any GAI interim or final deliverables within a period mutually agreed upon.
3. GAI will discuss and formalize the final schedule with WVDEP-DLR-AML upon Authorization to Proceed.
4. WVDEP-DLR-AML consultant(s)/contractor(s) will cooperate and coordinate with GAI in a timely and efficient manner.

4.0 REFERENCES

The following are references of GAI clients served in recent years by one or more members of the designated Project Team.

1. Raymond J. Seese III, PE | Senior Civil Engineer
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   Phone: 304.284.7406
   Email: emuzzarelli@morgantownwv.gov
3. Sondra Mullins | Historical Services Unit Leader
   WVDOH
   Phone: 304.558.9487
   Email: Sonda.L.Mullins@wv.gov
4. J.W. Hawk, PE | Senior Engineer/Project Manager
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   Phone: 304.790.3780
   Email: jw@allconstructionwv.com
5. Ray Perry BCO, CFM, COSS | Logan County Code Official
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   Phone: 304.792.6265
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6. Kristi Soltysiak | Senior Environmental Professional
   EDGE Engineering & Science
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   Email: KESoltysiak@edge-es.com

5.0 CLOSING

The GAI Team is excited about the opportunity to work with the WVDEP-DLR-AML on this Group of Projects, and we look forward to speaking with you about our AML experience in West Virginia. We believe that we can be a strong partner with the WVDEP-DLR-AML, working together towards the success of these and future projects. Should you have any questions or would like to speak with us about our EOI or services, please feel free to contact Project Manager, Jason Gandee at 681.245.6484.

PROJECT CONTACTS

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APPENDIX A

PROJECT EXPERIENCE & WVDEP AML PROJECT LIST

Belle (Sneed) Drainage Project

Belle, Kanawha County, West Virginia

Project Team:
GAI Consultants

Client:
WVDEP, Office of Abandoned Mine Lands & Reclamation

Services:
Preliminary Engineering and Planning

Surveying and Reconnaissance

Site Investigations

Design Access for Construction and Future Maintenance

Subsurface Exploration and Laboratory Testing

Hydrologic and Hydraulic Analysis

Drainage Channel Design and Installation

Construction Drawings and Specifications

Revegetation

Permitting

Pre-Bid and Pre-Construction Meetings

Periodic Construction Monitoring

Project Site

Subsurface Investigation

GAI is currently providing engineering services to WVDEP-DLR-AML for the Belle (Sneed) Drainage Project, located in the Town of Belle, Kanawha County, West Virginia. The general project scope consists of potentially three mine portal closures and drainage conveyance (channels, culverts, and underdrains) away from residential structures.

The goals of the project include:

- Developing construction plans and technical specifications to control associated site water.
- Designing plans and developing specifications for limits of disturbance, stormwater control, and erosion and sedimentation prevention. Disturbed areas are to be regraded and revegetated.
- Obtaining required permitting.

GAI is providing the following design services for the project: preliminary engineering and planning; surveying and reconnaissance; site investigations; subsurface exploration and laboratory testing; H&H analyses; identifying areas to be cleared and grubbed; designing access for construction and future maintenance; designing drainage conveyances, including drainage channels, underdrains, and/or other controls to safely convey water off site; conditioning and revegetating disturbed areas; construction drawings and specifications; obtaining required permitting and miscellaneous clearances; providing pre-bid and pre-construction meetings; and periodic construction monitoring.

Reynoldsville Refuse Design Project

Reynoldsville, Harrison County, West Virginia

Project Team:
GAI Consultants

Client:
WVDEP AML&R

Services:
Design of Drains and Drainage Structures

Installation of Mine Drainage Structures

Regrading and Soil Covering of the Refuse Pile

Sealing Mine Portals

Bat Gate Design

Site Reclamation

Erosion and Sedimentation Control

Disposal of Mine-Related Debris

Revegetation

Permitting Services

Construction Drawings and Specifications

Access Road Construction

Traffic Control

Quality Assurance/Quality Control

Reynoldsville Mine Refuse Site

Installed Bat Gate and Wet Mine Seal

GAI provided engineering services to West Virginia Department of Environmental Protection, Office of Abandoned Mine Lands and Reclamation (WVDEP AML&R) for the Reynoldsville Refuse Design Project, located near Reynoldsville, Harrison County, West Virginia. The goal of the project was to provide regrading and soil covering of the refuse pile, constructing access roads, providing streambank stabilization, sealing the mine portals, providing proper drainage control measures, and revegetating the areas.

GAI's scope of work included design for construction of mine portal seals, bat gates, regrading and soil covering refuse areas, subsurface drainage collection, providing proper drainage control measures, providing streambank stabilization, installation of temporary shoring and bracing to protect workers, erosion and sedimentation control, removal and disposal of mining-related debris, installation of mine drainage structures, regrading and revegetating disturbed areas, installation of mine seals, permitting, construct and maintain temporary access roads, traffic control, and quality assurance/quality control. GAI furnished supervision, labor, plants, power, equipment, and performed the operations in connection with this project.

Route 60 Drainage Design Project

Smithers, Fayette County, West Virginia

Project Team:
GAI Consultants

Client:
WVDEP, Office of Abandoned Mine Lands & Reclamation

Services:
Design of Drains and Drainage Structures

Installation of Mine Drainage Structures

Site Reclamation

Erosion and Sedimentation Control

Disposal of Mine-Related Debris

Revegetation

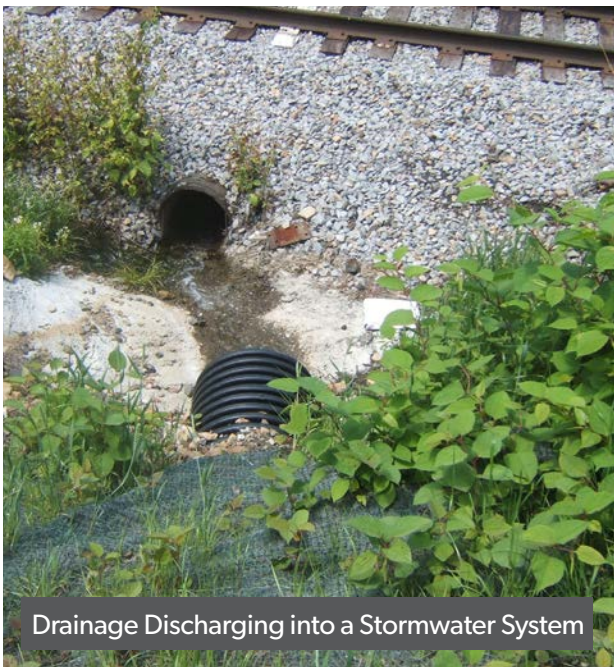
Permitting Services

Construction Drawings and Specifications

Access Road Construction

Quality Assurance/Quality Control

Drainage Design Post-Construction



Drainage Discharging into a Stormwater System

GAI provided engineering services to WVDEP-DLR-AML for the Route 60 Drainage Project, located along U.S. Route 60 in Smithers, Fayette County, West Virginia. The project was located on a hillside slope above numerous businesses and a residential area and consisted of at least seven collapsed and draining portals. Mine drainage has been saturating the area and impacting the businesses and there was also a concern of a potential blowout.

The goal of the project was to provide reclamation for the mine portals and to provide proper drainage. GAI's approach for the control of the portal drainage was to provide mine seals with drainage pipes that discharged into formed channels and a stormwater system that would safely convey the water around the businesses located below the hillside.

GAI's scope of work included installation of temporary shoring and bracing to protect workers; erosion and sedimentation control; installation of mine seals, drains, and other drainage structures; permitting; temporary access roads; quality assurance/quality control; and cleanup of areas upon completion of work.

Ned's Branch Impoundment Project, Phase II

Mingo County, West Virginia

Project Team:
GAI Consultants

Client:
WVDEP, Office of Abandoned Mine Lands & Reclamation

Services:
Reclamation Plan to Stabilize the Impoundment

Survey and Topographic Mapping

Site Reconnaissance to Locate and Identify Structures and Features

Subsurface Investigation Plan to Evaluate Site Conditions

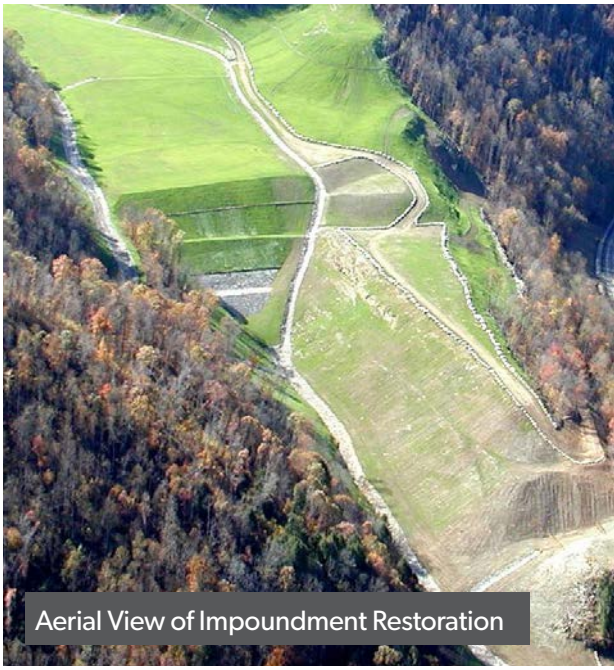
Slope Stability Analysis

Stream Relocation and County Road Design

Construction Monitoring and Testing

Award:
National Award for Most Outstanding Abandoned Mine Lands Reclamation

Aerial View of Impoundment Breach



Aerial View of Impoundment Restoration

Ned's Branch impoundment is an approximate five-acre abandoned, coal refuse slurry dam near Gilbert, West Virginia, that failed due to heavy rains. The failure sent approximately 1 million cubic yards of slurry, coal refuse, and debris into the Right Fork of Ned's Branch. The displaced material blocked main Ned's Branch and Ned's Branch Road, stranding numerous families in a nearby hollow. Divided into two phases, the project encompassed removing the debris to clear the roadway and Ned's Branch and reconstructing the slurry embankment. Work on both phases followed a 24-hour, seven-day week work schedule.

GAI met with the WVDEP-DLR-AML two days after the event to discuss a Work Directive from the Department, issued under their Emergency Guidelines. Within a month, GAI completed the challenging task of developing engineering plans, drawings, and specifications for emergency stabilization of the embankment. The plans addressed excavating and regrading the refuse to establish stable slopes, locating mine portals on the site, and demolishing any remaining structures and foundations. GAI also provided periodic construction monitoring, and the project was successfully completed within eight months.

GAI completed the investigation and planning process for the second phase of the project while the first phase of the project was underway. Embracing the urgency requested by the WVDEP-DLR-AML, GAI provided solutions that re-established the integrity of the impoundment and restored the natural beauty of the site under an accelerated work schedule.

Ned's Branch Impoundment Project recieved a National Award for Most Outstanding Abandoned Mine Lands Reclamation.

Greystone Mine Drainage Design Project

Monongalia County, West Virginia

Project Team:
GAI Consultants

Client:
WVDEP, Office of Abandoned Mine Lands & Reclamation

Services:
Design of Drains and Drainage Structures

Installation of Mine Drainage Structures

Site Reclamation

Erosion and Sedimentation Control

Disposal of Mine-Related Debris

Revegetation

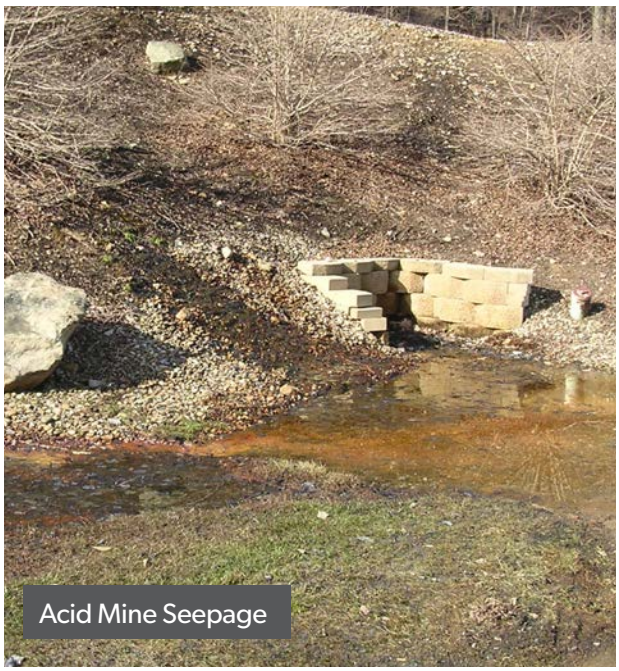
Permitting Services

Construction Drawings and Specifications

Access Road Construction

Periodic Construction Monitoring

Quality Assurance/Quality Control



Acid Mine Seepage

Installed Drainage Structure

GAI provided engineering services to WVDEP-DLR-AML for the Greystone Mine Drainage Project, located near Cheat Lake, Monongalia County, West Virginia.

Acid Mine Drainage seepage from the highwall benches caused hot spots in lawns and driveways and flooding during heavy precipitation events. GAI's scope of work involved providing collection of mine drainage through underdrains, a conveyance drainage system, and site reclamation.

The project included installation of temporary shoring and bracing to protect workers; erosion and sedimentation control; proper removal and disposal of mining-related debris and other trash and debris; installation of mine drainage structures; drains and other drainage structures; regrading and revegetating disturbed areas; access road construction; highwall elimination; and cleanup of the areas upon completion of the work.

Larry Frederick Highwall and Refuse Project

Lumberport, Harrison County, West Virginia

Project Team:
GAI Consultants

Client:
WVDEP, Office of Abandoned Mine Lands & Reclamation

Services:
Regrading and Soil Covering of the Refuse Pile

Design of Drains and Drainage Structures

Installation of Mine Drainage Structures

Site Reclamation

Erosion and Sedimentation Control

Disposal of Mine-Related Debris

Revegetation

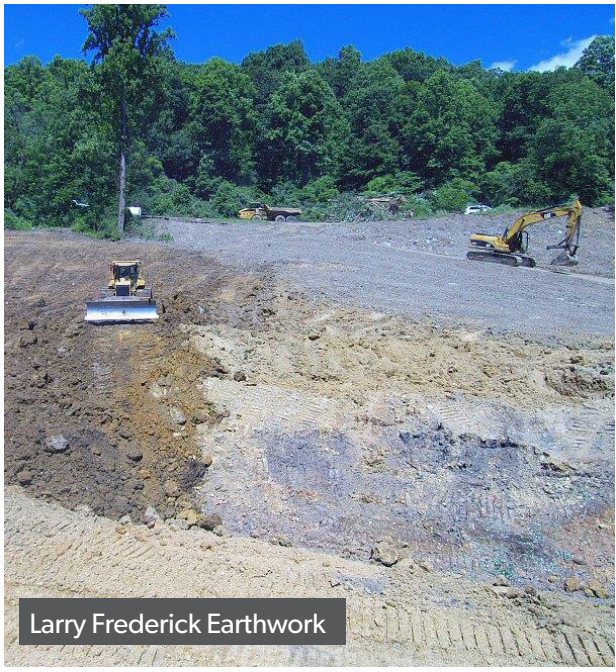
Permitting Services

Construction Drawings and Specifications

Access Road Construction

Quality Assurance/Quality Control

Larry Frederick Pre-Construction



Larry Frederick Earthwork

GAI provided engineering services to WVDEP-DLR-AML for the Larry Frederick Highwall and Refuse Project, located near Lumberport, Harrison County, West Virginia. The project consists of two mine portal closures, exposed refuse pile, residential waste, and a poorly vegetated bench area.

The goal of the project included regrading and soil covering the refuse pile, constructing access roads, sealing the mine portals, refuse disposal, soil enhancement for the bench, providing proper drainage control measures, and revegetating the areas.

GAI's scope of work included installation of temporary shoring and bracing to protect workers; erosion and sedimentation control; installation of mine seals, drains, and other drainage structures; permitting; upgrading access roads and revegetating disturbed areas; quality assurance/quality control; and cleanup of areas upon completion of work.

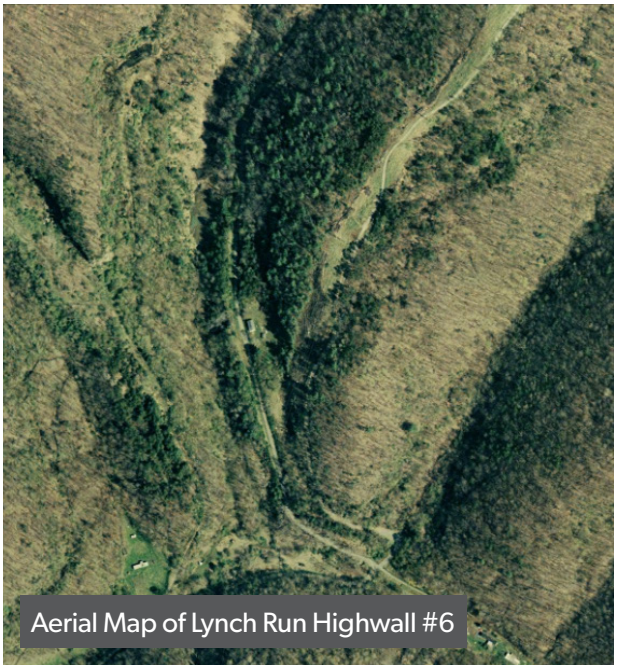
Lynch Run Highwall #6 Reclamation and Design Services

Sand Fork, Gilmer County, West Virginia

Project Team:
GAI Consultants

Client:
WVDEP, Office of Abandoned Mine Lands & Reclamation

Services:
Highwall Reclamation
Drainage Design
Subsurface Investigation
Mine Seals
Debris Removal
Natural Stream Design
Revegetation
Permitting Services
Construction Drawings and Specifications
Construction Monitoring



Aerial Map of Lynch Run Highwall #6

Stream Refuse

GAI provided engineering services to WVDEP-DLR-AML for the Lynch Run Highwall #6 Project, located near Sand Fork, Gilmer County, West Virginia. The project consisted of two highwalls, six collapsed and draining portals, refuse located along a stream, and subsidence holes. GAI's scope of work involved providing backfilling the highwalls, seals for the collapsed portals, reclamation of the refuse pile, and controlled drainage, including natural stream design.

GAI developed a subsurface investigation plan to obtain information to evaluate site conditions to allow for a design of a detailed reclamation plan. Test pits were completed in some portal areas to determine the thickness of mine spoil for the reclamation of the highwalls. Access roads and test pit locations were reclaimed, seeded, and mulched upon completion.

A Section 404 permit from the USACE and Section 401 Water Quality Certification from the WVDEP, Office of Water Resources, was required for potential impacts to the stream between the highwalls after the highwalls were backfilled. To make the site accessible for construction equipment and to tie up-gradient stormwater into this stream, a regional Abandoned Mine Lands permit from the USACE was needed. GAI acted as the WVDEP's agent and met with representatives from both agencies to discuss the conceptual design and specific permitting requirements.

GAI provided engineering plans, drawings, and specifications for outlined objectives. A detailed engineer's cost estimate was also developed. GAI attended the on-site pre-bid and pre-construction conferences. Periodic construction monitoring and associated office support was provided by GAI personnel.

Oldfield Branch (Hall) Drainage Project

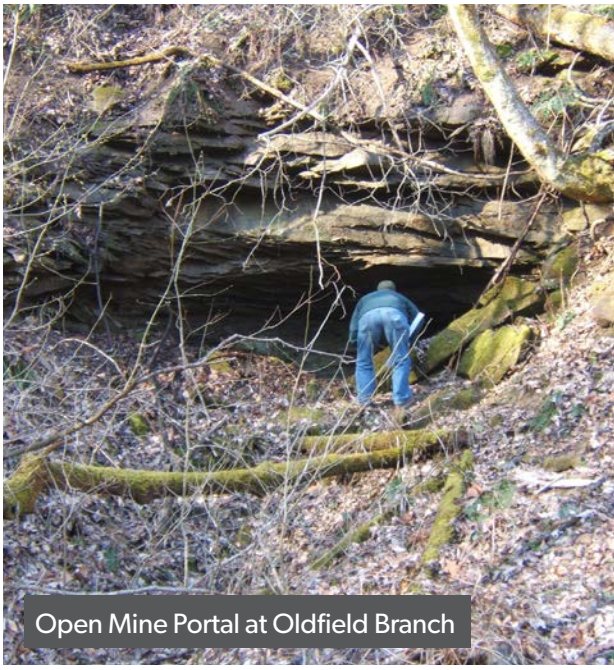
Naugatuck, Mingo County, West Virginia

Project Team:
GAI Consultants

Client:
WVDEP, Office of Abandoned Mine Lands & Reclamation

Services:
Records Review
Drainage Control Measures
Mine Portal Closures
Surveying
Retaining Wall Installation
Diversion Channel Construction
Subsurface Investigation
Laboratory Testing
Water Quality Testing
Mine Seals
Construction Drawings and Specifications
Construction Monitoring

Drainage at Oldfield Branch



Open Mine Portal at Oldfield Branch

GAI provided engineering services to WVDEP-DLR-AML for the Oldfield Branch (Hall) Drainage Project, located near Naugatuck, Mingo County, West Virginia. The project consisted of five mine portal closures, slip removal, and redi-rock retaining wall construction. The project also included upgrading access to the site and drainage control measures.

GAI's scope of work included providing subsurface investigations of the site to determine a mitigation plan for the landslide; laboratory testing; mine working conditions; sealing four mine portal closures; retaining wall installation; diversion channel construction; water quality testing; engineering plans, drawings, and specifications of the proposed design; engineers opinion of probable construction costs; permitting; pre-bid and pre-construction meetings; and periodic construction monitoring.

AML Engineering

Wheatley Branch (Luthy) Portals Project

Chapmanville, Logan County, West Virginia

Project Team:
GAI Consultants

Client:
WVDEP, Office of Abandoned Mine Lands & Reclamation

Services:
Records Review
Mine Portal Closures
Access Road Construction
Surveying
Drainage Control Measures
Subsurface Investigation
Laboratory Testing
Water Quality Testing
Mine Seals
Construction Drawings and Specifications
Construction Monitoring

Wheatley Branch Drainage Control

GAI provided engineering services to WVDEP-DLR-AML for the Wheatley Branch (Luthy) Portals Project located near Chapmanville, Logan County, West Virginia. The project consisted of 29 mine portal closures and included upgrading access to the site and drainage control measures.

GAI's scope of work involved providing preliminary engineering and planning; access road construction; 29 mine seals; providing proper drainage control measures; records review; surveying and reconnaissance; subsurface investigation and laboratory testing; water quality testing; construction drawings and specifications; permitting and miscellaneous clearances; and periodic construction monitoring.

GAI also prepared and obtained a stormwater NPDES Permit; WVDOH MM-109 permits; and a non-reporting nationwide USACE 404 permit.

Amigo Portals Design Project

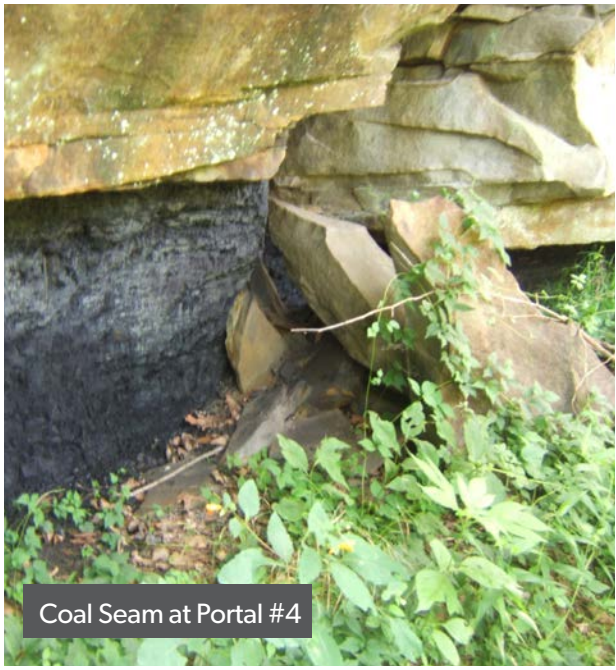
Raleigh County, West Virginia

Project Team:
GAI Consultants

Client:
WVDEP, Office of Abandoned Mine Lands & Reclamation

Services:
Records Review
Design of Drainage Conveyances
Mine Portal Closures
Installation of Mine Seals
Refuse Reclamation
Stream Bank Stabilization
Water Quality Sampling
Revegetation
Permitting Services
Construction Drawings and Specifications
Pre-Bid and Pre-Construction Meetings
Periodic Construction Monitoring
Quality Assurance/Quality Control

Portal #10 Wet Seal



Coal Seam at Portal #4

GAI provided engineering services to WVDEP-DLR-AML for the Amigo Portals Project, located near Amigo, Raleigh County, West Virginia. The project included design of drainage conveyances, installation of mine seals, refuse reclamation, streambank stabilization, and revegetation of disturbed areas.

The project consisted of 18 mine portal closures, small areas of exposed refuse, and a streambank which needed stabilized. GAI's scope of work involved designing drainage conveyances, providing stream realignment and streambank stabilization with rock, streambank revegetation, installation of mine seals, refuse reclamation, water quality assessment, soil thickness and soil properties, opinion of probable cost, preparation of construction documents, and performing quality assurance and quality control.

AML Engineering

Project Team:
GAI Consultants

Client:
WVDEP, Office of Abandoned Mine Lands & Reclamation

Services:

Subsurface Investigation

Site Reconnaissance

Survey

Alternative Evaluation

Permitting Services

Construction Drawings and Specifications

Latrobe (Gibson) Landslide Emergency Evaluation

Latrobe, Logan County, West Virginia

During Slope Reduction

After Slope Reduction

GAI responded to an urgent request from WVDEP-DLR-AML to evaluate an unstable landslide area situated above private residences upstream of Man along Buffalo Creek near Latrobe, West Virginia. The landslide, caused by abandoned coal mining operations, had developed scarps, cracks, rolling, and seepage through the face that was encroaching on the property.

GAI was asked to reduce the slopes, eliminate the instability, and develop provisions for controlling the drainage. An alternative analysis was conducted based on the records research, subsurface investigation, and stability analysis. The alternatives that were evaluated included: primary rock buttress, lateral drainage controls, retaining wall system, and complete removal of slide material.

The final design included the removal of the slide material, an emergency USACE permit for a valley fill, and various drainage control structures.

Duck Creek (Jenkins) Landslide

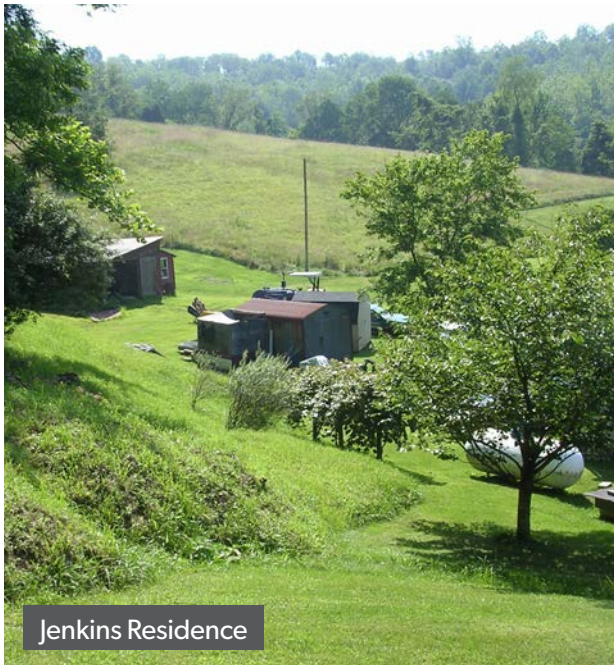
Harrison County, West Virginia

Project Team:
GAI Consultants

Client:
WVDEP, Office of Abandoned Mine Lands & Reclamation

Services:
Geological Investigations
Landslide Restoration Plan
Site Mapping
Field Survey
Drainage Channel Design
Permitting Services


Encroaching Landslide


Jenkins Residence

GAI provided engineering services to WVDEP-DLR-AML, for the Duck Creek (Jenkins) Landslide, located in Harrison County, West Virginia. The project's purpose was to prepare a restoration plan for a landslide located within the Duck Creek watershed that was encroaching upon the Jenkins residence. This seven-acre landslide was threatening the home, water well, and propane tank.

GAI performed site mapping and a detailed geotechnical exploration and developed restoration designs for the landslide. In addition, an existing long culvert was replaced and a rock channel was designed to protect the residence from future 25-year storm events. Utilizing an innovative and sustainable design approach, GAI was able to minimize stream impacts so only a basic nationwide USACE permit was required. The design did not require simple excavation and called for spoil to be placed in an adjacent area where streams would not be impacted.

GAI identified that the spoil causing the landslide came from a pre-law (prior to 1977) surface mine located uphill from the Jenkins residence. Our proactive approach included investigating an existing surface mine in the same vicinity. The mine owner identified a localized spot within their mine reclamation area that was having drainage issues and agreed to the placement of the landslide spoil at that location.

GAI's proactive approach to the landslide identified an existing mine and linked the landslide to mine spoil. GAI's design will protect the Jenkins residence without impacting ephemeral streams, improve an adjacent mine reclamation area, and replace the landslide material to an elevation close to where it originated years ago.

Laurel Point (Saylor Run Road Slip) Project

Laurel Point, Monongalia County, West Virginia

Project Team:
GAI Consultants

Client:
WVDEP, Office of Abandoned Mine Lands & Reclamation

Services:
Geotechnical and Geological Investigations
Subsurface Investigation
Drilling of Borings
Regrading and Drainage Controls for Refuse Piles
Engineering Analysis
Streambank Stabilization
Access Road Construction
Construction Drawings and Specifications
Remediation of Slip
Revegetation Plan
Permitting Services

Laurel Point Slip Area | Exposed Highwall

GAI provided engineering services to WVDEP-DLR-AML for the Laurel Point (Saylor Run Road Slip) Project, located near Laurel Point, Monongalia County, West Virginia. The project consisted of two sites with areas of exposed coal refuse, including collapsed and open deep mine portals, dangerous highwalls, and mine drainage. A hillside slip occurred at one of the sites, which made West Virginia County Route 19/4 (Saylor Run Road) unstable. The slip along Saylor Run Road was evaluated by GAI and was remediated by removing the material and constructing an engineered fill with a toe and bonding bench system.

GAI's scope included providing stabilization for Saylor Run Road, regrading and providing proper drainage controls for the refuse piles, and installing mine seals and bat gates in the open mine portals. Additionally, Saylor Run Road had a bridge crossing over a stream. The slope of the road had experienced sliding into the stream. In order to get materials and equipment to the site, temporary supports were added to the bridge. Streambank stabilization was also provided along the toe of the refuse along the stream to protect it from erosion. For access to the site, access roads were constructed. GAI's scope also included revegetating the area.

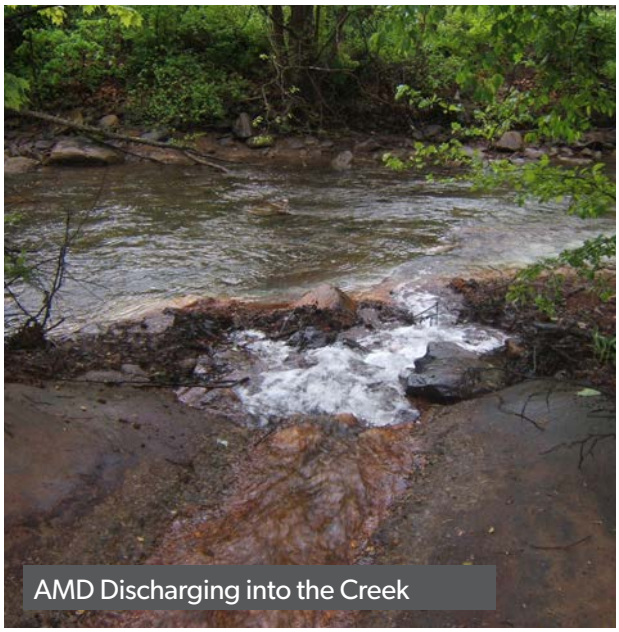
Richard Mine AMD Treatment Project

Morgantown, West Virginia

Project Team:
GAI Consultants

Client:
West Virginia Conservation Agency

Services:
Literature Search
Site Reconnaissance
Data Collection
Mine Maps
Mine Hydrology
Acid Mine Drainage
Preliminary Feasibility Assessment
Hydrologic and Hydraulic Analysis
Water Quality Analysis
Engineer's Opinion of Probable Cost



AMD Discharging into the Creek

AMD Mixing/Treatment Pond

GAI partnered with the West Virginia Conservation Agency and the Monongahela Conservation District to correct the AMD discharge problem at the Richard Mine near Morgantown, West Virginia. The overall goal of this project was to improve the water quality in Decker's Creek and to restore the fish habitat in the lower five miles of the stream. The many benefits to the natural environment included removing the ugly orange and white staining caused by the AMD precipitate.

The AMD enters Decker's Creek about five miles upstream of the river. Decker's Creek is a scenic stream that could become a recreational destination once AMD sources are removed from the creek. The creek meanders through a large city, a park, and through residential neighborhoods, and is visible and accessible to the population of the area. A rail trail also parallels the creek.

The project included five phases: 1) Analyze Problems and Compile Alternatives, 2) Develop Scope of Work, 3) Site Investigation, 4) Preliminary Design, and 5) Final Design. GAI was under contract to perform Phases 1 and 2. In December 2006, GAI completed a Phase I Evaluation of AMD Problem Report which included bench scale testing. This report summarized the available data on the mine, mine discharge, and other background data. In March 2007, GAI completed a Treatment Alternatives Report, which provided recommendations for the best ways to deal with the mine AMD. This report was an evaluation of several alternatives, passive, active and innovative, for the treatment of the AMD discharge. In addition, the "no build" alternative was also evaluated.

The best long-term solution was to convey the discharge to a nearby river where it can be diluted by the large volume of water with limited adverse effects to the river's water quality. The Morgantown Utility Board expressed interest in the conveyance of the AMD to the river because the required piping could be combined with storm sewer improvements. This helped solve combined sewer overflow problems that had to be corrected to meet EPA mandates.

WVDEP UNT #1 of Teter Creek ILF Mitigation Project

Barbour County, West Virginia

Project Team:
GAI Consultants

Client:
West Virginia Department of Water & Waste Management

Services:
Stream and Wetland Delineations
Watershed Analysis
Topographic Surveys
LiDAR and Contour Mapping
Geomorphic Surveys
Hydrologic and Hydraulic Analyses
FEMA Zone A Guidance
Plan Development
Permitting
Construction Oversight
As-Built Survey
Annual Monitoring

Currently in West Virginia, there is a West Virginia ILF Mitigation Program and subsequent Instrument between USACE and WVDEP. In order to provide compensatory mitigation to offset advanced credit sales, WVDEP relies on contractors or other subsidiaries to identify possible mitigation sites, secure initial landowner interest, and prepare a Concept Plan for review by the Department before moving forward.

After proactively working with WVDEP to identify and verify service areas that require mitigation credits to be offset by advanced credit sales, GAI financed site identification and landowner investigations to secure surface rights on five known parcels owned by one landowner. GAI prepared a Conceptual Mitigation Plan using a mitigation site in the Tygart Valley Watershed, on an Unnamed Tributary (UNT) of Teter Creek, located in Barbour County, West Virginia.

The Project is situated on approximately 500 acres and will encompass approximately 15,400 linear feet of stream proposed to be restored, enhanced, or preserved. An additional 5.4 acres of wetland will be established or enhanced and another 35 acres of riparian vegetation buffer will be enhanced and protected.

After approval of the Concept Plan by the WVDEP committee board and receipt of a $5,000 grant, GAI prepared a Mitigation Plan following the Compensatory Mitigation for Losses of Aquatic Resources; Final Rule ("Final Rule") 33 CFR Parts 325 and 332 (USACE) and 40 CFR Part 230 (EPA). The plan provided a summary of the Project's existing conditions and expected mitigation potential based on preliminary West Virginia Stream and Wetland Valuation Metric (SWVM) assessment and credit/debit calculations. Upon approval by USACE and the Interagency Review Team (IRT) of the Conceptual Mitigation Plan, GAI moved forward to collect the baseline data collection, conduct topographic and geomorphic surveys, and hired a subconsultant to fly the site and prepare an aerial with LiDAR and contour mapping.

GAI's scope also includes construction oversight, conducting the as-built status survey, and annual monitoring through project closure.

AML Engineering

Hanover Reservoir Mine Fire Abatement Project

Luzerne County, Pennsylvania

Project Team:
GAI Consultants (Prime)
Armstrong Drilling (Drilling)

Client:
PADEP BAMR

Services:
Mine Fire Mitigation
Geotechnical Drilling, Testing, and Temperature Monitoring
Data Collection
Project Development
Design
Permitting
Conceptual Plans for Excavation or Mine Grouting
Detailed Engineering Plan Development
Wetland and Stream Studies
Acoustic Bat Surveys
Engineering Support During Construction

GAI was selected by the Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation (PADEP BAMR) to provide comprehensive evaluation, data collection, project development, design, permitting, and construction administration relating to extinguishing an underground mine fire in Hanover Township, Luzerne County, Pennsylvania.

An underground mine fire is burning beneath a portion of a rural area surrounded by forest and reclaimed and un-reclaimed mine lands. The completed project will have the underground mine fire extinguished and eliminate or abate public health and safety hazards associated with surface and underground mining within abandoned mine lands, underground mine fires, and associated spoil piles and pits.

Exploratory drilling of the project site was completed in 2014, which included the installation of 29 boreholes and temperature monitoring/logging devices. During this drilling, the project site showed that the fire appeared to be active in two coal seams.

GAI completed a mine map review and coordinated geotechnical drilling, testing, and temperature monitoring to determine the mine fire locations. The drilling program included auger drilling, standard penetration soil sampling, and 10- and six-inch diameter air-rotary drilling. Six-inch diameter casings were installed to allow the borehole to be used for temperature monitoring using iButton® thermochron sensor capsules at varying depths.

GAI then developed Conceptual Plans for excavation or mine grouting to extinguish the mine fire. GAI also performed wetland and stream studies to support the project and is working to develop environmental permit applications.

Future tasks include detailed engineering plan development, acoustic bat surveys, and providing engineering support during construction.

AML Engineering

Shawville North (Remedial) Project

Clearfield County, Pennsylvania

Project Team:
GAI Consultants (Prime)
PennDrill (Drilling)

Client:
PADEP BAMR

Services:
Mobilizing and Demobilizing Equipment
Engineering Design
H&H Design Calculations
Project Management and Administration
Topographic Survey
Utility Coordination
E&SC Plans
Preliminary, Pre-final, and Final Design
NPDES Permitting
Project Bidding
Construction Services
Geotechnical Services
Subsurface Investigation
Soil Testing
Slope Stability Analysis
Grading Plan
Project Specifications, Cost Estimates, and Bid Documents

GAI was selected by the Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation (PADEP BAMR) to provide a geotechnical investigation to fully design the appropriate landslide repair with appropriate associated surface and subsurface drainage to mitigate further slope movement for the Shawville North Project located in Goshen Township, Clearfield County, Pennsylvania.

This project consisted of one Abandoned Mine Land Feature (AMLF) located within an identified problem area that meets the Office of Surface Mining's criteria for a Priority 2 Dangerous Slide (DS). The intent of the project was to repair a landslide which occurred at a reclaimed highwall, impacting a township road at the base of the slope. The aim was to eliminate public health and safety hazards associated with DS conditions and to stabilize the slope.

GAI provided a detailed geotechnical investigation and analysis to offer design recommendations for the landslide repair. A subsurface investigation was completed, involving the review of historic borings and drilling of new borings to gather additional subsurface information. Geotechnical testing was conducted to identify soil characteristics for the design.

A slope stability analysis was performed to model the failed condition and determine the factor of safety for the proposed repair. A geotechnical report was then prepared to document the investigation, analyses, and design recommendations.

After the preferred alternative was approved, GAI prepared construction drawings, including a grading plan for the landslide over-excavation and a grading plan for the proposed final grades. GAI also prepared project specifications, cost estimates, and bid documents. Hydrologic and hydraulic design calculations were completed to support the design for stormwater controls, an erosion and sediment control (E&SC) plan, and an application for a NPDES Individual Permit for stormwater discharges from construction activities.

Work included mobilizing equipment; clearing and grubbing; installation of E&SC items; excavation; backfill, compaction, and moisture conditioning of backfill; subsurface drainage installation; grading; construction of channels and rip-rap drainage blanket; seeding and mulching disturbed areas; demobilizing equipment; and cleanup of the area upon project completion.

