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WV PURCHASING
DIVISION

Expression of Interest
East Campus Assessment and Metal Building
AEOI 0211 GSD1900000011
June 12, 2019



Department of Administration
Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

Montum Architecture, LLC
37 ER Path, Keyser, WV 26726 • 304-276-7151 • tom@montumarch.com
montumarch.com



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June 12, 2019

West Virginia General Services Division
112 California Avenue
Building 4, 5th Floor
Charleston, WV 25305

Subject: EOI: East Campus Assessment and Metal Building

Dear Sirs and Madams,
Montum Architecture, LLC is pleased to submit this Statement of Qualifications to provide architectural and engineering services. Montum is headed by Tom Pritts, an architect with 15 years experience designing a multitude of project types. He will be the primary contact for the duration and provide architectural design and construction administration services.

Montum has teamed with Miller Engineering for mechanical, electrical, and plumbing design services, Potesta & Associates for civil, environmental, and site design services, and CAS Structural Engineering for structural design services. All parties on the design team have a strong working relationship with each other and with state agencies.

The design team has reviewed the four goals listed in the Goals/Objectives section of the EOI solicitation and the proposed approach is summarized below. Further documentation is presented in the firm profiles, qualifications, and experience sections of the EOI response.

Goal One – Potesta’s Environmental and Surveying components will provide critical analysis of the existing site constraints and opportunities for master planning activities. Montum will lead the effort to establish functional needs for the facilities and relational adjacencies for various end users.

Goal Two – The design team’s modus operandi is to work from a master planning perspective on everything we do in order to holistically understand the needs of the project and to integrate new work into overall operation of systems or facilities. Montum, CAS Structural, and Miller Engineering have extensive experience in design around and specifying Metal Building Systems. Vehicle turning software will be utilized in developing access to the buildings.

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Goal Three – The design team regularly works on multi-phase, multi-contract projects. This project goal reflects on Goal Two above as successful multi-phase and multi-contract projects require a strong master-planning effort. Previous examples include clients with a need for phasing due to budget, regulatory, or logistic constraints.

Goal Four – Potesta will lead efforts with parking lot and site design in regards to developing greenspace to the masterplan. Montum will support this decision-making process with aesthetic impacts to the neighboring properties and provide an interface with the Capitol Building Commission.

The primary goal for any project is to provide exemplary designs that function to the greatest extent possible for the given budget constraints. We feel that by striving to spend every project dollar to our best ability will inherently serve our client's best interest.

Thank you for taking the time to review the attached information about the design team and we are grateful for your consideration.

Respectfully submitted,
Montum Architecture LLC



Thomas Pritts, AIA, CSI-CCS, LEED-AP

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Montum Architecture

Montum Architecture, LLC was founded in 2017 to provide architectural design services to clients in West Virginia and western Maryland. Staff includes one licensed architect performing all tasks and duties. This ensures the utmost coordination of building plans and specifications with minimal potential for miscommunication.

Legal Organization

Montum Architecture is a Limited Liability Corporation initially filed in the State of West Virginia. The company is also registered in the State of Maryland as a foreign LCC.

Communication

Tom Pritts will be the primary point of contact for Montum's architectural services. Montum will manage communications with sub-consultants on this project.

Project Budget

Previous work experience has shown a consistent +/-2% bid-to-budget ratio.

Project Schedule

Montum will monitor and adjust the design tasks in order to complete the design work on the established timetables. They will also work diligently during project construction to maintain the contractual constraints placed as part of the contractor's bid.

Design Software

Montum utilizes Autodesk Revit for all design projects incorporating three-dimensional modeling and parametric reporting.



Firm Profile

MILLER ENGINEERING is a solely held (S) corporation owned by Craig Miller PE, President. The corporation maintains a Certificate of Authority with the WV State PE Board and has carried professional liability insurance since its inception. Neither the firm nor its professional engineers have ever faced disciplinary action in any form from the states in which they are registered.

Our engineered solutions involve a detailed assessment process: investigation, observation, communication with stakeholders, system analysis, building modeling and engagement from our entire team. We approach each and every project with this process and the guiding principle that buildings are designed to be livable and function in their intended purpose.

Over the past 14 years Miller Engineering, Inc. (MEI) has engineered solutions for over \$23.2M in MEP system upgrades, repairs and renovations for projects of all scopes and sizes, with clients ranging from private owners to local and state governments. With a strict attention to detail and commitment to delivering a job done well and done right the first time, every time, **MEI has accumulated a change order percentage of less than 0.1% over the past 8 years.**

Our team has unique skill-sets regarding engineered renovation solutions. Each member of the team has hands-on mechanical system experience including installation, construction, design and maintenance.

Miller Engineering takes pride in being **different by design**, and that difference shines through in all phases of our work and continued relationships with our clients.

- Experienced and Licensed Professional Engineers
- Quality, Value-Engineered Project Delivery
- Qualified Construction Representative on Staff
 - LEED-AP Certified
- Below Industry Change Order Status
 - Building Information Modeling
 - Emergency Facility Response

Engineering Design and Consultation

- Mechanical
- Electrical
- Plumbing
- HVAC Design
- Renovation
- New Construction
- Building Information Modeling

Aquatic Facility Design

- Public Pools & Areas
- ADA Compliance
- Indoor & Outdoor (air flow)
- Chlorination/Filtration

Construction Administration

- Maintenance/Facility Improvement Plans
- Contract Administration
- Code Observation

Communication System

- Intercomm & Public Address
- Voice/Data/CATV
- Urgent Response

Energy

- Power Supply (main & backup)
- Green & Renewable Consulting
- Systems Utilization & Upgrades
- Sustainable Solutions

Facility Utilization

- Systems Assessment & Solutions
- Adaptive Re-use
- Planning/Life-Cycle Control
- Engineered Replacement

Life Safety Inspection/Design

- Fire Protection & Alarm Systems
- Access Control
- Fire & Electrical Investigation

Industry Experience

- Education
- Local & State Government
- Commercial Development
- Healthcare





CORPORATE PROFILE

Providing Innovative, Timely, Cost-Effective Engineering and Environmental Solutions



Engineering • Mining • Remediation • Oil & Natural Gas • Environmental



Offices in:

CHARLESTON

7012 MacCorkle Avenue, SE
Charleston, WV 25304
(304) 342-1400

MORGANTOWN

125 Lakeview Drive
Morgantown, WV 26508
(304) 225-2245

WINCHESTER

15 South Braddock Street
Winchester, VA 22601
(540) 450-0180

Company Overview

FIRM HISTORY

Potesta & Associates, Inc. (POTESTA) was founded in 1997 as a full service engineering and environmental consulting firm headquartered in Charleston, West Virginia. We have now expanded to a diverse staff of 79 experienced engineers, scientists, and support personnel with branch offices in Morgantown, West Virginia, and Winchester, Virginia. Our clients include mining, manufacturing and chemical companies; utility companies; waste management companies; colleges/universities; land developers; attorneys; financial institutions; insurance companies; local, state and federal agencies; construction companies and architects.

SERVICES

- Air
- Asbestos Abatement
- Biological and Toxicological
- Civil Engineering and Site Design
- Coal Supply and Procurement
- CADD
- Construction Monitoring
- Environmental Emergency Response
- Environmental Site Assessment
- Geographic Information Systems
- Geotechnical Engineering
- Groundwater
- Hydrology and Hydraulics
- Landfills and Solid Waste
- Litigation Support
- Marcellus Shale Natural Gas
- Mining
- Mixing Zone Analysis
- Occupational Safety and Health
- Oil and Natural Gas
- Permitting
- Remedial
- Roadway Engineering
- Stream Restoration
- Storage Tanks
- Surveying and Mapping
- Water Quality Studies
- Water and Wastewater
- Wetlands



Experienced Professionals

POTESTA's staff is committed to delivering innovative, cost-effective solutions to meet our client's complex requirements. The firm's environmental department consists of biologists, geologists, chemists, environmental scientists and environmental engineers, many with advanced degrees (Masters and Ph.D. level). POTESTA's engineering department includes civil, geotechnical, environmental, mining and mechanical engineers. Our registered professional engineers have over 300 years experience among them and are supported by a capable team of engineers, designers, and surveyors.

Our firm is managed by two principals driving POTESTA forward with their experience and emphasis on exceeding expectations. Ronald R. Potesta, President, is a former Director of the West Virginia Division of Natural Resources and Dana L. Burns, P.E., Vice President of Engineering, has more than 39 years experience with civil, geotechnical, mining, and environmental engineering projects.

FIRM HIGHLIGHTS:

Established in 1997

Experienced Staff of 79

**Corporate Office in
Charleston, WV**

**Regional Offices in
Morgantown, WV
Winchester, VA**

**Primarily Serve Clients
East of the
Mississippi River**

**Carry a Full Line of
Insurance Coverage**

**Stringent Internal
Quality Control System**

POTESTA & ASSOCIATES, INC.

ENGINEERING AND ENVIRONMENTAL SERVICES

Engineering Services

- Aboveground Storage Tank (AST) Inspections/Compliance
- Acid Mine Drainage (AMD) Evaluation/Treatment Design
- Asset Management Plans
- Civil, Environmental, Geotechnical, and Mining Design
- CADD Services
 - * AutoCAD
 - * Civil 3D
- Construction Monitoring/Management
- Dam/Reservoir Analysis and Inspection
- Design of Slurry Impoundments and Refuse Disposal Sites
- Dewatering Plans
- Effluent Diffusers/Outfall Modifications
- Erosion and Sediment Control Plans
- Feasibility Studies
- Flood Studies (HEC RAS & HEC HMS)
- Geological Services
- Geotechnical Explorations and Foundation Designs
- Hydrologic and Hydraulic Evaluations
- Impoundment Stabilization, Design, and Monitoring
- In-Situ Pipeline Rehabilitation
- Landfill Design
- Landfill Closure Plans
- Landslide Evaluation and Remedial Design
- Pre-Blast and Pre-Subsidence Surveys
- Preparation of Construction Drawings and Specifications (Calculations Brief, Contractor's Bid Sheet, Engineer's Cost Estimate, QA/QC Manual and Technical Specifications)
- Railroad Grade/Crossing Design and Permitting
- Reclamation Design and Planning
- Reclamation Liability Assessments
- Regulatory Liaison Services
- Roadway Design
- Sewer Line/Lift Station Design
- Site Development Plans
- Slope Stability Analysis
- Solid, Industrial, and Hazardous Waste Landfill Design, Permitting, and Closures
- Spill, Prevention, Control, and Countermeasures Plan
- Stabilization and Closure of Waste Impoundments
- Subsidence Investigations
- Surveying (Traditional/Global Positioning Systems/Robotic)
- Stormwater Management Plans
- Waste Disposal Design
- Wastewater Treatment Plant Design
- Water Line, Water Treatment, Booster Station, and Storage Tank Design



POTESTA & ASSOCIATES, INC.

Charleston, WV • Morgantown, WV • Winchester, VA

Phone: (304) 342-1400 • Fax: (304) 343-9031 • www.potesta.com

Environmental Services

- Air Risk Management Plans - Accidental Release Program
- Asbestos Sampling and Inspection
- Benthic (Aquatic Life) Surveys
- Clean Air Act Compliance
- Corporate Environmental Management
- Environmental Compliance Audits
- Environmental Impact Studies
- Environmental Site Assessments
- Ground and Surface Water Sampling
- Groundwater Modeling and Monitoring
- Groundwater Investigation and Remediation
- Groundwater Protections Plans
- Hazardous Waste Management
- In-Situ and Ex-Situ Biostimulation/Bioaugmentation
- Multimedia Sampling
 - * Air
 - * Fly Ash
 - * Rock
 - * Soil
 - * Water
- National Environmental Policy Act (NEPA) Assessments
- Permitting - Air, Mine, Water and Waste, including
 - * 404/401 Permit Preparation and Negotiation
 - * FERC
 - * Fly Ash
 - * NPDES
 - * Quarry
 - * Solid and Hazardous Waste
 - * Stormwater
 - * DOH MM109
 - * Stream Activity Permit Railroad
- Pollution Preventions Plans
- Regulatory Assistance
- Risk-Based Environmental Assessments
- Site Characterization/Remediation Plans
- SARA Title III, Tier II, and Form R Inventory and Reporting
- Stream Restoration and Design
- TMDL/Mixing Zones Analysis
- Toxicity Identification/Reduction Evaluations
- Underground Storage Tank Services
 - * Closure and Site Remediation
 - * Installation Monitoring
- Waste Facility Permitting and Design
- Waste Minimization Plans
- Wetland Delineations/Mitigation

Other Services

- Expert Witness and Litigation Support
- Occupational Safety and Health



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POTESTA & ASSOCIATES, INC.

Civil Engineering and Design

Potesta & Associates, Inc. (POTESTA) helps clients evaluate and plan projects by completing the following types of preliminary evaluations and analyses.

- Phase I Environmental Site Assessments
- Floodplain Determination
- Geotechnical Explorations Including Soil, Bedrock, and Groundwater Characterization
- Foundation Recommendations
- Monitoring Well Systems and Site Characterization Plans
- Boundary, Topographical and Photogrammetric Surveys
- Utility Planning
- Earthwork Evaluations Including Volume Analysis
- Opinion of Probable Costs/Engineer's Construction Cost Estimates

Once the project has been determined feasible, POTESTA's design professionals complete preliminary and final designs. Frequent communication is made with the client and any other design professionals to review completed activities and obtain input for the design process. Our goal is to provide our services to achieve or exceed our clients' expectations.

Our design services include:

- Erosion and Sediment Control Plans
- Earth Retaining Structures Design
- Geometric Site Layout
- Grading and Drainage Plans, Including Excavation and Fill Optimization
- Access Road Design
- Hydraulic Structure Design
- Water and Sewer Design
- Slope Stability Analysis
- Subsurface Drainage System Design
- Construction Drawings, Specifications and Contract Document Preparation

POTESTA offers experienced environmental engineers and scientists to prepare applications for various environmental permits that may be required. These services include:

- Stormwater Management Permit/Erosion and Sediment Control Plans
- Office of Air Quality Permit to Construct
- Wetland Delineation and Permits
- National Pollutant Discharge Elimination System (NPDES) Permits
- Floodplain Management Permits
- Groundwater Protection Plans
- Spill Prevention, Control and Countermeasure Plans
- Environmental Site Assessments
- Environmental Impact Statements

POTESTA routinely provides professional services throughout construction of our projects. These services include survey layout, construction management, construction monitoring, record drawing preparation, and bid evaluation assistance.



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Regional Offices: Morgantown, WV and Winchester, VA



Potesta & Associates, Inc. has a significant body of work in site design for residential, commercial and industrial clients. Projects range from power plant siting to subdivision design. We have assisted numerous developers and development agencies with the creation of business industrial parks throughout West Virginia, and have been part of design teams for elementary, secondary and collegiate projects primarily associated with new building construction.

Our staff of civil, environmental, and geotechnical engineers; surveyors and environmental scientists can provide the following site planning and design services.

- Surveying – Topo and Boundary
- Base Mapping from Aerial Photography
- Geotechnical Engineering
- Land Planning
- Environmental Issues Evaluation and Mitigation
- Site Grading
- Vehicular and Pedestrian Circulation
- Utility Design
- Site Features
- Stormwater Management Plans

Some clients who have used our site design services include:

- West Virginia Development Office
- Development Authorities: Tucker, Wood, Roane and Hardy Counties
- Bright Enterprises
- Charleston Area Alliance
- University of Charleston
- Timberwolf Development Corporation
- West Virginia Department of Environmental Protection
- West Virginia Division of Natural Resources
- Marshall University
- Architects: Associated Architects; Bastian & Harris, Architects; SEM Partners; ZMM



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Potesta & Associates, Inc.'s (POTESTA) engineers and geologists have extensive experience related to the geotechnical engineering and geological disciplines. These areas include subsurface explorations, monitoring well and piezometer installations, foundation design recommendations, slope stability analysis, retaining walls, and remedial designs as they relate to construction, mining, waste disposal, environmental remediation, and other projects.

SUBSURFACE EXPLORATIONS

POTESTA's diverse staff of engineers and geologists is experienced in the many different facets of subsurface explorations. Our usual procedure is to attend an initial meeting with the client to establish requirements and expectations, conduct a preliminary site reconnaissance, and develop a recommended exploration program for your review and approval. Supplemental information from the local area is then obtained from readily available sources to assist the engineer or geologist in making final recommendations.



POTESTA can provide field engineers and geologists who are knowledgeable using the latest technologies to assist in collecting and analyzing samples. Our knowledge of the proper procedures and familiarity with local conditions allows office

and field personnel to adjust the exploration plan if unanticipated field conditions are found.

Our staff is familiar with the following items which can be associated with subsurface exploration:

- Drilling and Rock Coring Techniques (augers, rotary bits, Geoprobe™, etc.)
- Sample Collection Methods (split spoons, shelly tubes, Geoprobe™ sleeves, etc.)
- Classification and Logging of Soil and Rock Samples
- Monitoring Well and Piezometer Installation

SLOPE STABILITY ANALYSIS AND REMEDIAL DESIGN

Slope stability is often a major concern during the design and construction phases of many projects, especially those located in the Appalachian terrain. POTESTA's engineers are familiar with the various methods utilized to predict slope stability and are capable of performing the related analyses. Slope stability is critical for many projects such as analysis of existing or proposed soil embankments, rock fills, dam analysis and design, landfill design and operation, assessing the causation of slope failure, and designing remedial measures. Analyses can involve circular or sliding block methods, interface friction angles, and estimation of the strength parameters of the soil or rock. Slope stability analyses are performed on one of the most technologically advanced computer programs available and can be modified using site specific data.

POTESTA's engineers can also develop preventive measures during initial project design or recommendations to repair slope failures. Based upon the project circumstances, our engineers will consider various remedial measures such as regrading the site to obtain more suitable conditions, management of groundwater, and design of retaining structures. Our staff is familiar with a wide variety



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of retaining structures, including gabion baskets, soldier beam and lagging walls, sheet piles, reinforced concrete and reinforced earth slopes.



FOUNDATION DESIGN RECOMMENDATIONS

POTESTA's staff has experience with various types of foundations and will recommend the appropriate type of foundation given the anticipated application and site conditions. The different types of foundations with which our staff is familiar are spread and strip footings, steel piles, auger-cast concrete piles, drilled piers, and reinforced mats.

Preliminary foundation design recommendations and cost analyses are commonly performed during the initial phases of a project to assist in determining project feasibility. As project planning progresses, the preliminary alternatives will be revised into a final recommendation which can then be incorporated into the project's construction documents or developed as an independent package for presentation to the contractor.

The final recommendation can include construction drawings, technical specifications, recommendations for allowable bearing capacity, engineer's construction cost estimate, and contractor's bid sheet.



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POTESTA & ASSOCIATES, INC.

Water and Wastewater Engineering

Our professional staff is dedicated to providing quality engineering services for various types of water treatment and distribution systems, as well as wastewater management, collection and treatment systems. The following is a list of some of the services Potesta & Associates, Inc. is capable of providing:



- Remediation Systems
- Landfill Leachate Treatment
- Storage Tank Design
- Flow Measurement
- Surveying/GPS and Mapping
- Permitting and Regulatory Liaison
- Combined Sewer Overflow (CSO) Management, Sampling and Modeling

STORMWATER MANAGEMENT

- Hydraulic Conveyance Structure Design (Culverts, Channels, Drop Inlets, Etc.)
- Stormwater Retention/Detention Pond Design
- Stormwater Pond Modeling
- Floodplain Identification and Management Strategies
- Hydrologic and Hydraulic Analysis and Evaluations and Modeling
- Construction Monitoring
- Surveying
- Permitting and Regulatory Liaison

WATER AND WASTEWATER DESIGN

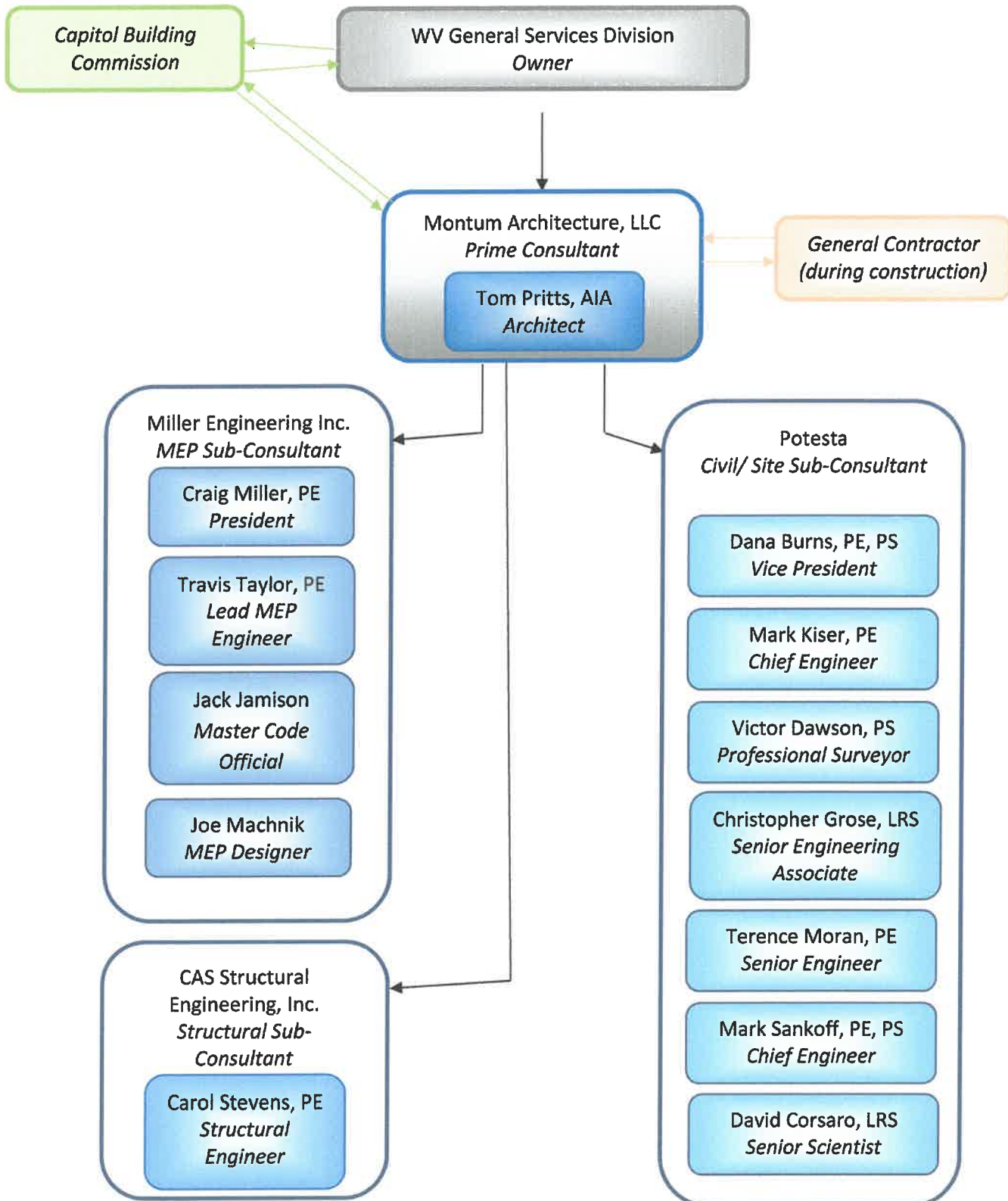
- Feasibility Studies
- Conceptual Design
- Final Design
- Bidding and Construction
- Construction Monitoring
- Wastewater Audits
- Wastewater Minimization Studies
- Engineer's Cost Estimates
- Small Flows Design (Traditional and Innovative Treatment Systems for Low Volume Flows)
- Sewage Collection and Treatment
- Water Treatment and Distribution
- Industrial Wastewater Treatment
- Wastewater Treatment Plant Design
- Water Treatment Plant Design
- Water and Sewer Line Extensions