Walkertown Coal Refuse Pile Exploration Drilling Support Project

Washington County, Pennsylvania

Project Team:
GAI Consultants (Prime)

Armstrong Drilling (Drilling)

Geochemical Testing (Laboratory Testing)

Client:
PADEP BAMR

Services:
Project Management and Administration

Site Preparation and Restoration

Sonic Drilling Support and Sampling

Drilling Oversight

Drill Sample Preparation

Laboratory Testing and Sample Transportation

Drilling

Site Restoration

GAI was retained by the Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation (PADEP BAMR) to provide services for the Walkertown Coal Refuse Pile Exploration Drilling Support Project located in West Pike Run Township, Washington County, Pennsylvania. The project consisted of one Abandoned Mine Land Feature (AMLF) within Problem Area 4759, and met the Office of Surface Mining's criteria for a Priority 2 Dangerous Pile and Embankment (DPE) and Priority 2 Clogged Stream (CS).

The seven-acre site averages 50 feet in height and sits on an existing abandoned coal refuse pile created from adjacent underground mining on the Pittsburgh Coal Seam from the late 19th century through the 1950s. The pile is comprised of steep, unstable coal refuse material. Several of the side slopes of the DPE are steeper than 60 degrees, with some of the refuse material sliding and depositing into Little Pike Run, creating a CS. The CS is altering the hydraulics of Little Pike Run, which is causing undercutting issues to the streambank along Whitehall Road, an improved public roadway. Downstream, there are multiple homes along Pike Run Drive which have had issues with flooding.

GAI provided sonic drilling support and sampling for approximately 22 exploration holes. This task involved the preparation of the site for drilling and site restoration after the completion of drilling services. The coal refuse pile is vegetated and tree-covered and requires tracked, heavy equipment to support the drilling services. The depth of holes varies from 15 feet to approximately 90 feet. GAI provided full-time support throughout the drilling process and preparing composite drill samples at five-foot intervals from the continuous drilling to completion of the drill hole. The total estimated number of samples was 151, based on 751 feet of sonic drilling and sampling every five feet. GAI was also responsible for transporting the samples to a testing laboratory.

GAI provided project administration services throughout the sonic exploration drilling, including project management. GAI's project manager maintained and monitored the schedule and costs associated with the project.

AML Engineering

Bens Creek Coal Refuse Pile Exploration Drilling Project

Cambria County, Pennsylvania

Project Team:
GAI Consultants Inc.

Armstrong Drilling (Drilling)

Geochemical Testing (Laboratory Testing)

Client:

PADEP BAMR

Services:
Site Preparation and Restoration

Sonic Drilling

Drilling Oversight

Drill Sample Preparation

Laboratory Testing

Drilling

Site Restoration

GAI was retained by the Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation (PADEP BAMR) to perform drilling, monitoring, and testing services for the Bens Creek Coal Refuse Pile Exploration Drilling Support Project located in Washington and Portage Townships, Cambria County, Pennsylvania.

The project involved the reclamation of two pre-act Abandoned Mine Land Features (AMLFs) and meets the Office of Surface Mining's criteria for a Priority 2 Dangerous Pile and Embankment (DPE) and a Priority 3 Gob (GO). The intent of the project was to secure a sonic exploration drilling operator, secure a coal refuse testing laboratory, and provide field support towards the acquisition of geological information to be provided to the PADEP BAMR. The project includes eliminating the dangerous conditions associated with the DPE by removing the coal refuse to original ground and hauling to a nearby coal refuse disposal area or other PADEP-permitted disposal facility.

The project site sits on an existing abandoned coal refuse pile as a direct result of surface mining from a coal company. The site totals approximately 30 acres and averages 150 feet in height. The refuse pile is comprised of steep, loose, and unconsolidated shale and coal refuse material. Several of the side slopes of the DPE are steeper than 60 degrees. The Gob pile totals approximately one-half acre and averages about 30 feet in height. The entire area is easily accessible and there is visible evidence of visitation from All-Terrain Vehicles, dirt bikes, and four-wheel drive trucks. The DPE is currently not vegetated and is contributing to the degradation of Bens Creek, a tributary to Little Conemaugh River.

Sonic drilling support included site preparation, sonic drilling/monitoring, sample preparation, laboratory testing, and site restoration. A 24-hour static water level was recorded and a total of 24 borings were drilled by Armstrong Drilling, and were backfilled with cuttings and on-site material. The total actual footage drilled was 1,016 feet. GAI provided drilling support and a GAI representative was present full-time throughout the entire drilling and site restoration tasks. GAI logged and photographed, prepared and collected composite samples for subsequent laboratory testing.

Samples were stored in durable watertight bags and reflected the project name, drill hole number, sample number, date and time, and depth information. GAI transported the composite samples with chain-of-custody forms to Geochemical Testing in Somerset, Pennsylvania for Short Proximate coal refuse analysis, including as-received moisture, Sulfur and British Thermal Unit (BTU/lb). The estimated number of samples tested was 347 and the actual number of samples for the actual footage drilled was 203 samples.

West Newton Refuse Embankment Stabilization Project

Westmoreland County, Pennsylvania

Project Team:
GAI Consultants (Prime)

AWK Consulting Engineers (Drilling)

Rhea Engineers & Consultants (Geophysical Survey)

Alex E. Paris Contracting (Excavating)

Client:
PADEP BAMR

Services:
Field Investigations and Surveys

Geotechnical Subsurface Analysis and Design

Stormwater Management Plan

Preliminary and Final Design Plans

Soils Amendment

AMD Remediation Plan

Pore Pressure monitoring

Dam Safety Permit Modification

Solar Panel Field Post-Closure Land Use Planning

GAI was selected by the Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation (PADEP BAMR) to provide a conceptual plan design and feasibility evaluation associated with the proposed West Newton Coal Logistics Project located in Rostraver Township, Westmoreland County, Pennsylvania.

A steel company began disposing of coal refuse from their adjacent coal preparation plant onto the 99-acre West Newton Coal Logistics site in the early 1960s. The coarse coal refuse material from the preparation plant was conveyed to the tipple and spread to form the embankments for three ponds on top of the refuse pile. Ponds 2 and 3 contain coal refuse slurry, while Pond 1 contains primarily sludge from the adjacent abandoned mine drainage (AMD) treatment plant. Based on the company's August 19, 1976, site plan map, the pile is shown as 3,300 feet long, 1,300 feet wide on average, and 100 feet to 141 feet high at the pond embankments.

The project site is located adjacent to the Monongahela River, approximately 1.5 miles south of the Borough of West Newton. The site has been declared an environmental and physical safety hazard due to multiple surface water runoff points documented to be laden with AMD pollution. Additionally, landslides during heavy rain events have overrun the rails-to-trails path and sections of power distribution lines with mining debris. The site has also been plagued with stormwater drainage structures that convey stormwater from the area between the site and the rails-to-trails path to the Monongahela River, which are in disrepair and caused severe erosion in and around the laying length of pipes.

GAI was tasked with evaluating the site, performing geotechnical borings, developing site stabilization and stormwater management plans, in addition to soils amendment and AMD remediation plans. GAI provided preliminary and final design plans that regraded the refuse pile to provide stable slopes and conveyed stormwater runoff to minimize erosion. The final design amended the coarse soils with bauxite residue ore and topsoil to provide additional soil stabilization, added alkalinity to the site, and remediated AMD-laden runoff (pollutants) that had been transported within the site's groundwater and surface water runoffs. In 2015, GAI's final design was submitted and approved for construction by the PADEP but was put on hold.

In 2018 the PADEP requested that GAI complete a modification to the 2015 design to facilitate a post reclamation land-use goal to use the land for solar energy generation. In 2018 through 2019, GAI completed additional geotechnical investigations, alternative evaluations, and a 35 percent design.

The 35 percent design was prepared to reclaim the impoundments through excavation and stabilization of the coal refuse and AMD treatment sludge with lime and cement. The 35 percent design provided a sequence of construction plan and an updated final grading plan for the project area. After completion of the 35 percent design the project was put on hold.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title:	WVDEP Belle (Sneed) Drainage Project
Location:	Kanawha County, WV
Tasks:	The scope of work includes potentially three mine portal closures and to develop plans for drainage conveyance (channels, culverts, and underdrains) away from residential structures. Construction plans and technical specifications are being developed.

Title:	WVDEP Duck Creek (Jenkins) Landslide
Location:	Harrison County, WV
Tasks:	The scope of work involves the design of stabilization measures for the slide and design of seepage and stormwater drainage controls. Construction plans and technical specifications were developed.

Title:	WVDEP Wolfpen (McBurney) Landslide
Location:	Kanawha County, WV
Tasks:	The scope of work involves stabilizing a slope, providing seals for collapsed portals, and providing controlled drainage. Construction plans and technical specifications were developed.

Title:	WVDEP Latrobe (Gibson) Landslide Emergency Project
Location:	Logan County, WV
Tasks:	The scope of work involved emergency evaluation and investigation to develop alternatives to reduce slopes, eliminate instability, and provide for controlled drainage. Once an alternative was selected, construction plans and specifications were developed.

Title:	WVDEP Charleston (Ratcliffe) Landslide
Location:	Kanawha County, WV
Tasks:	The project included subsurface investigation; research of mine mapping; and determination if the slide was due to mining.

Title:	WVDEP Mulberry Fork (Stover) Landslide
Location:	Fayette County, WV
Tasks:	The project included subsurface investigation and design of corrective measures for a landslide.

Title:	WVDEP Courtright Highwall
Location:	Bridgeport, WV
Tasks:	The project included a subsurface investigation to determine extent of landslide and whether mining related, field surveying to establish topographic mapping and control, and subsequent design of landslide repair alternatives. Design ultimately selected included a reinforced slope using stabilizing grid. Landslide contained 400,000 cubic yards of material.

Title:	WVDEP Belle (Malcolm) Landslide
Location:	Belle, WV
Tasks:	Landslide stabilization including excavation of slide mass, sealing of several mine entries, and drainage controls. Project included drilling, sampling, and piezometer installation and monitoring to develop project plans and specifications.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title:	WVDEP Williamson (Elias) Landslide - Emergency
Location:	Williamson, WV
Tasks:	Subsurface investigation and determination of whether or not a landslide threatening one home was mining related with subsequent development of plans for a retaining wall were conducted.

Title:	WVDEP Kitchen/Gibson Landslide - Emergency
Location:	Boone County, WV
Tasks:	Subsurface investigation and determination of whether or not a landslide threatening four homes was mining related were conducted.

Title:	WVDEP Duck Creek Landslide
Location:	Gilmer County, WV
Tasks:	The project included subsurface investigation, development of construction specifications and drawings, and construction monitoring for remedial work on a landslide resulting from uncompacted strip bench spoils.

Title:	WVDEP Ven’s Run Maintenance Project
Location:	Harrison, County, WV
Tasks:	The scope of work involves stabilizing the slopes and provide for controlled drainage. It is GAI's initial approach to the abatement of the landslide is to provide a proposed reclamation plan that will grade the slide in place as much as practical and not conduct a total removal of material.

Title:	WVDEP Oldfield Branch (Hall) Drainage
Location:	Mingo County, WV
Tasks:	The scope of work involved providing mine seals or bat gates for four mine entries, landslide mitigation with a retaining wall, and providing proper drainage control measures. We also prepared and obtained a Stormwater NPDES Permit and USACE 404 permit.

Title:	WVDEP Laurel Point Strip
Location:	Monongalia County, WV
Tasks:	The project consisted of two sites. The scope of work involved regrading and soil covering refuse pile, constructing access roads, providing streambank stabilization, sealing the mine portal(s), backfilling highwalls, landslide reclamation, providing proper drainage control measures and revegetating the areas. Construction plans and technical specifications were developed. We also prepared and obtained a Stormwater NPDES Permit and WVDOH permits.

Title:	WVDEP Mingo County PSD Feasibility Study (ID#405)
Location:	Mingo County, WV
Tasks:	The scope of work included interviewing local residents and government officials; collecting and analyzing of the previous water system' supplies; researching water quality records; designing and costing remedial measures; and summarizing the findings in a report

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Amigo Portals
Location: Raleigh County, WV
Tasks: The scope of work involved providing closure of 19 mine portals with bat gates or mine seals, covering exposed refuse, providing stream realignment and streambank protection, and providing proper drainage control measures. We also prepared and obtained a Stormwater NPDES Permit and USACE 404 permit.

Title: WVDEP Larry Frederick Highwall & Refuse
Location: Harrison County, WV
Tasks: The scope of work involved providing closure of three mine portals mine seals, regrading and reseeding an exposed refuse, revegetation of a highwall bench, and providing proper drainage control measures. We also prepared and obtained a Stormwater NPDES Permit.

Title: WVDEP Eastern Wyoming County PSD Feasibility Study (ID#401)
Location: Wyoming County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Raleigh County PSD Feasibility Study (ID#397)
Location: Raleigh County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Wheatley Branch (Luthy) Portals
Location: Logan County, WV
Tasks: The scope of work involved several locations of abandoned trash piles, access road construction, 29 mine seals, and providing proper drainage control measures. We also prepared and obtained a Stormwater NPDES Permit, WVDOH MM-109 permits and a non-reporting nationwide USACE 404 permit.

Title: WVDEP Webster County Commission Diana Area Feasibility Study (ID#383)
Location: Webster County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Cherokee Complex
Location: McDowell County, WV
Tasks: The scope of work involved providing regrading and soil covering of the refuse pile, providing natural stream restoration and streambank protection, structure demolition, and providing proper drainage control measures. We also prepared and obtained a Stormwater NPDES Permit and USACE 404 permit.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Reynoldsville Refuse
Location: Harrison County, WV
Tasks: The project consisted of 11 sites. The scope of work involved providing regrading and soil covering refuse piles, construct access roads, provide streambank stabilization, sealing mine portal(s), bat gates, demolition of mining structures, filling of vertical shafts, regrade sink hole areas, provide proper drainage control measures, and revegetate the areas. Construction plans and technical specifications were developed. We also prepared and obtained a Stormwater NPDES Permit and WVDOH permits.

Title: WVDEP Earling Refuse Pile
Location: Logan County, WV
Tasks: The scope of work included regarding the refuse pile, provide streambank stabilization, stream restoration, seal the mine portal(s), bat gates, and provide proper drainage control measures. Construction plans and technical specifications were developed. We also prepared and obtained a Stormwater NPDES Permit.

Title: WVDEP Erbacon CR9 Webster County WL Feasibility Study (ID#376)
Location: Webster County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Kanawha Rambling Hills Water Study
Location: Kanawha County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Davis Creek Water Study
Location: Kanawha County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Coalburg Water Study
Location: Kanawha County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Wallace 353 Water Study
Location: Harrison and Wetzel Counties, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Wallace 354 Water Study
Location: Harrison County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Greystone Mine Drainage
Location: County, WV
Tasks: The scope of work involves providing seals for the collapsed portals, backfilling the highwalls, reclamation of the refuse pile, and providing proper controlled drainage including natural stream design. Construction plans and technical specifications were developed.

Title: WVDEP Route 60 Drainage
Location: Fayette County, WV
Tasks: The scope of work involves providing seals for the collapsed portals, design of controlled drainage, and design of a pneumatic concrete wall for a rock highwall. Construction plans and technical specifications were developed.

Title: WVDEP Lynch Run Highwall #6
Location: Gilmer County, WV
Tasks: The scope of work involves providing seals for the collapsed portals, backfilling the highwalls, reclamation of the refuse pile, and providing proper controlled drainage including natural stream design. Construction plans and technical specifications were developed.

Title: WVDEP Mallory Refuse Pile
Location: Logan County, WV
Tasks: The scope of work involves regarding the refuse pile, sealing the mine portal(s), and design of drainage control measures. Construction plans and technical specifications were developed.

Title: WVDEP Heizer Creek (Lett-Zitselberger) Drainage
Location: Putnam County, WV
Tasks: The scope of work involves stabilizing a slope, providing seals for collapsed portals, and providing controlled drainage. Construction plans and technical specifications were developed.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Hominy Creek Area Waterline Extension Feasibility Study
Location: Nicholas County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Logan (Marcum) Drainage Emergency Project
Location: Logan County, WV
Tasks: The scope of work involves emergency evaluation and investigation to develop a method to collect and discharge the seepage from the coal seam and conveyance to a downstream drainage system. Construction plans and specifications were developed.

Title: WVDEP Bud/Alpoca Waterline Extension Feasibility Study
Location: Wyoming County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Nuriva/Maben Waterline Extension Feasibility Study
Location: Wyoming County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Herndon Heights Waterline Extension Feasibility Study
Location: Wyoming County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Handley/Upper Creek Drainage Project
Location: Kanawha County, WV
Tasks: The reclamation plan included dewatering the underground impoundment(s) and creating diversion ditches to redirect the drainage around structures to the nearby stream; regrading the areas behind the retaining wall; revegetating the area; and providing proper drainage for all disturbed areas.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP War Waterline Extension Feasibility Study
Location: McDowell County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Clark's Gap Waterline Extension Feasibility Study
Location: Mercer and Wyoming Counties, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP War (Dash) Impoundment
Location: McDowell County, WV
Tasks: The scope of work included providing aerial mapping and ground survey for verification of two sites consisting of a small impoundment, several mine portals, and coal refuse disposal. In addition, stability analyses were performed on various scenarios for the elimination of the impoundment including subsurface investigation.

Title: WVDEP Whites Run Highwall and Portal
Location: Randolph County, WV
Tasks: The scope of work consist of preparing construction documents for the reclamation of 6,000 linear feet of highwall, three deep mine portals, a coal refuse spoil area, and treatment of AMD. The treatment of the AMD will utilize passive treatment techniques. The project also includes re-establishment of a stream by natural stream techniques.

Title: WVDEP Helen Portals
Location: Raleigh County, WV
Tasks: The scope of work included the preparation of construction documents for four sites, consisting of abandoned mine portals, unstable refuse piles, small impoundment, and demolition of a mining related structure. The project also included re-establishing a stream by natural stream techniques.

Title: WVDEP Ned's Branch Impoundment (Phase II)
Location: Mingo County, WV
Tasks: The scope of work included this preparation of construction documents for reclamation of the failed impoundment. The scope of work included regrading of refuse, eliminating impoundment capability, sealing of mine portals, stream restoration, highway relocation and construction management services for the above activities.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Bearwallow Branch Refuse Pile
Location: McDowell County, WV
Tasks: The scope of work included the preparation of construction documents for reclamation of seven sites. The various sites consist of unstable refuse piles, abandoned mine portals, small impoundments, and miscellaneous structures.

Title: WVDEP Community of Preston - State Route 72 Waterline
Location: Preston County, WV
Tasks: The scope of work included the preparation of construction documents for a water transmission line. The total length of waterline is approximately 1.1 miles.

Title: WVDEP Anchor Road Water Pumping, Storage and Distribution Feasibility Study
Location: Logan County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Standard, Paint Creek, & Collinsdale Waterline Extension Feasibility Study
Location: Kanawha County, WV
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP McAlpin Eroding Dump - Phase II
Location: Raleigh County, WV
Tasks: The scope of work included the preparation of construction documents for eleven sites. The sites consisted of ten coal refuse piles (one of which is burning), numerous mine openings (both collapsed and open), old mine buildings, possible AMD, and various mine related debris.

Title: WVDEP McAlpin Eroding Dump - Phase I
Location: Raleigh County, WV
Tasks: The scope of work included the preparation of construction documents for six sites. The sites consisted of six coal refuse piles, numerous mine openings (both collapsed and open), old mine buildings, possible AMD, and various mine related debris.

Title: WVDEP Kingwood 52/6 Water Supply Extension
Location: Preston County, WV
Tasks: The scope of work included the preparation of construction documents for a water transmission line. Included in the distribution system are a 96,000-gallon water storage and a booster pump station. The total length of waterline is approximately 13 miles.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title:	WVDEP Micajah Ridge - Herndon Heights/Itman Waterline Extension Feasibility Study
Location:	Wyoming County, WV
Tasks:	The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title:	WVDEP Water Feasibility Study, Glen Rogers Study Area
Location:	Wyoming County, WV
Tasks:	The scope of work included local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.

Title:	WVDEP Rt. 20/Gould Community Waterline Extension Feasibility Study
Location:	Upshur County, WV
Tasks:	The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title:	WVDEP Water Feasibility Study, Elkins/Buckhannon Study Area
Location:	Upshur County, WV
Tasks:	Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.

Title:	WVDEP Laurel Creek Subdivision Subsidence
Location:	Raleigh County, WV
Tasks:	Preparation of construction documents for the Laurel Creek Subdivision Subsidence project in Beckley, WV. Project involved subsurface investigation (including borehole camera work); sampling of mine water; injection plan layout for grouting under over 40 residences; surface water drainage structure, preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings.

Title:	WVDEP Superior (PocaLand) Complex
Location:	McDowell County, WV
Tasks:	The assessment included a site reconnaissance, asbestos observations and sample analysis, lead-based paint observations and analysis, and limited surficial soil sample analysis. The assessment was concluded in a report to aid in evaluating the existing subsurface soil quality in the area to better understand the costs involved during reclamation efforts.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title:	WVDEP Washington Heights to Jeffrey Waterline Extension
Location:	Boone County, WV
Tasks:	The project involved a technical review plans and specifications presented by the WVAWC as part of the Boone County Public Service District: Regional Water Supply System. The plans included a total of seven contracts. The scope of work was to identify areas of the contracts that were within project limits set by a Phase II Water Feasibility Study conducted for the WVDEP and to determine the amount of the contract costs that were the responsibility of the WVDEP. Included were field reconnaissance, review of plans, hydraulic calculations, and cost estimating.

Title:	WVDEP Water Feasibility Study, Gaymont, Edmond, and Winona Study Area
Location:	Fayette County, WV
Tasks:	Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.

Title:	WVDEP Water Feasibility Study, Hominy Creek Study Area
Location:	Nicholas County, WV
Tasks:	Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.

Title:	WVDEP Elk Creek / Verner Waterline Extension Feasibility Study
Location:	Logan County, WV
Tasks:	The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title:	WVDEP Orlando Mining Facility
Location:	Gilmer County, WV
Tasks:	The scope of work included preparation of a report identifying the results from an investigation/evaluation of the facilities and equipment at the site. The investigation included determining the value, usefulness and/or condition of the facilities and equipment.

Title:	WVDEP Scotch Hill / Miller Hill Water Supply Extension
Location:	Preston County, WV
Tasks:	The scope of work included the preparation of construction documents for a water transmission line beginning at the existing hydro pneumatic booster station. Included in the distribution system is 96,000-gallon water storage. The total length of waterline is approximately 7.5 miles.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Camp Run AMD
Location: Barbour County, WV
Tasks: The scope of work included the preparation of construction documents for two sites. The sites consisted of 10-to-15 mine portals and mine drainage seep locations, one pond (to be drained), concrete tramway abutments (and debris), coal refuse, and various areas of saturated soil from mine drainage (one of which is sliding).

Title: WVDEP Mahan Tipple and Refuse Maintenance
Location: Fayette County, WV
Tasks: The scope of work included the preparation of construction documents for the repair of a sliding reclaimed coal refuse pile. The project consisted of installing a rock toe buttress and drainage channels

Title: WVDEP Johnsons Knob
Location: Fayette County, WV
Tasks: The scope of work included the preparation of construction documents for four sites. The sites consisted of five coal refuse piles totaling approximately twenty acres, numerous mine openings (consisting of auger hole and portals, both collapsed and open), six old mine buildings, possible AMD, and various mine related debris (including two old conveyors and a collapsed tipple).

Title: WVDEP Carolina Refuse
Location: Marion County, WV
Tasks: The project consisted of two sites. The sites consisted of a refuse pile totaling approximately three acres, various non-mine related debris, and two concrete mine shafts with some various debris.

Title: WVDEP Omega Mine Complex Project
Location: Monongalia County, WV
Tasks: The project involved writing a final report to the Electric Power Research Institute to include a comparison of the pre- and post-injection water quality data, the results of a post-construction benthic survey, and the results of an analysis of data from injection operations.

Title: WVDEP Omega Mine Complex Completion
Location: Monongalia County, WV
Tasks: The scope of work included the preparation of construction documents for a booster station upgrade as part of the Omega Mine Complex project. Hydraulic analyses were performed, new pumps were selected, and a demonstration was made that the new pumps had higher efficiencies than the old pumps. Construction documents for the booster station upgrade and pressure reducing assembly were prepared.

Title: WVDEP Hutchinson Subsidence
Location: Fairmont, WV
Tasks: Preparation of construction documents for the Hutchinson Subsidence project in Fairmont, WV. Project involved subsurface investigation (including borehole camera work); sampling of mine water; injection plan layout for grouting under three residences; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre- construction meetings.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Fairmont (Grandstaff) Subsidence
Location: Fairmont, WV
Tasks: Evaluation of potential subsidence effects for the Grandstaff Subsidence project in Fairmont, WV. Project involved subsurface investigation (including borehole camera work); sampling of mine water; and preparation of a report describing the findings of the above investigations.

Title: WVDEP City of Summersville (Rt. 39)
Location: Nicholas County, WV
Tasks: The project included the review of another consultants water feasibility study report and determination if the findings of the report were accurate.

Title: WVDEP Reynoldsville, Wallace, and Clarksburg Water Supply Extension Project
Location: Harrison County, WV
Tasks: The project included a feasibility/rate analysis, design of 9,400 feet of 8-inch water line, 33,000 feet of 6-inch water line, 12,200 feet of two-inch water line, a 96,000-gallon (nominal) water storage tank, and other appurtenances, selection, surveying, and geotechnical investigation of a water storage tank site, and preparation of construction documents, regulatory permit applications, and an engineer's report.

Title: WVDEP Mill Creek Regional Water Supply Extension Project
Location: Logan County, WV
Tasks: Preparation of construction documents for the construction of water transmission lines, a water distribution system, two water storage tanks, a booster station, two hydro pneumatic tanks, and a water treatment plant. The total length of water line to be constructed was approximately 34 miles.

Title: WVDEP Majesty Mine Complex
Location: Barbour County, WV
Tasks: Preparation of construction documents for the reclamation of the Majesty Mine Complex. The Majesty Mine Complex was an abandoned mine site which included old mine structures, open mine portals, unreclaimed refuse piles and an extensive highwall, existing wetlands and ponds, and numerous seeps producing acid mine drainage (AMD).

Title: WVDEP Phase II Water Feasibility Study, Washington Heights to Jeffrey Study Area
Location: Boone County, WV
Tasks: Phase II water feasibility study for private water supplies in the Washington Heights to Jeffrey Study Area in Boone County, WV. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report. Work was completed on a "fast track" schedule.

Title: WVDEP Evaluation of Construction Documents, Gauley River Water Line Extension
Location: Fayette and Nicholas Counties, WV
Tasks: Evaluation of construction documents for the Gauley River Water Line Extension, to be funded by AML. Evaluation included a review of technical specifications and drawings; evaluation of hydraulics; completion of letter summarizing the evaluation; and meetings to discuss the evaluation.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Evaluation of Construction Documents, Heizer/Manila Creek Water Line Extension
Location: Putnam County, WV
Tasks: Evaluation of construction documents for the Heizer/Manila Creek Water Line Extension, to be funded by AML. Evaluation included a review of technical specifications and drawings; evaluation of hydraulics; completion of letter summarizing the evaluation; and meetings to discuss the evaluation.

Title: WVDEP Owings Mine Complex
Location: Harrison County, WV
Tasks: GAI evaluated the water quality and potential passive AMD treatment system design at the Owings Mine Complex Site. The project included identification of monitoring points (streams and AMD discharges); sampling and analysis of monitoring points for a three-month period; preparation of a report summarizing the findings; and conceptual design of passive AMD treatment system including costs. GAI also prepared construction documents, including grading and drainage design for four refuse piles and various other refuse areas; design of seals for 18 mine portals; and preparation of technical specifications, drawings, and an engineer's cost estimate.

Title: WVDEP Omega Mine Complex
Location: Monongalia County, WV
Tasks: Preparation of construction documents for the Omega Mine Complex project in Monongalia County, WV. The project involved the injection of coal combustion byproduct grouts into mine workings to help alleviate the generation of AMD. Work included subsurface investigation; surveying; grout mix evaluation; acid-base accounting analysis of overburden and coal; and preparation of drawings, technical specifications, and engineer's cost estimate.

Title: WVDEP Mill Creek - Isom Community
Location: Logan County, WV
Tasks: Design of water system to service approximately 800 residents of the Mill Creek-Isom Community in Logan County, WV. Work included sizing of water treatment plant, four water tanks, four booster stations, one pressure reducing valve, and approximately 23 miles of water line. Construction cost was estimated at approximately $5,500,000.

Title: WVDEP Phase II Water Feasibility Study, Weaver-Junior Study Area
Location: Randolph and Upshur Counties, WV
Tasks: Phase II water feasibility study for private water supplies in the Weaver-Junior Study Area in Randolph and Upshur Counties, WV. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.

Title: WVDEP Phase II Water Feasibility Study, Reynoldsville, Wallace, and Clarksburg Study Area
Location: Harrison County, WV
Tasks: Phase II water feasibility study for private water supplies in the Reynoldsville, Wallace, and Clarksburg Study Area in Harrison County, WV. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Mainella Subsidence
Location: Marion County, WV
Tasks: Preparation of construction documents for the Mainella Subsidence project in Fairmont, WV. Project involved subsurface investigation (including borehole camera work); sampling of mine water; injection plan layout for grouting under three residences; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre- construction meetings. Approximately 15 injection holes were proposed at an estimated construction cost of approximately $138,000.

Title: WVDEP Glen Morgan Subsidence
Location: Raleigh County, WV
Tasks: Preparation of construction documents for the Glen Morgan Subsidence project near Beckley, WV. Project included subsurface investigation (including borehole camera work); base mapping development; sampling of mine water; injection plan layout for grouting under one residence; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings. Estimated construction cost was approximately $164,000.

Title: WVDEP Harris AMD
Location: Harrison County, WV
Tasks: Preparation of construction documents for the Harris AMD site in Harrison County, WV. Project included subsurface investigation; surveying; sampling of mine discharges; design of channels, wet seals, and drain pipes; preparation of technical specifications, drawings and engineer's cost estimate; and participation in pre-bid and pre- construction meetings. Bid construction cost was approximately $65,000.

Title: WVDEP Lefthand Fork (See) Burning Refuse
Location: Logan County, WV
Tasks: Preparation of construction documents for Lefthand Fork (See) Burning Refuse project. Project included subsurface investigation including temperature probe readings; surveying; refuse processing evaluation; grading and drainage design for regrading of refuse pile; delineation of burning refuse areas; design of excess material disposal site; completion of IBR for relocating existing bonded haul road; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings. Bid construction cost was approximately $940,000.

Title: WVDEP Summerlee Refuse - Post Construction Water Quality
Location: Fayette County, WV
Tasks: Water sample collection, analysis, and evaluation at the reclaimed Summerlee Refuse site. Findings were summarized in a report.

Title: WVDEP Cow Creek - Sarah Ann Water Supply Extension Project
Location: Logan County, WV
Tasks: Preparation of construction documents for the Cow Creek - Sarah Ann Water Supply Extension project in Logan County, WV. Project included subsurface investigation; design of three water tanks, three booster stations, one master meter assembly, and approximately 19 miles of waterline; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings. Bid construction cost was approximately $4,800,000.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Godby Branch Water Supply Extension
Location: Logan County, WV
Tasks: Preparation of construction documents for the Godby Branch Water Supply Extension project. Project included subsurface investigation; surveying; design of water tank, booster station, and approximately 2.5 miles of water line; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings. Bid construction cost was approximately $680,000.

Title: WVDEP Phase II Water Feasibility Study, New Haven Study Area
Location: Fayette County, WV
Tasks: Phase II water feasibility study for private water supplies in the New Haven Study Area in Fayette County, WV. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report. Conceptual design of water system included sizing a water treatment plant, one booster station, five water tanks, and approximately 87 miles of water line. Estimated construction cost was approximately $13,800,000.

Title: WVDEP Phase II Water Feasibility Study, Gauley River Study Area
Location: Fayette and Nicholas Counties, WV
Tasks: Phase II water feasibility study for private water supplies in the Gauley River Study Area. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.

Title: WVDEP Phase II Water Feasibility Study, Heizer and Manila Creek Community
Location: Putnam County, WV
Tasks: Phase II water feasibility study for private water supplies in the Heizer and Manila Creek Community in Putnam County, WV. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Phase I Water Feasibility Study, Reynoldsville, Wallace, & Clarksburg Study Area
Location: Harrison County, WV
Tasks: Phase I water feasibility study of the Reynoldsville, Wallace, & Clarksburg Study Area in Harrison County, WV to evaluate the potential for pre-1977 mining activity to have degraded the water supplies of residents. Work included interviews, record searches, field reconnaissance, and preparation of remedial action cost estimates. A report summarizing the findings was submitted.

Title: WVDEP Phase I Water Feasibility Study, Weaver-Junior Study Area
Location: Randolph and Upshur Counties, WV
Tasks: Phase I water feasibility study of the Weaver-Junior Study Area in Randolph and Upshur Counties, WV to evaluate the potential for pre-1977 mining activity to have degraded the water supplies of residents. Work included interviews, record searches, field reconnaissance, and preparation of remedial action cost estimates. A report summarizing the findings was submitted.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Phase I Water Feasibility Study, Matheny Hill Study Area

Location: Harrison County, WV

Tasks: Phase I water feasibility study of the Matheny Hill Study Area in Harrison County, WV to evaluate the potential for pre-1977 mining activity to have degraded the water supplies of residents. Work included interviews, record searches, field reconnaissance, and preparation of remedial action cost estimates. A report summarizing the findings was submitted.

Title: WVDEP Duncan Hill Subsidence No. 2

Location: Harrison County, WV

Tasks: Completed subsidence evaluation investigation at the Duncan Hill Subsidence No. 2 project site in Clarksburg, WV. Work included subsurface investigation; mapping development; surveying; records review; water sampling; and preparation of a report summarizing the findings. The report did not recommend stabilization for the structures in the project area, due to a lack of evidence that subsidence was causing problems.

Title: WVDEP Urso Subsidence

Location: Fairmont, WV

Tasks: Field reconnaissance, resident interviewers, videotape surveys of existing conditions, subsurface investigation, surveying, and subsequent evaluation to determine if mine subsidence was affecting structures within a several block area of Fairmont. Ultimately, stabilization program was limited to 5.4-acre area with approximately 28 residences and businesses. Construction documents, including drawings, technical specifications, and engineer's cost estimate were prepared. Proposed construction included approximately 140 injection holes and 18,000 cubic yards of injection material. Construction cost was estimated at approximately $1,200,000.

Title: WVDEP Phase I Water Feasibility Studies

Location: Brooke County, along Gauley River in Fayette County & Nicholas Counties, and New Haven area (around Hico) in Fayette County, WV.

Tasks: Preliminary investigation of three separate communities to evaluate the possibility that pre-1977 mining activity degraded water supplies. The investigation included a review of mining records, existing water quality data, and conductance of resident interviews to assess possible impacts. Separate reports were prepared for each community, documenting findings and providing a cost estimate for extending public water supply systems.

Title: WVDEP Phase II Water Feasibility Study, Mill Creek Study Area

Location: Boone, Lincoln, and Logan Counties, WV

Tasks: Phase II water feasibility study for private water supplies in the Boone County Community, Lincoln County Community, and Logan County Community all encompassed in the Mill Creek Study Area. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in separate reports for each community. Estimated construction cost for extending a public water supply to residents of the Mill Creek Study Area was approximately $15,400,000 and included one water treatment plant, one booster station, seven water storage tanks, and approximately 40 miles of water line.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Phase II Water Feasibility Study, Godby Branch Community
Location: Logan County, WV
Tasks: Phase II water feasibility study for private water supplies in the Godby Branch Community in Logan County, WV. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Title: WVDEP Madison Street/Fairview Route 218 Portals
Location: Marion County, WV
Tasks: Preparation of construction documents for the Madison Street/Fairview Route 218 Portals project. Work included subsurface investigation; surveying; design of wet mine seals and associated drains at multiple sites; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings.

Title: WVDEP Summerlee Refuse Project
Location: Fayette County, WV
Tasks: Preparation of construction documents for the Summerlee Refuse pile project. Project included subsurface investigation; surveying; water quality sampling; grading and drainage design for regrading and revegetation of 60-acre refuse pile, two impoundments, and two ponds; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings.

Title: WVDEP Putnam County Phase I Water Studies
Location: Two communities in Putnam County, WV
Tasks: Preliminary investigation of the Manila Creek and Heizer Creek areas of Putnam County to determine the possibility of pre-1977 mining activity degrading water supplies. Study included review of historical mining records, geological data, and resident interviews to assess possible impacts. Report prepared documenting findings and a cost estimate for extending public water supply system.

Title: WVDEP Boone County Phase I Water Studies
Location: Various communities in Boone County, WV
Tasks: Preliminary investigation of the Greenview/Big Branch, Ramage/Six Mile Creek, Secoal/Jeffrey/Obes Branch, Hewett Creek/Missouri Fork, and Meadowfork communities of Boone County to determine the possibility of pre-1977 mining activity degrading water supplies. Study included review of historical mining records, geological data, and resident interviews to assess possible impacts. Reports prepared documenting findings and cost estimates for extending public water supply systems.

Title: WVDEP Duncan Hill Subsidence
Location: Clarksburg, WV
Tasks: Field reconnaissance, resident interviews, videotape surveys of existing conditions, subsurface investigation, borehole video camera surveys, and surveying to determine whether subsidence was affecting numerous homes, water tank, and YMCA over a 16-acre area. Development of report documenting that damages to water tank and YMCA were not subsidence related. Preparation of stabilization plan including plans, specifications, etc. for residential area.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Phase II Logan Water Feasibility Study
Location: Logan County, WV
Tasks: Investigation to determine the percentage of residents in the Cow Creek, Crooked Creek and Upper Rum Creek communities whose ground water supplies had been degraded by pre-1977 mining activity. Field reconnaissance, mine map and mine permit records search, interviews, water sampling and analysis, and classification via piper diagrams were conducted.

Title: WVDEP Cora Mine Drainage No. II
Location: Logan County, WV
Tasks: Mine drainage abatement project included drilling and water analysis with subsequent design of several mine seals with piping and channels to convey flow to the receiving stream. Project included boring and jacking pipeline under railroad.

Title: WVDEP Covey Creek Mine
Location: Logan County, WV
Tasks: Field reconnaissance, historical records review, and subsurface investigation to determine extent of mine fire and to develop options for remediation.

Title: WVDEP Logan Phase I Water Study
Location: Logan County, WV
Tasks: Preliminary investigation of the Clothier, Cow Creek, Crooked Creek, Godby Branch, Godby Heights, Upper Rum Creek, and Whitman Creek/Holden communities to determine the possibility of pre-1977 mining activity degrading the water supplies of the communities. Field reconnaissance, interviews, and mining and water quality record searches were conducted, and a remedial cost estimate was provided with reports summarizing the findings for each community.

Title: WVDEP Vivian Refuse Pile
Location: Vivian, WV
Tasks: Subsurface investigation, surveying, and design for reclamation of a large coal refuse pile and two mine entries. Plans, specifications, cost estimate, coal refuse reprocessing evaluation, and supporting documents for regrading over 150,000 cubic yards of refuse, surface water control, mine seals, and riprap toe protection were completed.

Title: WVDEP Kimball Refuse Piles
Location: Kimball, WV
Tasks: Subsurface investigation, surveying and design for reclamation of three coal refuse piles and six mine entries. Design included replacement of a water well and related supply piping for the town of Kimball. Completed preparation of plans, specifications, cost estimate, coal refuse reprocessing report, WV Department of Health permit for new well, and other supporting documents for reclaiming this large site with over ½ million cubic yards of regrading.

Title: WVDEP Hampden (Smith) Bridge
Location: Mingo County, WV
Tasks: Design of metal arch culvert to replace a bridge to allow access to a landslide repair project. Development of plans and specifications were on a fast-track schedule.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Bear Run Refuse
Location: Gilmer County, WV
Tasks: Field reconnaissance to establish project limits, develop reclamation options, and collect water quality information to design a wetlands reclamation project. Subsurface investigation, surveying, and development of aerial mapping for 160 acres were conducted. Plans, specifications, cost estimate, reprocessing evaluation and report, and permit application assistance to develop reclamation plan for 13 former coal refuse disposal ponds/impoundments and three refuse piles were completed. Plan included developing and enhancing wetlands.

Title: WVDEP Beaver Creek Waterline Extension
Location: Barbour and Randolph Counties, WV
Tasks: The project included design of a 1.5 mile, 6-inch diameter water line extension including fire hydrants, stream crossings, and service to 13 residents. Preparation of plans, specifications, cost estimate, and supporting documents were completed.