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Project Organization Chart





Thomas Pritts, AIA, LEED-AP, CSI-CCS

Tom founded Montum Architecture in 2017. He has more than 15 years experience in design, specification, and project management. During his former employment, Tom has designed and managed dozens of built projects. His experience encompasses a wide range of projects including K-12 and higher education facilities, financial Institutions, emergency services buildings, and automotive dealerships. A native of Mineral County, Tom is member of the West Virginia Chapter of American Institute of Architects and was involved in the establishment of the US Green Building Council’s West Virginia chapter. He is highly skilled in the design of complex building systems, technical construction detailing and specifying, and construction contract administration. These skills were critical in the development and maintaining of many multi-year, multi-project relationships with Clients in his previous employment.

Project Role: Relationship Manager – Primary Point of Contact

- Principal in Charge
- Design and Project Management
- Concept and Construction Design
- Quality Assurance and Control

Professional History

2017- Present	Montum Architecture	Architect
2004-2017	Alpha Associates	Associate and Architect
2003	Marshall Craft Associates	Architectural Intern

Education

2004	Virginia Tech	Bachelors of Architecture
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Licenses and Certifications

- Licensed Architect (West Virginia, Maryland)
- NCARB Certificate
- Construction Specifier Institute – Certified Construction Specifier
- LEED-AP Certified
- 30-hour OSHA Card

Associations and Memberships

- American Institute of Architects
- Mineral County Chamber of Commerce – 1st Vice President

Professional Project Highlights

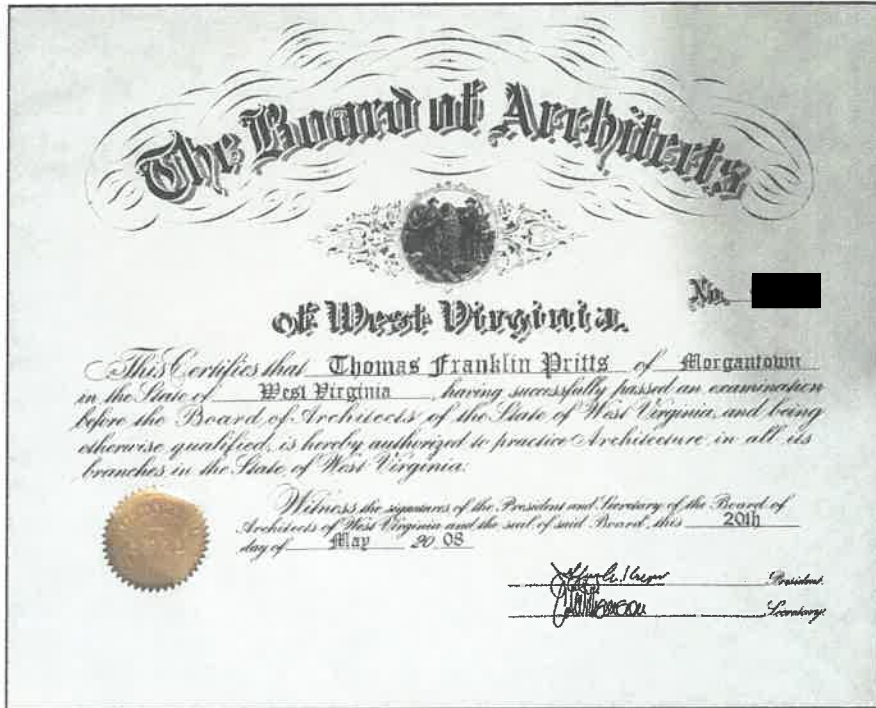
- Potomac State College – Bachelor of Nursing Renovation
- Wyoming East High School HVAC Renovation – Wyoming County Schools, WV
- Mountainview and MTEC HVAC Renovation – Monongalia County Schools, WV
- Berkeley Springs State Park – Pool Bathhouse Roof Replacement
- Berkeley Springs State Park – Old Roman Bath Renovation
- Blackwater Falls State Park – Boiler Room Renovation
- Our Lady of the Mountains Parish – Bathroom Renovation
- Mountain View Assembly of God – Rec Hall Ceiling Design

Montum



Professional Project Highlights (former employment built projects)

- Potomac State College – ADA Connector Building, Church-McKee Plaza, Shipper Library Façade
- WVU Engineering Sciences Building – East Wing Addition, 10th Floor Fit-Out, Basement Renovation
- WVU Engineering Research Building – G07 & G08 Renovation
- WVU Equine Education Center
- WVU College of Physical Activities and Sports Sciences/ Student Health Center
- WVU Center for Alternative Fuel Engines and Emissions
- WVU Colson Hall Water Infiltration Repairs
- WVU Mountainlair Water Infiltration Repairs
- WVU Chemistry Research Laboratories Fit-Out
- WVU Creative Arts Center Wheelchair Lift
- Alderson Broaddus University – Pyles Arena Deck Replacement
- Glenville State College – Morris Stadium Skybox
- Washington High School, Jefferson County Schools, WV
- Pineville Elementary School, Wyoming County Schools, WV
- Huff Consolidated School, Wyoming County Schools, WV
- Aurora School Addition, Preston County Schools, WV
- Riverview High Field House Design-Build, McDowell County Schools, WV
- Safe School Entries, Monongalia County Schools, WV
- Morgantown High Elevator, Monongalia County Schools, WV
- 2010 Comprehensive Education Facilities Plan- Monongalia County Schools, Wyoming County Schools
- Clear Mountain Bank Branches, Oakland, MD - Reedsville, WV - Kroger-Sabraton, WV
- Grant County Bank, Petersburg, WV
- Fairmont Federal Credit Union, Bridgeport, WV
- Freedom Ford, Kia, and Volkswagen Automotive Dealerships, Morgantown and Clarksburg, WV
- Jenkins Subaru Addition, Bridgeport, WV
- Elkins Fordland Renovation - Elkins Chrysler Dealership, Elkins, WV
- Harry Green Nissan Design-Build, Clarksburg, WV
- Cool Green Automotive Addition and Renovation, Shepherdstown, WV
- Veteran's Affairs – OI&T Office Fit-Out, Shepherdstown, WV
- OPM, Eastern Management Development Center Addition, Shepherdstown, WV
- National Energy Technology Laboratory – Building B-8 Roof Replacement, Morgantown, WV
- US Coast Guard – Conference Room Renovation, Martinsburg, WV
- Eastern Panhandle Transit Authority Addition, Martinsburg, WV
- Cacapon State Park – Old Inn HVAC and Interior Renovation
- WV National Guard - Armory Office Fit-out, Parkersburg, WV
- South Berkeley Fire Station, Inwood, WV
- Jefferson County Emergency Services Agency – New Headquarters
- Berkeley County Ambulance Authority – South Station Renovation and Addition
- Poolhouse Renovation, McMechen, WV
- Community Center, Ridgeley, WV
- Wastewater Treatment Plant Renovations, Martinsburg, WV
- Public Works Building, Fairmont, WV
- Oatesdale Park Little League Fields, Martinsburg, WV
- St. Luke Canopy Replacement, Morgantown, WV
- Freshwater Institute – Aquaculture Building, Shepherdstown, WV
- Clarion Hotel Renovation, Shepherdstown, WV
- Shenandoah Village Apartments – Façade and Deck Replacement, Martinsburg, WV
- Regional Eye Associates/ Surgical Eye Center, Morgantown, WV
- Bavarian Inn – Infinity Pool/ Pool Bar, Shepherdstown, WV



The West Virginia Board of Architects

certifies that

THOMAS F. PRITTS

is registered and authorized to practice
Architecture in the State of West Virginia.

In testimony whereof this certificate has been issued
by the authority of this board.

Certificate Number: [REDACTED]

The registration is in good standing until June 30, 2019.



[Signature]
Board Administrator



B. Craig Miller, PE

Craig founded Miller Engineering in 2003, and serves as President and Principal Engineer. He has more than 20 years experience in design, specification, operations and project management. During his employment with WVU, Craig was directly involved with approximately \$130 million in new capital construction. His experience with a wide range of projects including HVAC, electrical, plumbing, infrastructure upgrades, building automation, energy efficiency and maintenance/renovation, among others, allows him to serve in multiple capacities within a given project. Craig will serve as the main

communication interface between the Owner, the design team, contractors and end users.

Project Role: Relationship Manager – Primary Point of Contact

- *Engineer in Responsible Charge*
- *Design and Project Management of Mechanical, Electrical, Plumbing Projects*
- *Concept and Construction Design*
- *Business Operations and Financial Management Oversight*
- *Quality Assurance and Control*

Professional Project Highlights

- Bobtown Elementary HVAC
- WVU Life Sciences Building and Student Recreation Center – Owner’s Engineer
- Hawks Nest/Twin Falls HVAC
- Mapletown High School HVAC Replacement Phase I & II
- Advanced Surgical Hospital
- WV State Building 25 HVAC Piping Replacement
- WV State Building 36 HVAC Upgrades
- Cheat Lake Elementary & Middle School Renovations

Professional History

2003- Present	Miller Engineering, Inc.	President, Relationship Manager
2002-2003	Casto Technical Services	Existing Building Services Staff Engineer
2001-2002	Uniontown Hospital	Supervisor of Engineering
1995-2001	West Virginia University	Staff Engineer
1990-1995	BOPARC	Caretaker – Krepps Park
1983-1988	University of Charleston	Electrician/HVAC Mechanic

Education

1995	West Virginia University	BS- Mechanical Engineering
1988	University of Charleston	BA- Mass Communications

Licenses and Certifications

- Professional Engineer (West Virginia, Pennsylvania, Maryland, and Ohio)
- Licensed Master Plumber
- LEED-AP Certified



Travis Taylor, PE

Experience in project management facilitates Travis's ability to create and design constructible projects. Prior to joining the Miller Engineering team he was directly responsible for managing \$10 million in electrical construction budgets. His experiences encompass both new construction and renovation. Travis maintains professional competencies by attending seminars and continuing education classes. As lead engineer he provides HVAC, mechanical, plumbing and electrical design solutions and services for our clients. In addition, he is part of our team's complete assessment process in both planning and MEP design through construction administration.

Project Role: Lead MEP Engineer

- *Design of Mechanical, Electrical, and Plumbing Systems*
- *Building Information Modeling - Revit*
- *Constructible Materials Evaluation*
- *Site Evaluation and Mechanical System Review*
- *Submittal and RFP Review*
- *RFI Coordination, Review, and Response*
- *Construction Observation*

Professional Project Highlights

- Suncrest Middle Gym HVAC
- MTEC Welding Shop
- North Elementary Gym HVAC
- WV State Building 36 HVAC Upgrades
- WV State Building 25 HVAC Piping Replacement
- Bobtown Elementary School HVAC Upgrades
- Holly River State Park Primary Electric Service Replacements Phase I & II
- Pipestem Lodge McKeever Lodge HVAC Piping Replacement

Professional History

2011-Present	Miller Engineering, Inc.	Staff Engineer
2006-2011	Tri-County Electric, Co.	Project Manager
2006-2006	Schlumberger	Field Engineer Trainee - MWD

Education

2006 West Virginia University, BS – Mechanical Engineering

Licenses and Certifications

- Professional Engineer - State of West Virginia
- OSHA 10-hour Course: Construction Safety & Health

Staff – Qualifications and Experience



Jack Jamison

Jack brings 15 years as an electrical/building inspector and over 25 years of experience in the commercial electrical construction industry. His knowledge and experience are valuable resources to Miller’s complete assessment process.

Project Role: Master Code Official

- *Facility Review, Code Research, Field Observations, Issue Resolutions, and Project Evaluation*

Professional History

2010- Present	Miller Engineering, Inc.	Code and Construction Specialist
1999-2010	Megco Inspections	Chief Inspector
1972-1998	Jamison Electrical Construction	Master Electrician

Education

1971 Fairmont State College, BS-Engineering Technology-Electronics

Licenses and Certifications

- Master Code Professional, IAEL Master Electrical Inspector, Class C Electrical Inspector – WV, PA, MD, & OH
- ICC Commercial Building, Building Plans, Commercial Plumbing, Residential Energy, and Accessibility Inspector/Examiner
- WV Master Electricians License
- NCPCCI-2B, 2C, 4B, 4C: Electrical & Mechanical General/Plan Review
- OSHA 30 Hour Course: General Industry
- NFPA Code Making Panel 14 – NEC 2014 Edition



Joseph Machnik

Joe has experience with AutoCAD, MEP and Revit MEP. He provides design modeling, drafting and supervised design services and construction support for Miller Engineering.

Project Role: MEP Designer

- *Revit/CADD Coordination of New Construction and Renovation Designs*
- *Building Information Modeling*

Professional Project Highlights

- Bobtown Elementary HVAC
- WV State Building 25 HVAC Piping Replacement
- Suncrest Middle Gym HVAC
- North Elementary Gym HVAC
- WV State Building 36 HVAC Upgrades
- Westwood Middle Cooling Tower
- Pipestem Lodge HVAC Piping Replacement

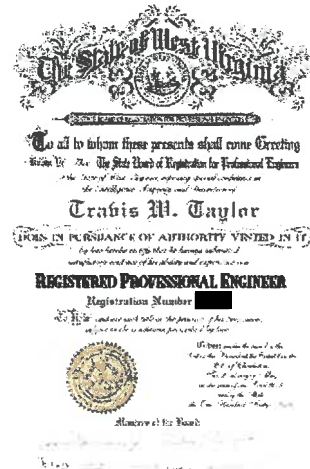
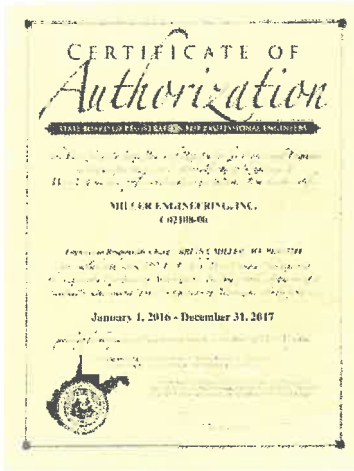
Professional History

2010 – Present Miller Engineering, Inc. MEP Designer

Education

2008 Penn State – Fayette, AS - Building Engineering Systems Technology: *Building Environmental Systems Technology*

2007 Penn State – Fayette, AS - Building Engineering Systems Technology: *Architectural Engineering Technology*



West Virginia State Board of Registration
for Professional Engineers

BRIAN C MILLER
WV [REDACTED]

This is to certify that the above named PROFESSIONAL ENGINEER has met the requirements of the West Virginia Code and is eligible to practice engineering in the State of West Virginia.

EXPIRES December 31, 2018

West Virginia State Board of Registration
for Professional Engineers

TRAVIS W TAYLOR
[REDACTED]

This is to certify that the above named PROFESSIONAL ENGINEER has met the requirements of the West Virginia Code and is eligible to practice engineering in the State of West Virginia.

EXPIRES December 31, 2018



DANA L. BURNS, P.E., P.S.

Vice President



EDUCATION

M.S. Civil Engineering, 1979
West Virginia University

B.S. Civil Engineering, 1978
West Virginia University

EMPLOYMENT HISTORY

1997-Present	Potesta & Associates, Inc.
1994-1997	Terradon
1979-1994	GAI Consultants, Inc.
1978-1979	West Virginia University
1976-1977	West Virginia Department of Highways (summers)

PROFESSIONAL REGISTRATIONS

- Professional Engineer – West Virginia, Illinois
- Professional Surveyor – West Virginia

PROFESSIONAL CERTIFICATIONS

40-Hour Health and Safety Training

SERVICE ON BOARDS AND COMMISSIONS

- Environmental/Technical Committee member – West Virginia Coal Association
- Environmental Committee member – Kentucky Coal Association

- Past Board of Directors member and current Waste Team Chairman on the Environmental Safety and Health Committee – West Virginia Manufacturers Association
- Environmental and Safety Committee member – Independent Oil and Gas Association of West Virginia
- Environmental Committee member – West Virginia Oil and Natural Gas Association
- Past President – West Virginia Society of Professional Engineers, Professional Engineers in Private Practice
- Past President and past Board of Directors member – American Council of Engineering Companies West Virginia Chapter
- Past Chairman of Transportation Committee – American Council of Engineering Companies West Virginia Chapter
- Past Board of Directors member – Society of American Military Engineers Huntington Post
- Member Committee D-18 on Soil and Rock – American Society for Testing and Materials (ASTM)

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers
- National Society of Professional Engineers
- WV Society of Professional Surveyors

AREAS OF SPECIALIZATION

Management of design and permitting of civil, environmental, geotechnical, and mining engineering projects. Siting, design, and permitting of industrial and municipal waste disposal sites; reclamation of abandoned mine lands; and development of stormwater management plans and groundwater sampling programs. Environmental/reclamation liability assessments. Development of site plans for commercial and industrial facilities including hydrologic and hydraulic analyses. Expert witness testimony. Directs engineering division including day-to-day operation of headquarters and three branch offices concerning staffing, coordination, training, business development; and overall management of technical and support staff.

PROFESSIONAL EXPERIENCE

Civil/Site Design

Utility extension, site grading plans, stormwater management, roadway design, and permitting for site development:

- Residential subdivisions
- Commercial developments

University of Charleston – Principal-in-Charge for the following projects:

- Development of topographic mapping of campus
- Evaluation of storm sewer system
- Civil site services – UC Pharmacy School, New Hall, Middle Hall, and Brotherton Hall
- Design of new campus entrance roadway

Marshall University – Principal-in-Charge for the following projects:

- 400 bed housing project
- Biotechnology Center
- Fifth Avenue parking and 6th Avenue parking facility
- Jomie Jazz Center
- Childcare Center
- Mid-Ohio Valley Center
- Campus landscape master use plan
- Campus improvements project
- MU Graduate College South Charleston campus
- Student Center and Henderson Center
- Bookstore addition
- University Heights

Glenville State University – Principal-in-Charge for the following projects:

- Student Residence Hall
- Athletic Convocation Center and Forestry/Survey Class Center

West Virginia University – Principal-in-Charge for a sidewalk repair project located near Allen Hall on the Evansdale Campus in Morgantown, West Virginia.

The Villages at Coolfont – Principal-in-Charge to provide environmental and engineering consulting services for the redevelopment of the Coolfont Recreation property in

Morgan County, West Virginia to create a second home community with high-end amenities:

- Phase I Environmental Site Assessment
- American Land Title Association (ALTA) boundary and property survey of 997 acres
- Completed an assessment of the facility's sanitary sewer wastewater treatment plant to facilitate acquisition of the property.
- Participated in week long planning charette with client, land planners, and other design consultants to assess characteristics of property, identify opportunities and constraints, obtain input from local residents and businesses, and develop design guidelines.
- Land use plan including 1,300 homes, a village center, spa, expansion of an existing lake, a proposed second lake, walking/hiking/biking trails, and the necessary infrastructure.
- Civil engineering design for potable water and wastewater treatment facilities.
- Selected source well locations, drilled 3 source test wells, and completed field testing and permitting.
- Designed 300 gallon per minute potable water treatment plant.
- Designed 2- 316,000-gallon water storage tanks and 75,000 LF of distribution system.
- Completed the design and permitting for a 448,000-gallon per day membrane bioreactor wastewater treatment plant, including the design of a 70,000 LF collection system.
- Assisted with permitting required for the development of the new lake and upgrades/expansion of the existing lake (included were Section 404 individual permit and Section 401 water quality certification).
- Prepared roadway and stormwater management plans, including typical pavement sections, road profiles, geometric layout plan, culvert and drop inlet sizing, drainage conveyance pipe and channel profiles, and miscellaneous stormwater management details.

City of Charleston – Inspection and preparation of rehabilitation design for Parking Garage No. 1.

Tucker County Industrial Park – Principal-in-Charge for the design which included water and sewer lines, stormwater management design, roadway design, pavement design, site grading plan, master plan, and geotechnical exploration/foundation recommendations.

Principal-in-Charge for site grading plans, stormwater management system, site surveying, roadway/parking lot design, wetland delineation/mitigation, and construction monitoring for the 400,000-square foot Coldwater Creek distribution center in Parkersburg, West Virginia.

Principal-in-Charge for the civil/site design for the new Sissonville Middle School in Kanawha County, West Virginia. Project included site grading plan with more than 230,000 cubic yards of earthwork to obtain 20 acres of level ground for a 74,000-square foot school, football field, soccer field, baseball field, access roadways, and parking areas. Project included utility designs for water service and sanitary and sewer. Stormwater collection systems and erosion and sediment control plan/permit completed.

Principal-in-Charge for civil/site design for new Riverview High School and Bradshaw Elementary School in McDowell County, West Virginia. Project included 2,500 linear feet of relocated WV Route 80, relocation of 1,200 feet of Oozley Branch, and site work (grading, stormwater drainage, geotechnical recommendations, sanitary sewer, water, and electrical services) to serve the two schools. Project design included site survey, geotechnical exploration, foundation recommendations, design of excavation slopes, layout of schools, parking areas and athletic fields, utility design, roadway relocations plans, and stream relocations plans. Responsible for the design and preparation of contract bid documents (specifications and drawings) for civil/site work. POTEITA served as a subconsultant to ZMM on this project.

Principal-in-Charge for civil/site design and permitting associated with the construction of three synthetic fuel pellet plants in McDowell County, Nicholas County, and Kanawha County, West Virginia. Project included developing synthetic fuel manufacturing facilities on inactive surface mining sites. Services included subsurface exploration, foundation recommendations, grading plans, stormwater management plans, preparation of permit applications, and construction monitoring for site grading and foundation construction. The McDowell County site included a water source study to identify and select water sources for the manufacturing process. The three plants had a construction cost of \$25 million. Project was a design/build arrangement with POTEITA working directly for the owner.