Title: WVDEP Garrison Complex
Location: Garrison, Boone County, WV
Tasks: Subsurface investigation, surveying, and design for the removal of a railroad embankment posing a water impounding hazard were conducted. Project also included several mine entries and surface water runoff control channels. Plans, specifications, cost estimate, and supporting documents were prepared.

Title: WVDEP Cassity Fork Water Supply Extension
Location: Randolph County, WV
Tasks: The project consisted of a water study to document existing water quality and impacts due to mining, subsurface investigations, surveying, and design of an eight-mile waterline extension including booster station, reservoir, pressure reducing valves, and provision for fire flow. Preparation of plans, specifications, cost estimate and supporting documents, and a review of contractor submittals during construction were conducted.

Title: WVDEP Beckley (Queen Street) Subsidence
Location: Beckley, WV
Tasks: Subsurface investigation to determine if mine subsidence was responsible for damages experienced by a home was conducted. Preparation of a report documenting that subsidence was not responsible for the observed damage was completed.

Title: WVDEP Jonben (Haga) Subsidence
Location: Jonben, WV
Tasks: Subsidence control on an emergency basis including sinkhole backfilling and drainage control. Project included drilling to determine the extent of mining and subsidence, field surveying to develop topographic mapping, and development of a backfilling and drainage plan.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Holden (Padgett) Subsidence
Location: Whitman Junction, WV
Tasks: The project included subsurface investigation to determine extent of mine workings, development of stabilization plan including drainage channels/pipes, and mine seals. Construction documents were prepared, and participation in pre-bid and pre-construction meetings was completed.

Title: WVDEP Minden Mine Fire
Location: Minden, WV
Tasks: The project included subsurface investigation to determine source and extent of underground fire.

Title: WVDEP Doug Gray Subsidence
Location: Fairmont, WV
Tasks: Subsidence control by injecting grout to fill mine voids. Project included exploratory drilling and sampling including both vertical and angle borings with the subsequent development of a grouting program to support homes and businesses in Fairmont, WV.

Title: WVDEP St. John's Road Subsidence
Location: Brooke County, WV
Tasks: Subsurface investigation and development of specifications and construction drawings for remedial work on mine subsidence affecting 30 acres and 50 homes were conducted.

Title: WVDEP High Coal Tipple
Location: Boone County, WV
Tasks: The project included development of specifications and construction drawings for remedial work on 16 mine portals and an abandoned tipple and its several associated structures.

Title: WVDEP Route 19/28 Subsidence
Location: Harrison County, WV
Tasks: The project included subsurface investigation and development of construction specifications and drawings, and topographic mapping for remedial work on mine subsidence affecting a road.

Title: WVDEP Omar Refuse Piles
Location: Logan County, WV
Tasks: The project included subsurface investigation and development of specifications and construction drawings for remedial work on regrading five refuse piles with over 330,000 cubic yards of earthwork, and sealing six mine portals and a large vertical shaft.

Title: WVDEP Mt. Hope (Sawyer) Subsidence
Location: Fayette County, WV
Tasks: The project included subsurface investigation and development of construction specifications and drawings, and topographic mapping for remedial work on mine subsidence affecting one home.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Morgantown Airport Drainage
Location: Morgantown, WV
Tasks: The project included subsurface investigation and development of construction specifications and drawings, and some topographic mapping for remedial work on mine subsidence effecting a day care center and an airport access road, and for closure of four mine portals below the end of a runway.

Title: WVDEP Logan Drainage Project
Location: Logan, WV
Tasks: The project included subsurface investigation and development of construction specifications and drawings, and some topographic mapping for remedial work on four mine portals, a mine seep, and 400 feet of abandoned conveyor with its headhouse and loadout platform.

Title: WVDEP Huffman Street Subsidence
Location: Fairmont, WV
Tasks: The project included subsurface investigation and development of construction specifications and drawings for remedial work on mine subsidence affecting 20 homes.

Title: WVDEP Switzer/Adams/Robinson Drainage
Location: Logan County, WV
Tasks: The project included subsurface investigation and development of construction specifications, drawings, and topographic mapping for remedial work on three mine portals, including the design of an energy dissipater with associated piping under railroad and state highway.

Title: WVDEP Follansbee (Hultsburg) Drainage
Location: Brooke County, WV
Tasks: The project included subsurface investigation and development of construction specifications and drawings for remedial work on acid mine drainage problems.

Title: WVDEP Fairmont East Subsidence
Location: Fairmont, WV
Tasks: The project included subsurface investigation and development of construction specifications and drawings for remedial work on mine subsidence affecting 125 homes on 20 acres.

Title: WVDEP Fairmont IV
Location: Fairmont, WV
Tasks: The project included subsurface investigation to determine if subsidence of three homes was related to mining and subsequent development of construction specifications and drawings for remedial work on the subsidence.

Title: WVDEP Hawkins AMD
Location: Harrison County, WV
Tasks: The project included subsurface investigation and development of construction specifications, drawings and topographic mapping for remedial work on acid mine drainage emanating from mine portals following a “blow-out” and causing a large-saturated area above five homes.

ATTACHMENT A: GAI WEST VIRGINIA AML PROJECT EXPERIENCE

Title: WVDEP Kistler Refuse and Mine Fire Extinguishment Program
Location: Logan County, WV
Tasks: The project included subsurface investigation and development of construction specifications and drawings for extinguishment through grout injection, and subsequent construction monitoring.

Title: WVDEP Rebrook Street Drainage
Location: Clarksburg, WV
Tasks: The project included subsurface investigation and development of construction specifications and drawings for remedial work on acid mine drainage from two mine portals which was affecting a house and its garage, and subsequent construction monitoring.

Title: WVDEP Hurricane Fork/Five-Mile Fork Burning Coal Seams
Location: Kanawha County, WV
Tasks: The project included subsurface investigation and development of costs which would be associated with extinguishment.

Title: WVDEP Kingmont Complex Reclamation
Location: Marion County, WV
Tasks: The project included development of specifications and construction drawings for sealing four mine portals and demolishing a steel river truss and buildings associated with an abandoned deep-mine complex.

Title: WVDEP Fairmont No. 2 Subsidence
Location: Fairmont, WV
Tasks: The project included report with recommendations after a subsurface investigation to determine whether or not subsidence of three homes was mining related, and subsequent development of specifications and construction drawings.

Title: WVDEP Green's Run Highwall and Marrara Spoil Area Reclamation Projects
Location: Preston County, WV
Tasks: The project included subsurface investigation with test-pits and development of specifications and construction drawings for reclaiming 30 acres of strip mine with three highwalls, six refuse piles, and two access roads.

Title: Confidential Mine AMD Project
Location: Monongalia County, WV
Tasks: GAI partnered with numerous state and federal conservation agencies to correct the AMD discharge problem at a mine near Morgantown, WV. The overall goal of this project was to improve the water quality in Deckers Creek to restore the fish habitat in the lower five miles of the stream. The many benefits to the natural environment for Monongalia County and the City of Morgantown included removing the staining caused by the AMD precipitate. GAI completed a Phase I Evaluation of AMD Problem Report which included bench scale testing. This report summarized the available data on the mine, mine discharge and other background data. GAI also completed a Treatment Alternatives Report, which evaluated several alternatives for the treatment of the AMD discharge, including a "no build" alternative.

APPENDIX B

KEY PERSONNEL RESUMES

Jason Gandee

Project Manager

Education

BS, Civil Engineering Technology, 2007, West Virginia University Institute of Technology

Skills

Civil Engineering

Civil Site Design

Stormwater Management

Environmental Compliance

Hydrologic and Hydraulic Design

Drainage and Grading Plans

Erosion and Sediment Control

Floodplain Studies

Certifications/Training

Troxler Nuclear Density Operator, 2001

HEC-RAS Course, National Highway Institute

Industry Experience

GAI Consultants, 2018-Present

Potesta & Associates, Inc., 2007-2018

Professional Summary

Mr. Gandee specializes in civil engineering design for GAI's Energy Business Unit. Project responsibilities include: civil site design, hydrologic and hydraulic design, grading plans, roadway layout, and stormwater management plans. He develops engineering calculations, prepares project drawings, generates contract documents and specifications, and completes engineering reports. He also has experience with construction oversight and construction management, and site inspections.

Mr. Gandee has experience preparing West Virginia Department of Transportation, Division of Highways (WVDOH) MM-109 occupancy permits; and construction stormwater National Pollutant Discharge Elimination System (NPDES) permits and supporting documents. He has prepared Spill Prevention, Control, and Countermeasure (SPCC) Plans, and is knowledgeable of current erosion and sediment control materials and requirements. Additionally, Mr. Gandee has performed floodplain studies using HEC-RAS to estimate the changes of the floodplain due to construction; projects include: site development adjacent to streams, bridge construction, and culvert installation. Mr. Gandee also has experience with sampling and testing materials, including soils and concrete. Testing included nuclear density testing for compaction of soils, concrete/grout testing, and cylinder fabrications.

Professional Experience

- Belle (Sneed) Drainage Project, West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Abandoned Mine Lands (WVDEP-DLR-AML), Kanawha County, West Virginia. Project Manager. GAI is providing geotechnical investigations and analyses; designing access for construction and future maintenance access; hydrologic and hydraulic analyses; installation of drainage channels, underdrains, and/or other controls to safely convey water off-site; revegetation of all disturbed areas; and required permitting.
- Project Engineer for over 25 reclamation projects for the WVDEP-DLR-AML. Responsible for site reconnaissance to determine the scope of the project; monitoring subsurface exploration drilling; preliminary and final design drawings; technical specifications; engineer's cost estimate; and conducting pre-bid and pre-construction meetings with contractors. Submitted and obtained NPDES construction stormwater permits and United States Corps of Engineer regional permits for the projects.

- WVDEP Waste Characterization Study, WVDEP Office of Environmental Advocate, Rehabilitation Environmental Action Plan (REAP), West Virginia (state-wide). Project Manager. GAI conducted a waste characterization study to examine the different types of materials and amounts of solid waste that were being discarded in West Virginia's landfills.
- Project Engineer for two WVDEP, Office of Special Reclamation Bond Forfeiture Projects. Responsible for developing construction plans to eliminate highwalls; regrading refuse piles; providing hydrologic and hydraulic design to manage stormwater on the site; designing ponds for active treatment; technical specifications; engineer's cost estimate; and conducting pre-bid and pre-construction meetings with contractors.
- Solar Project, Raleigh County, West Virginia. Project Engineer. Project Engineer for a 500-acre solar development project. Developed a stormwater construction plan that included sediment trap design, sediment basin design and additional Best Management Practices (BMP design). Obtained a West Virginia Construction NPDES Permit for the project.
- Solar Project, Mason County, West Virginia. Project Engineer. Project Engineer for a solar development project in Mason County, West Virginia. The project is currently on-going and will include hydrology and hydraulics, Erosion and Sediment Control (E&SC) design, NPDES Permitting and civil site work.
- Solar Project, Owner's Engineer Reviewing Design of Five Solar Utility-Scale Sites, West Virginia. Project Manager. Project Manager overseeing the design reviews for five solar projects for a power utility. Coordinated with internal team to review structural and electrical design of the solar projects. Personally reviewed civil site design as well as E&SC design.
- Power Station Coal Combustion Residual (CCR) Rule Compliance Project, Haywood, West Virginia. Civil Engineering Support. Assisted in the visual inspection of the CCR landfills to identify signs of distress or malfunction. Assisted in the completing the inspection report that discussed changes in geometry of the structure, appearance of an actual or potential structural weakness of the CRR impoundment, and any other changes which may affect the stability or operation of the CCR landfill.
- CCR Compliance Project, Pleasants County, West Virginia. Civil Engineering Support. Assisted in the visual inspection of the CCR landfill and impoundment to identify signs of distress or malfunction. Assisted in the completing the inspection report that discussed changes in geometry of the structure, appearance of an actual or potential structural weakness of the CCR impoundment or the impoundment, and any other changes which may affect the stability or operation of the CCR landfill or the impoundment.
- CCR 7-Day Inspections, Haywood, West Virginia. Civil Engineering Support. Assisted in the visual inspection of the CCR landfills to identify signs of distress or malfunction. Assisted in the completing the inspection report that discussed changes in geometry of the structure, appearance of an actual or potential structural weakness of the CRR impoundment, and any other changes which may affect the stability or operation of the CCR landfill.
- County Park Improvements Project, Grantsville, West Virginia. GAI is performing the following services for this project: preliminary design; assistance with funding applications; final design; bidding; services during construction; and construction inspection. Responsible for civil site design which includes utilities, building pad and access road layout.
- Interstate Widening Project, Huntington, West Virginia. Project Engineer. Responsible for preparing maintenance of traffic plans; geometric layout plans; construction drawings; and signing and marking plans for the project.
- Floodplain Management Projects. Project Engineer. Responsible for data gathering for the projects; estimating the hydrology at the site; performing hydraulic modeling of the watershed for existing and proposed conditions using HEC-RAS to determine the flood elevations and impacts; and report summarization.

Charles Straley, PE, PLS, MS

Project Advisor and QA/QC

Education

MS, Geotechnical Engineering, 1988, University of Akron

BS, Civil Engineering, 1986, University of Akron

Registrations

Professional Engineer (PE): KY, IN, MI, OH, TX, VA, WV

Professional Licensed Surveyor (PLS): WV #1888

Skills

Subsurface Exploration

Foundation & Embankment Design

Slope Stability & Landslide Engineering

Landfill Planning & Design

Water Feasibility Studies

Acid Mine Drainage

Certifications / Training

Leaders to Watch, GAI Consultants, 2011

Advanced Project Management Training, GAI Consultants, 2009

Troxler Certified

40-hour Health and Safety Training

8-hour Supervisor Health and Safety Training

OSHA 10-Hour Construction Training

Industry Experience

GAI Consultants, 1988 - Present

University of Akron, Private Consulting and Testing, 1986-1987

Professional Summary

Mr. Straley is a licensed Professional Engineer (PE) and Professional Licensed Surveyor (PLS) specializing in geotechnical and civil engineering projects, including all aspects of subsurface exploration; laboratory testing; foundation and embankment design; slope stability; material and construction specifications; and construction administration, management and monitoring. His experience includes managing and participating in the design and development of reclamation plans and feasibility studies for approximately 100 abandoned mine land (AML) reclamation projects.

Select Professional Experience

- Belle (Sneed) Drainage Project, West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Abandoned Mine Lands (WVDEP-DLR-AML), Kanawha County, West Virginia. Project Supervisor. GAI is providing geotechnical investigations and analyses; designing access for construction and future maintenance access; hydrologic and hydraulic analyses; installation of drainage channels, underdrains, and/or other controls to safely convey water off-site; revegetation of all disturbed areas; and required permitting.
- Richard Mine AMD Project, West Virginia Conservation Agency, Morgantown, West Virginia. Project Manager. GAI partnered with three conservation agencies to correct the AMD discharge problem at the Richard Mine. The overall goal of this project was to improve the water quality in Decker's Creek to restore the fish habitat in the lower five miles of the stream. Authored the Phase I Evaluation of AMD Report which summarized the available data on the mine and mine discharge; and authored the Treatment Alternatives Report, which provided recommendations for the best ways to deal with the Richard Mine AMD.
- Reynolds Refuse Project, WVDEP-DLR-AML, Harrison County, West Virginia. Project Manager. GAI provided regrading and soil, covering refuse piles; constructed access roads; provided streambank stabilization; sealed mine portal(s); designed bat gates; demolished mine structures; filled vertical shafts; regraded sink holes; provided proper drainage control measures; and revegetated the areas. Construction plans and technical specifications were developed. Stormwater NPDES and WVDOH permits were prepared and obtained.

- Amigo Portals Project, WVDEP-DLR-AML, Raleigh County, West Virginia. Project Manager. The scope of work involved providing closure of 19 mine portals with bat gates or mine seals, covering exposed refuse, providing stream realignment and streambank protection, and providing proper drainage control measures. Stormwater NPDES and USACE 404 permits were prepared and obtained.
- Cherokee Complex, WVDEP-DLR-AML, McDowell County, West Virginia. Project Manager. The scope of work involved providing regrading and soil covering of the refuse pile, providing natural stream restoration and streambank protection, structure demolition, and providing proper drainage control measures. Stormwater NPDES and USACE 404 permits were prepared and obtained.
- Earling Refuse Pile Project, WVDEP-DLR-AML, Logan County, West Virginia. Project Manager. GAI regraded the refuse pile, providing streambank stabilization, stream restoration, sealed the mine portal(s), bat gates, and provided proper drainage control measures. Construction plans and technical specifications were developed. A stormwater NPDES permit was prepared and obtained.
- Lynch Run Highwall #6, WVDEP-DLR-AML, Gilmer County, West Virginia. Project Manager. GAI provided seals for the collapsed portals, backfilled the highwalls, reclaimed the refuse pile, and provided proper controlled drainage, including natural stream design. Construction plans and technical specifications were developed.
- Latrobe (Gibson) Landslide Project, WVDEP-DLR-AML. Design of and preparation of construction documents for a landslide above a residence as an emergency project. Activities included: site grading, subsurface investigation, hydraulics and hydrology analysis, valley fill design, COIE permitting, preparation of drawings and technical specifications, engineering cost estimate and pre-bid meeting presentation.
- Ven's Run Landslide #2, WVDEP-DLR-AML. Design of and preparation of construction documents for a previously repaired landslide. Activities included site grading, subsurface investigation, hydraulics and hydrology analysis, road re-design, preparation of drawings and technical specifications, engineering cost estimate and pre-bid meeting presentation.
- Majesty Mine Complex Project, WVDEP-DLR-AML, Barber County, West Virginia. Design of a reclamation plan for the mine complex. The project included the design of site drainage along WV Route 16/2 (including channels and culverts), reclamation of two landslide areas along WV Route 16/2, and a soldier (pile and lagging) wall to support a landslide along WV Route 16/2.
- Summerlee Refuse Pile Project, WVDEP-DLR-AML, Fayette County, West Virginia.. GAI designed the regrading and drainage channels for a 75-acre coal refuse pile and developed specifications for the project, including earthwork, drainage structures and wetland plants. Design included analysis of water quality for determining potential treatment alternatives.
- Lefthand Fork Burning Refuse Project, WVDEP-DLR-AML, Logan County, West Virginia. GAI designed the regrading and drainage scheme for a 60-acre coal refuse. The project included the excavation and extinguishment of burning refuse and disposal of excess refuse in a valley fill. Developed specifications for the project. Prepared an application for the West Virginia Public Land Corporation permit and USACE 404 Nationwide Permit. Prepared an Incidental Boundary Revision application to relocate a permitted haul road.
- Kimball Coal Refuse Piles Project, WVDEP-DLR-AML, McDowell County, West Virginia.. Performed stability analysis for three existing coal refuse embankments. Designed and evaluated the proposed regrading and geometric changes to the coal refuse embankments. Developed specifications for the project which included a reinforced earth wall and water well replacement. Prepared application for replacement well permit and the USACE 404 Nationwide Permit.
- Owings Mine Complex Project, WVDEP-DLR-AML, Harrison County, West Virginia. Design of a reclamation plan. Project included surface and subsurface drainage design (including a concrete box culvert crossing of WV County Route 12/4) and preparation of technical specifications (including traffic maintenance and other WVDOH standard specifications), drawings, engineer's cost estimate, and obtaining the USACE permit.
- Duncan Hill Subsidence Project, WVDEP-DLR-AML, Harrison County, West Virginia.. Monitored subsurface exploration, designed and developed specifications for an abandoned mine subsidence project. The project

included stabilizing the abandoned mine workings by injecting cement grout and concrete and providing drainage from a portion of the workings. The project included a bore and jack pipe into the mine workings.

- Cora Mine Drainage II Project, WVDEP-DLR-AML. Designed the mine seals and drainage scheme for a series of abandoned mine entries. Developed the specifications which included the mine seals, drainage pipes and appurtenances and a bore and jack pipe.
- West Newton Refuse Embankment Stabilization Project, Pennsylvania Department of Environmental Protection Bureau of Abandoned Mine Reclamation (PADEP-BAMR), West Newton, Pennsylvania. Lead Geotechnical Engineer. Project involved geotechnical investigations and geophysical surveys to characterize the site, identifying the bottom of the impoundments, and estimating the slurry volumes in the impoundments. Cost estimates and grading plans were developed to evaluate options to stabilize the refuse embankment and impoundments with geosynthetic/coarse refuse cap systems, in-situ stabilization methods, and excavation and replacement methods.
- Middleton Run Reclamation Project, ODNR, Division of Mineral Resource Management, Jackson County, Ohio. Project Manager responsible for geotechnical engineering and development of remediation measures for the Middleton Run Reclamation Project, an abandoned mine site in Ohio. The 80-acre site was the largest major acid mine drainage contributor degrading the Raccoon Creek Watershed, and contained four acidic strip-pit lakes, an abandoned deep mine, and large areas of toxic mine spoil and mine tailings.
- Phase II Water Feasibility Study, Confidential Client, Logan County, West Virginia. Development of geologic cross sections and structural contouring as part of an investigation to determine the percentage of residents in the communities whose ground water supplies had been degraded by pre-1977 mining activity. Field reconnaissance, mine map and mine permit records search, interviews, water sampling and analysis, and classification via piper diagrams were conducted.
- Stream Relocation Project, Grant County, West Virginia. Project. The project involved crossing an existing stream channel over an acid mine drainage channel to a water treatment facility. The design consisted of a combination of relocated channels, spillways, and box culverts.
- Acid Mine Drainage (AMD) Impoundment Reclamation Project, Confidential Client. Prepared construction drawings and specifications for reclamation of an AMD Impoundment.
- Expert witness in identifying the source of AMD through a tunnel under a WVDOH highway for Confidential Client. Performed a structural inspection of the tunnel to obtain grade release for the mine permit.
- Project Manager of 700+ pre-subsidence surveys in conjunction with deep mine operations in West Virginia, Virginia, Ohio, Maryland, and Pennsylvania. Responsible for videotaping and photographing structures, identifying the existing condition of structures, documenting problem areas, and writing final reports.
- Ned’s Branch Impoundment Dam Project, Office of Surface Mine Reclamation and Enforcement (WVDEP), Mingo County, West Virginia. Project Manager. Design of and preparation of construction documents for a 600,000 cubic yard failed coal slurry impoundment dam as an emergency reclamation project. Activities included site grading, subsurface investigation, hydraulics and hydrology analysis, road re-design, mine seals, preparation of drawings and technical specifications, engineering cost estimate and pre-bid meeting presentation.
- White Avenue Slip Project, City of Morgantown, Morgantown, West Virginia. Project Supervisor. Responsible for coordinating and managing fiscal and personnel aspects of the project. The project included the remediation and design of a roadway damaged by a landslide located in Morgantown, West Virginia. The project required stabilization of the hillside, road repair, drainage upgrades, and remediation below the slip.

Affiliations

American Council of Engineering Companies, West Virginia

Contractor’s Association of West Virginia

John Klamut, PE, CFM, MS

Project Advisor and QA/QC

Education

MS, Civil Engineering, 2002, San Jose State University

BS, Forest Engineering, 1998, State University of New York, College of Environmental Science and Forestry

Registrations

Professional Engineer (PE): AZ, IN, KY, NM, PA, VA, WV

Skills

Project Management

Abandoned Mine Land (AML) Reclamation

Hydrology & Hydraulics

Passive Acid Mine Drainage (AMD) Treatment

Flood Control

CCR Rule Compliance

Earthen Dam Design and Assessments

NPDES Permitting

Groundwater Monitoring

Certifications / Training

Certified Floodplain Manager, #US-07-02733

OSHA 10-Hour Construction, 2021

Industry Experience

GAI Consultants, Inc., 2014-Present

Solid Waste Services, LLC, 2011-2014

Kimley-Horn and Associates, Inc., 2006-2010

URS Corporation, 2002-2006

Kleinfelder, Inc., 2001-2002

NASA Ames Research Center, 1999-2001

Professional Summary

Mr. Klamut is an Engineering Director with GAI and a licensed Professional Engineer in West Virginia and six additional states. He is also a Certified Floodplain Manager (CFM) with over 26 years of experience specializing in permitting and design of water resource and environmental projects, such as Abandoned Mine Land (AML) reclamation projects; Coal Combustion Residual (CCR) disposal impoundments, landfills, and bottom ash settling ponds; municipal solid waste landfills; earthen dams; flood control structures; constructed wetlands; lined evaporation ponds; sediment basins; mine tailings impoundment closures; mine overburden stockpile closures; groundwater monitoring; and National Pollutant Discharge Elimination Discharge (NPDES) permitting and reporting for industrial facilities. His experience includes managing projects for the Pennsylvania Department of Environmental Protection Bureau of Abandoned Mine Reclamation (PADEP-BAMR).

Professional Experience

- Shawville North (Remedial) Project, PADEP-BAMR, Clearfield County, Pennsylvania. Project Manager. Responsibilities include guiding the design and engineering process; evaluating and developing design alternatives; maintaining meeting minutes for meetings and telephone conversations where decisions and directions were made for the project; preparing and maintaining a baseline schedule for the project; and general coordination with the PADEP-BAMR.
- West Newton Coal Logistics Embankment Stabilization Project, PADEP-BAMR, West Newton, Pennsylvania. Project Manager. Project involved geotechnical investigations and geophysical surveys to characterize the site, identifying the bottom of the impoundments, and estimating the slurry volumes in the impoundments. Cost estimates and grading plans were developed to evaluate options to stabilize the refuse embankment and impoundments with geosynthetic/coarse refuse cap systems, in-situ stabilization methods, and excavation and replacement methods. The design included a revegetation plan that utilized mineral CSA and topsoil amendments. The design was planned to accommodate solar development as a potential post-closure land use.
- Passive Acid Mine Drainage Treatment System Project, Pennsylvania. Program Manager. GAI evaluated a 2-cell passive treatment system consisting of a limestone bed vertical flow pond

and constructed wetland. GAI took samples of the wetland soils and completed laboratory analysis of the soils for various metal concentrations and assisted in maintenance recommendations for replacement of metal-laden soil substrate in certain parts of the wetland.

- CCR Landfill Closure and Environmental Compliance Support, Armstrong County, Pennsylvania. Program Manager. Closure plans and operational support services for three CCR facilities which cover a combined area of 250 acres. Closure plans include permitting through the PADEP Solid Waste and Clean Water Groups. Grading plans and specifications were developed to meet stormwater management requirements and provide a cover system that supports vegetative growth. Operations support services include evaluation and design of stormwater collection systems, seepage collection systems, and mine pool treatment systems.
- 300 Level Stockpile Reclamation Project. Project Engineer, Jerome, Arizona. Prepared construction drawings for a 30-acre mine stockpile reclamation site. Provided design support for the stockpile closure plan. The reclamation consisted of a soil cap and asphalt cap/parking lot design for the Town of Jerome. Prepared grading plans, parking lot paving plans, roadway improvement plans, and drainage improvements to manage impacted and non-impacted stormwater.
- Vulture Mill WQARF-Mine Consolidation Pile Design-Build, Arizona. Project Engineer. Designed a 10-acre tailings landfill that incorporated a 2-ft soil cap, sedimentation basin, and a riprap toe design for the 100-year floodplain scour protection. Calculated material quantities and cut and fill requirements and performed value engineering analysis to find extensive cost savings. Coordinated with Maricopa County Regulatory Agencies to obtain the required construction permits.
- Generating Station Pond Coal Combustion Residual (CCR) Repurpose and Pond Closure Project, West Virginia. CQA/CQC Inspector for subgrade soil geoliner, geocomposite, and fabric form grout, drainage fabric, fabric form placement, grout placement, soil excavation and placement, drainage system installment, compaction testing, erosion and settlement control, removal of CCR material.
- Loudoun County Solid Waste Management Facility Sequence IV Closure and Old Fill Landfill Mining Project, Loudoun County, Virginia. Project Manager. Performed Resident Engineer Services and served as CQA Engineer for the closure. Lead Project Engineer for the preparation of construction plans and specifications, including a landfill mining specification and permit variance for the project. (2014)
- Power Station Coal Pile Runoff Pond, Richmond, Indiana. Completed the design, permitting and construction quality assurance for a lined impoundment designed to control runoff from the 100-year storm from the facilities coal pile. The liner system included a prepared subgrade, GCL, HDPE liner, protective cushion geotextile and concrete uniform section matt. Design included a metering system, and caustic system to meet effluent water quality and flow metering criteria.
- Power Plant, West Virginia - Various CCR Landfill Design and CQA Services. Project Manager. Certifying Engineer and Project Manager for CQA services associated with the Construction of Cell 2 of the Phase A FGD By-Product Disposal Facility (Phase A). In addition, was the Project Manager responsible for preparing the Ash Site Development Operating Plan for the Phase B Ash Disposal Facility (Phase B) in 2015 and 2020. Also is the Certifying Engineer and Project Manager responsible for the numerous CCR Rule compliance reports and annual inspections for the Phase A and B Facilities.
- Bottom Ash Settling Ponds Retrofit, Pennsylvania. Project Manager. Conceptual engineering, design, and permitting replace a power station's existing bottom ash settling ponds for CCR Rule compliance. Design includes a PaDEP compliant Class 1 liner system and concrete protective cover system designed to facilitate future cleaning operations. The design included new leak detection manholes, new outlet structure with overflow weir troughs, new inlet flow splitter box, and new stainless-steel piping to sluice bottom ash from the station's hydrobins. Completed a Water Quality Management Permit Modification that was approved by PADEP to modify the ponds. Completed construction drawings and bid documents.

Affiliations

- Association of State Floodplain Managers; Pennsylvania Floodplain Managers Association; Western Pennsylvania Coalition for Abandoned Mine Reclamation

gai consultants

Blaise Genes

Project Advisor and QA/QC

Education

BS, Civil Engineering Technology, 1988, Point Park University

Certifications / Training

ACS SASSI Workshop, Monroeville, Pennsylvania, 2009

Geotechnical Aspects of Earthquake Engineering, SHAKE2000 Workshop, Sacramento, California, 2006

Seismic Design of Embankment and Tailings Dams, 1991

Skills

2D and 3D SASSI SSI Analyses of Seismic Category 1 and/or II Structures

Geotechnical and Foundation Engineering

Geotechnical Exploration & Instrumentation

Undrained Strength Analysis

Landslide Investigation and Remediation

Seismic Hazard Assessments

Seismic Stability and Permanent Deformation Analyses

Industry Experience

GAI Consultants, Inc., 2009-Present

Civil & Environmental Consultants, Inc., 2001-2009

Almes & Associates, Inc. 1991-2001

D'Appolonia, 1988-1991

Westinghouse Electric Corp., 1980-1988

Affiliations

United States Society of Dams, Tailings Committee Member

Professional Summary

Mr. Genes' pertinent experience includes implementing in-situ field and laboratory testing programs to characterize and develop undrained shear strength and consolidation properties of hydraulically-placed tailings, ash/sludge, soil and rock materials, and performing seismic hazard assessments, and static and seismic liquefaction triggering analyses of upstream-constructed coal refuse and ash/sludge impoundments.

Mr. Genes routinely develops and implements the in-situ field and laboratory testing programs at coal refuse and coal ash impoundments and performs the static and seismic analyses for the design and permitting of these structures. Mr. Genes is a co-author of Chapter 7 of the 2009 MSHA Engineering Design Manual, "Seismic Design: Stability and Deformation Analyses," published author of papers pertaining to the undrained strength behavior of tailings, and a United States Society of Dams, Tailings Committee member.

He routinely develops detailed field and laboratory testing programs, and estimates static and dynamic soil, rock, coal refuse and power plant ash waste material properties. Mr. Genes provides slope, foundation, retaining wall and ground improvement engineering designs, and prepares geotechnical reports, construction drawings and technical specifications.

Mr. Genes has performed design-build specialty geotechnical construction projects, which included design and construction of cantilevered retaining structures, soil and rock slope (landslide) remediation and ground improvement remediation such as excavation/replacement, deep dynamic compaction, surcharge loading and geogrid-reinforced foundations projects.

Professional Experience

- West Newton Refuse Embankment Stabilization Project, Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation (PADEP BAMR),Westmoreland County, Pennsylvania. In-Situ Field and Laboratory Testing Program Lead. The site has been declared an environmental and physical safety hazard as multiple surface water runoff points have been documented to be laden with abandoned mine drainage pollution and has had landslides during heavy rain events that have overrun the rails to trails path and sections of power distribution lines with mining debris.

- Hanover Reservoir Mine Fire Project, PADEP BAMR, Luzerne County, Pennsylvania. Project Manager. GAI is providing mining engineering services for the evaluation, data collection, project development, design, permitting, and construction administration relating to extinguishing an underground mine fire. The completed project will have the underground mine fire extinguished and eliminate public health and safety hazards associated with surface and underground mining within the AMLs, underground mine fires, and associated spoil piles and pits.
- Walkertown Coal Refuse Exploration Drilling Project, PADEP BAMR, Washington County, Pennsylvania. Project Manager. Responsible for project management and sonic drilling support including one Abandoned Mine Land Feature, a Priority 2 Dangerous Pile and Embankment, and Priority 2 Clogged Stream.
- Shawville North (Remedial Project), PADEP BAMR, Clearfield County, Pennsylvania. Geotechnical Engineer/Mining Advisor. Lead geotechnical field investigation to obtain geotechnical information used to develop design alternatives for the landslide mitigation. Oversaw development of the slope stability model and geotechnical engineering report for the project.
- Bens Creek Coal Refuse Pile Exploration Drilling Support Project, PADEP BAMR, Cambria County, Pennsylvania. Project Manager. Responsible for project management and sonic drilling support for this site. The project involved the reclamation of two pre-act AMLFs and met the Office of Surface Mining's criteria for a Priority 2 Dangerous Pile and Embankment (DPE) and a Priority 3 Gob (GO). GAI's scope included site preparation and restoration, sonic drilling, drilling oversight, drill sample preparation, and lab testing.
- Mining and Reclamation Plan and Permit Renewal Revisions, Washington County, Pennsylvania. Senior Project Manager for the preparation/modification of an existing coal refuse disposal permit for a 600-acre coal refuse disposal facility to prepare a 23-year material handling plan for 39 million tons of coarse and fine coal refuse to be excavated and used as a fuel feed-stock for a 300 mega-watt co-generation power plant. The permit modification included the beneficial use of, and 30-year reclamation plan for disposal of 59 million tons of ash materials from the power plant, which would be placed and compacted back on the coal refuse disposal area. Included the layout/sequencing of the site preparation, 1-, 2-, 5-, 10-, 15- 20-, 25- and 30-year phasing plans, erosion & sedimentation controls, interim refuse and final ash slope stability analyses, and preparation of the various PaDEP coal refuse disposal permit modules.
- Landslide Geotechnical Exploration and Conceptual Remediation Design, Upshur County, West Virginia. Geotechnical Engineering Lead and Task Manager. Technical and managerial responsibilities for providing retaining wall remediation alternatives and a conceptual remediation design for an approximate 600-foot-long section of railroad shoulder which had slipped downslope in a remote section of WV. Technical responsibilities included estimating rock compressive strengths from point load testing, rock ratings to estimate rock properties, and conceptual soldier pile and reinforced concrete lagging retaining wall design. Developed pile schedule and construction cost estimates. Results of the field, laboratory and engineering analyses were compiled and transmitted in a report.
- Landslide Remediation, Weirton, West Virginia. Geotechnical Engineering Lead. Following an approximate 3-acre major landslide, which destroyed one house at the toe, threatened another, and threatened the integrity of an existing soldier pile and timber lagging retaining wall and local road, an emergency landslide remediation was performed. Design and construction management responsibilities included coordinating the remediation with a local earthworks contractor to unload the hillside by removing slide debris, evaluating the stability of the existing retaining wall and constructing a rock key at the wall with a wall buttress to provide long-term slope and wall stability. Approximate 2-week remediation project required removing about 25,000 cubic yards of slide debris and constructing an approximate 5,000 cubic yard buttress.
- Shaft Landslide Geotechnical Exploration and Remediation Design, Pittsburgh, Pennsylvania. Geotechnical Engineering Lead and Task Manager. Responsibilities included an emergency action plan, a geotechnical investigation, remediation alternatives, and overseeing landslide remediation of an approximately two-acre slide on a heavily traveled state route. Work included field direction of contractors to open traffic lane, geotechnical field testing, remediation alternatives and costs, bid package including construction drawings and technical specifications and construction management of the landslide remediation.

Lee McCoy, PE

Assistant Project Manager

Education

BS, Civil Engineering, 1996, West Virginia Institute of Technology

Licenses/Registrations

Professional Engineer (PE): WV, KY, OH

Skills

Civil Engineering

Transportation Engineering

Site Development

Planning & Surveying

Professional Affiliations

American Society of Civil Engineers

Society of American Military Engineers

Association of State Flood Plain Managers

Industry Experience

GAI Consultants 2024-Present

Burgess & Niple, 2024

Triad Engineering, 2006-2024

Burchart Horn, 2002-2006

City of Charleston, 2000-2002

Benatec Associates, 1998-2000

Chester Engineers, 1996-1997

Professional Summary

Lee McCoy is a licensed Professional Engineer in West Virginia, Kentucky, and Ohio, with extensive experience in civil engineering, water resources engineering, and project management. He has experience managing and designing complex projects, including Abandoned Mine Lands (AMLs), solar fields, electric substations, service centers, and call center complexes. His expertise spans grading, drainage, stormwater management (SWM), erosion and sediment control (E&SC), and permitting. Mr. McCoy has successfully led projects with a wide variety of clients ranging from Power/Industry to Commercial Development and AMLs, demonstrating his skills in site layout, hydraulic and hydrologic studies, and construction administration. He is proficient in using CAD software, hydraulic modeling programs like EPANET, HEC-RAS, and GIS for mapping and analytics.

Professional Experience

- West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Abandoned Mine Lands and Reclamation (WVDEP-DLR-AML) Projects, Multiple Locations, West Virginia. Project Manager and Lead Designer. Mr. McCoy performed design and prepared construction plans for six projects across West Virginia for the WVDEP AML program. These projects included portal closure, refuse pile remediation, drainage design, access design, and treatment design. Following is a list of these projects Mr. McCoy worked on:
  - Belington Portals Project, Barbour County, West Virginia. Designed and managed the closure of multiple mine portals near Belington, addressing public safety hazards and improving water quality through targeted drainage and access improvements.
  - Coaldale Refuse Project, Mercer County, West Virginia. Led the remediation of a large coal refuse pile, including slope stabilization, erosion control, and surface water management to mitigate environmental impacts and restore the site.
  - Elk Creek Portals Project, Harrison County, West Virginia. Developed portal closure designs and drainage systems to reduce acid mine drainage impacts in the Elk Creek watershed, enhancing stream health and community safety.

  - Mullens Portals Project, Wyoming County, West Virginia. Oversaw the design and implementation of portal closures and stream restoration measures near Mullens, improving ecological conditions and reducing mine-related hazards.
  - Richardson Refuse / Rumble Portals Project, Logan County, West Virginia. Executed integrated designs for refuse pile remediation and portal closures, including access road planning and water treatment strategies to support long-term site stability.
  - Morris Creek AML Project, Fayette County, West Virginia. Designed acid mine drainage treatment systems and stream restoration features to rehabilitate the Morris Creek watershed, enhancing water quality and habitat conditions.

- Solar Field, Shelby, Ohio. As project manager and lead engineer, Mr. McCoy prepared construction drawings, other project documents and permitting for a 12-acre solar field in Shelby, Ohio. This project involved grading, drainage, permitting through the City of Shelby and permitting through the Ohio Environmental Protection Agency. Particularly challenging because the solar panels and equipment were installed with no civil design and drainage issues have become a problem. The design is being performed “around” the existing equipment.
- Substation Project, West Virginia. As Project Manager and Lead Designer, Mr. McCoy prepared construction documents for the construction of an electric substation in Cross Lanes, West Virginia. This project includes grading, drainage, design of a reinforced embankment, and design of an access road.
- Substation Improvements, Huntington, West Virginia. As Project Manager and Lead Civil Designer, Mr. McCoy performed civil site design and prepared construction site drawings for an expansion of the existing electric substation in Huntington, West Virginia. This included grading and drainage design, retaining wall design, general site layout and temporary erosion and sediment control. Project plans were prepared in accordance with client Site Preparation Guidelines as well as local development standards.
- Client Service Center, Mason County, West Virginia As Project Manager and Lead Civil Designer, Mr. McCoy worked with the client to develop property in Mason County, West Virginia into a service center with related parking and other site amenities. Mr. McCoy provided a preliminary layout and used the topographical survey provided by others to develop site plans for an early site package. The work required included earthwork, storm drainage and possible utility work. Included in the earlier site package was permit assistance with local and state authorities.
- Client Service Center, Hurricane, West Virginia As Project Manager and Lead Civil Designer, Mr. McCoy assisted in the client’s need to develop a property in Putnam County, West Virginia. Mr. McCoy used a previously provided design as a base design to perform his own signed and sealed construction documents. He also worked with Asphalt Contracts and Site Work (ACASW) to obtain the required site permits.
- Substation Project, Confidential Client, West Virginia. As Project Manager and Lead Designer, Mr. McCoy prepared construction documents for the construction of an electric substation in West Virginia. This project includes grading, drainage, and utilities. Also involved was a hydraulic and hydrologic study involving a nearby stream.
- Substation Project, Coshocton County, Ohio. As Project Manager and Lead Designer, Mr. McCoy provided the work required to construct an expansion of Chrome Station in Coshocton County, Ohio. This project included preliminary site reconnaissance, site layout design, grading and drainage design, stormwater management design, erosion and sediment control design, permitting, and a stormwater pollution prevention plan. As project manager, Mr. McCoy also incorporated new transmission structures, required work pads, and construction access into the design.