Carmeuse Lime & Stone – Principal-in-Charge of engineering and environmental services for the expansion of current quarry operations at Winchester quarry in Winchester, Virginia. The expansion includes the addition of two new vertical lime kilns and associated equipment, increasing their current aggregate crushing operation, and expanding their rail system to allow for increased shipping of product.

- Design included grading, stormwater management, and an access road crossing for a rail loop encircling the lime kilns and aggregate crushing areas with rail spurs for loading and unloading of product to connect to two mainline rail carriers.
- The total project track length consists of approximately 29,000 linear feet of rail.
- The design of the rail expansion includes trackside ditches, culverts, stormwater management systems, gas line relocations and crossings, rail crossings, and internal plant roadways, as well as grading for the expanded aggregate plant and lime kilns.
- Additional designs included civil/site services for a new office building and design of the sanitary water treatment system for this building.
- Acquired the necessary approvals to construct this project, such as approvals from local planning and zoning, inspections, health departments, and state governments such as Virginia Department of Transportation, Department of Environmental Quality (DEQ) and Department of Mining and Mineral Extraction (DMME).
- Conducted wetland delineations, developed reports, and completed applications to the Norfolk District (Northern Virginia field office) of the United States Army Corps of Engineers (USACE).

Development of specifications for a sand mound treatment system in the U.S. Air Training Center near Pittsburgh, Pennsylvania.

Water Lines, Water Storage Tanks, and Water Treatment Plants

New extensions and replacement of existing lines:

- Cassity Fork Water Supply Extension Project – Randolph County, WV (Project Manager)
- Godby Branch Water Supply Extension Project – Logan County, WV (Project Manager)
- Beaver Creek Water Supply Extension – Upshur County, WV (Project Manager)

- Buff Creek/Trace Fork – Putnam County, WV (Principal-in-Charge)
- Route 60 – Putnam County, WV (Principal-in-Charge)
- Boone County PSD numerous extensions – Boone County, WV (Principal-in-Charge)

West Virginia American Water Company – Principal-in-Charge for construction administration/monitoring for Poca River Water Line Extension Project, Cabell County Water Line Extension Project, Contract No. 7, Spite Road Water Line Extension Project, and Fisher Ridge Water Line Extension Project. Work included construction monitoring, preparation of weekly reports, review of contractor submittals, review of contractor invoices, and preparation of records drawings for 100,000+ linear feet of water line extensions.

City of Philippi – Principal-in-Charge for municipal water system upgrade project. Work included design of two replacement booster stations, two new water storage tanks, new pumps for an existing booster station, a 1,500-foot water line extension, and telemetry systems. Drawings, specifications, and a cost estimate were prepared.

West Virginia American Water Company – Principal-in-Charge for Residuals Handling Facility project at the 32 MGD Kanawha Valley Water Treatment Plant, including coordination design consultant. Design included sludge pumping station, 950,000-gallon reinforced concrete gravity thickener, two belt filter presses, chemical feed systems, plate settler, and associated control and piping. Work included preparing design concept, surveying, subsurface exploration, preparation of drawings, specifications, cost estimate and permit applications, conductance of pre-bid public relations meeting, evaluation of bids, construction observation, review of contractor submittals, review of change order requests, and review of contractor invoices.

West Virginia American Water Company – Principal-in-Charge for evaluation of Town of Pineville water treatment plant and water distribution system, including observation of system during site visit, records review, discussions with regulatory officials, and issuance of findings in a report.

Tucker County Development Authority – Principal-in-Charge for design of approximately 10,000 feet of water line and sewer line to serve an industrial park, including a lift station. Drawings, specifications, and a cost estimate

were prepared. Also performed construction administration services.

West Virginia Bureau for Public Health – Principal-in-Charge for services associated with Source Water Assessment Protection Plans (SWAPP) for 38 public water systems throughout West Virginia. Services provided included windshield surveys to identify and locate (via GPS) potential contaminant sources (PCS's), review of regulatory databases, entering data into Access database, and preparation of summary reports.

City of Philippi – Principal-in-Charge for relocation of water lines due to proposed roadway. Relocation included approximately 4,000 feet of 1-inch to 12-inch diameter pipe, fire hydrants, meters, and valves. Prepared construction drawings, specifications, and quantities.

West Virginia American Water Company – Principal-in-Charge for hydraulic analysis for water supply extensions (total of 23 miles) in Cabell County, West Virginia, including line sizing and design of booster station and PRVs.

Management of design, permitting, and construction monitoring of more than 40 miles of new waterline serving rural communities in southern West Virginia.

West Virginia Department of Abandoned Mine Lands – Detailed design and preparation of construction drawings, specifications, contractor's bid sheet, and engineer's cost estimate for six-mile water line extension including fire protection. Project included 90,000-gallon water tank, booster station, and pressure relief valves. Extension tied into Norton Harding Jimtown PSD System and served town of Cassity in Randolph County.

West Virginia Department of Abandoned Mine Lands – Detailed design and preparation of construction drawings, specifications, contractor's bid sheet, and engineer's cost estimate for a half-mile water line extension to serve Beaver Creek near Junior in Randolph County.

West Virginia Department of Abandoned Mine Lands– Management of four Phase II water studies and five Phase I water studies to determine if water supplies had been affected by coal mining. Work included resident interviews, mine map searches, area reconnaissance, obtaining water samples, reviewing water analysis data, preparing conceptual designs and associated costs and preparation of summary report.

Sewer Lines and WWTPs

Washington County Industrial Development Agency – Design of a holding tank and ventilation system vault near Houston, Pennsylvania.

West Virginia American Water Company – Principal-in-Charge for evaluation of wastewater collections systems and treatment plants for two municipalities (Oak Hill and White Sulphur Springs) in West Virginia. Included were site visits to observe system, discussions with system operators and regulatory officials, records review, compilation of DMR data and issuance of findings in reports.

Geotechnical

Subsurface exploration, evaluation, and design of remedial measure for landslides:

- Soldier beam and lagging retaining walls
- Gabion walls
- Grade/drain/compact in-place
- Geo-grid reinforcement with grade/drain/compact in-place

Plasma Processing Corporation – Management of subsurface exploration and preparation of soils report near Ravenswood, West Virginia.

West Virginia University – Principal-in-Charge for the following projects:

- WVU Intermodal Parking Garage on the Medical Center Campus – geotechnical and civil engineering
- WVU Engineering Building – geotechnical evaluation

Principal-in-Charge for Williamson Landslide Project involving an abandoned mine land site. Geotechnical exploration and design of 480-foot long soldier beam and lagging retaining wall with tiebacks to support loose mine spoil backfill along the edge of a previously mined area with steep terrain. Project was required to protect an existing 125-bed nursing home facility.

Landfills/Solid Waste/Waste Disposal

Design and permitting of new landfills and development of cell closure plans:

Municipal Landfills –

- West Virginia Solid Waste Management Board/Monongalia County Sanitary Landfill – Morgantown, WV
- North Folk Landfill – Wheeling, West Virginia
- Disposal Service, Inc. Landfill – Hurricane, WV
- Sycamore Landfill, Inc. – Hurricane, WV
- City of Charleston Landfill – Charleston, WV
- Mingo County Landfill – Mingo County, WV
- Omar Landfill – Omar, WV
- Pocahontas County Landfill – Marlinton, WV
- HAM Sanitary Landfill – Peterstown, WV
- Kanawha- Western Landfill – Cross Lanes, WV
- S&S Landfill – West Milford, WV
- Brooke County Landfill – Brooke County, WV
- Wetzel County Landfill – Wetzel County, WV
- WVDEP’s Landfill Closure Assistance Program
 - Montgomery Sanitary Landfill – Montgomery, WV
 - Wyoming County Sanitary Landfill – Pineville, WV
 - Jackson County Sanitary Landfill – Ripley, WV
 - City of Moundsville Landfill – Charleston, WV

Industrial Solid Waste (Fly Ash, Bottom Ash, Scrubber Sludge) –

- Mobay Hazardous Waste Landfill – Natrium, WV
- American Cyanamid (4 projects) – Willow Island, WV
- Client confidential – Parkersburg, WV
- Monsanto Company (multiple projects) – Nitro, WV
- Harrison Power Station – Haywood, WV
- Fort Martin Power Station – Morgantown, WV
- Mount Storm Power Station – Mount Storm, WV
- Keystone Power Station – Elderton, PA
- New Castle Power Station – New Castle, PA
- Conemaugh Power Station – New Florence, PA
- Alcoa Corporation – Newsburg, IN
- Portsmouth Power Station – Portsmouth, VA
- F.B. Culley Power Station – Newburgh, IN
- Hatfield Power Station – Masontown, PA
- Armstrong Power Station – Armstrong County, PA
- Cheswick Power Station – Springdale, PA

Design, permitting, economic analyses, and preparation of construction bid documents for coal ash/refuse sites including HDPE and PVC liner systems:

- Virginia Electric and Power Company
 - Portsmouth Power Station ash pond to dry fill conversion project
 - Mount Storm Interim Ash Site
- Pennsylvania Electric Company

- Keystone Coal Ash/Coal Refuse Site
- Allegheny Power Station
- Hatfield Ash Site

WVDEP Office of Waste Management – Development construction drawings, technical specifications, contractor's bid sheet and engineer's cost estimate for closure of Montgomery Sanitary Landfill. Work included leachate collection system, cap and double walled leachate tank.

WVDEP Office of Waste Management – Development of construction drawings, technical specifications, contractor's bid sheet, and engineer's cost estimate for final closure of the Wyoming County Landfill. Work included site assessment, double walled leachate tank, pump station, and connection of leachate line to Center Public Service District sanitary sewer.

WVDEP Office of Waste Management – Development of interim closure plans including leachate collection system, adequacy of groundwater monitoring wells and soil cover for the Jackson County Landfill and the City of Moundsville Landfill.

WV Solid Waste Management Board's Monongalia County Sanitary Landfill – Management of three liner expansions, borrow area determination, minor permit modifications, 1.6 MG double-lined leachate pond design, construction monitoring, and investigation of future alternatives.

Disposal Services, Inc. – Evaluation of landfill expansion and leachate minimization. Preparation of permit application for Phase I Cell 3 and Phase II including drawings, specifications, and CQA manual. Preparation of construction drawings for Phase I Cell 3 Stage I and management of construction monitoring. Preparation of erosion and sedimentation control plan, soldier beam and lagging retaining wall, gabion basket retaining wall, and assistance on FERC permit to relocate gas line in Hurricane, West Virginia.

S&S Landfill – Preparation of Landfill Expansion Revisions, permit revisions, and permit negotiation. Detailed review of hydrogeology and groundwater flow regime. Management of QA/QC for landfill expansion including clay/synthetic liner system, double walled leachate tank, sedimentation pond, drainage channels, and associated facilities in Harrison County, West Virginia.

Pocahontas County Solid Waste Authority – Management of miscellaneous services including preliminary closure plan, evaluation of leachate treatment alternatives, repair of tear in synthetic liner, preparation of annual reports, and surveying for Pocahontas County Landfill in Marlinton, West Virginia.

Kanawha County Solid Waste Authority – Investigation of potential landfill fire at Kanawha Western Landfill. Detailed geologic and hydrologic studies, monitoring well installation, and preparation of associated sections of landfill permits.

- North Fork Landfill – Wheeling, WV
- Sycamore Landfill – Hurricane, WV

Rhone-Poulenc Ag Company – Management of non-hazardous industrial landfill design project involving design report, technical specifications, construction drawings, QA/QC manual, operation manual, permit application, and environmental assessment. Included meetings with EPA Region 3 and WV Division of Natural Resources. Also, three site selection studies. Complete geologic and hydrogeologic investigations including installation of monitoring wells.

Tennessee Valley Authority – Economic analyses of wet versus dry disposal processes, including conveyor belts, trucks, and sluicing by pipe for fly ash and bottom ash.

Pennsylvania Electric Company – Evaluation of natural and synthetic liner systems for coal ash/coal refuse sites. Preparation of permit applications for the New Castle ash site and Mitchell scrubber sludge disposal site:

- Pennsylvania Power Company
- Allegheny Power System

Coordinator of the compilation of data for a RCRA Part B permit application for a hazardous waste transfer facility in Parkersburg, West Virginia including SPCC plan.

Sludge sampling programs at the Institute, West Virginia plant of Union Carbide Corporation and the Tri-State Terminal of Ashland Petroleum Company.

Siting studies, including environmental impacts and economic analyses, for industrial waste and coal ash/refuse sites:

- Peabody Coal Company – slurry impoundment

- Rhone Poulenc Ag Company – 3 sites for industrial landfill
- Virginia Electric and Power Company – Mt. Storm Power Station
- Southern Indiana Gas and Electric Company – 4 sites at F.B. Culley Station
- Alocu Generating Corporation – 7 sites at Warrick Station

American Cyanamid Company – Management of QA/QC monitoring program for the first RCRA industrial waste impoundment in EPA Region 3. Composite liner system consisted of 3-foot soil-bentonite liner and two 60-mil HDPE synthetic liners separated by HDPE drainage net. Provided on-site testing laboratory. Daily and weekly project reports were provided. Prepared summary report and necessary “certifications” for submittal to WV Division of Natural Resources and EPA in Willow Island, West Virginia.

American Cyanamid Company – Management of QA/QC monitoring program for a stormwater retention basin consisting of 3’ soil bentonite liner with concrete overlay. Daily, weekly, and project summary reports were prepared in Willow Island, West Virginia.

American Cyanamid Company – Preparation of plans, specifications, and permit application for the closure of an industrial waste disposal site. The capping system included geogrid to assist in supporting the overlying HDPE liner and soil cap in Willow Island, West Virginia.
Electric Power Research Institute – Preparation of the Coal Ash Disposal Manual and various manuals for the High Volume/Low Technology Fly Ash Utilization Program.

Electric Power Research Institute – Development of a computer program that provides a detailed cost estimate for a coal ash disposal area.

Rhone Poulenc Ag Company – Evaluation of settling characteristics for an emergency fly ash disposal pond and design of associated modifications at a plant in Institute, West Virginia.

American Cyanamid Company – Management of QA/QC monitoring for a closure of a 3-acre hazardous waste disposal area with sludge stabilization and an HDPE cap. Provided an on-site testing laboratory, daily and weekly project reports, a summary report, and agency required certifications in Willow Island, West Virginia.

American Cyanamid Company – Management of QA/QC monitoring for the stabilization and capping of 10-acre hazardous waste equalization basin in Willow Island, West Virginia.

Rhone Poulenc Ag Company – Sampling/sounding of two basins containing sludge from secondary biological treatment of industrial wastewater and subsequent determination of sludge quantities.

Development of alternative truck transportation cost schemes:

- Industrial and Hazardous Waste Management Study – Allegheny County, PA
- Holcomb, KA Power Station – Sunflower Electric Cooperative
- Portsmouth Station remote ash structural fill – Virginia Electric and Power Company

Roadway Design

Principal-in-Charge for design of new entrance roadway to the University of Charleston and the utility extension, surveying, and general civil engineering for a 440-bed dormitory. Project was a design/build.

West Virginia Divisions of Highways – Inspection of bridge and highway construction.

Managed numerous industrial access roads. Roadways were designed for the private sector. Design was coordinated with and approved by the West Virginia Division of Highways and roadways were accepted into the state transportation system.

- ZMM Architects – Relocation of State Route 80 for construction of new elementary and high schools at Bradshaw in McDowell County, WV
- Jackson County Development Authority and Double C Enterprises – Industrial park access road and County Route upgrade in Kenna, WV
- Roane County Economic Development Authority – National Industrial Lumber access road in Amma, WV
- Tucker County Development Authority – Tucker County Industrial Park access road in Davis, WV
- Wood County Development Authority – Luigino’s access road in Parkersburg, WV
- University of Charleston – Design of new entrance road to University of Charleston and redesign of

MacCorkle Avenue (State Route 61) intersection/turn lanes in Charleston, WV

- N-Visions Architects – Entrance road, bus loop, and emergency exit roadway for new Sissonville Middle School in Sissonville, WV
- Entrance road and bus loop for Trap Hill Middle School in Raleigh County, WV

WV Division of Highways – Managed environmental permitting, surveying, and design of four-lane 1.25-mile North Bridgeport Connector Road from Interstate 79 Jerry Dove Interchange to Benedum Airport in Bridgeport, West Virginia.

WV Division of Highways under open-end agreements for:

- Landslides and slope stability projects
- Surveying
- Asbestos services

WV Division of Highways – Managed geotechnical, environmental, right-of-way, and survey work performed as a subconsultant for various projects:

- King Coal Highway (section near Pineville, WV)
- Sharon Heights Connector
- Eldora and Enterprise Connector
- Dundon Bridge
- Martha Truss Bridge
- Martha Concrete Girder Bridge
- Upgrade of three bridges on Interstate 81
- Corridor H (section near Kerns, WV)
- Corridor D (section near Washington, WV)

Oil and Gas

Columbia Gas Transmission Corporation – Management of consulting services for environmental report preparation and FERC permit applications for various natural gas pipeline projects.

Principal-in-Charge of well pad design, access road layout, landslide remediation design, evaluation of water supply sources and distribution systems, design of water treatment systems, impoundment design, stormwater management plans, permitting, AST inspections, surveying, and SPCC Plans for various major gas clients in the Marcellus and Utica formations.

- Stone Energy

- EQT
- Chesapeake
- Gastar
- NiSource

Storage Tanks

Principal-in-Charge of the registration, preparation of spill prevention response plans, and inspection of aboveground storage tanks (ASTs) for over 500 ASTs for numerous clients, including:

- NiSource
- Rubberlite
- CI Thornburg
- Tetra Technologies
- CAMC
- Interstate Hardwood
- Central Supply

Closure of aboveground storage tanks, including preparation of documentation for regulatory agency and sample acquisition and analyses:

- Rhone-Poulenc Ag Company – Institute, WV
- American Cyanamid Company – Willow Island, WV

Investigation of contamination from underground storage tanks and hydrocarbon spills. Included preparation of necessary regulatory forms, sample acquisition and analyses, and meeting with regulatory agency.

- West Virginia Division of Natural Resources – various projects under Master Agreement
- Goldman Associates
- Vandalia Mining Company
- Marshall University

Mining

Peabody Coal Company – Evaluation of potential stream flow attributed to long-wall deep mining subsidence in minimal overburden areas in southern West Virginia. Responsibilities included the review of mine maps, stream reconnaissance studies, and the establishment of three in-stream V-notch weirs. The weirs were monitored and maintained during a seasonal study period to generate direct flow measurements. The WVDEP also prepared a study for the site that was reviewed, and comments prepared for the results.

Principal-in-Charge on numerous Independent Third-Party Audits at sites for various coal producers. Independent Third-Party Reviews of mines/complexes were undertaken with a thorough review to assess compliance of the operation to various federal statutes and equivalent to state laws. Specific areas of review included are generally determined by the needs of the client or the requirements of governmental agencies and have included an assessment of the client's compliance with the following:

- Clean Air Act
- Clean Water Act
- Resource Conservation and Recovery Act
- Safe Drinking Water Act
- Toxic Substance Control Act
- Comprehensive Environmental Response, Compensation and Liability Act
- Emergency Planning and Community Right to Know Act
- Federal Insecticide, Fungicide and Rodenticide Act
- Oil Pollution Act
- Mine Safety and Health Administration
- Surface Mining and Reclamation Act
- National Pollution Discharge Elimination System
- Others as required

Development of reclamation plans for over 70 projects including landslides, mine fires, acid mine drainage, mine subsidence, refuse piles, water supply systems, and asbestos abatement. Projects were completed for West Virginia Division of Energy, West Virginia Division of Environmental Protection, Virginia Abandoned Mine Lands, and Ohio Department of Natural Resources and include the following:

- Duncan Hill Subsidence
- Beckley Subsidence
- Jonben (Haga) Subsidence
- Holden (Padgett) Subsidence
- Gray and Iaquina Subsidence
- St. John's Road Subsidence
- Route 19/28 Subsidence
- Mt. Hope Subsidence
- Huffman Street Subsidence
- Morgantown Airport Drainage/Subsidence
- Fairmont East Subsidence
- Fairmont IV Subsidence
- Cheyenne Sales Company Reclamation
- Little Whitestick Refuse
- Crany Mine Dump

- Morgan Mine Fire
- MacArthur Phase 2 Subsidence
- Lake Lynn Complex
- MacArthur Mine Subsidence
- East Lynn II
- Flipping Hollow Complex
- Sundial (Hatfield) Refuse Piles
- Mill Creek Refuse Pile
- John's Branch Coal Refuse Dam
- Jessop Highway #10
- Lando (Edwards) Drainage
- Taylorville (Cantrell) Drainage
- Borderland (Matney) Portals
- Peach Ridge Complex
- Measle Fork Refuse
- Georges Creek Portals
- Putney Impoundment
- Kopperston (John's Branch) Refuse Emergency
- Marmet (Wells Drive) Landslide Emergency
- Marmet (Clark) Drainage
- Pringle Run #2
- Mountain Run Refuse and Portals
- Fairmont East Mine Drainage
- May Portal (Virginia Abandoned Mine Lands)
- Williamson (Hatfield) Landslide
- Georges Creek (Lucas) Rockslide
- Rachel Refuse
- Grass Run Refuse
- Allen Sheridan Hazardous Facility (asbestos)
- Elk City- Century- Volga Phase I/II Water Study
- Camp Mohonegan Regrade
- Comfort Run Coal Company (asbestos)
- Allen AMD
- Cora Mine Drainage No. II
- Covey Creek Mine Fire
- Vivian Refuse Pile
- Summerlee Refuse Pile (won 1996 southern reclamation award)
- Kimball Refuse Pile (won 1995 southern reclamation award)
- Hampden (Smith) Landslide
- Bear Run Refuse (won 1994 Ducks Unlimited award)
- Charleston (Ratcliffe) Landslide
- Garrison Complex
- Mulberry Fork (Stover) Landslide
- Courtright Highwall
- Belle Landslide
- Minden Drilling
- Kitchen/Gibson Landslide
- High Coal Tipple

- Omar Refuse Pile (won reclamation of the year award)
- Logan Drainage
- Switzer Adams/Robinson Drainage
- Follansbee Drainage
- Hawkins AMD
- Vargo Drainage
- Duck Creek Landslide
- Kistler Mine Fire
- Turner Douglas Complex
- Buffalo Creek No. 5 Refuse
- Dawmont Mine Facility
- Helen (Lewis) Refuse
- Upshur 10/15 Drainage
- Webster County Water Studies
- Iaeger Water Feasibility Study
- Burnwell, Standard, and Collinsdale Water Line Extension
- Clay-Roane PSD Water Feasibility Study
- Burnsville PSD Water Feasibility Study
- Brandonville/Pisgah Water Feasibility Study
- Cuzzart/4-H Water Feasibility Study
- Hudson/Mt. Nebo Water Feasibility Study
- Phase I Water Studies Brooke and Fayette Counties
 - Gauley River PSD – Belva
 - Hammond PSD – Wellsburg
 - New Haven Chamber of Commerce – Hico
- Mill Creek Regional Water Project Phase II Water Study (Boone, Lincoln, and Logan Counties)
- Godby Branch Phase II Water Study
- Madison Street Portals/Fairview Route 218 Portals
- Putnam County Phase I Water Studies
 - Heizer Creek
 - Manila Creek
- Boone County Phase I Water Studies
 - Jeffrey Area – Jeffery, Hewett Creek, Seacoal
 - Ottawa Area – Ottawa, Greenview, Missouri Fork, Meadow Fork, Aleshire Branch, Dent Fork, Mike’s Fork
- Phase II Water Feasibility Studies
 - Logan County – Cow Creek, Crooked Creek, Upper Rum Creek
- Phase I Water Studies for Logan County
 - Pecks Mill – Godby Heights Communities
 - Cow Creek – Sarah Ann – Crystal Blocks Communities
 - Upper Rum Creek Community
 - Clothier Community
 - Crooked Creek Community
 - Godby Branch
 - Whitman Creek – Holden Project
- Beaver Creek Waterline Extension: Phase II Water Project

- Cassity Fork Water Supply Extension: Phase II Water Project

Subsurface explorations, subsidence monitoring, review of a coal reserve analysis, site plans, preblast/presubsidence surveys, hydrologic analyses, preparation of mining permits, and design and permitting of coal slurry impoundments for coal mining companies in West Virginia, Virginia, Kentucky, Ohio, and Maryland.