Shane Fisher, PE

Assistant Project Manager

Education

BS, Civil Engineering Technology, Fairmont State University, 2005

Registrations

Professional Engineer (PE): GA, MD, NJ, NY, NC, OH, PA, VA, WV, WI

Skills

Civil Engineering

Drainage System Engineering and Design

Bridge Analysis and Design

Erosion and Sediment Control Permitting

Stormwater Management Permitting

Certifications/Training

Plan Reviewer Certification, Virginia Department of Environmental Quality

OSHA 10-Hour Construction

Industry Experience

GAI Consultants, Inc., 2014-Present

West Virginia Department of Transportation, Division of Highways, 2008-2014

Potesta and Associates, 2005-2008

Glassworks WV, 2000-2002

Golden Bear Construction, 1996-1999

Teal Group Construction, 1992-1996

Affiliations

American Society of Highway Engineers

American Society of Civil Engineers, Past President, current Branch Vice President, current WV Section Vice President

WVU/WVDOH Partnership Fiber Reinforced Polymer Advisory Committee (formerly)

Professional Summary

Mr. Fisher specializes in civil engineering with experience in environmental permitting, the design and analysis of bridge structures, roadways, drainage systems, and sanitary and industrial water and wastewater systems. He is a Professional Engineer licensed in West Virginia and nine other states. His experience meeting Federal Emergency Management Act (FEMA) requirements includes flood mapping, floodplain compliance, and construction monitoring for disaster-related funds. He has most recently been managing Erosion and Sediment Control (E&SC), construction stormwater and roadway permitting duties for projects in both natural gas and overhead electric transmission lines in the Midwest, Mid-Atlantic, and Southeastern United States.

Mr. Fisher is skilled in MicroStation and InRoads for bridge and roadway design, and AutoCAD Civil 3D for preparing construction plans, grading, and civil site design. He also has experience as a construction superintendent and foreman, where he was responsible for coordinating laborers and preparing as-built drawings.

Professional Experience

- UNT #1 of Teter Creek In-Lieu-Fee (ILF) Project, West Virginia Department of Environmental Protection (WVDEP), Barbour County, West Virginia. Engineering Manager responsible for E&S oversight and environmental permitting for the implementation of Phase I (Site Acquisition) and Phase II (Pre-Construction Design) of the approved ILF Mitigation Site. GAI is responsible for land acquisition, easement, preparation/recording, survey, environmental baseline assessments, mitigation plan and design, permitting, and bidding document preparation.
- Water Systems Designs (Including Collection System Design/ Rehabilitation and Pump stations). Responsible for design and cost estimating for abandoned mine lands projects, sanitary and industrial wastewater projects, solid waste disposal facility design and permitting, and subdivision sewer system design (both gravity and pump station). Conducted environmental permitting, H&H analyses, and QA/QC monitoring. Developed E&SC plans, SWPPP, and Best Management Practice plans. FEMA work including Letter of Map Amendment (LOMA), flood mapping, floodplain management, and DFIRM database. Visualized and designed rain gardens, infiltration systems, and detention/retention ponds.

- Numerous site-specific E&SC plans and SWPPP preparation in West Virginia, Pennsylvania, and Ohio. Task Manager for the development of and completing E&SC Plans and SWPPP submission to the WVDEP for approval by the agency.
- Pipeline Project, Confidential Client, Upshur and Barbour Counties, West Virginia. Task Manager for roadway permitting, submitted to the West Virginia Department of Transportation, Division of Highways (WVDOH), and Stormwater Pollution Prevention Plan (SWPPP) preparation and submission to the West Virginia Department of Environmental Protection (WVDEP).
- Site-Specific E&S Control Plans and SWPPP Projects, Confidential Client, Pennsylvania, West Virginia, and Ohio. Task Manager for the development of and completing E&SC Plans and SWPPP submission to the WVDEP for approval by the agency.
- 5-mile and 18-mile 138kV Transmission Line Projects, Confidential Client, West Virginia. Task Manager for two new 138kV transmission line projects. Scope of work included roadway permitting, SWPPP development, site registration, and WVDEP submission.
- West Virginia Pipeline Project. Task Manager for roadway permitting, submitted to the WVDOH, and SWPPP preparation and submission to the WVDEP.
- Stabilization Project, Confidential Client, West Virginia. Assistant Engineering Manager. Responsible for peer review and oversight of the E&S drawings and the Project Plans. GAI completed design and permitting for the stabilization of approximately 340 linear feet of eroded streambank in West Virginia. Riprap protection (bank and toe) was designed at the areas experiencing erosion.
- Pennsylvania Compressor Station. Task Manager for preparation and submission of ESCGP-2 to PaDEP.
- Compressor Station, Confidential Client, Northampton County, Pennsylvania. Task Manager for preparation and submission of ESCGP-2 to the Pennsylvania Department of Environmental Protection (PaDEP).
- Streambank Restoration Project, Confidential Client, Western Pennsylvania. Responsible for peer review and oversight of the E&S drawings. GAI developed and prepared a streambank restoration stabilization plan with necessary plan sheets to fulfill the Client's obligations of restoring and monitoring approximately 435 linear feet of perennial streambank. After large rainfalls, approximately 42 feet of land had washed perpendicular to the streambank, causing a large unstable area along the property. To restore the bank and comply with all standards and permits associated with an adjacent pipeline, GAI worked with multiple local, state, and federal agencies to develop a plan for stabilization and acquire all necessary permits.
- Compressor Station and Electric Substation Project, Confidential Client, Prince William County, Virginia. Assistant Project Manager for E&S Control and stormwater management design and permitting for this compressor station and electric substation project. Responsible for development, submission, and subsequent approval for E&SC and SWM approval through the local Virginia Stormwater Management Program (VSMP) Authority.
- Pipeline Replacement Project, Confidential Energy Client, South Carolina. GAI provided environmental services related to FERC compliance for this pipeline replacement project located in South Carolina. GAI's client is proposing to replace mainline valve settings and cross over valves. GAI prepared a South Carolina Department of Health and Environmental Control Notice of Intent for coverage under the NPDES General Permit for Hydrostatic Test Water Discharges. GAI also performed an optional site-specific E&SC for the project to promote soil and water conservation and good faith construction practices.
- McMillan and Heinze ILF Projects, Wisconsin Department of Natural Resources (WIDNR), Columbia and Marathon Counties, Wisconsin. Project Manager. Responsible for E&S oversight and environmental permitting for the implementation of Phase I (Site Acquisition) and Phase II (Pre-Construction Design) of the approved ILF Mitigation Site. GAI responsible for land acquisition, easement, preparation/recording, survey, environmental baseline assessments, mitigation plan and design, permitting, and bidding document preparation.

Jeremy Young, PE, MS

Assistant Project Manager/Civil Engineer

Education

MS, Engineering Management, 2017, Marshall University

BS, Civil Engineering, 2012, Marshall University

Registrations

Professional Engineer (PE): WV – 2017, #22222

Skills

Civil Engineering

Post Construction Stormwater Management

Site Development

Erosion and Sediment Control

Environmental Data Collection

Specialized Knowledge/Training

Engineering Software – AutoCAD Civil 3D, AutoTurn, Hydraflow, WinTR-55, HY8

Industry Experience

GAI Consultants, Inc., 2011–2016; 2023–Present

RK&K, 2020–2022

Environmental Resources Management, 2016–2020

Professional Summary

Mr. Young is a detail-oriented Professional Engineer with 13 years of engineering-focused work experience. He is knowledgeable about the development of design drawings for site development, linear projects (natural gas and electric transmission), stormwater management, and roadway projects utilizing various computer aided design products. Mr. Young has led teams of multiple consultants and participated in agency meetings to achieve project goals.

Professional Experience

- Oldfield Branch (Hall) Drainage Project, West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Abandoned Mine Lands (WVDEP-DLR-AML), Naugatuck, Mingo County, West Virginia. Senior Project Engineer. GAI provided erosion and sediment control plans, design of access roads, design of drainage conveyances and underdrains, installation of mine seals, geotechnical investigation of landslide, landslide repair, design and construction documents.
- AML Water Feasibility Study, WVDEP-DLR-AML, Beckley, Raleigh County, West Virginia. Senior Project Engineer. Responsible for gathering water samples and plotting laboratory results on a Piper Diagram.
- Laurel Run Point AML Reclamation Project, WVDEP-DLR-AML, Laurel Run, Monongalia County, West Virginia. Senior Project Engineer. GAI provided AML reclamation, including design of access road, mine seals, bat gates, drainage control, highwall elimination, regrade refuse, and revegetation.
- AML Wheatley Branch (Luthy) Portals Project, WVDEP-DLR-AML, Chapmanville, West Viriginia. Senior Project Engineer. The scope of work involved several locations of abandoned trash piles, access road construction, 29 mine seals, and providing proper drainage control measures. GAI also prepared and obtained a Stormwater NPDES Permit, WVDOH MM-109 permits and a non-reporting nationwide COE 404 permit.
- EPA/WVDEP Compliance Sites, New Martinsville, Wetzel County, West Virginia. Senior Project Engineer.
- Landslide Evaluation Project, Logan County, West Virginia. Senior Project Engineer.
- Federal No. 2 Subsidence Control Plan Northern Reserves, Monongalia, West Virginia. Senior Project Engineer.

- Coalfield Development, West Virginia. Senior Project Engineer. Redevelopment of a 4-acre parcel site for the rehabilitation and reuse of an industrial facility.
- 138kV Line, West Virginia. Senior Project Engineer. Project replaced, retired, and modified several facilities. Provided environmental and cultural resource consulting services to evaluate the proposed efforts and assist with permitting and environmental clearances.
- Pipeline Project, Wetzel County, West Virginia. Senior Project Engineer. Project consisted of approximately 15,405 feet of new pipeline, 38,295 feet of access roads, and associated workspaces. Tasks include Environmental Field Review and Report, PCN Preparation, Threatened and Endangered Species Consultation, Cultural Resources Consultation and Report, and WVDEP Stormwater Permit Application.
- Residential Development, Fort Gay, West Virginia. Senior Project Engineer for a storm sewer upgrade. Project was previously completed by others but required additional storm sewer upgrades following project changes. Task was to complete drainage calculations for a new separate storm sewer connection for a building and parking lot, which was being retrofitted to become a residential development.
- Recreational Field Improvements, Huntington, West Virginia. Senior Project Engineer for a park revitalization project. The site was an existing park, which included two baseball fields and supporting facilities. The purpose of the project was to develop site, grading, stormwater management, and erosion and sediment control for the proposed park upgrades. National Pollutant Discharge Elimination System (NPDES) and MS4 permitting were required for this project.
- Medical Center Demolition, Wheeling, West Virginia. Senior Project Engineer for a demolition project involving removal of a dilapidated structure and related infrastructure. The site was to be turned into a temporary gravel lot to maintain existing site imperviousness. The purpose of the project was to permit the site as a temporary condition for a future building project. Work included plan development, grading, erosion and sediment (E&S) control, stormwater management, and NPDES permitting through WVDEP.
- Phase III Archaeological Study, Putnam County, West Virginia. Senior Project Engineer. Support of an archaeological study to clear a site in the Kanawha River Valley for new development. Project work included plan development, E&S control, NPDES permitting, and site construction monitoring.
- State Park Trail, Barbour County, West Virginia. Senior Project Engineer for a 0.75-mile trail designed to connect main road to river for emergency vehicles. Project work included trail plan development, grading, and drainage. Project drawings were developed using Openroads Designer.
- WV 45, West Virginia Department of Transportation, Division of Highways (WVDOH), Berkeley County, West Virginia. Senior Project Engineer for the widening of WV 45. Project work included intersection design, temporary traffic control, and maintenance of traffic. Drawings were developed in MicroStation.
- Confidential Electric Transmission Projects, West Virginia. Project Engineer for multiple projects and clients. Work included plan development, E&S control, and NPDES permitting. Projects generally included right-of-way clearing and the design of small sites for the tower locations.
- Confidential Access Road Projects, Virginia and West Virginia. Project Engineer for trail roads designed to local Department of Transportation specifications within Monongalia National and George Washington National Forests. Work included plan development, grading, drainage, E&S control, and permitting.
- Confidential Compressor Station and Supporting Facilities Projects, West Virginia. Project Engineer for multiple projects and clients. Included plan development, site grading, drainage, and E&S control.
- Confidential Electric Transmission Project, West Virginia. Project Engineer. Provided infrastructure upgrades for approximately 20 miles of transmission lines. Project also included new access roads to all the tower locations. Included construction monitoring and field engineering of E&S controls.
- Confidential Stream and Wetland Restoration Project, West Virginia. Project Engineer for multiple projects. Projects involved developing natural-looking streams and wetlands in areas where the natural streams and/or wetlands have been impacted due to construction activities.

David Blake, PE

Assistant Project Manager/Geotechnical Engineer

Education

BS, Mining Engineering, 2011, West Virginia University

Registrations

Professional Engineer (PE): WV, OH, PA, IN, NY, NJ, RI

Skills

Chemical Engineering

Geotechnical Engineering

Mining

Feasibility Studies

Simulations

Construction

Geology

Water Resource Management

Environmental Management

Programs: AutoCAD

Certifications / Training

OSHA 10-Hour Construction, 2014

SafeLandUSA Training, 2014

West Virginia Experienced Miner – Black Hat, 2013

Ohio Experienced Miner – Black Hat, 2012

Industry Experience

GAI Consultants, 2024-Present

Sixmo Architects, 2021-2024

ECS Limited, 2018-2021

Geo-Technology Associates, 2015

Triad Engineering, 2014-2015

Murray Energy Corporation, 2011-2014

Professional Summary

Mr. Blake holds a degree in Mining Engineering and is a licensed Professional Engineer in West Virginia and six additional states. His recent projects include creating a conceptual karst mitigation plan and providing civil site engineering support for substation construction. Previously, he served in various managerial and engineering roles, overseeing geotechnical evaluations, project management, and client engagement. Additionally, he has Black Hat certifications in mining in both West Virginia and Ohio.

Professional Experience

- Hanover Reservoir Mine Fire Project, PADEP-BAMR, Luzerne County, Pennsylvania. Mr. Blake provided review of the multiple-seem historic mine mapping within the anthracite basin fire burning since at least 1958. From the temperature sensor data he established a 12-acre grouting program and confirmed the boundary of mitigation efforts to suffocate the remaining burning coal across a 25-acre work area. He provided review of technical review and drafted specifications for earthwork and grouting. GAI is providing mining engineering services, providing comprehensive evaluation, data collection, project development, design, permitting, and construction administration relating to extinguishing the underground mine fire.
- 230kV Remediation Project, Pennsylvania. Engineering Manager I. Created a conceptional Karst mitigation plan after reviewing existing information and coordinating with Karst mitigation contractors for the Client's plans to install a new infrastructure within the footprint of an existing substation.
- Pond Substation Project, Pennsylvania. Engineering Manager I. Provided a topographic survey and support services, preliminary phase civil site engineering, design phase civil site engineering support, and geotechnical investigations for the construction of a new 2.2-acre substation located within 500 feet west from an existing substation.

Prior Experience

- Multiple Transmission Line Rebuilds, Luzerne, Columbia, Lackawanna Counties, Pennsylvania. Subject Matter Expert. Provided review of approximately 30-miles of electric transmission line reconstruction at structure locations to determine the susceptibility analysis for mine subsidence for up to 19 stacked coal seams with 14 separate historic mines at each location.

- Quick Service Restaurant Site, Scranton, Pennsylvania. Project Manager. Repeat client requested geotechnical evaluation of site for construction of quick service restaurant, upon initial evaluation it was discovered that the site was extensively undermined with limited overburden remaining. Based on mapping there was 15-30 ft of overburden remaining on site with extreme potential for subsidence. Client requested confirmation drilling to be performed which determined overburden was limited to 19 ft of rock with no soil structure on site between bottom of foundation and roof of mined area. Grouting plan was designed to stabilize site and allow construction. Client elected to sell site to 3rd party; 3rd party requested additional evaluation to confirm conditions and utilized myself as subject matter expert regarding mine subsidence.
- Oil-Gas Dual Well Pad (Confidential), Batesville, Ohio. Project Manager. Provided evaluation of site conditions of post reclamation surface mining for the construction of two asymmetrical 4.5-acre well pads. Each pad encountered differing subsurface conditions including ~20 vertical feet of buried trees, transition across highwall, mine spoil exceeding 120 vertical feet. To achieve settlement requirements deep dynamic compaction in addition to localized over-excavation and replacement depending upon the end use at each location. Access road was designed for use of full-depth reclamation (soil cement) improvements.
- Oil-Gas Pipeline (Confidential), Clarksburg, West Virginia. Project Manager. Performed field evaluation of mine subsidence conditions and confirmed historic mine features to coordinate with mapped historic mining within the Clarksburg, WV area. Prepared contingency package if inundated mine workings were breached during geotechnical drilling, evaluated potential additional settlement from proposed earthwork operations, coordinated access and site meetings with client. (Project was suspended following completed geotechnical evaluation).
- Director of Site Services, Sixmo Architects & Engineers. Responsible for coordinating opportunities for growth and expansion of Client. Duties included client engagement, operations organization, and client success.
- Senior Project Manager, ECS Limited. Performed geotechnical engineering evaluations.
- Project Manager, Geo-Technology Associates. With the assistance of a team of Geotechnical experts, performed all sides of geotechnical, slope stability, foundation bearing, construction observation-testing, and pavement analysis and design.
- Geotechnical Engineer, Triad Engineering. Coordinated project scheduling, operations and business development. Created proposals, engineering reports and field investigation plans.
- Mining Engineering Intern, American Energy Corporation – Murray Energy Corporation Subsidiary. Completed training rotations through all sections of mine operations, assisted roof scopes in difficult conditions, budget planning. Learned all portions of the underground mining experience from some of the best operators around as well as assist expert engineers with planning and processes.
- Senior Drafter, West Virginia University. Completed as-built revisions, assisted project managers in contractor coordination, design new standard teaching lectern for university.
- Environmental Engineering Intern, Massey Energy. Prepared wide variety of environmental permits, prepare mine projections and assist with drafting needs.
- Engineering Intern, Whitlock Dalrymple Poston & Associates. Laboratory soil testing and inspections.

gai consultants

Abeera Batool, PhD, PE

Lead Geotechnical Engineer

Education

PhD, Civil Engineering, 2013, Virginia Polytechnic Institute and State University

MS, Civil Engineering, 2009, Virginia Polytechnic Institute and State University

BS, Civil Engineering, 2007, University of Engineering and Technology (UET)

Registrations

Professional Engineer: CA – 2017, #87687

Skills

Site Characterization

Foundation Engineering

Geotechnical Earthquake Engineering

Seepage and Slope Stability

Mine Tailings

Certifications / Training

Envision™ Sustainability Professional Credential (ENV SP)

Languages

Urdu (native), English (excellent), Punjabi (excellent), Hindi (spoken)

Industry Experience

GAI Consultants, 2015-Present

Arup, 2013-2015

Virginia Polytechnic Institute and State University, 2008-2013

Affiliations

Deep Foundation Institute (DFI) - Women in Deep Foundation Committee

GeoProfessional Business Association (GBA) - Diversity and Inclusion Committee

Professional Summary

Dr. Batool specializes in various aspects of geotechnical engineering including site characterization, developing geotechnical design parameters, design of shallow and deep foundations, retaining walls, and support of excavation. Her expertise includes advanced seepage and loading rate analyses of upstream constructed tailings dams, including stability and seismic evaluations. She also has experience in design of landslide remediations, management of geotechnical information for green infrastructure projects, and providing on-site construction supervision.

Dr. Batool is an experienced user in Slope/W, SEEP/W, GSTABL, Rocscience Slide and Phase-2, SNAIL, COMSOL, GRLWEAP, LPILE, PILE GROUP 2, MFAD, MATHCAD, MS Office, Sigma Plot, and Grapher.

Professional Experience

- Shawville North (Remedial) Project, Pennsylvania Department of Environmental Protection (PADEP), Bureau of Abandoned Mine Reclamation (BAMR), Clearfield County, Pennsylvania. Responsible for the coordination to obtain additional geotechnical data; preparing the geotechnical engineering report, including the evaluation of slide stabilization alternatives; and providing recommendations. GAI is providing mining engineering services for this reclamation project that consists of one pre-act Abandoned Mine Land Feature (AMLF) and meets the Office of Surface Mining criteria for a Priority 2 Dangerous Slide.
- Walkertown Coal Refuse Pile Exploration Drilling Support Project, PADEP-BAMR, Washington County, Pennsylvania. Responsible for the coordination and summarizing the data for the project, consisting of one AMLF. GAI is providing mining engineering services for this project, which meets the Office of Surface Mining's criteria for a Priority 2 Dangerous Pile and Embankment and Priority 2 Clogged Stream.
- Hanover Reservoir Mine Fire Project, PADEP-BAMR, Luzerne County, Pennsylvania. Responsible for reviewing existing data, drilling coordination and summarizing and interpreting the data for installed instrumentation, as well as any applicable analyses for the project. GAI is providing mining engineering services, providing comprehensive evaluation, data collection, project development, design, permitting, and construction administration relating to extinguishing the underground mine fire.

- Bens Creek Coal Refuse Pile Exploration Drilling Support Project, PADEP-BAMR, Cambria County, Pennsylvania. The project involved the reclamation of two pre-act AMLFs and met the Office of Surface Mining's criteria for a Priority 2 Dangerous Pile and Embankment (DPE) and a Priority 3 Gob (GO). Responsible for the coordination and summarizing the geotechnical data for the project.
- Confidential Mine Refuse Disposal Facilities Projects, Confidential Client, Pennsylvania, West Virginia, Kentucky, and Illinois. Geotechnical Engineer. Responsibilities included: developing and evaluating field and laboratory testing programs/results; evaluating static and dynamic properties of coal refuse; performing material characterization studies; performing advanced seepage and construction loading rate analyses; performing post-earthquake slope stability analyses and the factors of safety against liquefaction flow failure; determining yield accelerations for estimating permanent deformations; developing piezometric action/warning levels based on tolerable excess pore pressures during construction for field monitoring; summarizing project data and calculation briefs in written reports and oral presentations of the field test results, laboratory testing, analytical results, and conclusions to the client and regulatory agencies. These projects included existing/proposed 100 to 400-foot high, high-hazard, upstream-constructed coal refuse and Coal Combustion By-product (CCB) tailings impoundments.
- Nitro City Park Streambank Restoration Project, City of Nitro, Kanawha County, West Virginia. Geotechnical Engineer. Responsibilities included preparing the geotechnical report for Kanawha River streambank stabilization, which consisted of development of soil parameters from available data, and slope stability analyses, along with stability recommendations.
- Tamarack Lake Dam A and Dam B, Pennsylvania Department of General Services (PADGS), Bureau of Engineering and Architecture, Crawford County, Pennsylvania. Responsible for updating seepage and stability models to address comments from various agencies, and match the actual site conditions during construction. This involved performing sliding analysis for both Dams A and B for updated thickness and position of blanket drain, and updating the phreatic surfaces in stability analysis to match the observed piezometer readings. Updated seepage analyses to model the sand trench and associated gradients to address various construction and leakage problems, as well as comparing the model to the piezometer readings for any potential piping and sand boil issues.
- Bradford Dam Number 2 Rehabilitation Project, Bradford City Water Authority, Bradford, Pennsylvania. Geotechnical Engineer. GAI conducted a subsurface investigation for the dam, consisting of soil borings, piezometer installation, and Cone Penetrometer and Dilatometer Testing. Selected soil samples were submitted for laboratory analysis. Geotechnical analyses consisted of stability runs, seepage models, settlement analysis, and bearing capacity and were used to design rehabilitation measures to upgrade the dam to current standards. To avoid impacting the historic existing spillway, the dam was designed to overtop during a Probable Maximum Flood (PMF) event and remain stable under the resulting hydraulic loads.
- US Steel Annandale Archive Facility, Pennsylvania. Geotechnical Engineer. Responsibilities included mine visit to access the existing conditions, review of old mine data, developing the field investigation plan, and review of the field data to develop the systematic procedures for inspecting the limestone mine roof and ribs of the Facility.
- Confidential Power Plant Project, Confidential Client, West Virginia. Geotechnical Engineer. The Project involved the design of the two soil nail walls to support a North Area Sediment Collection Pond, North Area Leachate Holding Basin, an active Treatment System, and Service Road. The North Soil Nail Wall is approximately 1,075 ft long with a maximum exposed height of 74 ft, and the South Soil Nail Wall is approximately 380 ft long with a maximum exposed height of 41 ft. Responsibilities included checking of SnailzWIN analysis of North Wall, as well as investigation of effect of clay-filled joint on stability of the wall.

Chelsea Lyle, PG, MS

Geology/Mining Lead

Education

MS, Geology, 2014, Kent State University

BA, Geological Sciences, 2010, State University of New York

BA, Adolescence Education, 2010, State University of New York

Registrations

Professional Geologist (PG): PA

Skills

Subsurface Explorations and Investigations

Global Positioning Systems (GPS)

Geologic mapping

Development of Soil and Rock Parameters

Certifications/Training

OSHA 10-Hour Construction, 2021

Industry Experience

GAI Consultants, Inc., 2015-Present

Oyster Bay-East Norwich Central School District, 2011-2015 (Part-time Substitute Teacher)

Kent State University, 2011-2013 (Teaching Assistant)

State University of New York, 2009-2010 (Teaching Assistant)

Affiliations

Association of Environmental and Engineering Geologists (AEG), Greater Pittsburgh Chapter Vice Chair

Professional Summary

Ms. Lyle specializes in engineering geology. She has experience with geotechnical subsurface investigations, including site reconnaissance characterizations, subsurface boring and sampling, geologic mapping, and soil and rock core selection for lab analysis. Ms. Lyle has a variety of industry experience that includes transmission line sighting and design, substations, compressor stations, landslides, pipelines, bridges, roadways, and mine subsidence.

Professional Experience

- Coal Mine Grouting Verification Project, Pennsylvania. This work involved exploratory drilling for maintenance facility buildings to confirm quality of fill material placement and to verify post grouting conditions from a mine stabilization program. Duties included subsurface investigation and data report preparation.
- Mine Stabilization Monitoring During Construction of a Water Transmission Line, Westmoreland County, Pennsylvania. Project involved researching site's geology and mining history, as well as monitoring drilling of boreholes along the site to determine which locations encountered abandoned mine workings and/or voids beneath the proposed water transmission line. Boreholes that encountered mine opening were then injected with a low slump concrete to reduce the potential of sinkhole subsidence.
- Supervised geotechnical drilling as a PennDOT Certified Drilling Inspector for six mine grout verification projects in Washington and Allegheny County, Pennsylvania. Exploratory drilling was required to verify post-grouting conditions from a mine stabilization program and to retrieve samples of the grout stabilization for visual inspection. This involved monitoring drilling and sampling operations, collecting water levels, and observing a Downhole Digital Video Camera to observe grout and mine conditions.
- Subsurface Investigations Projects, West Virginia, Pennsylvania, New York, Virginia, Kentucky, and Nevada. Geotechnical Drilling Monitor. This involved site characterization, subsurface boring and sampling, and soil and rock core selection for lab analysis. Development of geologic cross sections using available boring logs, geological literature, maps, and site reconnaissance.
- Soil and Rock Parameter Project. Developed soil and rock parameters from field investigation, corrected blow count values, and soil and rock material to be used in slope stability. Performed slope stability analysis using GSTABL7.

- Eclipse Bottom Bridge Preliminary Engineering and Final Design, West Virginia Department of Transportation, Division of Highways (WVDOH), McDowell County, West Virginia. Geotechnical Support. GAI was retained to design a new bridge for Eclipse Bottom Bridge in McDowell County. The proposed bridge will provide primary access to an area of the town of Bradshaw referred to as Eclipse Bottom. Eclipse Bottom, in the Town of Bradshaw, can only be accessed by way of a single lane, private road constructed adjacent to an active Norfolk Southern railway line. The proposed bridge uses a new roadway alignment that crosses Dry Fork upstream of the remains of an old pedestrian bridge. The proposed bridge will require construction of approximately 160 ft of new roadway and approximately 400 ft of mill and overlay. The proposed bridge will be approximately 215 ft long, with a clear width of 24 ft and no sidewalk. The structure will be a two-span structure. The existing private road will remain in service during construction to maintain traffic.
- Infiltration Calculations, Pennsylvania. Used data collected from infiltration testing to perform infiltration calculations in accordance with the Pennsylvania Department of Environmental Protection (PADEP) Stormwater Best Management Practices Manual. These calculation results were used for design of infiltration ponds.
- Multiple Landslide Projects for PennDOT District 4-0, Wayne County, Pennsylvania. Inclinometer monitoring and site reconnaissance in three active landslide locations along the Delaware River in to determine slope movement/stability and help determine possible remediation options. Analysis was performed using DigiPro2. Responsible for collecting inclinometer readings and slope stability analysis.
- PennDOT Certified Drilling Inspector, Various Projects, Pennsylvania. Responsible for preparing soil, geologic, and hydrologic setting reports. Prepare geotechnical boring logs and fences using gINT software.
- Supervised a long-term geotechnical drilling investigation for a 38-mile-long transmission line rebuild project in Virginia. The exploration purpose was to obtain subsurface conditions for the design of foundations for double circuit steel monopole structures. This involved a site reconnaissance of the entire transmission line, monitoring drilling and sampling operations, collecting water levels, and selecting soil and rock cores for lab analysis. Soil samples included soil jars, shelby tubes, and bulk samples. Selected locations for seismic refraction testing to be performed at select structure locations to estimate the depth to bedrock where drill rig access was not possible.
- Inclinometer monitoring and site reconnaissance in three active landslide locations along the Delaware River in Wayne County, Pennsylvania to determine slope movement/stability and help determine possible remediation options. Analysis was performed using DigiPro2.
- Supervised monitoring well installations and abandonments as part of landfill groundwater monitoring programs. Responsible for subsurface investigation, directing well construction, creating monitoring well logs, and report writing.
- Recorded construction foundation logs for drilled shafts for a transmission line rebuild project. Log records included recording top of competent rock, length of sockets, total depth of drilled shaft, depth of groundwater, and soil stratifications. Monitored construction activities in order to verify drilled shafts were consistent with design specifications.
- Monitored Geotechnical Drilling for Subsurface Investigations in Pennsylvania, New York, West Virginia, Virginia, Kentucky, and Nevada. This involved site characterization, subsurface boring and sampling, and soil and rock core selection for lab analysis. Development of geologic cross sections using available boring logs, geological literature, maps, and site reconnaissance.
- Supervised Drilling Activities in Karstic terrains in Pennsylvania. Responsibilities included site reconnaissance, lead inspector for multiple drilling rigs, subsurface boring and sampling monitoring, selecting laboratory samples, and finalizing drilling logs.

gai consultants

D. Ian Webster, PE

Civil Engineering Lead

Education

BS, Civil Engineering, 2013, Mathematics Minor, West Virginia University Institute of Technology, *magna cum laude*

Registrations

Professional Engineer (PE): WV, KY, NC, TN, VA

Skills

Erosion and Sedimentation Control

Hydrologic and Hydraulic Design

FEMA regulations

NPDES permitting

Stormwater Systems

Programs: MicroStation/InRoads, OpenRoads, HEC-RAS, HEC-HMS, StormCAD, Aquaveo – WMS/SMS, HY-8, Hydraulic Toolbox, STAAD

Industry Experience

GAI Consultants, 2022-2023, 2023-Present

WRA, 2022-2023

WVDOH, 2015-2021

CDI Engineering Solutions, 2015

WVDOH, 2013-2015

Professional Summary

Mr. Webster has been involved in the analysis, design and review of West Virginia Department of Transportation, Division of Highways' (WVDOH) drainage projects, including but not limited to bridges, stormwater systems, retention and sediment ponds, roadway drainage and natural stream design. His nine years of experience includes preparing, Hydrologic and Hydraulic design and reports, Federal Emergency Management Agency (FEMA) no-rise floodplain certificates, National Pollutant Discharge Elimination System (NPDES) permits, and roadway and Right-of-Way (ROW) plans.

Professional Experience

- Belle (Sneed) Drainage Project, West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Abandoned Mine Lands and Reclamation (WVDEP-DLR-AML), Kanawha County, West Virginia. Senior Project Engineer. GAI is providing geotechnical investigations and analyses; designing access for construction and future maintenance access; Hydrologic and Hydraulic (H&H) analyses; installation of drainage channels, underdrains, and/or other controls to safely convey water off-site; revegetation of all disturbed areas; and required permitting.
- Landslide Management Tool Project, WVDOH, West Virginia. Project Lead. Developed a statewide landslide database using input from the 10 WVDOH Districts. Created a risk assessment tool in Microsoft Excel that calculates a risk score based on input information. Information was then routinely compiled and plotted in ESRI ArcMap to be reported to WVDOH management to help make data driven decisions on which locations to repair and when to repair them.
- Bridge Replacement Projects, WVDOH, West Virginia. Hydraulics and Drainage Engineer. Performed H&H analysis and design for numerous WVDOH bridge replacement jobs, including HEC-RAS 1-dimensional steady and unsteady models, H&H reports, No-rise floodplain certificates, NPDES permitting work, scour analysis, temporary causeway design and consultant and district review of similar work.
- Huff Bridge Replacement Project, WVDOH, Wetzel County, West Virginia. Project Manager. Performed both 1- and 2-dimensional hydraulic analysis, using HEC-RAS and SMS, respectively; designed roadway geometry and preliminary structural beam design; and developed PFR and RW plans.

- Technical Advice/Review, WVDOH, West Virginia. Instructor/Reviewer. Worked for the WVDOH Hydraulics and Drainage Unit providing instruction and technical presentations related to drainage topics such as hydrologic analysis, culvert design, HEC-RAS, bridge deck drainage and more. Answered technical questions and assisted WVDOH district level engineers with drainage topics. Reviewed consult design projects drainage computations on projects such as, Beckley Z-Way, Arcadia Springs Development, Ralston Branch Bridge, The Jug, Wetzel County, West Virginia 2-dimensional hydraulic analysis, etc.
- Beaver Creek Drainage Project, WVDOH, Raleigh County, West Virginia. Project Manager. This project included the replacement of a collapsed/failed 48-inch metal culvert. The new culvert had to be anchored into rock due to the severe slope of the ground. Developed and delivered PS&E plans.
- Chemical Building Retrofit Project, Kanawha County, West Virginia. Civil/Structural Engineer. Modeled building in Institute, West Virginia in STAAD using original Union Carbide plans. Analyzed adding new equipment to the building and made structural recommendations based on the results.
- Nitro I/C Drainage Project, WVDOH, Kanawha County, West Virginia. Drainage Design Lead. Performed H&H design to address ponding that led to hydroplaning on Interstate 64 West Bound. Detailed LiDAR data was used to find the breakover points in the curves to know where to install slotted drains. A collector pipe was also designed to be slip lined and a dumped rock gutter was added to address erosion at the pipe outfall. Assisted in the development of design plans.
- South Kanawha Street Project, WVDOH, Upshur County, West Virginia. Drainage Design Lead. Performed H&H analysis and design to upgrade the existing stormwater drainage system on West Virginia Route 20. The existing system was inadequate and failing. Followed WVDOH procedures and policy to design a new stormwater system that could handle the 10-year design storm and meet the WVDOH requirements for maximum allowable spread of water into the roadway.
- Glenville Roundabout Project, WVDOH, Gilmer County, West Virginia. Drainage Design Lead. As the drainage design lead, Mr. Webster was responsible for developing a 70% design for a stormwater drainage system to drain water from a new roundabout that was to be constructed. Following WVDOH design guidelines and procedures, the drainage network was designed to meet WVDOH maximum spread requirements for a 10-year storm event. Mr. Webster utilized Bentley Microstation, inroads, and StormCAD to develop design and plan sheets for the project.
- Drainage Investigations, WVDOH, Multiple Counties, West Virginia. While employed by the WVDOH, Mr. Webster served as a technical lead for the WVDOH Engineering Division providing services to the WVDOH Legal Team in multiple drainage and flooding complaints. He was responsible for visiting the site locations, analyzing the storm events, and determining the cause of the complaint. A summary of findings and recommended solutions and course of action was then prepared in a report to provide to the WVDOH Legal Team.
- Fredericksburg Design Build Bundle Project, Virginia Department of Transportation (VDOT), Gloucester County, Virginia. Drainage Lead. As an employee of Whitman Requardt & Associates Mr. Webster served as a drainage lead for the Fredericksburg Design Build Bundle. This project replaced 4 bridges within Gloucester County, Virginia. Two of the four bridges were controlled by coastal flooding, while two were controlled by riverine flooding. Mr. Webster was tasked with performing an H&H analysis using HEC-RAS to show the proposed bridges would cause no adverse flooding effects. He was also responsible for performing a scour analysis or assessment for three of the bridges. Upon completion of the analysis, Mr. Webster provided an H&H report.

Mary Beth Berkes, PE, MS

H&H Engineering/Stream Restoration Practice Lead

Education

MS, Civil Engineering, Concentration in Coastal and Ocean Engineering, 2010, Oregon State University

BS, Civil Engineering, 2008, University of Pittsburgh

Registrations

Professional Engineer (PE): IN, KY, OH, PA, WI, WV

Certifications/Training

Rosgen I: Applied Fluvial Geomorphology, MT, 2016

Rosgen II: River Morphology and Applications, NC, 2017

Rosgen III: River Assessment and Monitoring, WV, 2018

Rosgen IV: River Restoration and Natural Channel Design, CO, 2019

Skills

Stream Restoration

Hydrology and Hydraulics

Dam Design and Hydraulic Analysis

Stream and Wetland Mitigation Design

Awards

2018 Young Professional of the Year – Society of American Military Engineers

Industry Experience

GAI Consultants, Inc., 2010-Present

Oregon State University, Civil Engineering Department, 2008-2010

University of Pittsburgh, 2008

University of Notre Dame, 2007

Professional Summary

Ms. Berkes specializes in hydrologic and hydraulic (H&H) design for stream restoration, wetland mitigation, and streambank stabilization projects. She also has extensive experience H&H analyses for bridge and culvert replacements, inundation studies and investigations, and design of hydraulic structures. She has completed formal training on Natural Channel (Rosgen Levels I through IV) and completed a multi-dimensional modeling for stream restoration training through North Carolina State University. Her training resume also includes H&H permitting and procedures and advanced HEC-RAS and scour analyses. She is proficient in HEC-RAS, HY-8, HEC-HMS, Hydraflow Hydrographs, DamSites, PondPack, StormCAD, and AutoCAD.

Professional Experience

- UNT #1 of Teter Creek In-Lieu-Fee (ILF) Project, West Virginia Department of Environmental Protection (WVDEP), Barbour County, West Virginia. Civil Engineer for the implementation of Phase I (Site Acquisition) and Phase II (Pre-Construction Design) of the approved ILF Mitigation Site. Deliverables included design and hydraulic modeling for over 5,700 linear feet of Level 1 Restoration or Establishment, 4,900 linear feet of Level 3 Restoration, and 2,500 linear feet of enhancement. Design drawing package of 56 sheets included plan, profile, and cross section views for 29 streams along with design tables, a site planting plan and details, and details for in-stream structures, culvert replacements, and ford crossings. Co-led an on-site pre-bid meeting, responded to contractor questions, and assisted WVDEP with review of contractor bids.
- Streambank Restoration Project, West Virginia. Project Manager. GAI developed and prepared a streambank restoration stabilization plan with necessary plan sheets to fulfill the Client's obligations of restoring and monitoring approximately 100 linear feet of perennial streambank. GAI prepared a H&H Analyses Report for Stabilization Design and Floodplain Assessment along with a bank restoration and stabilization plan to support permitting and construction. Led development of construction support documents including bid forms, quantity estimates, and material specifications and ran on-site pre-bid and pre-construction meetings. Conducted construction observation and led coordination with survey for stakeout and as-built certification.
- On- and Off-Site Restoration and Mitigation Plan, West Virginia. GAI is responsible for collecting physical, chemical, and biological data necessary for calculation of Ohio Stream and Wetland Valuation Metric and preparation of the Conceptual Mitigation Plan.

- Unnamed Tributary of a Creek Stream Restoration Project, West Virginia. Project Manager. Designed on-site stream relocation using natural channel design (NCD) methods. Design challenges included working within a constrained environment due to an adjacent roadway in the stream's floodway. GAI developed a mitigation and restoration plan which provided enough Stream and Wetland Valuation Metric credits to offset the debits, resulting in 256-feet of stream restoration. Led development of construction support documents including bid forms, quantity estimates, and material specifications and ran on-site pre-bid and pre-construction meetings. GAI conducted construction observation, developed final as-built survey, and is currently conducting annual monitoring and reporting.
- Stream and Culvert Restoration, West Virginia. Project Manager. Designed on-site stream relocation using natural channel design (NCD) methods. Design challenges included working within a constrained environment due to an adjacent roadway and undersized existing culvert to be replaced. GAI developed a mitigation and restoration plan which provided enough Stream and Wetland Valuation Metric credits to offset the debits, resulting in 115-feet of stream restoration. Led development of construction support documents including bid forms, quantity estimates, and material specifications and ran on-site pre-bid and pre-construction meetings. GAI conducted construction observation, developed final as-built survey, and is currently conducting annual monitoring and reporting.
- Stream Restoration Design for nine on-site permittee responsible mitigation (PRM) projects across West Virginia. Solutions for stream restoration or stabilization were designed to offset alleged impacts from previous development. Stream restoration design included use of natural channel design and fluvial geomorphology based methodologies as practical considering site constraints due to surrounding roadways and/or steep topography. Deliverables included hydraulic modeling to assess shear stress and sediment transport, design of structures for grade control and bank stabilization, and preparation of design reports and drawings. Work at two sites included leading of on-site pre-bid and pre-construction meetings, coordinating construction observation efforts and as-built surveys, and conducting annual monitoring.
- Culvert Extension H&H Evaluations, Confidential Roadway Client, Bedford County, Pennsylvania. Five culverts will be extended due to proposed widening of the roadway. The extensions were designed to meet Federal Emergency Management Agency (FEMA), Pennsylvania Department of Environmental Protection (PaDEP), and Pennsylvania Department of Transportation (PennDOT) design criteria, and several culverts were proposed to slip-lined due to their deteriorating interior. The upstream and downstream extensions were modeled in HY-8 to evaluate headwater and velocity, and the entire culvert system was modeled using HEC-22 methodology to evaluate losses of the manholes connecting the culvert system.
- Heinze Mitigation Project, Wisconsin Department of Natural Resources, Columbia County, Wisconsin. Project Engineer responsible for creation of grading, planting, and mitigation plan drawings and details. Hydrologic design for the site utilized two-dimensional hydraulic modeling to assess existing flow patterns which were driven by agriculture, irrigation, and drainage tiles and proposed flow patterns after fill of ditches and limited bank excavation. Site design also required one-dimensional hydraulic modeling to demonstrate that the proposed site would not cause an increase in base flood elevation due its location in a FEMA Special Flood Hazard Area (SFHA). Responsibilities at the site also included leading an on-site pre-bid meeting, evaluating contractor questions and bids, contractor selection, and leading preparation of as-built drawings. GAI was also responsible for land acquisition, easement, preparation/recording, survey, environmental baseline assessments, permitting, bidding document preparation, construction observation, and site maintenance and monitoring.

Relevant Publications

2024 Berkes, M.B., Stream Restoration Solutions for Challenging Environments. In: Kleinmann, B., Skousen, J., Wolkersdorfer, Ch.: West Virginia Task Force & 15th Internation Mine Water Association Congress. -p. 43-49; Morgantown, WV, USA.

Valerie Clarkston, CE, CWB®, MS

Environmental Science Lead

Education

MS, Wildlife Science, 2011, Purdue University

BS, Wildlife Science, 2008, Purdue University

Skills

Environmental Site Assessments

Endangered species surveys

Project Management

Wildlife surveying

Environmental studies

Aquatic resource delineations

Certifications / Training

Certified Ecologist (CE) - Ecological Society of America, 2018

Certified Wildlife Biologist (CWB®), 2019

Phase 1 Environmental Site Assessment (ESA) Training, 2024

OSHA 24-Hour HAZWOPER Training, 2021

Mexican Spotted Owl Training, USFWS, 2019

Industry Experience

GAI Consultants, 2024-Present

Environmental Solutions & Innovations, Inc., 2012-2024

Purdue University, 2008-2011

US Fish & Wildlife Service, 2010

USDA Forest Service, Pacific Northwest Research Station, 2010

Professional Summary

Ms. Clarkston is an accomplished Assistant Environmental Manager that has excelled in managing multidisciplinary projects across the Southeast, Mid-Atlantic, and Midwest regions of the United States, including throughout the state of West Virginia. Her expertise spans natural gas, electric transmission, municipal facilities, real estate developments, and renewable energy projects. Ms. Clarkston has experience preparing project scopes and cost estimates, maintaining budgets and schedules, coordinating field investigations, and leading siting investigations for solar and wind energy projects. She is a Certified Ecologist (CE) and Certified Wildlife Biologist (CWB®) and has extensive training in Environmental Site Assessments (ESAs), endangered species consultation, and hazardous materials handling. Her field experience includes various wildlife survey techniques and environmental compliance efforts, ensuring the successful execution of complex environmental projects.

Professional Experience

- Pipeline Project, Tyler County, West Virginia. Project Manager. Emergency request for bat emergence counts at four trees within hillside slip area along an existing pipeline.
- Municipal Complex, Mercer County, West Virginia. Project Manager. Aquatic resource delineations for a proposed 35-acre multipurpose development project.
- Solar Project, Boone and Raleigh Counties, West Virginia. Project Manager Cultural resources desktop, aquatic resource delineation, and protected species habitat assessments for a proposed 724-acre solar development.
- Natural Gas Pipeline Project, Doddridge County, West Virginia. Project Manager. State and federal agency coordination for Rare, Threatened, and Endangered (RTE) species, freshwater mussel surveys, and detailed bat habitat assessments on a proposed 4.0-mile buried permanent gas pipeline.
- Panhandle Central Waterline Project, Brooke and Ohio Counties, West Virginia. Project Manager. Annual monitoring of traditional two-chambered bat boxes and rocket boxes and biennial acoustic surveys to fulfill conservation measures for a waterline.
- Solar Project, Somerset County, Pennsylvania. Project Manager. Presence/probable absence summer mist net surveys and detailed habitat assessments for federally and state-listed bats on a proposed 298-acre solar renewable energy expansion and generation development.

- Transmission Line Extension Project, Marshall County, West Virginia. Project Manager. Aquatic resource delineation, cultural resources desktop and Phase I field investigations, bald eagle nest survey, and mist net and portal search surveys for federally and state listed bats along approximately 8 miles of electric transmission line extension.
- Transmission Line Rebuild Projects, Marshall County, West Virginia. Project Manager. Aquatic resource delineation, cultural resources desktop, Phase I field investigations, bald eagle nest surveys, and mist net and portal search surveys and federally and state listed bats along approximately 8.7-miles of electric transmission line rebuild.
- Well Pad Project, Doddridge County, West Virginia. Project Manager. Determined quantity and quality of potential Indiana and northern long-eared bat habitat and completed emergence counts at nine potential roost trees associated with the decommissioning of two water impoundments and a well site expansion.
- Well Pad Project, Wetzel County, West Virginia. Project Manager. Mist net surveys for federally listed bats within a 57.6-acre natural gas well pad site.
- Well Line Projects, Wetzel County, West Virginia. Project Manager. Construction, installation, and 2-year monitoring of traditional two-chambered bat boxes and rocket boxes to fulfill conservation measures for two natural gas pipelines.
- Expressway Project, Wyoming County, West Virginia. Project Manager. Mist net surveys for federally listed bats along an approximate 62-mile highway improvement.
- Solar Project, Isle of Wight and Surry Counties, West Virginia. Project Manager. Presence/probable absence summer mist net surveys for federally and state-listed bats on a proposed 1,437-acre solar power generation facility.
- Well and Water Containment Pad Project, Tyler and Wetzel Counties, West Virginia. Project Manager. Mist net surveys for federally listed bats within a 66-acre well and water containment pad.
- Solar Project, Twiggs County, Georgia. Project Manager. Phase I Environmental Assessment (EA), cultural resources, protected species desktop and habitat surveys, and aquatic resource delineations for a proposed 734-acre solar development.
- Solar Project, Venango County, Pennsylvania. Project Manager. Phase I EA, cultural resources, protected species desktop and habitual surveys, and aquatic resource delineations for a proposed 487-acre solar site.
- Solar Project, Dale County, Alabama. Project Manager. Phase I EA, cultural resources, protected species desktop and habitat surveys, and aquatic resource delineations for a proposed 840-acre solar development.
- Solar Project, Crawford County, Pennsylvania. Project Manager. Phase I EA, cultural resources, protected species desktop and habitat surveys, and aquatic resource delineations for a proposed 314-acre solar site.
- Solar Project, Duplin County, North Carolina. Project Manager. Phase I EA, cultural resources, protected species desktop and habitat surveys, and aquatic resource delineations for a proposed 891-acre solar site.
- Battery Energy Storage System (BESS) Project, Hidalgo County, Texas. Project Manager. Phase I EA, cultural resources, protected species desktop and habitat surveys, and aquatic resource delineation for a proposed 23-acre solar BESS.
- Solar Project, Kershaw County, South Carolina. Project Manager. Phase I EA, cultural resources, protected species desktop and habitat surveys, and aquatic resource delineations for a proposed 941-acre solar site.
- Solar Project, Jackson County, Ohio. Assistant Project Manager. Hibernacula search, harp trap, and mist net surveys for federally and state listed bats within a 2,082-acre proposed solar development.
- Development Project, Cuyahoga County, Ohio. Project Manager. Mist net surveys for federally and state listed bats within a 33-acre area commercial development.
- Natural Gas Pipeline Project, Mist net surveys for federally listed bats along a 5.8-mile natural gas pipeline.

Adam Mann, MS

Endangered Species Biologist / Environmental Manager

Education

MS, Biology, 2007, Marshall University

BA, Biology, 1997, Thomas More College

Skills

Biology and Wildlife Zoology

Endangered Species Surveys

Habitat Assessments

Certifications / Training

Federally permitted bat biologist

State-permitted bat biologist and approved bat surveyor: CT, GA, IN, IL, KY, MD, MO, NJ, NY, OH, PA, TN, VA, and WV

Qualified Indiana Bat Surveyor: PA

Approved Surveyor of Bats: VA

Rosgen I: Applied Fluvial Geomorphology, Asheville, NC, 2004

Rosgen II: River Morphology and Applications, Franklin, NC, 2005

PADI Advanced Open-Water Diver

Wildlife Acoustics – Bat Acoustics Training Course

ODOT Ecological Training

USFWS – Interagency Consultation for Endangered Species

USFWS – Acoustical Monitoring for Indiana Bats

Industry Experience

GAI Consultants, 2012-Present

Environmental Solutions & Innovations, Inc. (ESI), 2003-2012

Marshall University, 2001-2003

Professional Summary

Mr. Mann specializes in wildlife zoology with a diverse background in herpetology, ornithology, ichthyology, and mammalogy. He has been involved in a variety of aquatic and terrestrial ecology research positions, working closely with bats, amphibians, reptiles, fish, mussels, birds, and aquatic invertebrates. He is familiar with the physiology, taxonomy, and ecology of many extant vertebrates and terrestrial plants. Mr. Mann has completed surveys for a wide variety of species in the eastern United States.

Mr. Mann's project management experience includes coordinating multiple field survey teams, maintaining contact with clients and regulatory agencies, and producing all necessary follow-up documentation. Many of these projects concern federally listed or proposed bat species as well as state listed species. Mr. Mann is a federally permitted bat biologist and has held state permits and conducted projects within numerous states in the ranges of Indiana bats (*Myotis sodalis*), northern long-eared bats (*Myotis septentrionalis*), and tricolored bats (*Perimyotis subflavus*). Since 2003, He has managed and conducted a diverse array of field studies for bats and possesses expertise in the following areas:

- Mist net and harp trap surveys: site reconnaissance, mist net set up, bat handling, eastern bat species identification (including all threatened and endangered species), and morphometric processing
- Radio-telemetry surveys: transmitter attachment, diurnal roost and nocturnal foraging telemetry, aerial radio-telemetry via fixed-wing aircraft, roost tree assessments, and emergence surveys
- Acoustic monitoring: detector set up, detector monitoring and maintenance, and data compilation and analysis
- Habitat assessments: evaluation of summer and winter habitat suitability, identification of potential roost trees, bridge and other roost structure surveys
- Winter hibernacula surveys: Indiana bat and northern long-eared bat hibernacula population inventories
- Mitigation and Conservation Measures: design, construction, installation, and monitoring of artificial roosts

Professional Experience

- 46kV Transmission Line Project, West Virginia. Managed project involving summer mist netting, mine portal searches, and acoustic monitoring near mine portals in West Virginia.
- Pennsylvania Department of Environmental Protection (PaDEP) Abandoned Mine Surveys. Completed harp trap surveys for federal and state listed bat species at 12 abandoned mine portals located in areas of future commercial development in Eastern Pennsylvania. Led a team of two biologists, whose purpose was to document the presence/absence of federal and state listed bats during autumn swarming, and to determine if bats are using the portals as hibernacula. Completed mine assessments, bat habitat assessments; trap set-up, bat handling and identification, and Anabat sampling.
- Pipeline Expansion Project, West Virginia. Performed Indiana bat habitat assessment, abandoned mine portal searches, and mist net site reconnaissance at numerous well sites in a natural gas storage field.
- 138kV Transmission Line Rebuild Projects, all part of a larger area improvements project, West Virginia and Virginia. Managed all bat studies on approximately 100 miles of improvement projects. Project tasks included net site reconnaissance, mist netting, transmitter attachment, radio-tracking, portal searches, fall portal harp trapping, and habitat assessments. Performed harp trapping field efforts, coordinated with clients and agencies, and produced technical reports and Bat Conservation Plans.
- 138kV Extension Projects, West Virginia. Managed portal search, mist netting, and bat habitat assessments along numerous stretches of transmission line corridors and associated access roads.
- Surface Mine Project, Virginia. Managed a summer mist netting survey for the federally-endangered Indiana bat, gray bat, and Virginia big-eared bat on a 285-acre mine site.
- Pipeline Project, Kentucky. Conducted Indiana bat potential roost tree and habitat assessments along a proposed 68-mile natural gas transmission line in Kentucky. Conducted abandoned mine portal search by walking the alignment of the line to assess nearby mines for potential winter bat habitat.
- Lewisburg Mine Winter Hibernaculum Survey, for the ODNR. Identified and counted all bats and recorded microclimate data for a large portion of the mine. Documented several hundred bats of five different species, including the Indiana bat.
- Power Station Coal Combustion By-product (CCB) Pond Closures, Virginia. Managed mist net survey for northern long-eared bat. Coordinated efforts, analyzed data, and produced technical report.
- Pipeline Project, Pennsylvania. Managed bat studies for natural gas pipeline. Project tasks included portal searches, habitat assessments and conservation plan. Coordinated with the client, agency, and field staff and conducted all associated reporting.
- Coordinated efforts to perform counts of hibernating bats in Lewisburg Mine, the largest Indiana bat hibernaculum in Ohio for the Ohio Department of Natural Resources (ODNR). Interacted with federal and state agencies, coordinated with the landowner, organized volunteer participation, and directed production of yearly reports.

Affiliations

Bat Working Groups: Northeast, Ohio, Kentucky, Midwest

Southeast Bat Diversity Network

Partners in Amphibian and Reptile Conservation (PARC)

Greater Cincinnati Herpetological Society

Kelly Hockersmith, RPA, MA

Cultural Resources Director

Education

MA, Applied Anthropology, 2004, University of South Florida

BA, Anthropology and Psychology, 2001, Heidelberg University

Registrations

Register of Professional Archaeologists (RPA) #15792

Skills

Project Management

Historical Archaeology

Environmental Permitting

Phase I, II, & III Archaeological Investigations

SHPO and Native American Consultation

Affiliations

Southeastern Archaeological Conference

Society for American Archaeology

Tennessee Council for Professional Archaeology

National Association of Environmental Professionals Women's Energy Network

Industry Experience

GAI Consultants, 2024-Present

Previous Experience, 2002, 2024, including POWER Engineers, TRC, SEARCH, AECOM, other

Professional Summary

Ms. Hockersmith has managed cultural resources projects throughout the Southeast, Midwest, Mid-Atlantic, and Southwestern United States in various federal, state, municipal, and private sectors. Ms. Hockersmith's qualifications exceed those set forth by the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716-42) with specialization in the management of and quality control for energy and transportation projects. Her areas of specialization include managing open-end agreements with a focus on staffing, scheduling, quality and cost controls, technical report preparation, and State Historic Preservation Office (SHPO) and Native American consultation.

She has more than 20 years of experience conducting and managing all aspects of historical archaeology and Section 106 and 110 [National Historic Preservation Act (NHPA)] compliance investigations. This includes the completion of National Environmental Policy Act (NEPA), NHPA, Section 4(f), and Federal Energy Regulatory Commission (FERC) compliance documents, feasibility studies, Phase I, Phase II, and Phase III archaeological investigations, criteria of effect evaluations, programmatic and memorandum of agreements, integrated cultural resources management plans, and historic preservation plans.
Ms. Hockersmith is also familiar with the Native American Graves Protection and Repatriation Act (NAGPRA), Archaeological Resources Protection Act (ARPA), and U.S. Army Corps of Engineers (USACE) permitting.

Professional Experience

- 99MW Solar Facility, Jefferson County, West Virginia. Project Manager. GAI performed a Phase Ia Cultural Resources Reconnaissance and a Phase I Cultural Resources Survey (archaeological and architectural resources surveys) of approximately 950 acres of land pro-posed for future solar development. GAI's tasks included background research, Phase Ia pedestrian reconnaissance and documentation, West Virginia Division of Arts, Culture, and History Consultation (WVDACH), Architectural Survey and Effects Report, consultation with interested local historic preservation organizations, and development of a Memorandum of Agreement (MOA) due to an adverse effect on the viewshed of three historic districts and two properties that have been determined eligible for inclusion in the NRHP.

- Pipeline Project, 17 Counties in West Virginia and Virginia. Project Manager. Cultural resources inventory surveys, NRHP evaluations, data recovery investigations, variance reporting, and archaeological monitoring.
- Pipeline Project, Ohio, West Virginia, Pennsylvania, and Michigan. Project Archaeologist. Coordinated Phase I surveys of 700 miles of natural gas pipeline and writing support for the FERC Resource Report 4.
- Abandonment and Capacity Restoration Project, Ohio, Kentucky, Tennessee, Arkansas, Mississippi, Louisiana, and Texas. Supported cultural resources inventory surveys and NRHP evaluations.
- Thirty Tracts Associated with a Fossil Plant Coal Combustion Products (CCP) Property Acquisition Project, Tennessee. Principal Investigator. Conducted Phase I survey, artifact analysis, and report writing.
- Geophysical Investigations within a Potential Coal Combustion Landfill Site, Alabama. Field Director. Performed a Phase I survey, artifact analysis, and report writing. Project encompassed 360 acres.
- Proposed Stream Crossings at Subdivision, USACE Nashville District, Williamson County, Tennessee. Principal Investigator. Performed Phase I survey, artifact analysis, and report writing.
- Electrical Transmission Project, James City County, Virginia. Project Manager. Provided comprehensive cultural resource management services to support the client's and the USACE Norfolk District's preparation of an Environmental Impact Statement for the project.
- 115kV Transmission Line Rebuild Project, Western Pennsylvania. Project Manager. Environmental support services for an approximately 157-mile transmission line rebuild project. GAI performed archaeological and historic architectural surveys of a study corridor, including 92 miles of access roads and up to five 10-acre contractor yards. Phase I tasks included background research, archaeological and architectural and historical resources field surveys, artifact analysis and curation, and reporting per Pennsylvania SHPO guidelines.
- 30-mile Pipeline Project. Cultural Resources Task Lead. Provided cultural resources survey and reporting support for USACE and Louisiana Coastal Use permitting. Project included a 30-mile hydrogen pipeline.
- Pipeline Expansion Project, Simpson and Jefferson Davis counties, Mississippi. Provided cultural resources field and reporting support for FERC permitting. Project included natural gas storage facilities, raw water well pads, and a booster compression station.
- Mixed-Use Development, Nashville, Davidson County, Tennessee. Project Manager. Directed archaeological monitoring and reporting. Archaeological monitoring resulted in the identification of human remains.
- 165-mile Natural Gas Pipeline Project, Louisiana. Senior Project Manager. Provided cultural resources field support and reporting for this project. The project crosses land under the jurisdiction of the USACE Vicksburg, Fort Worth, Galveston, and New Orleans Districts and consists of an approximate 165-mile natural gas pipeline.
- State Route Bridge Replacement, Giles County, Tennessee. Senior Project Manager. Phase I archeological assessment over 11 acres, one previously recorded site, and one newly recorded archeological site.
- Tennessee Valley Authority Union-Carbide Project, Montgomery County, Tennessee and Todd County, Kentucky. Principal Investigator. Conducted a Phase I cultural resources survey for the project. The Lead Federal agency was Tennessee Valley Authority (TVA), and four newly recorded sites were documented during the investigation.
- Fossil Plant Soil Borrow Areas, Proposed Pond Spillway Improvements Project, Ash Management Expansion Area, Tennessee. Principal Investigator. Performed Phase I surveys and report writing.
- Fossil Plant Retirement Project, Alabama. Field Director. Phase I survey, artifact analysis, and reporting.
- Buffington Island Battlefield Fort Laurens Park George Roger Clark Park Battle of Fallen Timbers Site Johnson's Island Civil War Depot and River Raisin/French Town Massacre, Heidelberg University, Ohio and Michigan. Field Technician. Performed metal detection surveys, shovel testing, test unit excavation, archival research, and artifact analysis.

JT Sutton

Construction Management Lead

Education

BA, Anthropology, 1991, West Virginia University

Registrations

HAZWOPER: 40-hour Hazardous Materials Training. Certified 2003, 2004, 2005, 2008

Confined Space Entry and Awareness Training. Certified

Subpart S: Underground Construction and Coffer Dams Training. Certified

ISO 9001:2000 Internal Quality Management Systems Auditor.

Certified by Lloyd's Register Quality Services 2007

Certifications / Training

Introduction to Federal Projects and Historic Preservation Law, GSA Interagency Training Center

ODOT Section 106/National Register Eligibility Training, ODOT

Section 106 in the New Regulatory Environment, SRI Foundation

Previous Industry Experience

GAI Consultants, 2008-Present

KCI Technologies, Inc., 1999-2008

Big Blue Archaeological Research, LLC, 1997-1998

West Virginia State Historic Preservation Office, 1995-1997

KCI Technologies, Inc., 1990-1995

Professional Summary

Mr. Sutton has nearly 30 years of specializing in the management and protection of environmental resources throughout Ohio, Pennsylvania, West Virginia, Virginia, Kentucky, Georgia, Maine, Vermont and Maryland.

Professional Experience

Senior Construction Support Specialist (2017-Present)

- Responsibilities include the scheduling and management of a group of Environmental Inspectors involved in the field inspection of active construction and post-construction projects located within West Virginia and Ohio. Also responsible for Client coordination on upcoming project permitting and in-progress and post-construction project activities, as well as relaying compliance issues identified as part of project inspections. Other duties include continuing personal inspection on-going projects to identify issues of environmental non-compliance as applicable under State and Federal Regulations and Permitting. Results of these inspections findings were utilized in the preparation of project specific reports for submission to Clients. In addition, these findings of deficiencies were often relayed to project contractors and used to help develop corrective measures to these deficiencies. In addition, serves as a direct liaison between WVDEP inspectors and Energy Client representatives.

Environmental Inspector (2015-2017)

- Field inspection of active construction and post-construction energy projects located within West Virginia. Duties include the field inspection of various projects to identify issues of environmental non-compliance as applicable under State and Federal Regulations and Permitting. Results of these inspections findings were utilized in the preparation of project specific reports for submission to Clients. In addition, these findings of deficiencies were often relayed to project contractors and used to help develop corrective measures to these deficiencies.

Project Archaeologist (2008-2015)

- Responsibilities included the application of National Historic Preservation Act criteria, as well as various state conservation and protection statutes, to numerous categories of projects throughout the Mid-Atlantic Region. Duties ranged from the preparation of Initial Consultation packages for agency submission through Phase I, II and III work-plan development and field implementation and final report preparation. Included are projects initiated by both private and public-sector organizations.

Cultural Resources Manager (1999-2008)

- Field evaluation for and subsequent reporting of resources impacts related from mining, pipeline, transportation expansion, cell tower construction and public/commercial development throughout West Virginia, Pennsylvania, Maryland, Virginia, Georgia and Ohio.

Cultural Resources Compliance Specialist (1997-1998)

- Responsibilities included the review of impacts of proposed mining-related activities throughout West Virginia. These impacts were associated with both proposed, permit-related mining activities by private firms, as well as reclamation activities being conducted by the Abandoned Mine Lands Section of the West Virginia Department of Environmental Protections.

Field Technician (1990-1997)

- Conducting cultural resources compliance projects throughout West Virginia, Pennsylvania, Virginia, Maryland, Ohio, Maine, and Vermont

gai consultants

Michael Holbert, PE

Roadway and Traffic Engineering Lead

Education

BS, Civil Engineering (Summa Cum Laude), 1996, West Virginia University

Licenses/Registrations

Professional Engineer (PE): WV, MD, PA

Skills

Transportation and Roadway Engineering

Surveying

Previous Industry Experience

GAI Consultants, 2018-Present

AECOM, 2003–2018

Thrasher Engineering, Inc., 2002–2003

Hannah & Associates, Inc., 1999–2002

WVDOT, Division of Highways District 1, 1997–1999

Professional Summary

Mr. Holbert, a Professional Engineer licensed in West Virginia, Pennsylvania, and Maryland, serves as Assistant Engineering Director in GAI's Northeast Transportation group. Over the course of 28 years in transportation and roadway engineering, he has contributed to the development of plans, specifications, and cost estimates, as well as design studies, preliminary engineering, and final design for a wide range of bridge and roadway projects. His work has supported organizations such as the West Virginia Department of Transportation, Division of Highways (WVDOH); Pennsylvania Department of Transportation (PennDOT); Pittsburgh Regional Transit; Maryland Department of Transportation State Highway Administration (MDOT SHA); City of Morgantown; Marshall University; Virginia Railway Express; and ENSR.

Professional Experience

- White Avenue Slip, City of Morgantown, Morgantown, West Virginia. Project Manager. A landslide occurred near 672 White Avenue in February 2019, causing a section of the road embankment, including a portion of the travel lane, to drop significantly. The landslide was approximately 70 feet long within an area that had previously been identified as landslide prone and had minor landslide repairs in the past. Approximately 1,000 vehicles per day use White Avenue and the width varies between 11 to 20 feet. GAI was engaged to provide engineering services associated with the stabilization of the hillside, road repair, drainage upgrades, and remediation below the landslide. GAI investigated the cause of the landslide and proposed remediation options. GAI also conducted further on-site investigations to determine the exact condition and size of the landslide and to determine if additional areas along White Avenue were impacted and at risk of similar movements.
- Upper Gassaway Bridge Replacement, WVDOH, District 7, Gassaway, West Virginia. Lead Roadway Engineer responsible for roadway, traffic, right-of-way (ROW), utilities, and drainage design. The GAI team was selected to provide engineering services for replacing an existing 4-span bridge comprised of simple-span trusses over the Elk River. The existing bridge is 330 feet, 6 inches long and has many challenges like federally endangered mussels, close proximity of utilities, tight right-of-way (ROW), and existing roadway geometry. The proposed replacement structure is a multibeam continuous curved plate girder on drilled shaft piers and integral abutments.

- Hutchinson Truss Bridge Replacement, WVDOT/DOH, Hutchinson, West Virginia. Lead Roadway Engineer. GAI was selected by WVDOH to develop Preliminary Investigation & Engineering (PIE) study, contract plans, and other documents for the replacement of Hutchinson Truss. This project includes submission of a categorical exclusion evaluation. The bridge carries Marion County Route (CR) 90/3 over the West Fork River and is located approximately 0.03 miles east of US 19 in Marion County. The study consisted of the preparation of feasibility reports/studies and construction estimates for various alternatives, along with any subsequent surveying, mapping, and geotechnical engineering work that was necessary to develop a design study, contract plans, and right-of-way acquisition plans. The proposed replacement structure is a multi-girder 3-span continuous plate girder bridge on single drilled shaft piers and semi-integral abutments being built 500 ft upstream of the existing bridge. The proposed bridge will be 338 ft in length with a main span of 155 ft. The existing bridge has been closed due to its condition. Alternate roadways to the back side of the community will provide service during construction.
- Eclipse Bottom Bridge, WVDOT/DOH, McDowell County, West Virginia. Project Manager. GAI was retained by WVDOH to design a new bridge for Eclipse Bottom Bridge in McDowell County. The proposed bridge will provide primary access to an area of the town of Bradshaw referred to as Eclipse Bottom. Eclipse Bottom, in the Town of Bradshaw, can only be accessed by way of a single lane, private road constructed adjacent to an active Norfolk Southern railway line. The proposed bridge uses a new roadway alignment that crosses Dry Fork upstream of the remains of an old pedestrian bridge. The proposed bridge will require construction of approximately 160 ft of new roadway and approximately 400 ft of mill and overlay. The proposed bridge will be approximately 215 ft long, with a clear width of 24 ft and no sidewalk. The structure will be a two-span structure. The existing private road will remain in service during construction to maintain traffic.
- J.C. Cruikshank Memorial Bridge Replacement (CR 46), WVDOH, District 7, Clay County, West Virginia. Lead Roadway Engineer responsible for roadway, traffic, right-of-way (ROW), utilities, and drainage design. The GAI was selected to conduct a design study for replacing an existing 4-span bridge over the Elk River. The existing bridge is 338 feet, 6 inches long. The study evaluated an upstream replacement alternative, a down-stream replacement alternative, and an alternative that was to rehabilitate the existing structure.
- Ohio Bridge Replacement Project. Lead Roadway Engineer. GAI performed design and preparation of contract plans and related documents for the Bridge Replacement Project in Ohio. The replacement structure is anticipated to be adjacent concrete box beams with a mounted guardrail. There is anticipated to have to stub abutments on piling. GAI also prepared a hydraulic analysis of the stream to estimate the potential impact to the Base Flood Elevation of the stream, resulting from construction of the proposed structure replacement. The hydraulic analyses was prepared with HEC-RAS software, utilizing stream channel geometry collected from field survey data, and considered the existing and/or current conditions of the stream, as well as the final proposed configuration of the structure replacement. Finally, GAI prepared a topographic survey and base mapping for this project, which included locating existing utilities (distribution and service laterals), hydraulic cross sections, guardrails, mailboxes, septic tanks, drain fields, water wells, signs, existing drainage structures and pipes, pavement type identification, building structure type identification, sidewalk and parking area identities, and property line locations. GAI's services included roadway and bridge design, preparation of contract plans, hydraulic analysis, topographic survey, and base mapping.
- Weirton Steel Overpass Rehabilitation, Final Design, WVDOH, Hancock County, West Virginia. Lead Roadway Engineer. Prepared a design study report for the WVDOH to determine the most suitable and economical alternate for the rehabilitation of the overpass bridge, a 1,428-ft-long structure. Included in the report was also an assessment of the South Main Street Bridge, an approximately 366-ft-long, single-span structure that adjoins the south end of overpass bridge. GAI recommended that the overpass bridge be removed and replaced with a new 4-lane roadway supported by retaining walls, beginning at the north abutment of the South Main Street Bridge, and transitioning to a roadway at grade through the 4-way intersection formed by WV 2 and WV 105. The new roadway will feature widened lanes and sidewalks to better accommodate motorists and pedestrians. The project includes the design of a new right-turn lane into an office park just north of the intersection of WV 2 and WV 105. GAI's services for the new roadway and turn lanes include the design of construction plans and right-of-way plans, survey, geotechnical, utility coordination, traffic engineering, NEPA documentation, and natural and cultural resources.

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Michael Owens, GISP®

GIS/Mapping Lead

Education

BS, Information Science, 2005, University of Pittsburgh

Skills

Geographic Information Systems (GIS)

Enterprise GIS

Mobile GIS

Global Positioning Systems (GPS)

Databases

Certifications / Training

ArcGIS Enterprise: Configuring a Base Deployment, 2018

Geographic Information Systems Professional (GISP), 2015

Esri Certified Desktop Associate, 2014

Management and Leadership Skills Training, GAI Consultants, Inc., 2013

Advanced Project Management Training, GAI Consultants, Inc., 2013

Risk Management Training, GAI Consultants, Inc., 2012

Building Geodatabases, Esri, 2010

Introduction to the Multiuser Geodatabase, Esri, 2010

Industry Experience

GAI Consultants, Inc., 2006-Present

Dominion, 2006

Professional Summary

Mr. Owens specializes in designing and maintaining Geographic Information Systems (GIS) using Esri ArcGIS for Desktop and ArcGIS Enterprise, including Server and Portal, and SDE databases. As GIS Group Manager for GAI's Energy-focused Business Sectors/Units, he oversees the development and quality control of production mapping, spatial data collection and analysis, and web and mobile GIS solutions. Michael is a proficient user, developer, and administrator of Esri ArcGIS Enterprise (Portal) and Online organizations, Field Maps (Collector) workflows, and Survey123 for ArcGIS applications. He also oversees the development and deployment of custom GIS applications and tools, map and geoprocessing services, and databases. Mr. Owens uses his 15+ years of technological experience and Information Technology (IT) background to further develop, implement, and manage: adherence to client-specific geospatial data standards; efficient and accurate data collection and analysis strategies; and technical quality assurance for 200+ noteworthy gas pipeline, electric transmission, renewable energy, and infrastructure projects.

He is an experienced Project Manager and Task Manager, with a focus on projects that require advanced GIS technical skills, ad-hoc GIS professional services, and on-site GIS staff augmentation. He manages a fleet of Trimble GPS equipment, including software and firmware updates as required, and provides technical support for mobile GIS applications for GAI's technical disciplines, such as the Environmental, Cultural Resources, and various Engineering groups. Mr. Owens leads in the development, implementation, and quality control of data and workflow management systems for: legacy (historical) data migrations, project management, assets/facilities management, and agency compliance monitoring. As GAI's Practice Area Leader for GIS in the Northeast region, he is responsible for: maintaining and improving quality standards for GIS; coordinating and working together with the IT and its vendors to optimize GIS software/hardware deployments; advancing GIS use with internal and external clients; and attending local, regional, and national seminars and conferences to remain engaged with the GIS community and help ensure that GAI is servicing our clients using the latest applicable technology and best practices.

Professional Services

- Environmental Due Diligence Projects. GIS Technical Leader for the analysis of property parcels and lease tracts to aid in the determination of risk factors associated with natural gas development. Acquires publicly available datasets from federal/state/local agencies to overlay with the proposed lease tracts in order to determine potential siting constraints and rank leases based upon the assessed overall risk factors. Datasets include environmental (stream, wetland, and floodplain), geologic, existing oil and gas permits and wells, mining permits and existing mine boundaries/operations, and federal/state reported site contaminations, leaks, and spills. Enhances risk assessment with a visual analysis of each lease tract by searching for additional constraints such as commercial/industrial sites, major roads/railroads, schools, hospitals, and airports. Develops a series of maps to be used in conjunction with the risk assessment table for meetings and decision making by key team members.
- Wind Farm Project, Confidential Client, Pennsylvania. Senior GIS Specialist for the development and analysis of mine maps, environmental impacts, soils maps, land cover maps, endangered species habitat maps, and watershed maps.
- 114-Mile, 500kV Power Transmission Line Project, West Virginia. GIS Specialist and 3D Designer. A sensitivity study was performed by GAI for the proposed construction of 114 miles of 500kV power transmission line, along with associated access roads, staging and pulling/tensioning areas. Using data from recorded archaeological sites within one mile of the proposed right-of-way (ROW), GAI developed a model for classifying a particular location relative to its sensitivity or potential for the presence of previously unknown archaeological resources.
- Romney Bridge Project, West Virginia Department of Transportation, Division of Highways. Analyzed GIS data and calculated the potential impacts for the Romney Bridge report. Accumulated data from various sources, including CADD files, georeferenced imagery, and shapefiles. Used ArcGIS Desktop to calculate the lengths and acreage of various impacted environmental features. The calculations were essential in determining if permits should be obtained.
- 37-Mile Natural Gas Pipeline Project, Ohio and West Virginia. GIS Task Manager and Assistant GIS Technical Leader for a 37-mile natural gas pipeline connecting West Virginia and Ohio systems. Responsible for the coordination and management of GIS/GPS data and mapping for environmental field work, data processing and validation, geospatial data acquisition and metadata documentation, geodatabase development and management, Federal Energy Regulatory Commission (FERC) Application environmental resource reports (GIS analysis), state-level environmental permit reports (GIS analysis), and provides quality control with technical oversight on various project tasks.
- 60-Mile Pipeline Removal and Replacement Project, West Virginia and Kentucky. GIS Task Manager and GPS Specialist. In fulfillment of USACE permitting requirements, GAI conducted Phase I archaeological and geomorphological investigations of the 60-mile pipeline removal and replacement project.
- Pennsylvania Agency Storage Tank Database. Developed a database and integrated GIS maps for our client's facilities and Pennsylvania Department of Environmental Protection (PADEP) compliance monitoring. Database Specialist & Lead GIS Specialist. Developed a secure web-based database to load the information gathered into an asset management system for client use. The system gives users the ability to create, track, and view facilities, storage tanks, and facility inspection dates and results and integrates document management tools for storing and viewing permits, specifications documents, etc. Designed an interactive GIS map for the system which allows users to view the locations of client facilities based on topographic, aerial, or road atlas maps. Client routes and districts are highlighted, and facilities are linked with information from the database allowing users to interact with the map and obtain information without searching or querying the database. Continuing to work with the client by maintaining facility inspection information and mapping new facilities.
- GIS Support Services Projects. Task Manager and Project GIS Specialist for 20 Project sites. Reviewed shapefiles and mapping provided by the Client for the development and analysis of siting constraints, such as mining, wetlands, waterbodies, roadways, structures/residences, etc. Delivered presentation-quality mapping and shapefiles to the Client in-house GIS team for internal use.

Vincent Paparella, PLS, PS

Survey Lead

Education

AS, Civil Engineering, 1997, Hagerstown Community College

Licenses/Registrations

Professional Land Surveyor (PLS): ND, PA, VA, KY, NC

Professional Surveyor (PS): WV

Skills

Surveying and Mapping

Construction Management

Routing

Stormwater Management

Land Development

Trainings/Certifications

OSHA 10-Hour Construction Training

Industry Experience

GAI Consultants, Inc., 2023-Present

Civil & Environmental Consultants, Inc., 2019-2022

Dawood Engineering, Inc., 1998-2019

Byers & Runyon Surveying, 1993-1998

Professional Summary

Mr. Paparella is a Professional Surveyor (PS) and Professional Land Surveyor (PLS) with over 30 years of experience managing survey projects, from small boundary surveys to large oil and gas projects. His expertise includes the construction management, routing, surveying, and mapping of major water body crossings for energy and transportation clients. His project experience ranges from utility work, pipeline work, transmission lines, oil and gas pads, Topographic Surveys, Boundary Surveys, ALTA Surveys, Route Surveys, Utility Surveys, Control Surveys, Volumetric Surveys, and Construction Stakeout.

Mr. Paparella is also experienced at providing AutoCAD Drafting (topographic mapping and subdivision plans), preparing legal descriptions, reducing and plotting survey data, and providing boundary determination and calculations.