- Peabody Coal Company
- Eastern Associated Coal Company
- Southern Ohio Coal Company
- Island Creek Corporation
- Massey Coal Services
- Appalachian Mining, Inc.
- Oneida Coal Company
- Old Ben Coal Company
- Mettiki Coal Company
- Shafer Brothers Coal Co.
- LP Minerals

Management of fly ash utilization permits for various coal companies:

- Rawl Sales, Inc.
- Elk Run Coal Company
- Appalachian Mining, Inc.
- Peerless Eagle Coal Company

Managed subsurface investigation, foundation design, and development of mine stabilization program for NASA’s Independent Verification and Validation Center in Fairmont, West Virginia.

Monongahela Power Company – Development of fly ash flowable fill specification for submittal to WV Division of Highways in Fairmont, West Virginia.

Computer modeling of groundwater movement of contaminants resulting from underground coal gasification.

NPDES Industrial/Municipal Permitting

Completed National Pollutant Discharge Elimination System (NPDES) renewal permitting and associated agency negotiations for several facilities.

Plasma Processing Corporation – Management of numerous projects in Ravenswood, West Virginia including:

- Subsurface exploration and preparation of soils report
- NPDES Permit
- Development of sampling program for Plasma to follow in obtaining samples for NPDES Stormwater Analyses
- Development of hazardous waste operations manual
- Acquisition of WV Air Pollution Commission permits
- Environmental audit of facility operations

Hydrology and Hydraulics

City of Charleston – Hydrologic and hydraulic analyses of South Ruffner Watershed. Project analyzed various storm events and presented conceptual recommendations to reduce effects of these storms.

U.S. Army Corps of Engineers, Jacksonville District – Determination of watershed areas along the Suwannee River Basin.

Groundwater

Dilley's Mill – Principal-in-Charge for review of regional groundwater information for a summer Boy Scout camp facility to locate and construct a replacement drinking water well for the facility. Responsibilities included the development and review of existing facility usage, determination of the location and depth of the proposed water well and design of the well to meet with the requirements of the State of West Virginia Department of Health standards. Design of sewage collection system and synthetic lined sewage treatment lagoon including permitting.

Groundwater sampling programs:

- Herr's Island – Urban Redevelopment Authority of Pittsburgh
- Robertshaw Controls in New Stanton, PA
- New Castle Power Station
- Pennsylvania Power Company
- Portsmouth Power Station
- Virginia Electric and Power Company
- Rhone Poulenc Ag Company – Institute, WV

Management of pump tests:

- Peabody Coal Company – Bim, WV
- Southern Ohio Coal Company – Meigs County, OH
- Rhone-Poulenc Ag Company – Institute, WV

Rhone Poulenc Ag Company – Development of specification manual for conducting soil and groundwater sampling programs. Manual detailed decontamination methods and proper handling/disposal methods in Institute, West Virginia.

Air Pollution/Air Services

Principal-in-Charge for internal and external methane gas monitoring at nursing home facility in Boone County, West Virginia.

Urban Redevelopment Authority of Pittsburgh – Preliminary and detailed air pollution modeling for Pittsburgh's convention center complex and for the Washington Heights development.

Eastern Associated Coal Corporation – Management of certified emission statements for 11 coal preparation plants and air emission inventories for 8 coal preparation plants for submittal to the West Virginia Office of Air Quality.

Nicholson Construction Company – Operation permit from West Virginia Air Pollution Control Commission for cement/grout portable batch plant for mine subsidence control project in Follansbee, West Virginia.

Stream/Wetland Delineation, Permitting and Mitigation

Columbia Gas Transmission Corporation – Management of stream stabilization and restoration plan for segment of East Fork of Queer Creek in Hocking County, Ohio.

Environmental Assessments/Impact Statements

Management of numerous environmental assessments for property transactions:

- Arch Coal – Multiple WV Tracts ESA (60,500 acres)
- Massey Coal Services – Red Cedar Surface Mine (850 acres)
- Duke Energy – Chicopee Environmental Audit (6,000 acres)

- Pittston Coal Management Group – Phase I ESA (6,000 acres)
- Massey Coal Co. – Hampton Site, Spruce Laurel (130 acres)
- Eastern Associated/Peabody Coal – Phase I ESA (1,035 acres)
- Eastern Associated Coal – Environmental Due Diligence for Active and Closed Operations in KY and WV (100,000 acres)
- Peabody Coal – Multi-state Environmental Audit in WY, CO, NM, AZ, Western KY, IN, IL (250,000+ acres)
- Peabody Coal – Environmental Due Diligence for Properties in IL and IN (150,000+ acres)
- AMVEST Mineral Services – Phase I ESA (8,000 acres)
- Peabody Energy Corp. – Phase I ESA on Putnam Property (1,036 acres)
- Arch Coal – Environmental Compliance Audit in KY, WV, and VA (150,000+ acres)
- Massey – Consolidated Coal Co. Holden Complex (5,500 acres)
- Massey – Environmental/Reclamation Liability Assessment for Northland Resources (150 acres)
- Peabody Coal – Phase I ESA for Imperial Coal and Turner Properties (5,400 acres)
- Peabody Group – Environmental/Reclamation Liabilities for Kanawha Eagle, LLC Permits in Boone and Kanawha Counties, WV (350 acres)

Principal-in-charge for the Coalfields Industrial Site Survey performed for the West Virginia Development Office. Study identified and evaluated more than 1,000 former and current mining sites for use as industrial sites. McDowell County was one of six included in the study. The study considered accessibility, utility status and distance of required extensions, topography, site size, etc.

West Virginia Division of Highways – Coordination of Environmental Impact Statement for Route 19 upgrade from Summersville to Interstate 79 in Braxton County and New River Parkway from Sandstone Falls on I-64 to near Athens on I-77.

D. MARK KISER, P.E., L.R.S.

Chief Engineer, Licensed Remediation Specialist



EDUCATION

B.S. Civil Engineering, 1984
West Virginia University

EMPLOYMENT HISTORY

1997-Present Potesta & Associates, Inc.
1995-1997 Terradon Corporation
1984-1995 GAI Consultants

PROFESSIONAL REGISTRATION

- Professional Engineer – West Virginia
- Licensed Remediation Specialist – West Virginia

PROFESSIONAL CERTIFICATION

- Hazardous Waste Site Operations and Superfund
- Worker Protection Training, 40-Hour Training
- Supervisory Training and Annual Refreshers
- Troxler Nuclear Densometer Certification

SERVICE ON BOARDS AND COMMISSIONS

Commissioner – Sissonville Public Service District

AREAS OF SPECIALIZATION

Environmental assessments, environmental sampling and remedial programs, conceptual and final designs for chemical, utility, and municipal solid waste disposal sites, including liner systems, leachate management systems,

stormwater management systems, operational plans and capping/closure systems, abandoned mine land reclamation projects, sludge stabilization and basin/pond closure projects, environmental permitting, hydrologic and hydraulic analyses, quality assurance/quality control monitoring.

PROFESSIONAL EXPERIENCE

Civil/ Site Design

Ridgeline, Inc./Cabela's – Retained by developer and Cabela's to provide civil engineering design services for a new Cabela's store in Charleston, West Virginia.

- ALTA survey
- Subsurface exploration
- Grading plan including balanced cut and fill for the building pad, parking fields, and access roads.
- Stormwater collection system design including curb inlets, catch basins, and culverts.
- Pavement design.
- Utility extension designs including sanitary sewer, potable water, fire service, natural gas, underground electric, underground telephone, and underground cable television.
- Permitting services
- Support for local approvals including approval from Charleston Municipal Planning Commission as a Development of Significant Impact and building permit to allow construction to begin.
- MM-109 permit to allow for connection of the store's new roadway with the existing public roadway.

Fieldcrest Subdivision – Project manager/engineer for development of a nine-lot subdivision in Charleston, West Virginia. Design and permitting/regulatory approvals for infrastructure, including new street, sanitary sewer main, water main, stormwater, electric, telephone, cable, and natural gas. Preparation of drawings/specifications for necessary governmental agency approvals and for solicitation of bids. Inspection and certification of completed sanitary sewer system.

Connell Pointe Subdivision – Project manager/engineer for development of an eleven-lot subdivision in Charleston, West Virginia. Design and permitting/regulatory approvals for infrastructure, including new street, sanitary sewer main, water main, natural gas service, stormwater, electric, telephone, and

cable. Preparation of drawings/specifications for governmental agency approvals and for solicitation of bids. Inspection and certification for completed sanitary sewer systems.

Conner Drive Townhouses – Project manager/engineer for development of 13 townhouse lots just outside of Charleston, West Virginia. Planning, surveying, design, and regulatory approvals for infrastructure, including new street, stormwater management system, sanitary sewer main, water main, electric, natural gas, telephone, and cable.

Gettysburg Subdivision – Project manager/engineer for an 18-lot subdivision located in Kanawha County, West Virginia. Design, surveying, and regulatory approvals for infrastructure, including new street, sanitary sewer main, water main, stormwater management system, electric, natural gas, telephone, and cable. Preparation of drawings/specifications for solicitation of bids. Inspection and certification of the sanitary sewer collection system and pump station.

Yorktowne Subdivision – Project engineer for development and construction phase services for a 50-lot subdivision in Charleston, West Virginia. Design of streets, lots, stormwater management systems, sanitary sewer mains and pump stations, water mains, underground electric, natural gas, telephone, and cable.

City of Charleston – Feasibility study for the replacement of the CSX Ramp in Charleston, West Virginia.