Select Project Experience

- I-77 and I-79 Bridge Bundle Contract, WVDOH, Kanawha County, West Virginia. Survey Manager. The project consisted of 13 bridge rehabilitations along the I-77 and I-79 corridors throughout the Charleston area in Kanawha County. GAI's services for the bridge rehabilitations included reviewing current inspection reports; performing fieldwork, obtaining permits for all recommended and approved repairs; conducting surveys; traffic engineering services; and preparing construction plans, contract plans, and related documents—along with providing regularly scheduled bridge inspection services.
- Conservation Easement Survey, Tree Pittsburgh, Pittsburgh, Pennsylvania. Lead Surveyor. GAI performed a conservation easement survey for this environmental non-profit organization, registered as a 501(c)3, located in Pittsburgh, Pennsylvania. GAI performed courthouse research of the parcel using previously completed surveys of the parcel to dedicate a 3.5-acre conservation easement from the parent 5.05-acre parcel. Performed the field stakeout of the proposed conservation easement. GAI then provided a drawing showing the conservation easement.
- Substation Expansion Project, Pennsylvania. The project involves approximately 0.3-acre expansion of the existing substation being located within a Federal Emergency Management Agency (FEMA) delineated floodway. Assistant Survey Manager.

- Substation Expansion Project, Pennsylvania. Assistant Survey Manager. GAI is providing environmental and engineering support services for this project. Responsible for the topographic and boundary surveys.
- Two Solar Development Projects, Virginia. Assistant Survey Manager. GAI is providing survey services for this proposed Solar Farm. Responsible for the boundary survey verification and lease exhibit preparation.

Other Professional Experience

- **Principal/Pittsburgh Survey Practice Lead, Civil & Environmental Consultants, Inc., Moon Township, Pennsylvania (April 2019-November 2022).** Provided overall supervision of Survey Staff consisting of as many as 22 employees, including two Survey Project Managers, three Assistant Project Managers, multiple Survey Technicians and five-to-seven field crews on projects in Pennsylvania, West Virginia, Ohio, Virginia, and New Jersey for numerous energy, state, commercial and private clients. Duties also included department budget preparation, preparation of proposals, managing budgets, client development. Projects ranged from utility work, pipeline work, transmission lines, oil & gas pads, topographic surveys, boundary surveys, and GPS control networks. Projects ranged from as little as $1,000 to over $5,000,000.
- **Survey Technician/Project Surveyor/Director of Survey Services/Associate, Dawood Engineering, Inc., Enola, Pennsylvania (May 1998 – March 2019).** Throughout his tenure at Dawood Engineering, Mr. Paparella worked his way up from a Survey Technician to his previous position of Director of Survey Services/Associate. Duties included the following:
  - **Survey Technician:** AutoCAD Drafting (topographic mapping, ALTA Surveys, Boundary Surveys, Subdivision Plans/Stakeout Calculations/Prepare Legal Descriptions/Reduce and Plot Survey Data/Boundary Determination and Calculations.
  - **Project Surveyor:** All the above and supervised 1-2 field crews performing Topographic Surveys, Boundary Surveys, Route Surveys, Utility Surveys, and Control Surveys for numerous clients across Pennsylvania, Maryland, and Virginia. Managed projects ranging in size from $1,000 up to over $500,000.
  - **Director of Survey Services:** Supervised 2-3 Project Surveyors and 5-6 field crews working on a wide variety of survey projects for private developers, the DEP, Department of Conservation and Natural Resources (DCNR), PennDOT, and numerous utility companies working in Pennsylvania, Maryland, Virginia, New York, New Jersey, and Delaware. Managed projects ranging in size from $20,000 to over $1,000,000.
- **Party Chief/Survey Technician, Byers & Runyon Surveying, Chambersburg, Pennsylvania (September 1993 – May 1998).** Worked on various survey projects, including topographic surveys, boundary surveys, construction stakeout, and volumetric surveys for various clients across Pennsylvania. Work included drafting in AutoCAD, deed plotting, courthouse research, creating surfaces and topographic maps, cogo calculations, subdivision layout and planning, erosion and sedimentation calculations, and writing legal descriptions. Worked on a one-man survey crew with a robotic instrument.
- **Instrument Operator, R. Lee Royer & Associates, Waynesboro, Pennsylvania (December 1989 – September 1993).** Instrument Operator on a two-man survey crew performing Topographic Surveys, Boundary Surveys, and Construction Stakeout. Performed courthouse research and drafted on inclement weather days.

gai consultants

Edwin Mayhood

Senior Design Manager

Education

AST, 2000, Computer Drafting and Design, ITT Technical Institute

Skills

Computer Aided Design and Drafting (CADD)

CAD Office Coordinator

Team leader and supervisor

Assist with proposal cost

Maintain and implement client and internal standards

Review drawings for quality and consistency.

Complex design and site grading

Industry Experience

GAI Consultants, Inc., 2000-Present

Professional Summary

Mr. Mayhood is a seasoned design professional with expertise in grading design, construction documentation, and site development. He produces detailed as-built drawings, master plans, surveys, and permit applications, while crafting and refining both conceptual and construction-level details. His technical skill set includes AutoCAD Civil 3D, AutoTURN, Bluebeam Revu, Adobe Photoshop, MicroStation, and Adobe Acrobat. Using CAD software, he designs site layouts and grading plans, develops comprehensive construction drawings, including plans, sections, and details, and prepares cost estimates, specifications, and phasing strategies. As manager of the Power Generation Design/Drafting team, he assigns and coordinates project work across staff, aligning efforts with project timelines and budgetary goals.

Professional Experience

- Belle (Sneed) Drainage Project, West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Abandoned Mine Lands (WVDEP-DLR-AML), Kanawha County, West Virginia. Senior Design Manager. GAI is providing geotechnical investigations and analyses; designing access for construction and future maintenance access; hydrologic and hydraulic analyses; installation of drainage channels, underdrains, and/or other controls to safely convey water off-site; revegetation of all disturbed areas; and required permitting.
- Shawville North (Remedial) Project, Pennsylvania Department of Environmental Protection (PADEP), Bureau of Abandoned Mine Reclamation (BAMR), Clearfield County, Pennsylvania. Senior Design Manager. GAI is providing mining engineering services for this reclamation project that consists of one pre-act Abandoned Mine Land Feature (AMLF) and meets the Office of Surface Mining criteria for a Priority 2 Dangerous Slide.
- Hanover Reservoir Mine Fire Project, PADEP-BAMR, Luzerne County, Pennsylvania. Senior Design Manager. GAI is providing mining engineering services, comprehensive evaluation, data collection, project development, design, permitting, and construction administration relating to extinguishing the underground mine fire.

- Percy Mine Fire Project, PADEP-BAMR, Fayette County, Pennsylvania. Senior Lead Project Designer. Oversaw the design of a complex underground abandoned mine land (AML) mine fire mitigation project. GAI applied advanced geotechnical methods and materials and led multidisciplinary coordination with numerous team members to develop and implement a fire-extinguishment strategy using LPCTM slurry. The project included borehole layout and injection planning to seal mine voids, suppress fire progression, and reduce long-term environmental risk.
- Tamaqua Mine Water Problem Study, PaDEP BAMR, Tamaqua, Schuylkill County, Pennsylvania. Senior Lead Project Designer. Led the design and technical development of a comprehensive study addressing mine water contamination issues in the Tamaqua region. GAI collaborated with state agencies to assess environmental impacts, develop remediation strategies, and support sustainable water management solutions for AMLs.
- Mine Water Use in the Susquehanna River Project, PADEP BAMR, Susquehanna River Basin, Pennsylvania. Senior Lead Project Designer. GAI evaluated the use of abandoned mine pools as reservoirs to provide additional water to the Susquehanna River Basin, which encounters significantly low flows during high consumption periods. This additional water not only compensated for the low flows but also restored the stream currently affected by Acid Mine Drainage (AMD) from local mines.
- Refuse and Underground Mine Fire Project, U.S. Government Client, Pennsylvania. Senior Lead Project Designer. Served as Lead Project Designer for a complex environmental remediation initiative addressing subsurface combustion at a legacy industrial site. The mine is an abandoned anthracite coal underground mine. The site has burning coal refuse on the surface and in the underground anthracite mine workings. The fire reportedly began from a rubbish fire on top of the culm bank. When previous efforts to extinguish the fire were not successful, GAI was selected to assist in controlling the mine fire. GAI's involvement included acquiring aerial mapping of the fire area; obtaining available mine maps; conducting a field reconnaissance of the site; drilling, monitoring and logging a series of 19 test borings and reviewing our client's data from earlier borings. In addition to providing recommendations for controlling the mine fire, GAI also established a downhole temperature monitoring program and database and provided interpretation of the subsurface and surface data.
- Mine Wastewater Project, Confidential Energy Client, Allegheny County, Pennsylvania. Senior Lead Project Designer. GAI proposed a modified design and permitting required to treat mine water containing leachate from a nearby ash landfill for a client located in Pennsylvania. The client planned to repair and modify the wastewater treatment system at the mine site to treat the mine water. Tasks included creating an Erosion and Sedimentation Control Plan, National Pollutant Discharge Elimination System permitting, Act 220 registration, and other associated work.
- Mine Shaft Site Reclamation Project, Confidential Energy Client, Pennsylvania. Senior Lead Project Designer.
- Mine Reclamation Site Study, Ohio. Senior Lead Project Designer. GAI conducted a comprehensive Site Investigation for this mine reclamation project. GAI evaluated, identified, and ranked existing abandoned mine lands as future prospective mine reclamation areas and created a Design Report based on the findings. GAI submitted a Design Report of the findings which included information gained from the Desktop Reconnaissance Site Investigation and the Detailed Site Investigation, conceptual grading plans, cost estimates for prospective reclamation areas, and design calculations.

Matthew Guard, CSP, ASP

Senior Director of Health and Safety

Education

BS, Industrial Health & Safety, 2000, Pennsylvania State University

Skills

Environmental Health & Safety

Construction Safety

Safety Management Systems

Accident Investigations

Hazard/Risk Assessments

Certifications / Training

Certified Safety Professional (CSP): CSP-31068

Associate Safety Professional (ASP): A17068

OSHA Authorized Construction Trainer, 2014

MSHA New Miner Training Instructor, Surface Coal & Non-Metal

40-Hour HAZWOPER, 2015

First Aid/CPR/AED Instructor

Affiliations

American Society of Safety Professionals

American Council of Engineering Companies - Pennsylvania

Industry Experience

GAI Consultants, 2024-Present

Michael Baker International, 2018-2024

Key Environmental, Inc., / Field & Technical Services, LLC., 2014-2018

Keegan Wireless, LLC., 2014

Hatch Associates Consultants, 2005-2014

Koppel Steel Corporation, 2002-2005

Eichleay Engineers Constructors, 2000-2002

Professional Summary

Matthew Guard serves as GAI's Senior Director of Health and Safety, bringing over 25 years of experience in cultivating and advancing safety cultures across diverse organizations. He holds both the Certified Safety Professional (CSP) and Associate Safety Professional (ASP) credentials, along with several other certifications that deepen his expertise in the field. Matthew's background includes leading safety programs, conducting audits, interpreting regulatory standards, and overseeing compliance reviews, risk assessments, and incident investigations. His work consistently reflects a commitment to the highest standards of health, safety, and environmental practices.

Professional Experience: GAI Consultants, Inc.

- Develops required safety programs, policies, procedures and/or presents safety training for employees or project requirements including project specific training, new employee orientation and policies.
- Leads accident/injury investigations through closure.
- Prepares and submits applicable reporting documentation and maintains all safety records.
- Evaluates and ensures organizational compliance with local, state and federal regulations.
- Partners with Project Managers/Teams in preparation and implementation of site-specific safety and health plans.
- Determines and enacts corrective or preventative measures by working with partners on implementing actions where needed.
- Conducts compliance audits for office and field operations to confirm adherence of safety procedures, practices and regs.
- Develops reports of audit findings and ensures required actions have been implemented.
- Acts as the main point of contact for safety materials and resources such as signs, posters, barriers and other materials to warn of potential or actual safety hazards and distributes materials accordingly.
- Leads in the Selection and purchasing of Personal Protective Equipment (PPE) for the company.
- Implements the company's workers' compensation program, including working with the insurance carriers to reduce employee lost time.

- **Vice President – Health, Safety, and Security, Michael Baker International.** Led the organization's effort to enhance the safety culture by integrating safety into standard business practices. Monitored and reported key metrics, developed and implemented polices, programs, and practices to help ensure compliance with all regulations and standards concerning health and safety. Chaired the Corporate Council. Developed and implemented effective health and safety training systems and programs for all levels of the organization. Administered the company Workers' Compensation Program including coordination with the insurer. Maintained business required and compliance information. Oversaw the Corporate Physical Security Department.
- **Health & Safety Manager, Key Environmental, Inc., (KEY) / Field & Technical Services, LLC (FTS).** Planned, organized, directed, and coordinated the safety mandates, programs, and activities within both the KEY and FTS companies. Prepared/revised project-specific Health & Safety (H&S) plans/programs, assisted field personnel in the implementation of the programs. Conducted audits and inspections at work sites, prepared reports, provided recommendations to enhance worker safety and health as well as compliance rules, regulations, policies, and procedures. Conducted and coordinated safety training to new hires and current employees. Maintained safety documentation and statistics. Provided interpretations of applicable environmental and safety regulations, rules, policies, and procedures. Worked with clients in site safety alignment and requirements. Reviewed background checks, pre-employment/annual physicals and drug screening of employees. Maintained United States Department of Transportation (USDOT) Commercial Motor Vehicle (CMV) files, and compliance for company vehicles.
- **Safety Director, Keegan Wireless, LLC.** Directed leadership, oversight, and training to the tower construction crews. Assisted ownership in creating and achieving safety objectives and goals. Created, reviewed, and revised safety management plans, policies, and procedures. Worked closely with senior management in scheduling of crews' health and safety needs. Conducted field audits on company crews and subcontractor crews to measure safety compliance and performance. Performed qualification of lower-tiered subcontractors prior to contract. Conducted safety training to new hire employees. Conducted qualification evaluations for subcontractors. Worked with clients in site safety alignment and requirements. Assigned and reviewed background checks and drug screening of employees. Worked with insurance companies in Workers' Compensation claims. Assisted in recruiting and fleet management/logistics.
- **Safety Advisor / Project Safety Manager, Hatch Associates Consultants.** Provided leadership, direction, oversight, and training to the construction management team. Provided visible and high-level leadership with accountability for all employees at Hatch. Assisted in setting and achieving Health, Safety, and Environmental (HSE) Project plans and ensured they were followed by Project teams. Conducted risk assessments for all jobs, making sure change procedures were followed. Led safety compliance audits of Projects, field, and administration items. Performed prequalification of potential contractors prior to award of contract. Ensured incidents were being reported, investigated, found root causes, and corrective actions were implemented. Worked well with client management in their safety expectations. Oversaw Contractor's safety professionals. Interviewed, hired, and managed safety department staff on various Projects.
- **Environmental Health & Safety (EH&S) Coordinator, Koppel Steel Corporation.** Conducted new hire training of United Steelworkers (USW) employees. Assisted the EH&S Manager in day-to-day EH&S functions at two pipe manufacturing facilities. Led weekly supervisor safety meetings. Conducted audits, assessments, and reviews against EH&S Standards and regulations to find areas for continuous improvement. Assisted plant engineers in revising the lockout/tagout program. Established a glove program, revising inventory to stock gloves best suited for the job task. Revised supervisor audits in a manner to focus on the safety of their employees. Performed Radiation Safety Officer duties for both the Koppel and Ambridge facilities.
- **Site Safety Supervisor, Eichleay Engineers Constructors.** Provided leadership, direction, oversight, and training to the construction management team. Oversaw the Contractor's safety professionals on Projects. Conducted training to field management and Contractor management. Led site audits, identified unsafe acts and conditions, developed corrective actions and followed up with the completion of the actions. Worked at various client sites in Canada and the United States.

APPENDIX C

SIGNED BID SOLICITATION/ADDENDUM ACKNOWLEDGMENT FORMS

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

State of West Virginia
Centralized Expression of Interest

Proc Folder: 1717189 **Doc Description:** AML - EOI Pre-Qualification for Consultants **Proc Type:** Central Purchase Order			**Reason for Modification:**
Date Issued	**Solicitation Closes**	**Solicitation No**	**Version**
2025-08-01	2025-08-20 13:30	CEOI 0313 DEP2600000001	1

BID RECEIVING LOCATION

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

VENDOR

Vendor Customer Code: 000000160372

Vendor Name : GAI Consultants, Inc.

Address : Charleston Office

Street : 500 Lee Street East, Suite 700

City : Charleston

State : West Virginia **Country :** United States **Zip :** 25301

Principal Contact : Jason Gandee

Vendor Contact Phone: 681.245.6484 **Extension:**

FOR INFORMATION CONTACT THE BUYER

Joseph (Josh) E Hager III
(304) 558-2306
joseph.e.hageriii@wv.gov

Vendor Signature X Kent C. Cockley Digitally signed by Kent C. Cockley DN: E=k.cockley@gaiconsultants.com, CN=Kent C. Cockley Date: 2025.08.18 15:13:09-04'00' **FEIN#** 25-1260999 **DATE** August 18, 2025

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

ADDITIONAL INFORMATION

The Acquisitions and Contract Administration Section of the Purchasing Division is soliciting vendors to prequalify to provide proposals on Expression(s) of Interest(s) ("EOI") for the West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Abandoned Mine Lands and Reclamation (WVDEP-DLR-AML) from qualified firms to provide architectural/ engineering services pursuant to HB 3429.

The purpose of the project is to solicit pre-qualifications for the purpose of making available a list of pre-qualified Consultants.

INVOICE TO	SHIP TO
ENVIRONMENTAL PROTECTION OFFICE OF AML&R 601 57TH ST SE CHARLESTON WV 25304 US	ENVIRONMENTAL PROTECTION OFFICE OF AML&R 601 57TH ST SE CHARLESTON WV 25304 US

Line	Comm Ln Desc	Qty	Unit Issue
1	EOI Engineering Design Services		

Comm Code	Manufacturer	Specification	Model #
81100000			

Extended Description:
EOI Engineering Design Services

SCHEDULE OF EVENTS

Line	Event	Event Date

EXPRESSION OF INTEREST

Pre-Qualification for Design Firms

TABLE OF CONTENTS:

SECTION ONE: GENERAL INFORMATION

1. **PURPOSE:** The Acquisitions and Contract Administration Section of the Purchasing Division ("Purchasing Division") is soliciting vendors to prequalify to provide proposals on Expression(s) of Interest(s) ("EOI") for the West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Abandoned Mine Lands and Reclamation (WVDEP-DLR-AML) ("Agency"), from qualified firms to provide architectural/engineering services ("Vendors") pursuant to HB 3429.

2. **PROJECT:** The purpose of the project is to solicit pre-qualifications for the purpose of making available a list of pre-qualified Consultants.

Enrolled Version - Final Version

OTHER VERSIONS - Committee Substitute (1) | Engrossed Version | Introduced Version |

Key: Green = existing Code. Red = new code to be enacted

WEST VIRGINIA LEGISLATURE

2025 REGULAR SESSION

ENROLLED

Committee Substitute

for

House Bill 3429

By Delegate Riley

[Passed April 12, 2025; in effect 90 days from passage (July 11, 2025)]

AN ACT to amend the Code of West Virginia, 1931, as amended, by adding a new section designated §22-2-11, relating to providing engineering services under the abandoned mine lands and reclamation act; requiring certain advertisements; establishing a prequalification process for hiring engineering firms; providing prequalification agreement requirements; and providing directives for project assignments.

Be it enacted by the Legislature of West Virginia:

ARTICLE 2. ABANDONED MINE LANDS AND RECLAMATION ACT.

§22-2-11. Prequalification process for consultants; project assignments.

(a) For purposes of this section, "professional services" means engineering services provided by firms and includes those professional services of an engineering nature as well as incidental services that members of those professions and those in their employ may logically or justifiably perform.

(b) The secretary shall publish a Class II legal advertisement to solicit letters of interest for professional services used in engineering procurement. The advertisement:

(1) Shall comply with the Class II legal advertisement provisions of §59-3-1 *et seq.* of this code;

(2) State a time and place for submitting letters of interest and a description of the services required;

(3) Specify the secretary's right to reject any letter of interest; and

(4) Shall be published at least once in at least one daily newspaper published in the city of Charleston and in other journals or magazines as the secretary determines is advisable.

(c) The department shall evaluate any letter of interest received and generate from the letters received a list of all qualified firms, designated the "Prequalified List of Firms".

(d) Upon the department's recommendation, the Purchasing Division shall enter into a prequalification agreement with the qualified firms pursuant to §5A-3-10e of this code. The agreement shall cover the services defined in the letters of interest and have a one-year term, with an optional two-year extension if requested by the department.

(e) For all project assignments:

(1) The department shall issue an expression of interest for any project that needs to be solicited and deliver it to those prequalified firms with which the Purchasing Division has an active prequalification agreement;

(2) The department may review and consider responses only from prequalified consultants with active prequalification agreements;

(3) The department shall conduct discussions with three or more professional services firms solicited on the basis of known or submitted qualifications for the project prior to awarding a contract. If the secretary determines that special circumstances exist such that seeking competition is not practical, the department may, with the Director of Purchasing's prior approval, select a professional services firm on the basis of previous satisfactory performance and knowledge of the department's facilities and needs. After selection, the department and firm shall develop the scope of services required and negotiate a contract;

(4) The department shall notify its procurement division and the Division of Purchasing of the firm that it selected;

(5) The department shall schedule and conduct a scope of work meeting with the selected firm within 45 days of selection;

(6) Within 60 days of selection, unless an extension is requested by both parties, the department and firm shall complete cost negotiations;

(7) The department shall provide to its own procurement division and the Purchasing Division information regarding the agreed upon costs and all required forms necessary to initiate a contract; and

(8) The department may issue an advanced notice to proceed, if requested by the firm.

The Clerk of the House of Delegates and the Clerk of the Senate hereby certify that the foregoing bill is correctly enrolled.

.....

Clerk of the House of Delegates

.....

Clerk of the Senate

Originated in the House of Delegates.

In effect 90 days from passage.

.....

Speaker of the House of Delegates

.....

President of the Senate

The within is ..... this the.....

Day of ....., 2025.

.....

Governor

EXPRESSION OF INTEREST

Pre-Qualification for Design Firms

SECTION TWO: INSTRUCTIONS TO VENDORS SUBMITTING BIDS

Instructions begin on the next page.

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

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

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

3. **PRE-BID MEETING:** The item identified below shall apply to this Solicitation.

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

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

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

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

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

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

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

Submitted emails should have the solicitation number in the subject line. Question

Submission Deadline: 8/13/2025 @ 4:00 PM

Submit Questions to: Josh Hager
2019 Washington Street, East Charleston, WV 25305
Fax: (304) 558-3970
Email: Joseph.E.HagerIII@wv.gov

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

6. **BID SUBMISSION:** All bids must be submitted on or before the date and time of the bid opening listed in section 7 below. Vendors can submit bids electronically through *wv*OASIS, in paper form delivered to the Purchasing Division at the address listed below either in person or by courier, or in facsimile form by faxing to the Purchasing Division at the number listed below. Notwithstanding the foregoing, the Purchasing Division may prohibit the submission of bids electronically through *wv*OASIS at its sole discretion. Such a prohibition will be contained and communicated in the *wv*OASIS system resulting in the Vendor's inability to submit bids through *wv*OASIS. The Purchasing Division will not accept bids or modification of bids via email.

Bids submitted in paper, facsimile, or via *wv*OASIS must contain a signature. Failure to submit a bid in any form without a signature will result in rejection of your bid.

A bid submitted in paper or facsimile form should contain the information listed below on the face of the submission envelope or fax cover sheet. Otherwise, the bid may be rejected by the Purchasing Division.

VENDOR NAME: GAI Consultants, Inc.
BUYER: Josh Hager
SOLICITATION NO.: CEOR 0313 DEP2600000001
BID OPENING DATE: see section 7
BID OPENING TIME: see section 7
FAX NUMBER: 304-558-3970

Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason.

Bid Delivery Address and Fax Number:
Department of Administration, Purchasing Division 2019 Washington Street East
Charleston, WV 25305-0130
Fax: 304-558-3970

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

Bid Opening Date and Time: 8/20/2025 @ 1:30 PM ET

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

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

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

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

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

11. **COMMUNICATION LIMITATIONS:** In accordance with West Virginia Code of State Rules §148-1-6.6.2, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

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

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

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

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

15. **SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37 and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or minority- owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors.

16. **WAIVER OF MINOR IRREGULARITIES:** The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.7.

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

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

19. **ACCEPTANCE/REJECTION:** The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.6. and § 148-1-6.3."

20. **WITH THE BID REQUIREMENTS:** In instances where these specifications require documentation or other information with the bid, and a vendor fails to provide it with the bid, the Director of the Purchasing Division reserves the right to request those items after bid opening and prior to contract award pursuant to the authority to waive minor irregularities in bids or specifications under W. Va. CSR § 148-1-4.7. This authority does not apply to instances where state law mandates receipt with the bid.

21. **EMAIL NOTIFICATION OF AWARD:** The Purchasing Division will attempt to provide bidders with e-mail notification of contract award when a solicitation that the bidder participated in has been awarded. For notification purposes, bidders must provide the Purchasing Division with a valid email address in the bid response. Bidders may also monitor *wv*OASIS or the Purchasing Division's website to determine when a contract has been awarded.

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

EXPRESSION OF INTEREST

Pre-Qualification for Design Firms

SECTION THREE: PROJECT SPECIFICATIONS

1. **Background:** The WVDEP/AML Program is soliciting Consultant Firms to provide "full service" A/E planning, realty, design, and construction oversight. Firms are to be licensed Architectural/Engineering Firms (A/E) in the State of West Virginia and either the firm or its sub-contractors within a given field must have a successful track record of permitting and designing reclamation projects, reality, and construction inspection. The anticipated contract (s) will be advertised once the prequalified vendors are determined and will be for "full service" A/E planning, realty, design, and construction oversight. This solicitation is only for the purpose of prequalifying vendors. No specific project will be awarded from this solicitation.

   The expectation is the successful prequalified A/E firm(s) will be able to call upon a team of professionals for each discipline, whether internal or subcontracted, that can provide each discipline's deliverables with a minimum of supervision. The expectation is that the successful prequalified A/E firm will be providing a schedule, tracking work to that schedule, and providing regular updates as to progress with a minimum of State oversight.

2. **Project and Goals:** The project goals and objectives include but are not limited to those listed below. Vendors should discuss any anticipated concepts and proposed methods of approach for achieving each of the listed goals and objectives:

   Qualifications should be highlighted to meet the following criteria:

   All Work shall comply with the Infrastructure Investment Jobs Act (IIJA), including compliance with the Davis-Bacon and Build America, Buy America (BABA), as applicable and all Federal, State, and Local laws.

   Planning Work encompasses all related consultations, investigations, report generation, applications, etc. required to perform the Work, which may include, but may not be limited to: National Environmental Policy Act (NEPA) consultations, West Virginia Division of Natural Resources (WVDNR) consultation, West Virginia Historic Preservation Office (SHPO) consultation, WV Regional Planning consultation, US Forest Service consultations, US Fish and Wildlife Service (USFWS) consultations, and any other consultation(s) or permit(s) needed to perform the Work. The above includes but is not limited to bat studies, threatened and endangered species investigation / analysis / report generation, water quality sampling, and data collection / analysis.

EXPRESSION OF INTEREST

Pre-Qualification for Design Firms

Realty Work encompasses all necessary research and subsequent right of entry agreements being set into place for the sites to be sufficiently and legally investigated, designed, and for a final design to be constructed. This may include, but may not be limited to: performing courthouse research to determine legal property ownership and dutifully documenting the findings, obtaining Exploratory Rights of Entry (EROE) from affected landowners, obtaining Construction Rights of Entry (CROE) from landowners, keeping logs of all conversations with landowners, data collection, reporting, and possessing the capability of having boundary surveys performed on an as-needed basis. The successful A/E firm must obtain the rights of entry prior to performing any fieldwork on-site, and these rights of entry must include the successful A/E firm, the WVDEP-DLR-AML, and Office of Surface Mining Reclamation & Enforcement (OSMRE).

Design Work which may include, but may not be limited to: Civil, Geological, Hydrological, Survey (mapping), Process, Structural, Electrical, etc., as applicable. This encompasses all required engineering and survey (including current mapping and other related services) necessary to successfully design an engineered, permanent solution that fully addresses the issues and problems that each project presents. This also includes site and geotechnical investigations. Each design must fully remove and mitigate dangers to private individuals or the public that are currently present, not introduce new dangers, and be stamped by a Registered Professional Engineer in the State of West Virginia for design and Registered Professional Surveyor in the State of West Virginia for survey for deliverables. Design Work includes but is not limited to: National Pollutant Discharge Elimination System (NPDES) construction stormwater General Permit registration, West Virginia Department of Highways (WVDOH) MM-109 encroachment permits, Army Corps of Engineers (USACE) consultations, Department of Health Permits (for water lines, if applicable), and county permits as applicable, including floodplain permits. Design Work could also include but is not limited to: developing construction plans and technical specifications for all aspects to reclaim mine portals, drainage controls and systems, slope stabilization, coal refuse and mine spoil reclamation, stream and / or channel restoration, subsidence repair, temporary and permanent access or accesses for construction and future maintenance, stormwater and erosion and sediment control, regrading and revegetation, any required water treatment systems, and any remediation for all other conditions encountered on the project sites. The successful A/E firm must
obtain, maintain, and release all required permits.

Construction Oversight Work including but may not be limited to: Daily Inspection with documentation for the duration of the Construction and through the warranty period until final release, Engineering Oversight and Support, review and approval of contractor-provided as-builts, and Final Engineer's Certification Report of the project.

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Pre-Qualification for Design Firms

Vendor should describe how the firm will meet the Agency's and firms agreement for deadlines.

Vendors should demonstrate a clear understanding of the time-sensitive nature of Abandoned Mine Land (AML) reclamation projects and provide a plan for how they will meet all deadlines established by the Agency throughout the project lifecycle.

3. **Contract Services Deliverables: Once Prequalified, The Agency expects firms to**:

   - Adhere to established schedules for project initiation, deliverables, and completion.
   - Be responsive to funding and compliance timelines under the Infrastructure Investment and Jobs Act (IIJA) and the Surface Mining Control and Reclamation Act (SMCRA).
   - Coordinate effectively with Agency staff, subcontractors, and permitting authorities to avoid delays.
   - Proactively identify risks and propose mitigation strategies to stay on track.

   Firms must include but not limited to the following documentation in each prequalification response:

   - A description of their project management approach and internal systems used to ensure timely performance;
   - Examples of past AML or similar projects completed on time, including key deadlines met.
   - A summary of personnel availability and resource planning to meet overlapping or expedited deadlines;
   - A plan for communication, progress tracking, and prompt issue resolution.

4. **Qualifications, Experience, and Past Performance:** Consultant must include a statement of qualifications and performance data. The statement of qualifications and performance data may be presented through things like information regarding its employees, such as staff qualifications and experience in completing similar projects; references; copies of any staff certifications or degrees applicable to this project; proposed staffing plan; descriptions of past projects completed entailing the location of the project, project manager name and contact information, type of project, and the project goals and objectives and how they were met.

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Pre-Qualification for Design Firms

All Consultants requesting to be considered **MUST** hold a valid Certificate of Authorization (COA) and have an individual who shall oversee the work, who will sign and seal all design documentation, plans, etc., and must be registered and licensed with the West Virginia Board of Professional Engineers.

The response should be presented in concise format which defines the corporation history and the experience, qualifications, and performance data of the firm's staff as requested by the AML Consultant Qualification Questionnaire (CQQ), Attachment "A" and the AML and Related Project Experience Matrix (RPEM), Attachment "B".

AML Consultant Qualification Questionnaire (CQQ) should be completed and submitted with Vendor's submitted response to be eligible (**See Attachment "A"**).

AML and Related Project Experience Matrix (RPEM) should also be completed and submitted with Vendor's submitted response to be eligible (**See Attachment "B"**).

SECTION FOUR: VENDOR PROPOSAL, EVALUATION, & AWARD

1. The resume and qualifications of the submitted staff will be reviewed and evaluated based on design experience. Additional AML experience should be included for additional evaluation. Selections will be based on detailed work experience supplied in the resume, as well as the firm's principal in charge assurances of reliability and competency. If it is determined that work is being performed at a substandard or inefficient manner the Department may choose to remove the firm from the list with the approval of the Purchasing Division.

Once approved, that Consultant's name shall be placed on the list of Consultants pre-qualified to participate in this program and shall be considered pre-qualified and eligible for project selection

Those Consultants selected and placed on a master list MUST resubmit their CQQ (or **Attachment "A"**) upon any changes or change of discipline. Consultants must keep a current certificate of insurance (COI) throughout the contract period and resubmit a current COI upon renewals.

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2. **Evaluation and Award Process:** Expressions of Interest for projects will be evaluated and awarded in accordance with W.Va. Code §22-2-11. The State shall select the best value solution according to WV Code §22-2-11. This solicitation is for the prequalification of those vendors only. No award for a specific project will be determined from this solicitation.

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

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

   Evaluation Determination: The Agency will evaluate the letters of interest to determine the most qualified to perform the desired service. The evaluation criteria will be based upon the prequalification process for consultants; project assignments pursuant to WV Code §22-2-11.

EXPRESSION OF INTEREST

Pre-Qualification for Design Firms

SECTION FIVE: TERMS AND CONDITIONS

Terms and conditions begin on the next page.

GENERAL TERMS AND CONDITIONS:

1. CONTRACTUAL AGREEMENT: Issuance of an Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance by the State of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid, or on the Contract if the Contract is not the result of a bid solicitation, signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

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

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

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

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

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

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

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

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

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

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

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

☑ **Term Contract**

Initial Contract Term: The Initial Contract Term will be for a period of One (1) Year _____. The Initial Contract Term becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as _____), and the Initial Contract Term ends on the effective end date also shown on the first page of this Contract.

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to Two (2) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

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

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

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

☐ **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that:

☐ the contract will continue for _____ years;

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

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

☐ **Construction/Project Oversight:** This Contract becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as _____), and continues until the project for which the vendor is providing oversight is complete.

☐ **Other:** Contract Term specified in _____

4. AUTHORITY TO PROCEED: Vendor is authorized to begin performance of this contract on the date of encumbrance listed on the front page of the Award Document unless either the box for "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked in Section 3 above. If either "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked, Vendor must not begin work until it receives a separate notice to proceed from the State. The notice to proceed will then be incorporated into the Contract via change order to memorialize the official date that work commenced.

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

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

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

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

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

☐ **Construction:** This Contract is for construction activity more fully defined in the specifications.

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

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

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

☑ Certificate of Authorization

☐

☐

☐

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

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

Vendor must maintain:

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

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

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

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

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

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

☐ **Pollution Insurance** in an amount of: _____ per occurrence.

☐ **Aircraft Liability** in an amount of: _____ per occurrence.

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

10. VENUE: All legal actions for damages brought by Vendor against the State shall be brought in the West Virginia Claims Commission. Other causes of action must be brought in the West Virginia court authorized by statute to exercise jurisdiction over it.

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

☐ _____ for _____.

☐ Liquidated Damages Contained in the Specifications.

☑ Liquidated Damages Are Not Included in this Contract.

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

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

14. PAYMENT IN ARREARS: Payments for goods/services will be made in arrears only upon receipt of a proper invoice, detailing the goods/services provided or receipt of the goods/services, whichever is later. Notwithstanding the foregoing, payments for software maintenance, licenses, or subscriptions may be paid annually in advance.

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

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

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

18. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available. If that occurs, the State may notify the Vendor that an alternative source of funding has been obtained and thereby avoid the automatic termination. Non-appropriation or non-funding shall not be considered an event of default.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

34. VENDOR NON-CONFLICT: Neither Vendor nor its representatives are permitted to have any interest, nor shall they acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency.

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

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

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

37. NO DEBT CERTIFICATION: In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State. By submitting a bid, or entering into a contract with the State, Vendor is affirming that (1) for construction contracts, the Vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, neither the Vendor nor any related party owe a debt as defined above, and neither the Vendor nor any related party are in employer default as defined in the statute cited above unless the debt or employer default is permitted under the statute.

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

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

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

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

40. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, the State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check. Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

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

a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.

b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process.

c. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:

    1. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars ($2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or

    2. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

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

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

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

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

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

45. VOID CONTRACT CLAUSES: This Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

46. ISRAEL BOYCOTT: Bidder understands and agrees that, pursuant to W. Va. Code § 5A-3-63, it is prohibited from engaging in a boycott of Israel during the term of this contract.

ADDITIONAL TERMS AND CONDITIONS
(Architectural and Engineering Contracts Only)

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

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

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

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

5. GREEN BUILDINGS MINIMUM ENERGY STANDARDS: In accordance with West Virginia Code § 22-29-4, all new building construction projects of public agencies that have not entered the schematic design phase prior to July 1, 2012, or any building construction project receiving state grant funds and appropriations, including public schools, that have not entered the schematic design phase prior to July1, 2012, shall be designed and constructed complying with the ICC International Energy Conservation Code, adopted by the State Fire Commission, and the ANSI/ASHRAE/IESNA Standard 90.1-2007: Provided, That if any construction project has a commitment of federal funds to pay for a portion of such project, this provision shall only apply to the extent such standards are consistent with the federal standards.

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

(Printed Name and Title) Jason Gandee, Senior Technical Manager 1 / Senior Associate

(Address) 500 Lee Street East, Suite 700, Charleston, West Virginia 25301

(Phone Number) / (Fax Number) 681.245.6484 / 304.926.8180

(email address) j.gandee@gaiconsultants.com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through *wv*OASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

GAI Consultants, Inc.

(Company)

Kent C. Cockley

Digitally signed by Kent C. Cockley
DN: E=k.cockley@gaiconsultants.com, CN=Kent C. Cockley
Date: 2025.08.18 15:13:51-04'00'

EDR

(Signature of Authorized Representative)

Kent Cockley, PE, MS, Vice President/Business Sector Leader, Power Generation

(Printed Name and Title of Authorized Representative) (Date)

412.399.5418 / 412.476.2020

(Phone Number) (Fax Number)

k.cockley@gaiconsultants.com

(Email Address)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CEOI 0313 DEP2600000001

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

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

Addendum Numbers Received:
(Check the box next to each addendum received)

- [x] Addendum No. 1
- [ ] Addendum No. 2
- [ ] Addendum No. 3
- [ ] Addendum No. 4
- [ ] Addendum No. 5
- [ ] Addendum No. 6
- [ ] Addendum No. 7
- [ ] Addendum No. 8
- [ ] Addendum No. 9
- [ ] Addendum No. 10

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

GAI Consultants, Inc.
Company

EDR ☑ Kent C. Cockley Digitally signed by Kent C. Cockley DN: E=k.cockley@gaiconsultants.com, CN=Kent C. Cockley Date: 2025.08.18 15:14:05-04'00'
Authorized Signature

August 18, 2025
Date

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

APPENDIX D

AML CONSULTANT QUALIFICATION QUESTIONNAIRE

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AML CONSULTANT QUALIFICATION QUESTIONNAIRE **Attachment "A"**

PROJECT NAME	DATE (DAY, MONTH, YEAR)	FEIN
AML – EOI Pre-Qualification for Consultants	August 20, 2025	25-1260999

1. FIRM NAME	2. HOME OFFICE BUSINESS ADDRESS	3. FORMER FIRM NAME
GAI Consultants, Inc.	385 E. Waterfront Drive Homestead, PA 15120	General Analytics, Inc.

4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YR)	5. TYPE OWNERSHIP	6a. WV REGISTERED DBE (Disadvantaged Business Enterprise)
412.476.2000	1958	Individual X Corporation Partnership Joint-Venture	YES X NO

6. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE
500 Lee Street East, Ste 700, Charleston, WV 25301 / 304.926.8100 / Shaun Long, PE
AML Design Personnel in each office: Charleston-3; Bridgport-1; Pittsburgh-19; Southpointe-1

7. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8a. NAME, TITLE, & TELEPHONE NUMBER – OTHER PRINCIPALS
Anthony Morrocco, President: 412.399.5197 Kevin Leadbetter, CEO: 904.559.8087	Richard Kodera, Business Unit Leader, Power & Energy: 412.399.5192 David Bevilacqua, Business Unit Director, Power & Energy: 412.399.5442

9. PERSONNEL BY DISCIPLINE

94 ADMINISTRATIVE	4 ECOLOGISTS	19 LANDSCAPE ARCHITECTS	29 STRUCTURAL ENGINEERS
0 ARCHITECTS	2 ECONOMISTS	17 MECHANICAL ENGINEERS	**20 SURVEYORS**
19 BIOLOGIST	41 ELECTRICAL ENGINEERS	**8 MINING ENGINEERS**	41 TRAFFIC ENGINEERS
50 CADD OPERATORS	97 ENVIRONMENTALISTS	0 PHOTOGRAMMETRISTS	274 OTHER
1 CHEMICAL ENGINEERS	1 ESTIMATORS	19 PLANNERS: URBAN/REGIONAL	
209 CIVIL ENGINEERS	**18 GEOLOGISTS**	1 SANITARY ENGINEERS	
93 CONSTRUCTION INSPECTORS	6 HISTORIANS	13 SOILS ENGINEERS	
29 DESIGNERS	3 HYDROLOGISTS	0 SPEC WRITERS	1,108 TOTAL PERSONNEL
0 DRAFTSMEN			

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 7
***RPEs other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.**

Founded in 1958, GAI is an over 1,100-person engineering and environmental consulting firm with experience delivering innovative engineering solutions. GAI's extensive team includes 34 office locations, including two offices in West Virginia, and is consistently ranked in *Engineering News-Record's* Top 500 Design Firms and Top 200 Environmental Firms. GAI has a long history of working on mining-related projects throughout West Virginia, Pennsylvania, and Ohio. **We have experience providing engineering and environmental services for Abandoned Mine Land (AML) reclamation projects since the 1980s, and we have completed hundreds of AML projects for various clients**, including the West Virginia Department of Environmental Protection, Office of Abandoned Mine Lands and Reclamation (WVDEP-AML&R, the Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation (PADEP BAMR), and the Ohio Department of Natural Resources (ODNR). We are familiar with the topography and features of the region and have comprehensive knowledge of the regulatory approval process for various types of projects. Our personnel know West Virginia's geologic and mineral environment, as well as the potential issues posed by past mining activities and practical methods to alleviate them. We have worked for many years with public and private sector clients to provide economic, effective, and innovative solutions to these problems.

10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE? ☐ YES ☐ NO ☒ NA

11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. Attach "AML Consultant Qualification Questionnaire".		
NAME AND ADDRESS: EnviroProbe Integrated Solutions 963 Canyon Road Morgantown, West Virginia 26508	SPECIALTY: Subsurface Drilling	WORKED WITH BEFORE __X__Yes No
NAME AND ADDRESS: Pennsylvania Drilling Company 281 Route 30 Imperial, PA 15126	SPECIALTY: Subsurface Drilling	WORKED WITH BEFORE __X__Yes No
NAME AND ADDRESS: Terra Testing, Inc. 260 Meadowlands Blvd. Washington, PA 15301	SPECIALTY: Subsurface Drilling	WORKED WITH BEFORE __X__Yes No
NAME AND ADDRESS: Geotechnics, Inc. 544 Braddock Avenue East Pittsburgh, Pennsylvania 15112	SPECIALTY: Construction Materials Testing	WORKED WITH BEFORE __X__Yes No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes No

12. A. Is your firm's personnel experienced in Abandoned Mine Lands Remediation/Mine Reclamation Engineering?

YES Description and Number of Projects: Our personnel assigned to WVDEP AML projects bring deep expertise in AML engineering and extensive experience with similar project scopes. GAI has completed approximately 150 projects for WVDEP-DLR-AML over the past 40 years. In addition, GAI has delivered more than 200 Abandoned Mine Land (AML) projects across West Virginia, Pennsylvania, Ohio, Virginia, Maryland, and Tennessee, serving state and federal AML programs as well as private clients. These projects have included remediatior design for abandoned refuse piles, landslides, portals, facility demolition, drainage control structures, mine fires, subsidence issues, highwalls, acid mine drainage, and revegetation plans.

B. Is your firm experienced in Soil Analysis?

YES Description and Number of Projects: GAI has completed over 250 projects involving comprehensive soil analysis to support revegetation plans, acid-base accounting, foundation stability assessments, and evaluations of engineering properties. Soil analysis has been a critical component in the majority of the 140+ WVDEP-DLR-AML projects. Depending on project requirements, GAI has performed these analyses both in-house and in collaboration with specialized subconsultants.

C. Is your firm experienced in hydrology and hydraulics?

YES Description and Number of Projects: GAI has completed hundreds of projects involving hydrologic and hydraulic (H&H) analysis, including numerous mining-related assignments. The majority of the 140+ WVDEP-DLR-AML projects have required H&H evaluations and design for drainage control structures, mine pool levels, mainstream storm events, water conveyance, and erosion and sedimentation control. GAI also brings specialized expertise in natural stream restoration and wetland mitigation, supported by trained and experienced personnel.

D. Does your firm produce its own Aerial Photography and Develop Contour Mapping?

YES Description and Number of Projects: GAI has developed contour mapping for approximately 200 projects supporting AML Programs. When aerial photography is not readily available, GAI coordinates with trusted subconsultants to acquire the necessary imagery, allowing for accurate and high-quality mapping deliverables.

E. Is your firm experienced in domestic waterline design? (Include any experience your firm has in evaluation of aquifer degradation as a result of mining.)

YES Description and Number of Projects: GAI has completed over 100 projects involving domestic waterline design, including 44 for the WVDEP-DLR-AML program. These projects have encompassed aquifer degradation evaluations, waterline design, coordination with Public Service Districts, compliance with Public Service Commission (PSC) requirements, and securing Health Department permits. Additional services have included field surveys, inspections, and participation in public hearings and community meetings. Aquifer degradation assessment and waterline design have been central components of these efforts.

F. Is your firm experienced in Acid Mine Drainage Evaluation and Abatement Design?

YES Description and Number of Projects: GAI has completed approximately 130 Acid Mine Drainage (AMD) evaluations and abatement designs, including 27 projects for the WVDEP-DLR-AML program. Additionally, AMD considerations have played a role in the majority of the 140+ WVDEP-DLR-AML projects GAI has supported. These efforts have included grouting programs, SAP (Successive Alkalinity Producing) system installations, and innovative abatement designs tailored to site-specific conditions.

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Gandee, Jason, G. Title: Senior Technical Manager Role: Project Manager	15	18	3

Brief Explanation of Responsibilities

Mr. Jason Gandee is GAI's proposed Project Manager for this assignment. Operating from GAI's Charleston, WV office, he will lead day-to-day project operations and provide strategic oversight to the GAI Project Team. His responsibilities include developing detailed work plans, tracking progress to keep the project on schedule and within budget, reviewing deliverables throughout the project lifecycle, and offering technical guidance and support. Mr. Gandee will also contribute directly to engineering and design tasks as needed. With over 18 years of experience, he has managed or supported over 25 AML and related projects for WVDEP. He currently serves as Project Manager for the WVDEP Belle (Sneed) Drainage Project, which involves geotechnical investigations and analysis, access design for construction and long-term maintenance, H&H evaluations, installation of drainage channels and underdrains, revegetation of disturbed areas, and coordination of required permitting. Mr. Gandee specializes in civil engineering design, including site layout, grading, H&H design, stormwater management, and roadway planning. He prepares engineering documents and reports, and has experience in construction oversight, site inspections, and materials testing.

EDUCATION (Degree, Year, Specialization)

BS, Civil Engineering Technology, 2007, West Virginia Institute of Technology

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers (ASCE)	N/A

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Straley, Charles, F. Title: Engineering Director Role: Project Advisor|QA/QC	37	39	39

Brief Explanation of Responsibilities

Mr. Charles Straley, PE, PLS, MS, is an Engineering Director with GAI and a licensed Professional Engineer in seven states, including West Virginia, as well as a Professional Licensed Surveyor in West Virginia, with over 39 years of experience in civil and geotechnical engineering. He has played a key role in supporting the WVDEP through the design and development of reclamation plans and feasibility studies for approximately 100 AML projects across the state. His expertise includes subsurface exploration, geotechnical analysis, slope stability, foundation and embankment design, and the preparation of material and construction specifications. Mr. Straley is also highly experienced in construction administration, management, and monitoring.

EDUCATION (Degree, Year, Specialization)

MS, Geotechnical Engineering, 1988, University of Akron

BS, Civil Engineering, 1986, University of Akron

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Council of Engineering Companies (ACEC), WV Contractor's Association of WV National Society of Professional Engineers	Professional Engineer, 1993, WV Professional Engineer, 1995, OH Professional Engineer, 1996, KY Professional Engineer, 2007, IN Professional Engineer, 2022, VA Professional Engineer, 2023, TX Professional Engineer, 2023, MI Professional Land Surveyor, 1996, WV

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE: 26	YEARS OF AML RELATED DESIGN EXPERIENCE: 26	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Klamut, John, R. Title: Engineering Director Role: Project Advisor|QA/QC			

Brief Explanation of Responsibilities

Mr. John Klamut, PE, MS, is an Engineering Director with GAI and a licensed Professional Engineer in West Virginia and six additional states, as well as a Certified Floodplain Manager (CFM) with over 26 years of experience in water resource and environmental engineering. He has extensive experience managing AML projects for the PADEP BAMR, where he has led the engineering and design process for numerous reclamation efforts. His AML work includes evaluating and developing design alternatives, coordinating with PADEP BAMR, and overseeing project schedules and budgets to help achieve successful outcomes. Mr. Klamut's technical background spans mine tailings impoundment closures, overburden stockpile remediation, sediment basin design, and groundwater monitoring, and includes skills that directly support AML reclamation goals focused on environmental restoration and public safety.

EDUCATION (Degree, Year, Specialization)

MS, Civil Engineering, 2002, San Jose State University
BS, Forest Engineering, 1998, State University of New York, College of Environmental Science and Forestry

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
Association of State Floodplain Managers Pennsylvania Floodplain Managers Association Western Pennsylvania Coalition for Abandoned Mine Reclamation	Professional Engineer, 2014, WV Professional Engineer, 2004, AZ Professional Engineer, 2011, VA Professional Engineer, 2014, PA Professional Engineer, 2015, KY Professional Engineer, 2016, NM Professional Engineer, 2018, IN

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE: 31	YEARS OF AML RELATED DESIGN EXPERIENCE: 37	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Genes, Blaise Title: Technical Director 1 Role: Project Advisor|QA/QC			

Brief Explanation of Responsibilities

Mr. Blaise Genes has over 37 years of geotechnical engineering experience, specializing in field and laboratory testing of tailings, ash/sludge, soil, and rock materials, as well as seismic hazard assessments and liquefaction analyses. In his combined role as Project Advisor and QA/QC Lead, he directs testing programs, reviews geotechnical data, and provides oversight on engineering designs involving slope stability, foundations, retaining structures, and ground improvements. He also reviews technical reports, drawings, and specifications to maintain consistency and technical quality. Mr. Genes has contributed to numerous PADEP Abandoned Mine Land (AML) projects, including the West Newton Refuse Embankment Stabilization Project, Shawville North (Remedial) Project, Walkertown Coal Refuse Exploration Drilling Project, Hanover Reservoir Mine Fire Project, and the Bens Creek Coal Refuse Drilling Project, providing technical leadership and quality oversight throughout each phase.

EDUCATION (Degree, Year, Specialization)

BS, Civil Engineering Technology, 1988, Point Park University

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
United States Society of Dams, Tailings Committee Member	N/A

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
McCoy, Larry, L. Title: Assist. Engineering Director Role: Assist. Project Manager	29	29	0

Brief Explanation of Responsibilities

Mr. Larry McCoy, PE, is a licensed Professional Engineer in West Virginia and two other states, with a background in civil and water resources engineering, particularly in the remediation and redevelopment of AMLs. He has successfully managed and designed complex projects involving site stabilization, drainage improvements, and environmental restoration across former industrial and mining sites. His work includes H&H studies tailored to AML conditions, as well as permitting for projects with unique regulatory and environmental challenges. Mr. McCoy's technical expertise spans grading, erosion and sediment control, and stormwater management, which are critical components in AML reclamation efforts. In his role as Assistant Project Manager/Civil Engineering Lead, he will support project planning, design development, technical specifications, cost estimates, client coordination, and field operations.

EDUCATION (Degree, Year, Specialization)

BS, Civil Engineering, 1996, West Virginia Institute of Technology

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers (ASCE) Society of American Military Engineers (SAME) Association of State Flood Plain Managers	Professional Engineer, 2001, WV Professional Engineer, 2008, KY Professional Engineer, 2008, OH

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Fisher, Shane, A. Title: Project Engineer 2 Role: Assist. Project Manager/ Civil Engineer	4	20	0

Brief Explanation of Responsibilities

Mr. Shane Fisher, PE, is a Professional Engineer licensed in West Virginia and nine other states, with 33 years of experience in civil engineering, specializing in AML and infrastructure projects. His AML work includes design and cost estimating for reclamation and industrial wastewater systems, and he served as Lead Civil Engineer for WVDEP's UNT #1 of Teter Creek In-Lieu-Fee (ILF) Project. He brings expertise in environmental permitting, erosion and sediment control, construction stormwater management, and the design of roadways, drainage systems, and water/wastewater infrastructure. Mr. Fisher is proficient in MicroStation, InRoads, and AutoCAD Civil 3D, and his field experience as a construction superintendent enhances his ability to provide technical accuracy, regulatory compliance, and successful project delivery from planning through execution.

EDUCATION (Degree, Year, Specialization)

BS, Civil Engineering Technology, 2005, Fairmont State University

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Highway Engineers (ASHE) American Society of Civil Engineers (ASCE), Past President, current Branch Vice President, current WV Section Vice President	Professional Engineer, 2012, WV Professional Engineer, 2017, VA, NC Professional Engineer, 2018, MD Professional Engineer, 2022, PA Professional Engineer, 2023, NY, OH, NJ, WI, GA

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Young, Jeremy, E. Title: Project Manager 2 Role: Assist. Project Manager/ Civil Engineer	13	13	1

Brief Explanation of Responsibilities

Mr. Jeremy Young, PE, MS, is a seasoned Project Manager with over 13 years of experience supporting AML projects for the WVDEP. He is a licensed Professional Engineer in West Virginia specializing in site studies and engineering design, contributing to a wide range of environmental restoration and infrastructure improvement efforts across the state. His project portfolio includes the WVDEP Oldfield Branch (Hall) Drainage Project, WVDEP AML Water Feasibility Study in Beckley, WVDEP Laurel Run Point AML Reclamation Project, and the WVDEP AML Wheatley Branch (Luthy) Portals Project. As Assistant Project Manager and Civil Engineer for this project, Mr. Young will oversee engineering design coordination, assist in managing project schedules and deliverables, support field investigations, and provide compliance with regulatory and technical standards.

EDUCATION (Degree, Year, Specialization)

MS, Engineering Management, 2017, Marshall University
BS, Civil Engineering, 2012, Marshall University

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
N/A	Professional Engineer, 2017, WV

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Blake, David, L. Title: Engineering Manager 1 Role: Assist. Project Manager/ Subsurface Drilling	10	14	0

Brief Explanation of Responsibilities

Mr. David Blake, PE, is a licensed Professional Engineer in West Virginia and six additional states, with extensive experience in mining and civil engineering, specializing in AML projects and subsurface hazard mitigation. His recent work includes the Hanover Reservoir Mine Fire Project in Luzerne County, Pennsylvania, where he helped define a grouting program and mitigation boundaries to extinguish a decades-old underground fire. He also performed field evaluations of mine subsidence conditions in Clarksburg, West Virginia, confirming historic mine features and preparing contingency plans for geotechnical drilling near inundated workings. Mr. Blake has contributed to karst mitigation planning and civil site engineering for substation construction, and holds Black Hat mining certifications in West Virginia and Ohio.

EDUCATION (Degree, Year, Specialization)

BS, Mining Engineering, West Virginia University

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
Adult Leader with Scouting America	Professional Engineer, 2022, WV Professional Engineer, 2022, OH Professional Engineer, 2023, IN Professional Engineer, 2024, PA Professional Engineer, 2025, RI Professional Engineer, 2025, NJ Professional Engineer, 2025, NY

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Batool, Abeera Title: Engineering Manager 2 Role: Lead Geotechnical Engineer/ Subsurface Drilling	3	18	0

Brief Explanation of Responsibilities

Abeera Batool, PhD, PE, will provide Geotechnical Engineering leadership for this project. She has over 18 years of experience in various aspects of geotechnical engineering, including site characterization, developing geotechnical design parameters, design of shallow and deep foundations, retaining walls, and support of excavation. Her expertise includes advanced seepage and loading rate analyses of upstream constructed tailings dams, including stability and seismic evaluations. She also has experience in design of landslide remediations, management of geotechnical information for green infrastructure projects, and providing on-site construction supervision. Dr. Batool has worked on numerous AML projects for the PADEP BAMR, providing drilling coordination, coordinating additional geotechnical data, and preparing Geotechnical Engineering Reports. Her experience also includes working at mine refuse disposal facilities in West Virginia, where she was responsible for developing and evaluating field and laboratory testing/results and providing written reports and oral presentations of the field test results to clients and regulatory agencies.

EDUCATION (Degree, Year, Specialization)

PhD, Civil Engineering, 2013, Virginia Polytechnic Institute and State University
BS, Civil Engineering, 2009, Virginia Polytechnic Institute and State University
BS, Civil Engineering, 2007, University of Engineering and Technology

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
Deep Foundation Institute – Women in Deep Foundation Committee GeoProfessional Business Association – Diversity & Inclusion Committee	Professional Engineer, 2017, CA

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Lyle, Chelsea, A. Title: Geology Manager 1 Role: Lead Geologist	4	10	1

Brief Explanation of Responsibilities

Ms. Chelsea Lyle, PG, MS, is a licensed Professional Geologist in Pennsylvania with over 10 years of specialized expertise in engineering geology and geotechnical subsurface investigations. Her experience includes site reconnaissance, subsurface boring and sampling, geologic mapping, and core selection for laboratory analysis. She has supported a wide range of infrastructure projects, including transmission lines, substations, compressor stations, pipelines, bridges, roadways, landslide assessments, and mine subsidence mitigation. Her mining-related work includes overseeing mine stabilization during the construction of a water transmission line in Westmoreland County, Pennsylvania, where she monitored borehole drilling and concrete injection to mitigate subsidence risks. She also conducted exploratory drilling and reporting for a confidential coal mine grouting verification project, and served as a PennDOT Certified Drilling Inspector for multiple mine grout verification efforts in Pennsylvania, supervising drilling operations and using downhole video technology to assess grout and mine conditions.

EDUCATION (Degree, Year, Specialization)

MS, Geology, 2014, Kent State University
BA, Geological Sciences, 2010, State University of New York

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
Association of Environmental and Engineering Geologists (AEG)	Professional Geologist: PA

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Webster, David, Ian Title: Assist. Engineering Manager Role: Lead Civil Engineer/Erosion & Sediment Control	3	12	0

Brief Explanation of Responsibilities

Mr. Ian Webster, PE, has 12 years of experience that includes analysis, design, and review of drainage projects, including but not limited to, stormwater systems, retention and sediment ponds, roadway drainage, and natural stream design. He is a licensed Professional Engineer in West Virginia and four additional states and specializes in E&SC, National Pollutant Discharge Elimination System (NPDES) permitting, Federal Emergency Management Agency (FEMA) no-rise floodplain certificates, H&H design and reports, and roadway and right-of-way plans. He was responsible for H&H analysis and installation of drainage channels, underdrains, and stormwater management to safely convey water off-site for the WVDEP Belle (Sneed) Drainage Project in Kanawha County, WV.

EDUCATION (Degree, Year, Specialization)

BS, Civil Engineering, 2013, West Virginia University

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers (ASCE)	Professional Engineer, 2017, WV Professional Engineer, 2020, NC, KY Professional Engineer, 2023, TN, VA

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Berkes, Mary Beth, E. Title: Senior Engineering Manager 1 Role: H&H Engineering/Stream & Wetland Restoration Lead	2	16	0

Brief Explanation of Responsibilities

Ms. Mary Beth Berkes, PE, MS, has over 16 years of experience specializing in H&H analyses, stream restoration design, inundation studies and investigations, coastal engineering, and design of hydraulic structures. She is a Professional Engineer in West Virginia and five other states and has completed training on Natural Channel (Rosgen Levels I through IV), H&H permitting and procedures, and advanced HEC-RAS scour analyses. She is proficient in HEC-RAS, HY-8, HEC-HMS, Hydraflow Hydrographs, DamSites, PondPack, StormCAD, and AutoCAD. She was awarded the 2018 Young Professional of the Year by the Society of American Military Engineers. Ms. Berkes was the Project Manager for WVDEP's UNT #1 of Teter Creek ILF Project located in Barbour County, West Virginia. Deliverables included design and hydraulic modeling for over 5,700 linear feet of Level 1 Restoration or Establishment; 4,900 linear feet of Level 3 Restoration; and 2,500 linear feet of enhancement. Design drawing package of 56 sheets included plan, profile, and cross section views for 29 streams along with design tables, a site planting plan and details, and details for in-stream structures, culvert replacements, and ford crossings.

EDUCATION (Degree, Year, Specialization)

MS, Civil Engineering, 2010, Oregon State University

BS, Civil Engineering, 2008, University of Pittsburgh

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
Society of American Military Engineers (SAME)-Pittsburgh Post Women's Energy Network (WEN)	Professional Engineer, 2015, WV Professional Engineer, 2021, IN Professional Engineer, 2019, KY, OH Professional Engineer, 2014, PA

	Professional Engineer, 2022, WI

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Clarkston, Valerie, J. Title: Assist. Environmental Mgr. Role: Environmental Lead	0	0	0

Brief Explanation of Responsibilities

Ms. Valerie Clarkston, CE, CWB, MS, is a highly accomplished Assistant Environmental Manager with a proven track record of successfully leading multidisciplinary projects across the Southeast, Mid-Atlantic, and Midwest regions of the United States, including extensive work throughout West Virginia. Ms. Clarkston holds dual certifications as a Certified Ecologist (CE) and Certified Wildlife Biologist (CWB®), and has received advanced training in Environmental Site Assessments (ESAs), endangered species consultation, and hazardous materials management. Her field experience includes a wide range of wildlife survey methodologies and environmental compliance practices, consistently contributing to the successful delivery of complex environmental projects.

EDUCATION (Degree, Year, Specialization)
MS, Wildlife Science, 2011, Purdue University
BS, Wildlife Science, 2008, Purdue University

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
The Wildlife Society	Certified Ecologist (CE), 2018 Certified Wildlife Biologist (CWB®), 2019

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Hockersmith, Kelly, S. Title: Cultural Resources Director Role: Cultural Resources Lead	0	0	0

Brief Explanation of Responsibilities

Ms. Kelly Hockersmith, RPA, MA, is a qualified cultural resources professional with extensive experience managing projects across the Southeast, Midwest, Mid-Atlantic, and Southwestern U.S. in federal, state, municipal, and private sectors. She exceeds the Secretary of the Interior’s Standards for Archaeology and Historic Preservation (48 FR 44716-42), specializing in energy and transportation projects. Her expertise includes overseeing open-end agreements with a focus on staffing, scheduling, cost and quality control, technical reporting, and consultation with State Historic Preservation Offices (SHPOs) and Native American tribes. She has led all phases of historical archaeology and compliance with the National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA) (Sections 106 and 110), Section 4(f), and Federal Energy Regulatory Commission (FERC), and is well-versed in the Native American Graves and Repatriation Act (NAGPRA), Archaeological Resources Protection Act (ARPA), and United States Army Corps of Engineers (USACE) permitting.

EDUCATION (Degree, Year, Specialization)
MA, Applied Anthropology, 2004, University of South Florida
BA, Anthropology, 2001, Heidelberg University

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
Society for American Archaeology (SAA) National Association of Environmental Professionals (NAEP), Women’s Energy Network (WEN) Tennessee Council for Professional Archaeology	Register of Professional Archaeologists (RPA)

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE: 0	YEARS OF AML RELATED DESIGN EXPERIENCE: 0	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Paparella, Vincent, J. Title: Assist. Survey Technical Director Role: Lead Surveyor			

Brief Explanation of Responsibilities

Mr. Vince Paparella, PS, PLS, is a Professional Surveyor (PS) in West Virginia and Professional Land Surveyor (PLS) in six states, with over 30 years of experience managing survey projects, from small boundary surveys to large oil and gas projects. His expertise includes construction management, routing, surveying, and mapping of major water body crossings for energy and transportation clients. His project experience includes topographic surveys, boundary surveys, ALTA Surveys, Route Surveys, Utility Surveys, Control Surveys, Volumetric Surveys, and Construction Stakeout. Mr. Paparella is also experienced at providing AutoCAD Drafting (topographic mapping and subdivision plans), preparing legal descriptions, reducing and plotting survey data, and providing boundary determination and calculations.

EDUCATION (Degree, Year, Specialization)

AS, Civil Engineering, 1997, Hagerstown Community College

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
N/A	Professional Surveyor, 2018, WV Professional Land Surveyor, 1999, PA Professional Land Surveyor, 2015, ND Professional Land Surveyor, 2022, VA Professional Land Surveyor, 2023, KY, NC Professional Land Surveyor, 2024, TN

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE: 0	YEARS OF AML RELATED DESIGN EXPERIENCE: 0	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Holbert, Michael, L. Title: Assist. Engineering Director Role: Roadway & Traffic Engineering Lead			

Brief Explanation of Responsibilities

Mr. Michael Holbert, PE, is a licensed Professional Engineer (PE) in West Virginia, Pennsylvania, and Maryland, currently serving as an Assistant Engineering Director within GAI's Transportation group. With 29 years of experience in transportation and roadway engineering, he brings extensive expertise in developing plans, specifications, and cost estimates, as well as conducting design studies, preliminary engineering, and final design for a wide range of bridge and roadway projects. His clients have included major public agencies and institutions such as the West Virginia Department of Transportation, Division of Highways (WVDOH); Pennsylvania Department of Transportation (PennDOT); Pittsburgh Regional Transit (PRT); Maryland Department of Transportation State Highway Administration (MDOT SHA); City of Morgantown; Marshall University; Virginia Railway Express; and ENSR. Throughout his career, Mr. Holbert has held key roles including Deputy Project Manager, Civil Task Manager, Project Engineer, Lead Roadway Engineer, Civil Designer, and Survey Party Chief.

EDUCATION (Degree, Year, Specialization)

BS, Civil Engineering, 1996, West Virginia University (Summa Cum Laude)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
N/A	Professional Engineer, 2001, WV Professional Engineer, 2005, PA Professional Engineer, 2017, MD

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Mayhood, Ed, J. Title: Senior Design Manager Role: Computer Aided Design Lead	25	25	0

Brief Explanation of Responsibilities

Mr. Ed Mayhood specializes in grading design and developing construction documents, as-built drawings, master plans, surveys and permit applications, including creating and refining conceptual and construction details. He has in-depth knowledge of AutoCAD Civil3D, as well as AutoTURN, Bluebeam PDF Revu, Adobe Photoshop, MicroStation, and Acrobat. He uses CAD software to create surveys, design site layout and grading, and create construction plans, sections, and details. As the Senior Lead Project Designer, Mr. Mayhood has led complex AML mine fire mitigation and water management initiatives across the Northeastern United States. Projects have included the PADEP BAMR Percy Mine Fire Project in Fayette County, Pennsylvania; PADEP BAMR Mine Water Use in the Susquehanna River Project in the Susquehanna River Basin, Pennsylvania; and the PADEP BAMR Tamaqua Mine Water Problem Study in Tamaqua, Pennsylvania.

EDUCATION (Degree, Year, Specialization)

AST, Computer Drafting and Design, 2000, ITT Technical Institute

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
N/A	N/A

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Sutton, John, T. Title: Project Environmental Specialist 1 Role: Construction Management Lead	0	34	0

Brief Explanation of Responsibilities

Mr. John Sutton has 35 years of experience specializing in the management and protection of environmental resources throughout West Virginia. His responsibilities include the scheduling and management of a group of environmental inspectors involved in the field inspection of active construction and post-construction projects located within West Virginia and Ohio. He is also responsible for client coordination on upcoming project permitting and in-progress and post-construction project activities, as well as relaying compliance issues identified as part of project inspections. Other duties include continuing personal inspection of on-going projects to identify issues of environmental non-compliance as applicable under state and federal regulations and permitting. He has also served as a direct liaison between WVDEP inspectors and client representatives.

EDUCATION (Degree, Year, Specialization)

BA, Anthropology, 1991, West Virginia University

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
N/A	Confined Space Entry and Awareness Training Certified 40-Hour Hazardous Materials Training Certified

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE: 25	YEARS OF AML RELATED DESIGN EXPERIENCE: 25	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Owens, Michael, D. Title: Senior GIS Manager Role: GIS/Mapping Lead			

Brief Explanation of Responsibilities

Mr. Michael Owens, GISP®, is a seasoned GIS professional with over 20 years of experience specializing in Esri ArcGIS for Desktop and Enterprise platforms. As GIS Group Manager for GAI's Energy-focused sectors and Northeast Practice Area Leader, he oversees mapping, spatial data analysis, and web/mobile GIS solutions, while managing quality standards and technical support across disciplines. Michael is a skilled developer and administrator of ArcGIS Enterprise, Field Maps, and Survey123, and leads the deployment of custom GIS tools and databases. He has supported over 200 major infrastructure projects and provides advanced GIS services, staff augmentation, and GPS equipment management, all while staying actively engaged with the GIS community.

EDUCATION (Degree, Year, Specialization)
BS, Information Science, 2005, University of Pittsburgh

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
N/A	Geographic Information Systems Professional, 2015 Esri Certified Desktop Associate, 2014

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE: 25	YEARS OF AML RELATED DESIGN EXPERIENCE: 25	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Guard, Matthew Title: Sr Director, Health & Safety Role: Health & Safety Lead			

Brief Explanation of Responsibilities

Matthew Guard, CSP, ASP, Senior Director of Health and Safety at GAI Consultants, brings over 25 years of experience in cultivating safety-first cultures across a range of industries. He holds Certified Safety Professional (CSP) and Associate Safety Professional (ASP) credentials, along with several specialized certifications that reinforce his expertise. He is also a Mine Safety and Health Administration (MSHA) New Miner Training Instructor for Surface Coal and Non-Metal. At GAI, Matthew leads the development of comprehensive safety programs, delivers targeted training, and manages regulatory compliance across office and field operations. He oversees incident investigations, conducts audits, and collaborates with project teams to implement tailored safety plans. His strategic, hands-on approach reflects a deep commitment to protecting employees, reducing risk, and promoting a culture of continuous safety improvement.

EDUCATION (Degree, Year, Specialization)
BS, Industrial Health & Safety, 2000, Pennsylvania State University

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Safety Professionals (ASSP) American Council of Engineering Companies (ACEC)	Certified Safety Professional (CSP): CSP-31068 Associate Safety Professional (ASP): A17068 MSHA New Miner Training Instructor, Surface Coal & Non-Metal

14. PROVIDE A LIST OF SOFTWARE/EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE USED TO COMPLETE AML DESIGN SERVICES

Design Software: AutoCAD/Civil 3D, MicroStation, Microsoft Office Suite, Sewer CAD, Water CAD, Hydrocalc Hydraulics, TR-55,Hydraulic Modeling Software, Maptech (Professional), SLOPE/W and Slide2 (Slope Stability), and GeoPack Design.

Equipment: Plotters, Digital Cameras, Digital Planimeters, Surveying Stations, GPS Units, Computers, Photocopiers, Printers, and Scanners

Cultural Resources Equipment and Software:

- 1,000 SF Laboratory, lighted by natural and artificial light, and contains storage cabinets and shelves, worktables, sinks, and computers
- 1,500+ SF Storage Facility for Long-Term Artifact Curation
- 6,000 SF Archaeological Storage Facility with Equipment Storage Areas
- Computer Equipment
- Flote-Tech Machine (for processing light and heavy fraction soil flotation samples)
- Portable Shelters and Heaters, allowing GAI archaeologists to work during the winter months
- In-House Library of approximately 10,000 volumes dealing with aspects of technical projects
- Mapping-Grade, Hand-Held Global Positioning System
- DSLR Cameras
- Smartphones
- Printers
- Mapping-Grade Handheld GPS Units
- Tablets with ArcGIS Field Maps Survey Software and Trimble Receivers
- Microsoft Office 365 Software
- Survey123 for ArcGIS Software
- AutoCAD Software

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD*
*Note: This is a summary of a few of our projects located in West Virginia. GAI has hundreds of current projects ongoing.

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
Belle (Sneed) Drainage Project; Town of Belle, Kanawha County, WV	WVDEP, Division of Land Restoration, Office of Abandoned Mine Lands 601 57th Street SE Charleston, WV 25304	Performing a Site Investigation; Designing Access for Construction and Future Maintenance Access; Design of Drainage Conveyances, including Drainage Channels, Underdrains, and/or other Controls to Safely Convey Water Off Site; and Condition and Revegetation Disturbed Areas	$75,055 (fee)	90%
City of Wheeling Landfill Closure Cap Design Project; Landfill Site Characterization, Leachate Management and Closure Cap Design, and Construction Monitoring; Ohio County, WV	WVDEP, Office of Environmental Remediation 2031 Pleasant Valley Road, Fairmont, WV 26554	Surveying and Mapping; Site Reconnaissance; Records Review and Research; Subsurface Exploration and Testing; Characterization Report Preparation; Meetings; Design Development; Permitting; Construction Documents; Construction Monitoring; and QA/QC Testing	$934,080 (fee)	60%
US 340 – Charles Town to Virginia Line Road Widening Project; Charles Town, Jefferson County, WV	West Virginia Department of Transportation, Division of Highways 2120 Northwestern Turnpike Burlington, WV 26710	Final Design and Contract Plans, Project Management and Coordination, Surveying, Final Hydraulics, Bridge Design, Maintenance of Traffic, Roadway Design, Stormwater Management, NPDES Permitting, Environmental Permitting, Right-of-Way, and Geotechnical Engineering for the widening of approximately 3.5 miles of two-lane roadway to a four-lane roadway.	$600,000 (fee)	80%
Corridor H – Section 3 Roadway Construction, Tucker County, WV	West Virginia Department of Transportation, Division of Highways, 1101 North Randolph Avenue Elkins, WV 26241	Final Design and Contract Plans, Project Management and Coordination, Surveying, Final Hydraulics, Maintenance of Traffic, Roadway Design, Stormwater Management, NPDES Permitting, Environmental Permitting, Right-of-Way, and Geotechnical Engineering for the construction of approximately 4.0 miles of new four-lane highway.	$5,000,000 (fee)	75%
TOTAL NUMBER OF PROJECTS: 290 Active WV Projects		TOTAL ESTIMATED CONSTRUCTION COSTS: $7,750,000		

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS*

*Note: GAI is a subconsultant for numerous projects. This is a summary of a few of our most relevant projects in West Virginia.

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY
WVDOH Don Knotts Ave +2 ADA Project; Monongalia County, WV	Design Build project. Provide final design, construction administration and as- built drawings for retro-fitting new sidewalks and curb ramps to meet current ADA guidelines.	SQP Construction 281 Smiley Drive St. Albans, WV 25177	September 2025	$1,070,307	$105,000 (Fee)
WVDOH District 8 ADA Bundle Projec; Tucker, Randolph, and Pocahontas Counties, WV	Design Build project. Provide final design, construction administration and as built drawings for retro-fitting new sidewalks and curb ramps to meet current ADA guidelines.	SQP Construction 281 Smiley Drive St. Albans, WV 25177	October 2025	$1,161,969	$104,000 (Fee)
WVDOH Jones Ave +2 ADA Project; Fayette County, WV	Design Build project. Provide final design, construction administration and as built drawings for retro-fitting new sidewalks and curb ramps to meet current ADA guidelines.	SQP Construction 281 Smiley Drive St. Albans, WV 25177	January 2026	$1,035,714	$102,000 (Fee)
WVDOH District 1 ADA Bundle Project; Putnam and Mason Counties, WV	Design Build project. Provide final design, construction administration and as built drawings for retro-fitting new sidewalks and curb ramps to meet current ADA guidelines.	SQP Construction 281 Smiley Drive St. Albans, WV 25177	February 2026	$1,260,406	$121,000 (Fee)

WVDOH 7th Street +5 ADA Project; Final Design, Construction Administration, and As Built Drawings; Wood County, WV	Design Build project. Provide final design, construction administration and as built drawings for retro-fitting new sidewalks and curb ramps to meet current ADA guidelines.	SQP Construction 281 Smiley Drive St. Albans, WV 25177	April 2026	$1,119,649	$94,000 (Fee)
WVDOH Don Knotts Ave +2 ADA Project; Final Design, Construction Administration, and As Built Drawings; Monongalia County, WV	Design Build project. Provide final design, construction administration and as built drawings for retro-fitting new sidewalks and curb ramps to meet current ADA guidelines.	SQP Construction 281 Smiley Drive St. Albans, WV 25177	September 2025	$1,070,307	$105,000 (Fee)
WVDOH District 8 ADA Bundle Project; Final Design, Construction Administration, and As Built Drawings; Tucker, Randolph, and Pocahontas Counties, WV	Design Build project. Provide final design, construction administration and as built drawings for retro-fitting new sidewalks and curb ramps to meet current ADA guidelines.	SQP Construction 281 Smiley Drive St. Albans, WV 25177	October 2025	$1,161,969	$104,000 (Fee)

17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD*
*Note: GAI has completed hundreds of projects within the past 5 years. This is a summary of a few of our most relevant projects.

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
Walkertown Coal Refuse Pile Exploration Drilling Project, AML Remediation Project, Washington County, Pennsylvania	Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation 400 Market Street, 13th Floor Harrisburg, PA 17101	$158,505 (Project Fee)	2024	NO
Shawville North (Remedial) Project, AML Remediation Project, Clearfield County, Pennsylvania	Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation 400 Market Street, 13th Floor Harrisburg, PA 17101	$90,000 (Design Fee)	2025 (Design)	CONSTRUCTION IS SCHEDULED TO BEGIN IN FALL 2025
West Newton Refuse Embankment Stabilization Project, AML Remediation Project, West Newton, Westmoreland County, Pennsylvania	Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation 400 Market Street, 13th Floor Harrisburg, PA 17101	$311,000 (Design Fee)	2021 (Design)	ONGOING
White Avenue Slip Project, Landslide Remediation Project, Morgantown, Monongalia County, West Virginia	City of Morgantown 389 Spruce Street Morgantown, WV 26505	$67,000 (Design Fee)	2021 (Design)	YES
North St. Car Way +2 ADA Project, Harrison County, West Virginia	West Virginia Division of Highways PO Box 4220 Clarksburg, WV 26302	$108,000 (Design Fee)	2022	YES
MacCorkle Ave SE +1 ADA Project, Kanawha County, West Virginia	West Virginia Division of Highways 1340 Smith St. Charleston, WV 25301	$65,000 (Design Fee)	2022	YES
East Main Street +2 ADA Project, Harrison County, West Virginia	West Virginia Division of Highways PO Box 4220 Clarksburg, WV 26302	$124,000 (Design Fee)	2023	YES
West Moreland Ave +2 ADA Project, Cabell County, West Virginia	West Virginia Division of Highways 801 Madison Ave. Huntington, WV 25712	$118,00 (Design Fee)	2024	YES

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS CONSTRUCTION OVERSIGHT ON PROJECTS
*Note: GAI has completed hundreds of projects within the past 5 years. This is a summary of a few of our most relevant projects.

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
Keystone Station Coal Combustion Residual Landfill Cap Construction Quality Assurance and Engineering Support – Phase 1 Landfill Closure, Armstrong County PA	Keystone Operating, LLC Plumcreek Township, Armstrong County PA	$6,000,000	2023	Yes
Conemaugh Station Coal Combustion Residual Landfill Cap Construction Quality Assurance and Engineering Support – Phase 1 Landfill Closure, Indiana County PA	Conemaugh Operating, LLC West Wheatfield Township, Indiana County PA	$5,500,000	2023	Yes
Keystone Station Coal Combustion Residual Landfill Cap Construction Quality Assurance and Engineering Support – Phase 2 Landfill Closure, Armstrong County PA	Keystone Operating, LLC Plumcreek Township, Armstrong County PA	$6,000,000	2024	Yes
Conemaugh Station Coal Combustion Residual Landfill Cap Construction Quality Assurance and Engineering Support – Phase 2 Landfill Closure, Indiana County PA	Conemaugh Operating, LLC West Wheatfield Township, Indiana County PA	$5,500,000	2024	Yes
Sequence 4 Liner Repair Construction Quality Assurance and Engineering Support, Landfill Construction, Winfield, WV	American Electric Power 1 Riverside Plaza, Columbus Ohio	$4,000,000	2023-2024	Yes
Walkertown Coal Refuse Exploration Drilling, Sonic Drilling Project, Washington County, PA	Pennsylvania Department of Environmental Protection, Bureau of Abandon Mine Reclamation Cambria Office 286 Industrial Park Rd. Ebensburg, PA	$160,000	2024	Yes

19. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE) *Note: GAI has completed hundreds of projects as a sub-consultant within the past 5 years. This is a summary of a few of our most relevant projects.

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH
Martinsburg +5 ADA Project, Design Build Berkeley County, WV	West Virginia Division of Highways 2120 Northwestern Turnpike Burlington, WV 26710	$84,000 (Fee)	2023	YES	SQP Construction Group
Williamson ADA Project, Design Build Mingo County, WV	West Virginia Division of Highways 801 Madison Ave. Huntington, WV 25712	$62,000 (Fee)	2023	YES	SQP Construction Group
Madison Ave +2 ADA Project, Design Build Cabell County, WV	West Virginia Division of Highways 801 Madison Ave. Huntington, WV 25712	$80,000 (Fee)	2023	YES	SQP Construction Group
Washington St. E +1 ADA Project, Design Build Kanawha County, WV	West Virginia Division of Highways 1340 Smith Street Charleston, WV 25301	$80,000 (Fee)	2023	YES	SQP Construction Group
Grand Central Ave +2 ADA Project, Design Build Wood County, WV	West Virginia Division of Highways 624 Depot St. Parkersburg, WV 26101	$83,000 (Fee)	2024	YES	SQP Construction Group
5th Ave ADA Project Design Build Cabell County, WV	West Virginia Division of Highways 801 Madison Ave. Huntington, WV 25712	$81,000 (Fee)	2024	YES	SQP Construction Group

19. Use this space to provide any additional information or description of resources supporting your firm's qualifications to perform work for the West Virginia Abandoned Mine Lands Program. **Please see GAI's Expression of Interest for additional information pursuant to GAI's qualifications for working on WVDEP-DLR-AML and similar projects.**

20. The foregoing is a statement of facts.

Signature: Kent C. Cockley Digitally signed by Kent C. Cockley DN: E=k.cockley@gaiconsultants.com, CN=Kent C. Cockley Date: 2025.08.18 15:15:02-04'00' Title: Vice President

Date: August 18, 2025

Printed Name: Kent Cockley, PE, MS

APPENDIX

E

AML & RELATED PROJECT EXPERIENCE MATRIX

LATED PROJECT EXPERIENCE MATRIX

PROJECT	Exp. Basis C=Corp. P=Personnel *	Additional Info Provided in Section(s) **	PROJECT EXPERIENCE REQUIREMENTS															PRIMARY STAFF PARTICIPATION CAPACITY *** M= Management P=Professional											
			Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Mapping	Jason G. Gandee	Chalres F. Straley, PE, PLS	John Klamut, PE, CFM, MS	Blaise Genes	Lee McCoy	Shane Fisher, PE	Jeremy Young, PE, MS	David Blake, PE	Abeera Batool, PhD, PE	D. Ian Webster, PE	Mary Beth Berkes, PE, MS	Ed Mayhood
WVDEP Belle (Sneed) Drainage Project	C/P	EOI/Appendix A	X	X	X	X			X		X	X					X	X	M/P	M/P								P		P
WVDEP Mingo County PSD Feasibility Study	C/P	Appendix A	X			X						X								M/P										
WVDEP Amigo Portals	C/P	Appendix A	X	X	X	X					X	X				X		X		M/P										
WVDEP Larry Frederick Highwall & Refuse	C/P	EOI/Appendix A	X	X	X	X	X		X		X	X			X		X	X		M/P										
WVDEP Oldfield Branch (Hall) Drainage	C/P	Appendix A	X	X	X	X					X	X					X	X		M/P					P					
WVDEP Eastern Wyoming County PSD Feasibility Study	C/P	Appendix A	X			X						X								M/P										
WVDEP Raleigh County PSD Feasibility Study	C/P	Appendix A	X			X						X								M/P										
WVDEP Wheatley Branch (Lutyhy) Portals	C/P	Appendix A	X	X	X	X					X	X			X		X	X		M/P					P					
WVDEP Webster County Commission Diana Area Feasibility Study	C/P	Appendix A	X			X						X								M/P										
WVDEP Cherokee Complex	C/P	Appendix A	X			X	X				X	X			X	X	X	X		M/P										
WVDEP Laurel Point (Saylor Run Road Slip)	C/P	EOI/Appendix A	X	X	X	X					X	X			X	X	X	X		M/P					P					
WVDEP Reynoldsville Refuse	C/P	EOI/Appendix A	X	X	X	X			X		X	X			X	X	X	X		M/P										
WVDEP Earling Refuse Pile	C/P	Appendix A	X	X	X	X					X	X			X	X	X	X		M/P										
WVDEP Erbacon CR9 Webster County WL Feasibility Study	C/P	Appendix A	X			X						X								M/P										
WVDEP Kanawha Rambling Hills Water Study	C/P	Appendix A	X			X						X								M/P										
WVDEP Davis Creek Water Study	C/P	Appendix A	X			X						X								M/P										
WVDEP Coalburg Water Study	C/P	Appendix A	X			X						X								M/P										
WVDEP Wallace 353 Water Study	C/P	Appendix A	X			X						X								M/P										
WVDEP Wallace 354 Water Study	C/P	Appendix A	X			X						X								M/P										
WVDEP Greystone Mine Drainage	C/P	EOI/Appendix A	X	X	X	X					X	X					X	X		M/P										
WVDEP Route 60 Drainage	C/P	Appendix A	X	X	X	X					X						X	X		M/P										
WVDEP Malllory Refuse	C/P	Appendix A	X		X	X	X				X				X		X	X		M/P										
WVDEP Lynch Run Highwall #6	C/P	EOI/Appendix A	X		X	X					X	X		X	X	X	X	X		M/P										
WVDEP Duck Creek (Jenkins) Landslide	C/P	EOI/Appendix A	X			X					X						X	X		M/P										
WVDEP Heizer Creek Drainage	C/P	Appendix A	X	X	X	X					X						X	X		M/P										
WVDEP Wolfpen Landslide	C/P	Appendix A	X	X	X	X					X						X	X		M/P										

* List whether project experience is corporate or personnel based or both
** Use this area to provide specific sections or pages if needed for reference
*** List Primary Design personnel and their functional capacity for the projects listed

LATED PROJECT EXPERIENCE MATRIX

PROJECT	Exp. Basis C=Corp. P=Personnel *	Additional Info Provided in Section(s) **	PROJECT EXPERIENCE REQUIREMENTS															PRIMARY STAFF PARTICIPATION CAPACITY *** M= Management P=Professional											
			Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Mapping	Jason G. Gandee	Chalres F. Straley, PE, PLS	John Klamut, PE, CFM, MS	Blaise Genes	Lee McCoy	Shane Fisher, PE	Jeremy Young, PE, MS	David Blake, PE	Abeera Batool, PhD, PE	D. Ian Webster, PE	Mary Beth Berkes, PE, MS	Ed Mayhood
WVDEP Hominy Creek	C/P	Appendix A	X			X						X								M/P									
WVDEP Logan (Marcum) Drainage	C/P	Appendix A	X	X	X	X					X	X					X	X		M/P									
WVDEP Bud Alpoca	C/P	Appendix A				X						X								M/P									
WVDEP Nuriva Maben	C/P	Appendix A				X						X								M/P									
WVDEP Herndon Heights	C/P	Appendix A				X						X								M/P									
WVDEP Handley/Upper Creek	C/P	Appendix A	X	X	X	X					X	X					X	X		M/P									
WVDEP Titus Road	C/P	Appendix A	X			X					X	X		X			X	X		M/P									
WVDEP American Legion	C/P	Appendix A	X			X					X	X		X			X	X		M/P									
WVDEP Cogar	C/P	Appendix A		X	X	X							X							M/P									
WVDEP East Branch Phase II	C/P	Appendix A	X			X					X	X		X		X	X	X		M/P									
WVDEP West Branch Headwaters	C/P	Appendix A	X	X	X	X			X			X				X		X		M/P									
WVDEP Lake Milton Reclamation	C/P	Appendix A	X			X					X	X					X	X		M/P									
WVDEP Middleton Run Reclamation	C/P	Appendix A	X			X					X	X						X		M/P									
WVDEP Latrobe (Gibson) Landslide	C/P	Appendix A		X	X	X					X					X	X	X		M/P									
WVDEP Lodestar Energy	C/P	Appendix A	X	X	X	X					X		X			X	X	X		M/P									
WVDEP Ven's Run Maintenance	C/P	Appendix A	X			X					X						X	X		M/P									
WVDEP War Waterline	C/P	Appendix A										X								M/P									
WVDEP Clarks Gap	C/P	Appendix A				X						X								M/P									
WVDEP War (Dash) Impoundment	C/P	Appendix A				X											X	X		M/P									
WVDEP Whites Run	C/P	Appendix A	X	X	X	X	X				X	X		X		X				M/P									
WVDEP Helen Portals	C/P	Appendix A	X	X	X	X	X				X				X	X				M/P									
WVDEP Bearwallow Branch	C/P	Appendix A	X	X	X	X	X				X					X				M/P									
WVDEP Ned's Branch Impoundment	C/P	Appendix A	X		X	X					X	X	X			X	X			P									
WVDEP McAlpin Phase II & III	C/P	Appendix A	X	X	X	X	X	X		X	X	X		X	X	X	X			M/P									
WVDEP McAlpin Phase I	C/P	Appendix A	X	X	X	X	X				X	X		X	X	X	X			M/P									
WVDEP Community of Preston	C/P	Appendix A				X					X		X				X			M/P									
WVDEP Kingwood 52/6	C/P	Appendix A				X					X		X				X			M/P									
WVDEP Micajah Ridge	C/P	Appendix A				X						X								M/P									
WVDEP Glen Rogers	C/P	Appendix A				X						X								M/P									
WVDEP Rt. 20 / Gould	C/P	Appendix A				X						X								M/P									
WVDEP Elkins/Buckhannon	C/P	Appendix A				X						X								M/P									
WVDEP Laurel Creek	C/P	Appendix A		X	X	X			X		X					X	X			M/P									

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*** List Primary Design personnel and their functional capacity for the projects listed

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WVDEP Superior	C/P	Appendix A								X										P									
WVDEP Wash. Heights Review	C/P	Appendix A				X						X								P									
WVDEP Gaymont	C/P	Appendix A				X						X								P									
WVDEP Hominy Creek	C/P	Appendix A				X						X								P									
WVDEP Elk Creek / Verner	C/P	Appendix A				X						X								P									
WVDEP Orlando Mining	C/P	Appendix A								X					X														
WVDEP Scotch Hill	C/P	Appendix A									X						X			P									
WVDEP Camp Run AMD	C/P	Appendix A	X	X	X	X					X	X		X	X	X	X			P									
WVDEP Mahan	C/P	Appendix A	X			X					X					X	X			M/P									
WVDEP Johnsons Knob	C/P	Appendix A	X	X	X	X	X				X	X		X	X	X	X			P									
WVDEP Carolina	C/P	Appendix A	X	X	X	X	X				X				X		X			P									
WVDEP Hutchinson	C/P	Appendix A		X					X		X						X			M/P									
WVDEP Fairmont (Grandstaff)	C/P	Appendix A		X					X		X						X			M/P									
WVDEP City of Summersville	C/P	Appendix A				X														P									
WVDEP Reynoldsville	C/P	Appendix A				X					X		X				X			M/P									
WVDEP Mill Creek	C/P	Appendix A				X					X			X			X			P									
WVDEP Majesty Mine	C/P	Appendix A	X	X	X	X	X	X	X		X	X		X	X	X	X			P									
WVDEP Wash. Hts to Jeffrey	C/P	Appendix A										X																	
WVDEP Gauley River Review	C/P	Appendix A				X														P									
WVDEP Heizer/Manila Review	C/P	Appendix A				X														M/P									
WVDEP Owings Mine	C/P	Appendix A	X	X	X	X	X			X	X	X		X	X	X	X			P									
WVDEP Omega	C/P	Appendix A		X	X	X					X	X				X	X			P									
WVDEP Mill Creek - Isom	C/P	Appendix A										X																	
WVDEP Weaver-Junior	C/P	Appendix A										X								M/P									
WVDEP Reynoldsville Phase II	C/P	Appendix A										X								P									
WVDEP Mainella	C/P	Appendix A		X					X		X						X			M/P									
WVDEP Glen Morgan	C/P	Appendix A		X					X		X						X			M/P									
WVDEP Harris AMD	C/P	Appendix A		X	X	X					X			X						P									
WVDEP Lefthand Fork	C/P	Appendix A	X	X	X	X	X	X			X				X	X	X			P									
WVDEP Madison Street/Fairview	C/P	Appendix A		X		X					X									P									
WVDEP Summerlee	C/P	Appendix A	X			X	X				X					X	X			M/P									
WVDEP Cow Creek	C/P	Appendix A		X	X	X					X						X			P									
WVDEP Godby Branch	C/P	Appendix A				X					X						X			P									
WVDEP New Haven Phase II	C/P	Appendix A										X																	
WVDEP Gauley River Phase II	C/P	Appendix A										X																	

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WVDEP Heizer and Manila Ph. II	C/P	Appendix A										X								M/P									
WVDEP Matheny Hill Phase I	C/P	Appendix A										X								M/P									
WVDEP Duncan Hill No. 2	C/P	Appendix A							X		X						X			M/P									
WVDEP Urso Subsidence	C/P	Appendix A		X					X		X						X			M/P									
WVDEP Mill Creek Phase II	C/P	Appendix A										X																	
WVDEP Duncan Hill Subsidence	C/P	Appendix A		X					X		X						X			M/P									
WVDEP Cora Mine Drainage II	C/P	Appendix A		X	X	X					X	X				X				M/P									
WVDEP Covey Creek Mine	C/P	Appendix A		X				X			X						X			P									
WVDEP Vivian	C/P	Appendix A	X			X	X				X					X	X			P									
WVDEP Kimball	C/P	Appendix A	X			X	X				X					X	X			P									
WVDEP Hampden Bridge	C/P	Appendix A				X					X					X													
WVDEP Bear Run Refuse	C/P	Appendix A	X			X	X				X	X		X		X	X												
WVDEP Beaver Creek	C/P	Appendix A				X					X						X												
WVDEP Charleston Landslide	C/P	Appendix A	X								X						X												
WVDEP Garrison Complex	C/P	Appendix A		X		X					X						X												
WVDEP Cassity Fork	C/P	Appendix A				X					X						X												
WVDEP Mulberry Fork Landslide	C/P	Appendix A	X								X						X												
WVDEP Beckley Subsidence	C/P	Appendix A		X					X		X						X												
WVDEP Courtright Highwall	C/P	Appendix A	X								X						X												
WVDEP Richard Mine AMD Treatment	C/P	EOI	X			X						X		X						M/P									
WVDEP Wolfpen (Carpenter) Portals	P			X	X	X					X								P										
WVDEP Little Whitestick Refuse	P			X	X	X					X					X	X		P										
WVDEP Crany Mine Dump	P		X			X					X					X	X		P										
WVDEP MacArthur Phase 1 Subsidence	P			X		X			X		X	X					X		P										
WVDEP MacArthur Phase 2 Subsidence	P			X		X			X		X	X					X		P										
WVDEP East Lynn II	P			X	X	X					X					X	X		P										
WVDEP Flipping Hollow Complex	P			X	X						X								P										
WVDEP Sundial (Hatfield) Refuse Re-Bid	P			X	X	X					X				X	X	X		P										
WVDEP Mill Creek Refuse Pile	P			X		X					X						X		P										
WVDEP Johns Branch Refuse Dam	P			X		X		X			X						X		P										
WVDEP Clay-Roane PSD Water Study	P			X								X							P										

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WVDEP Burnsville PSD Water Study	P			X								X							P										
WVDEP Brandonville/Pisgah Water Study	P			X								X							P										
WVDEP Cuzzart/4-H Water Study	P			X								X							P										
WVDEP Hudson/Mt. Nebo Water Study	P			X								X							P										
WVDEP Jessop Highwall #10	P		X		X	X					X						X		P										
WVDEP Lando (Edwards) Drainage	P		X	X	X	X					X						X		P										
WVDEP Taylorville (Cantrell) Drainage	P			X	X	X					X								P										
WVDEP Borderland (Matney) Portals	P			X	X	X					X								P										
WVDEP Peach Ridge Complex	P		X	X	X	X					X				X		X		P										
WVDEP Measle Fork Refuse	P		X			X					X				X	X	X		P										
WVDEP Georges Creek Portals	P			X	X	X					X						X		P										
WVDEP Putney Impoundment	P		X	X	X	X					X					X	X		P										
WVDEP Kopperston Refuse Emergency	P		X			X					X								P										
WVDEP Marmet (Wells Drive) Emergency	P			X	X	X					X						X		P										
WVDEP Marmet (Clark) Drainage	P			X	X	X					X						X		P										
WVDEP Pringle Run #2	P		X	X	X	X					X				X		X		P										
WVDEP Fairmont East Mine Drainage	P			X		X					X								P										
WVDEP Rachel Refuse	P		X		X	X					X				X				P										
WVDEP Laeger Water Study	P			X								X							P										
WVDEP May Portals	P			X	X	X					X						X		P										
WVDEP Belington Portals Project	P	LEE MCCOY RESUME	X		X				X			X	X				X	X					M/P							
WVDEP Coaldale Refuse Project	P	LEE MCCOY RESUME	X						X			X	X	X			X	X					M/P							
WVDEP Elk Creek Portals Project	P	LEE MCCOY RESUME		X	X	X			X			X	X		X		X	X					M/P							
WVDEP Mullens Portals Project	P	LEE MCCOY RESUME		X	X	X			X			X	X		X	X	X	X					M/P							
WVDEP Richardson Refuse/Rumble Portals Project	P	LEE MCCOY RESUME		X	X	X			X			X		X			X	X					M/P							
WVDEP Morris Creek AML Project	P	LEE MCCOY RESUME	X			X						X	X	X		X	X	X					M/P							
WVDEP UNT #1 of Teter Creek	C/P	SEE EOI				X					X	X	X			X		X						M/P					M/P	
WVCA Richard Mine AMD	C/P	SEE EOI		X		X			X			X		X		X	X			M/P										

* List whether project experience is corporate or personnel based or both
** Use this area to provide specific sections or pages if needed for reference
*** List Primary Design personnel and their functional capacity for the projects listed

LATED PROJECT EXPERIENCE MATRIX

PROJECT	Exp. Basis C=Corp. P=Personnel *	Additional Info Provided in Section(s) **	PROJECT EXPERIENCE REQUIREMENTS: Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Mapping	PRIMARY STAFF PARTICIPATION CAPACITY *** M= Management P=Professional: Jason G. Gandee	Chalres F. Straley, PE, PLS	John Klamut, PE, CFM, MS	Blaise Genes	Lee McCoy	Shane Fisher, PE	Jeremy Young, PE, MS	David Blake, PE	Abeera Batool, PhD, PE	D. Ian Webster, PE	Mary Beth Berkes, PE, MS	Ed Mayhood
PADEP Hanover Reservoir Mine Fire	C/P	SEE EOI	X	X	X			X							X		X	X			M/P	M/P				P	M/P			M/P
PADEP Shawville North	C/P	SEE EOI	X	X		X			X		X		X		X		X	X			M/P	M/P					M/P			M/P
PADEP Walkertown Coal Refuse Pile Exploration Drilling Project	C/P	SEE EOI	X						X						X		X			M/P		M/P					M/P			
PADEP Bens Creek Coal Refuse Pile Exploration Drilling Project	C/P	SEE EOI	X						X	X					X		X					M/P					M/P			
PADEP West Newton Refuse Embankment Stabilization Project	C/P	SEE EOI	X			X			X	X		X		X	X		X				M/P	M/P								
PADEP Monongahela South Dangerous Highwall Reclamation Project	C/P	SEE EOI		X	X	X			X		X		X		X	X	X													

* List whether project experience is corporate or personnel based or both
** Use this area to provide specific sections or pages if needed for reference
*** List Primary Design personnel and their functional capacity for the projects listed

APPENDIX

F

AML CONTRACTOR INFORMATION FORM

OMB # 1029-0119
Expiration Date:
01/31/2028

ABANDONED MINE LANDS (AML) CONTRACTOR INFORMATION FORM

You must complete this form for your AML contracting officer to request an eligibility evaluation from the Office of Surface Mining Reclamation and Enforcement (OSMRE) to determine if you are eligible to receive an AML contract. This requirement can be found under OSMRE's regulations at 30 CFR 874.16. **NOTE:** This form must be signed and **dated within 30 days** of submission to be considered for a current bid.

Part A: General Information

Business Name:	GAI Consultants, Inc.
Tax ID #:	25-1260999
Address:	385 East Waterfront Drive
City, State, & Zip:	Homestead, Pennsylvania 15120
Phone Number:	412.476.2000
Email Address:	k.cockley@gaiconsultants.com

Part B: Obtain an Organizational Family Tree (OFT) from the Applicant Violator System (AVS)

If you plan to certify the existing AVS information or submit updates under Part C, you must include an OFT. Instructions for downloading an OFT from the AVS can be found at: https://www.osmre.gov/sites/default/files/2022-02/OMB%201029-0119%20instructions.pdf. If you require assistance you may contact the AVS Office by phone at: 800-643-9748, or by email at: avshelp@osmre.gov.

Part C: Certifying and updating information in the AVS

Select one of the options, follow the instructions for the selected option, sign, and date below.

I, Kent Cockley, PE, MS (Print Name), have express authority to certify that:

☐ 1. Our business is listed in the AVS. The information is accurate, complete, and up to date. (If you select this option, you must attach an Entity OFT from the AVS to this form). Do not complete Part D.

☑ 2. Our business is in the AVS. The information needs to be updated. (If you select this option, you must attach an Entity OFT from the AVS to this form). Complete Part D to provide the missing or corrected information.

☐ 3. Our business is not listed in the AVS. The information needs to be added. Complete Part D to provide the information.

August 14, 2025	☑ Kent C. Cockley	Vice President/Business Sector Leader
Date	Signature	Title

Digitally signed by Kent C. Cockley
DN: E=k.cockley@gaiconsultants.com, CN=Kent C. Cockley
Date: 2025.08.14 08:57:12-04'00'

OMB # 1029-0119
Expiration Date:
01/31/2028

Part D: OFT Information

Contractor's Business Name: GAI Consultants, Inc.

If the current Entity OFT information for your business is incomplete in the AVS, or if there is no information in the AVS for your business, you must provide all of the following information as it applies to your business. Please include additional copies of this page if the space below is not sufficient to capture all information.

- Every officer (President, Vice President, Secretary, Treasurer, etc.);
- All Directors, Partners, and Members;
- All persons performing a function similar to a Director;
- Every person or business that owns 10% or more of the voting stock in your business;
- Any other person(s) who has the ability to determine the manner in which the AML reclamation project is being conducted.
- **Please list an end date for any person who is no longer with your business.**

Name:	Gary Dejidas
Address:	618 E. South Street, Suite 700
City, State, Zip:	Orlando, FL 32801
Begin Date:	5/15/1972
End Date:	12/31/2024
% Ownership:	N/A
Position/Title:	Chief Executive Officer/Chairman of the Board
Phone Number:	N/A

Name:	Karl Palvisak
Address:	618 E. South Street, Suite 700
City, State, Zip:	Orlando, FL 32801
Begin Date:	2/28/1994
End Date:	5/30/2025
% Ownership:	N/A
Position/Title:	Vice President/Treasurer
Phone Number:	N/A

Name:	Kevin Leadbetter
Address:	12574 Flagler Center Blvd, Ste 202
City, State, Zip:	Jacksonville, FL 32258
Begin Date:	2/1/2005
End Date:	N/A
% Ownership:	N/A
Position/Title:	Chief Executive Officer/Chairman of the Board
Phone Number:	904.559.8087

Name:	Gregory Nettuno
Address:	12574 Flagler Center Blvd, Ste 202
City, State, Zip:	Jacksonville, FL 32258
Begin Date:	9/14/1998
End Date:	N/A
% Ownership:	N/A
Position/Title:	Senior Vice President/Business Sector Leader
Phone Number:	904.559.8090

PAPERWORK REDUCTION STATEMENT

The Paperwork Reduction Act of 1995 (44 U.S.C 3501) requires us to inform you that: Federal Agencies may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a current valid OMB control number. This information is necessary for all successful bidders prior to the distribution of AML funds, and is required to obtain a benefit.

Public reporting burden for this form is estimated to range from 15 minutes to one hour, with an average of 30 minutes per response, including time for reviewing instructions, gather and maintaining data, and completing and reviewing the form. You may direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Office of Surface Mining Reclamation and Enforcement, 1849 C Street, NW, Room 4559, Washington, DC 20240.

Name:	Robert Houston, Jr.
Address	385 E. Waterfront Drive
City, State, Zip:	Homestead, PA 15120
Begin Date:	10/25/1976
End Date:	N/A
% Ownership:	N/A
Position/Title:	Environmental Director 2
Phone Number:	412.399.5323

Name:	Stephen Gould
Address:	385 E. Waterfront Drive
City, State, Zip:	Homestead, PA 15120
Begin Date:	1/6/1992
End Date:	N/A
% Ownership:	N/A
Position/Title:	Executive VP/Chief Admin. Officer
Phone Number:	412.399.5192

Name:	Ben Resnick
Address:	385 E. Waterfront Drive
City, State, Zip:	Homestead, PA 15120
Begin Date:	12/11/1989
End Date:	N/A
% Ownership:	N/A
Position/Title:	Architectural Historian Director 1
Phone Number:	412.399.5105

Name:	Richard Kodera
Address:	618 E. South Street, Suite 700
City, State, Zip:	Orlando, FL 32801
Begin Date:	7/31/2024
End Date:	N/A
% Ownership:	N/A
Position/Title:	Senior VP/Business Unit Leader
Phone Number:	321.319.3030

Name:	Steve Boylan
Address:	618 E. South Street, Suite 700
City, State, Zip:	Orlando, FL 32801
Begin Date:	4/16/2012
End Date:	N/A
% Ownership:	N/A
Position/Title:	Vice President/Business Sector Leader
Phone Number:	321.319.3071

Name:	David Bevilacqua
Address:	385 E. Waterfront Drive
City, State, Zip:	Homestead, PA 15120
Begin Date:	7/1/2013
End Date:	N/A
% Ownership:	N/A
Position/Title:	Senior VP/Business Unit Director
Phone Number:	412.399.5192

Name:	Kathleen Leo
Address:	618 E. South Street, Suite 700
City, State, Zip:	Orlando, FL 32801
Begin Date:	10/16/2017
End Date:	N/A
% Ownership:	N/A
Position/Title:	Vice President/Business Sector Leader
Phone Number:	321.319.3095

Name:	Kent Cockley
Address:	385 E. Waterfront Drive
City, State, Zip:	Homestead, PA 15120
Begin Date:	4/1/1993
End Date:	N/A
% Ownership:	N/A
Position/Title:	Vice President/Business Sector Leader
Phone Number:	412.399.5418

Name:	Bob Pfordresher
Address:	12574 Flagler Center Blvd, Suite 202
City, State, Zip:	Jacksonville, FL 32258
Begin Date:	11/06/2023
End Date:	N/A
% Ownership:	N/A
Position/Title:	Senior VP/Chief Financial Officer
Phone Number:	321.319.3119

U.S. Department of the Interior
Office of Surface Mining Reclamation and Enforcement
Applicant/Violator System

AVS_Visitor
Help Logout

Entities

Previous Search

Entity Name | Search | All items

Entity Number: 140978
Last Name: GAI Consultants Incorporated
*** First Name:**
Middle Name:
Alias:
Tax ID:
Memo: AML CONTRACTOR
Created: 4/3/1996
Updated: 8/31/2007
Source: dfeheley@osmre.gov
Entity Type: Business
Locked: Y

Entity #	Entity Name	Suffix	First	Middle	Lock	Type	
140978	GAI Consultants Incorporated				Y	Business	Select

Addresses | Relationships | Applications | Permits | Comments

	Entity #	Parent Entity	Relationship	Entity #	Related Entity	First	% Own	Begin	End	Hold	Hold Source	Create	Update
☐	140978	GAI Consultants Incorporated	President	152306	Morrocco	Anthony	0.00	6/1/2017		None		3/4/2022	3/4/2022

☐	140978	GAI Consultants Incorporated	Chief Executive Officer	152309	Dejidas	Gary	0.00	6/1/2003		None		3/4/2022	3/4/2022
☐	140978	GAI Consultants Incorporated	Chairman of the Board	152309	Dejidas	Gary	0.00	6/1/2003		None		3/4/2022	3/4/2022
☐	140978	GAI Consultants Incorporated	Vice President	156448	Palvisak	Karl	0.00	7/1/2004		None		4/23/2008	4/23/2008
☐	140978	GAI Consultants Incorporated	Treasurer	156448	Palvisak	Karl	0.00	7/1/2004		None		7/6/2005	11/7/2006
☐	140978	GAI Consultants Incorporated	Vice President	158896	Nettuno	Gregory	0.00	7/1/2002		None		11/7/2006	11/7/2006
☐	140978	GAI Consultants Incorporated	Vice President	159534	Houston	Robert	0.00	10/20/2006		None		5/7/2007	5/7/2007
☐	140978	GAI Consultants Incorporated	Corporate Officer	249779	Resnick	Benjamin	0.00	8/14/2009		None		12/8/2009	12/8/2009
☐	140978	GAI Consultants Incorporated	Executive Vice President	264942	Gould	Stephen	0.00	6/1/2019		None		3/4/2022	3/4/2022
☐	140978	GAI Consultants Incorporated	Chief Operations Officer	264942	Gould	Stephen	0.00	1/1/2019		None		3/4/2022	3/4/2022
☐	140978	GAI Consultants Incorporated	Senior Vice President	264943	Leadbetter	Kevin	0.00	2/1/2005		None		3/4/2022	3/4/2022
☐	140978	GAI Consultants Incorporated	Secretary	140983	Giarrusso	Raymond	0.00		2/19/1998	None		4/3/1996	7/6/2005
☐	140978	GAI Consultants Incorporated	Shareholder	140983	Giarrusso	Raymond	0.00		2/19/1998	None		4/3/1996	7/6/2005
☐	140978	GAI Consultants Incorporated	Assistant Secretary	140984	Hribar	John	0.00	6/28/1993	1/1/1999	None		12/17/2002	12/17/200
☐	140978	GAI Consultants Incorporated	Shareholder	140984	Hribar	John	0.00		1/1/1999	None		4/3/1996	1/14/2002
☐	140978	GAI Consultants Incorporated	Vice President	140984	Hribar	John	0.00	6/28/1993	1/1/1999	None		12/17/2002	12/17/200
☐	140978	GAI Consultants Incorporated	Director	140980	Donovan	Thomas	0.00		11/9/1999	None		4/3/1996	7/6/2005
☐	140978	GAI Consultants Incorporated	Shareholder	140980	Donovan	Thomas	0.00		11/9/1999	None		4/3/1996	7/6/2005
☐	140978	GAI Consultants Incorporated	Shareholder	140985	Niece	James	0.00		9/30/2002	None		4/3/1996	7/6/2005
☐	140978	GAI Consultants Incorporated	Director	152309	Dejidas	Gary	0.00	1/2/2001	6/1/2003	None		5/17/2002	3/4/2022
☐	140978	GAI Consultants Incorporated	Chief Executive Officer	140981	Digioia Jr	Anthony	0.00		6/30/2003	None		4/3/1996	7/6/2005
☐	140978	GAI Consultants Incorporated	President	140981	Digioia Jr	Anthony	0.00	10/17/2002	6/30/2003	None		6/23/2003	7/6/2005
☐	140978	GAI Consultants Incorporated	Director	151581	Pavlik	Mark	0.00	1/2/2000	7/6/2003	None		5/17/2002	5/7/2007

☐	140978	GAI Consultants Incorporated	Vice President	152304	Mandel	Herbert	0.00	6/27/1993	7/7/2003	None		5/17/2002	11/7/2006
☐	140978	GAI Consultants Incorporated	Director	146701	Okorn	Dennis	0.00	1/2/2000	8/30/2003	None		5/17/2002	7/6/2005
☐	140978	GAI Consultants Incorporated	President	146701	Okorn	Dennis	0.00	1/1/2001	8/30/2003	None		1/14/2002	7/6/2005
☐	140978	GAI Consultants Incorporated	Director	151580	Dodds	Lawrence	0.00	1/1/1998	11/3/2003	None		5/17/2002	11/7/2006
☐	140978	GAI Consultants Incorporated	Senior Vice President	151580	Dodds	Lawrence	0.00	1/1/1998	11/3/2003	None		5/17/2002	12/7/2006
☐	140978	GAI Consultants Incorporated	Senior Vice President	140982	Salver	Henry	0.00	6/30/1991	12/12/2003	None		5/17/2002	7/6/2005
☐	140978	GAI Consultants Incorporated	Vice President	140982	Salver	Henry	0.00		12/12/2003	None		4/3/1996	7/15/2005
☐	140978	GAI Consultants Incorporated	Shareholder	140982	Salver	Henry	0.00		12/31/2003	None		4/3/1996	7/6/2005
☐	140978	GAI Consultants Incorporated	Assistant Secretary	151582	Pitzer	Gerald	0.00	1/2/2000	12/31/2003	None		1/14/2002	7/6/2005
☐	140978	GAI Consultants Incorporated	Vice President	151582	Pitzer	Gerald	0.00	1/2/2000	12/31/2003	None		1/14/2002	7/6/2005
☐	140978	GAI Consultants Incorporated	Vice President	152308	Spence	Paul	0.00	12/29/2000	4/16/2004	None		5/17/2002	7/6/2005
☐	140978	GAI Consultants Incorporated	Treasurer	151581	Pavlik	Mark	0.00	1/2/2000	6/30/2004	None		1/14/2002	7/6/2005
☐	140978	GAI Consultants Incorporated	Assistant Secretary	152301	Yodnane	Precha	0.00	12/13/2000	6/30/2004	None		5/17/2002	7/6/2005
☐	140978	GAI Consultants Incorporated	Shareholder	140981	Digioia Jr	Anthony	0.00		12/31/2004	None		4/3/1996	7/6/2005
☐	140978	GAI Consultants Incorporated	Chairman of the Board	140981	Digioia Jr	Anthony	0.00	1/1/2001	12/31/2004	None		1/14/2002	7/6/2005
☐	140978	GAI Consultants Incorporated	Chairman of the Board	140979	Gray	Richard	0.00		3/11/2005	None		4/3/1996	7/6/2005
☐	140978	GAI Consultants Incorporated	Senior Vice President	140979	Gray	Richard	0.00	9/1/1985	3/11/2005	None		5/17/2002	7/6/2005
☐	140978	GAI Consultants Incorporated	Vice President	152305	Mccutcheon	Kirk	0.00	12/13/2000	4/15/2005	None		5/17/2002	7/6/2005
☐	140978	GAI Consultants Incorporated	Secretary	151581	Pavlik	Mark	0.00	7/1/2004	6/30/2005	None		7/6/2005	7/15/2005
☐	140978	GAI Consultants Incorporated	Vice President	152302	Fiorvante	Michael	0.00	12/30/2000	2/15/2006	None		5/17/2002	11/7/2006
☐	140978	GAI Consultants Incorporated	Vice President	158894	Kennington	Donald	0.00	12/28/2003	5/19/2006	None		11/7/2006	5/7/2007
☐	140978	GAI Consultants Incorporated	Vice President	158897	Smith	Lane	0.00	12/28/2003	5/19/2006	None		11/7/2006	5/7/2007

☐	140978	GAI Consultants Incorporated	Executive Vice President	151580	Dodds	Lawrence	0.00	11/3/2003	1/5/2008	None		7/6/2005	12/1/2008
☐	140978	GAI Consultants Incorporated	Senior Vice President	156449	Sievers	J	0.00	1/30/2004	1/5/2008	None		7/6/2005	12/1/2008
☐	140978	GAI Consultants Incorporated	Vice President	152306	Morrocco	Anthony	0.00	12/13/2000	5/31/2008	None		5/17/2002	12/1/2008
☐	140978	GAI Consultants Incorporated	Vice President	158895	Nawn	John	0.00	10/10/2005	10/10/2008	None		11/7/2006	12/1/2008
☐	140978	GAI Consultants Incorporated	Manager	152306	Morrocco	Anthony	0.00	6/1/2008	11/8/2008	None		12/1/2008	12/1/2008
☐	140978	GAI Consultants Incorporated	Vice President	152307	Obrien	Thomas	0.00	12/13/2000	5/24/2009	None		5/17/2002	12/8/2009
☐	140978	GAI Consultants Incorporated	Vice President	151581	Pavlik	Mark	0.00	1/2/2000	11/28/2009	None		5/17/2002	3/22/2010
☐	140978	GAI Consultants Incorporated	Assistant Treasurer	151581	Pavlik	Mark	0.00	5/19/2006	11/28/2009	None		5/7/2007	3/22/2010
☐	140978	GAI Consultants Incorporated	Secretary	151581	Pavlik	Mark	0.00	1/2/2000	11/28/2009	None		1/14/2002	3/22/2010
☐	140978	GAI Consultants Incorporated	Assistant Secretary	249780	Paulik	Mark	0.00	4/24/2009	11/28/2009	None		12/8/2009	3/22/2010
☐	140978	GAI Consultants Incorporated	Vice President	151580	Dodds	Lawrence	0.00	1/6/2008	12/31/2009	None		12/8/2009	3/22/2010
☐	140978	GAI Consultants Incorporated	Corporate Officer	247449	Penn	C	0.00	12/1/2007	5/25/2012	None		4/23/2008	3/1/2022
☐	140978	GAI Consultants Incorporated	Vice President	152301	Yodnane	Precha	0.00	12/13/2000	6/1/2012	None		5/17/2002	3/1/2022
☐	140978	GAI Consultants Incorporated	Vice President	159535	Newman	F	0.00	5/19/2006	3/1/2013	None		5/7/2007	3/1/2022
☐	140978	GAI Consultants Incorporated	Corporate Officer	247448	Chaney	W	0.00	12/2/2007	3/15/2013	None		4/23/2008	3/1/2022
☐	140978	GAI Consultants Incorporated	Corporate Officer	158901	Mollish	David	0.00	1/3/2006	11/6/2013	None		11/7/2006	3/1/2022
☐	140978	GAI Consultants Incorporated	Vice President	247450	Hartman	Gerald	0.00	1/2/2007	1/31/2014	None		4/23/2008	3/1/2022
☐	140978	GAI Consultants Incorporated	Corporate Officer	158899	Griffin	Linda	0.00	1/2/2005	7/3/2014	None		11/7/2006	3/1/2022
☐	140978	GAI Consultants Incorporated	Corporate Officer	158898	Copenhaver	Jay	0.00	1/2/2005	9/26/2014	None		11/7/2006	3/1/2022
☐	140978	GAI Consultants Incorporated	Corporate Officer	250149	Edwards	John	0.00	12/31/2009	12/31/2015	None		5/4/2010	3/1/2022
☐	140978	GAI Consultants Incorporated	Secretary	152303	Landers	Diane	0.00	4/24/2009	1/1/2016	None		12/8/2009	3/1/2022
☐	140978	GAI Consultants Incorporated	Vice President	152303	Landers	Diane	0.00	12/31/2000	1/1/2016	None		5/17/2002	3/1/2022

	140978	GAI Consultants Incorporated	Vice President	250148	Cicero	Thomas	0.00	12/31/2009	7/20/2016	None		5/4/2010	3/1/2022
	140978	GAI Consultants Incorporated	Corporate Officer	158900	Harrison	Grace	0.00	1/2/2005	3/3/2017	None		11/7/2006	3/1/2022
	140978	GAI Consultants Incorporated	Senior Vice President	152306	Morrocco	Anthony	0.00	6/1/2008	5/31/2017	None		12/1/2008	3/4/2022
	140978	GAI Consultants Incorporated	Assistant Secretary	152306	Morrocco	Anthony	0.00	1/1/2004	5/31/2017	None		7/6/2005	3/4/2022
	140978	GAI Consultants Incorporated	President	152309	Dejidas	Gary	0.00	7/1/2004	6/1/2017	None		7/6/2005	3/4/2022
	140978	GAI Consultants Incorporated	Vice President	158893	Cima	Richard	0.00	12/28/2003	1/2/2018	None		11/7/2006	3/1/2022
	140978	GAI Consultants Incorporated	Assistant Secretary	156449	Sievers	J	0.00	1/30/2004	5/13/2019	None		7/6/2005	3/1/2022
	140978	GAI Consultants Incorporated	Executive Vice President	156449	Sievers	J	0.00	1/6/2008	5/13/2019	None		12/1/2008	3/1/2022
	140978	GAI Consultants Incorporated	Manager	156449	Sievers	J	0.00	1/6/2008	5/13/2019	None		12/1/2008	3/1/2022

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Charleston, West Virginia 25301
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