Villages at Coolfont – Project manager for project in Morgan County, West Virginia, which included planning, engineering, and permitting associated with developing a second home community on 1,000 acres near Berkeley Springs, West Virginia. Project included:

- Potable water supply source (wells), treatment plant, storage and distribution system
- 0.44 MGD MBR wastewater treatment plant and sanitary sewer collection system
- Community roadways and storm sewer systems
- Detailed plans for the water and wastewater treatment plants and the distribution allocation system serving the first 124 homes
- Permits were obtained for the water and wastewater plants

Project engineer for development of Suncrest Subdivision in Charleston, West Virginia. Project included engineering and permitting for a new residential subdivision including roadway, underground electric, telephone, cable, water, sanitary sewer and storm water. Sanitary sewer system was designed, constructed, and monitored under the terms of an alternate mainline extension agreement with the Charleston Sanitary Board.

Business and Industrial Development Corporation – Preparation of Utility Extension and Roadway Paving Plans for Southridge Centre - Phase 2 area. Project included preparation of bidding/construction drawings to provide natural gas, water, sanitary sewer, telephone, and cable television serving four commercial lots and a 50-lot proposed subdivision. All utilities were underground. The length of the project was approximately ½ mile. The project also included roadway paving and stormwater drainage.

Development of a conceptual development plan for a mixed use industrial park. The evaluation included developing preliminary alignments for two access roadways including earthwork requirements, drainage, subbase, and paving with preliminary cost estimates. Total length of road was over 5 miles. The evaluation also included preliminary layout of water and sewer service for a proposed 400-acre development.

Plasma Processing Corporation – Preparation of permit to construct and site development plan for a secondary aluminum processing facility startup in Jackson County, West Virginia.

Utility relocation plans required for site development, waterline, and sewer construction projects. Projects included determination of utility locations by records review, utility contacts, and surveying. Designs were prepared including locations, details, and pavement replacement. Design also included obtaining approvals from West Virginia Division of Highways and the owners of the utilities.

Abandoned Mine Lands

West Virginia Division of Environmental Protection Abandoned Mine Lands (WVDEP AML) Reclamation – Project engineer/project manager for open-end contract from 1988 through 1995. Continued after 1995 with AML projects for WVDEP AML including reclamation

designs, preparation of plans, specifications, bid documents, and permitting. Projects included:

- Duncan Hill No. 1 and No. 2 Subsidence
- Urso Subsidence
- Jonben Subsidence
- Doug Gray Subsidence
- Turner Douglas Complex
- Omar Refuse Piles (project won reclamation of the year award)
- Bear Run Refuse (project won 1994 Ducks Unlimited award)
- Kimble Refuse Pile (project won 1995 southern reclamation award)
- Vivian Refuse Pile
- Summerlee Refuse Pile
- Godby Branch Water Extension
- Williamson (Elias) Landslide
- Lefthand Fork Burning Refuse
- Belle Landslide
- Harris Acid Mine Drainage
- Numerous Phase I and Phase II Water Quality Studies/Survey
- Williamson (Hatfield) Landslide
- Taylorville (Cantrell) Drainage
- Sundial Refuse
- Sundial (Hatfield) Refuse Piles
- St. John's Road Subsidence
- Rachel Refuse
- Putney Impoundment
- Pringle Run No. 2
- Peach Ridge Complex
- Mountain Run Refuse and Portals
- Mill Creek Refuse Pile
- Measle Fork Refuse
- Marmet (Wells Drive) Landslide
- Marmet (Clark) Drainage
- MacArthur Mine Subsidence
- MacArthur Phase 2 Subsidence
- Little Whitestick Refuse
- Lando (Edwards) Drainage
- Kopperston (John's Branch) Refuse
- John's Branch Coal Refuse Dam (Kopperston)
- Jessop Highway #10
- High Coal Tipple
- Harris AMD
- Gray and Iaquinta Subsidence
- Grass Run Refuse
- Godby Branch Waterline Extension
- Georges Creek Portals
- Georges Creek (Lucas) Rockslide

- Garrison Complex
- Flipping Hollow Complex
- Fairmont East Mine Drainage
- East Lynn II
- Crany Mine Dump
- Courtright Highwall
- Cora Mine Drainage No. II
- Charleston (Ratcliffe) Landslide
- Cassity Fork Waterline Extension
- Camp Mohonegan Regrade
- Buffalo Creek No. 5 Refuse
- Borderland (Matney) Portals
- Beckley Subsidence
- Allen AMD

WVDEP-AML – Detailed design and preparation of construction drawings, specifications, contractor's bid sheet, and engineer's cost estimate for a half-mile water line extension to serve Beaver Creek near Junior in Randolph County.

WVDEP-AML – Management of four Phase II water studies and five Phase I water studies to determine if water supplies had been affected by coal mining. Work included resident interviews, mine map searches, area reconnaissance, obtaining water samples, reviewing water analysis data, preparing conceptual designs and associated costs and preparation of summary report.

Subsurface investigation, surveying coal refuse reprocessing evaluation and report, and design of reclamation plan to stabilize and approximately 15-acre refuse pile at Buffalo Creek No. 5 in Marion County, West Virginia. Developed plans, specifications, cost estimate, and calculations brief for drainage control and regrading plan.

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 report, West Virginia Department of Health permit for new well, and other supporting documents for reclaiming this large site with over ½ million cubic yards of regrading.

Subsurface investigation, surveying, coal refuse reprocessing evaluation, water quality monitoring, and design of a reclamation plan for a coal refuse pile, unreclaimed highwalls, and slurry and water treatment

ponds in Lewis County, West Virginia. Plans, specifications, cost estimates, and calculations brief were completed for the project.

Environmental Assessments/Impact Statements

Rhone-Poulenc AG Company – Management and oversight of environmental assessment to identify any liabilities or soil/water degradation for a proposed industrial solid waste landfill. Investigation included drilling, sampling, monitoring well sampling, site reconnaissance, and historic records research to establish baseline soils and groundwater conditions. Results presented in a report.

West Virginia Division of Highways – Environmental Assessment for a 1.25-mile proposed four-lane divided highway in Bridgeport, West Virginia.

West Virginia Division of Highways – Environmental Impact Statement (EIS) for proposed Route 19 upgrade from Summersville, West Virginia to Interstate 79 in Braxton County, West Virginia. Project included evaluation of three alternatives over approximately 25-mile length. Responsibilities included hazardous waste section collection of general data used by other scientists, field reviews, and public meeting participation.

Assessment of environmental and reclamation liabilities associated with over 40 surface mine permits in western Virginia. Evaluation included PCB concerns, reclamation costs, underground and aboveground storage tanks, and acid mine drainage.

Massey Coal Service, Inc. – Assessment of environmental liabilities associated with a large tract of property including over 25 permitted mines and a coal preparation plant. Investigation included a review of permits and requirements, past environmental compliance record, walkover of each site, and development of estimated reclamation costs for each site. Report prepared to document results of the liability assessment.

Completion of environmental assessments and a preliminary design report for two inactive commercial solid waste disposal landfills located in Kanawha and Wyoming County, West Virginia. The environmental assessment included completion of a groundwater user's survey for residents located within ½ mile of each facility, drilling shallow groundwater monitoring wells to monitor flow along the soil/bedrock interface

downgradient of each landfill, an extensive geotechnical soils/rock investigation, assessment of each facilities compliance with the solid waste management rules, and developing recommendations for a preliminary closure plan.

Mining

Eastern Associated Coal Corporation – Coal ash utilization study including five mining operations and four coal ash sources in Virginia and West Virginia. Study evaluated both surface and underground beneficial uses of ash to neutralize acidic drainage.

Project manager/engineer for the preparation of coal ash utilization permits for West Virginia mining operations. Permits included placing ash in the embankment of refuse disposal sites and placing ash with spoil backfill.

- Elk Run Coal Company
- Appalachian Mining, Inc.
- Peerless Eagle Coal Company
- Rawl Sales and Processing Company

Pace Carbon Fuels, LLC. – Consulting and permitting for the development of seven coal-based synthetic fuel manufacturing plants in West Virginia, Indiana, Kentucky, and Illinois. Project included obtaining pre-construction and operating permits for air, water and mining for the manufacturing plants and the feedstock coal recovery operations. Assignments included permit application preparation, assistance in locating and evaluating coal feedstock sites, construction monitoring, Phase 1 environmental site assessments, and other miscellaneous engineering consulting functions.

Pennsylvania Electric Company – Yearly construction designs for lined coal ash and coal refuse disposal sites at the Keystone and Conemaugh power stations, including a synthetic liner system, groundwater and surface-water control, leachate collection, landfill development, and haul road design. Construction quantity and cost estimates and development of IBM-PC software for evaluating the storage capacity of the disposal sites.

Landfills/Solid Waste/Waste Disposal

DuPont Washington Works – Project Manager responsible for design, preparation of construction documents, and construction documents, and construction

quality assurance monitoring for a 6.2-acre expansion of a piggyback of a leachate collection system at an industrial waste landfill.

Eastern Environmental Services, Inc. – Project engineer/project manager for finalizing a permit application for the S&S Landfill near Clarksburg, West Virginia. Components of the plan included a detailed staging and closure plan to comply with sediment control and leachate storage requirements. Successfully represented the landfill in a permit appeal hearing before the Water Resources Board. Prepared two construction/bid packages for constructing the initial 10 acres of the landfill.

Cytec Industries – Quality assurance/quality control monitoring for closure of a 10-acre SWMU containing biological treatment sludge. The contents of the basin were stabilized by mechanical mixing. Activities included supervision of testing, data evaluation, and a revised interim grading and drainage plan. Report and certification provided for WVDEP-OWM.

Cytec Industries – Closure plan and permit application for closure of a 5-acre industrial waste landfill. Steep slopes over a portion of the landfill necessitated the design of an innovative cap system and leachate collection system. Project also included closure and capping of a small pit containing tar residue.

Responsible for detailed hydrogeologic investigation and preparation of a major portion of the WVDEP Part A Solid Waste Disposal Permit Application for the Northfork Landfill near Wheeling, West Virginia. Project included field reconnaissance and mapping of existing site conditions, rock corings, test pits, laboratory analysis of soils for potential construction materials, installation of four monitoring wells, and the corresponding analysis and evaluation of data for completing the Part A Application.

Responsible for hydrogeologic investigation and preparation of the WVDEP Part A Solid Waste Disposal Permit Application for the Sycamore Scenic Landfill in Putnam County, West Virginia. Work included coring, test pit, and laboratory analysis of soils; review of existing groundwater data; and analysis and evaluation of data for completing the Part A Application.

Project Manager responsible for construction quality assurance monitoring for three landfill expansions at

Brooke County Sanitary Landfill, including 6.5 acres of composite liner.

Project Manager responsible for construction quality assurance monitoring for 0.8-acre composite liner expansion at Wetzel County Landfill.

Project Manager/Project Engineer for design of composite liner system expansion, design and construction quality assurance for a 2-acre final landfill cap, and design of a new access road serving Pocahontas County Landfill.

Chambers Development Company – Preparation of solid waste disposal permit applications for the Monroeville Landfill, Monroeville, Pennsylvania, and the Southern Alleghenies Landfill, Cambria County, Pennsylvania, both of which include a double synthetic liner system combined with a drainage net leak detection system to conform to Pennsylvania DER regulations.

Project manager/engineer for the West Virginia Division of Environmental Protection's landfill closure assistance program for 1997 through 2002. Responsible for conceptual design, field investigation, construction drawings, specifications, permit applications, etc., for the following projects:

- Wyoming County Landfill
- Jackson County Landfill
- Kanawha Western Landfill
- Monongalia County Sanitary Landfill
- Fayette County Landfill
- Fleming Sanitary Landfill

QA/QC monitoring oversight for a municipal waste landfill in Tazwell County, Virginia.

Design; preparation of drawings, technical specifications, and contract/bid documents; construction monitoring; air monitoring; sludge sampling and analysis; review and approval of a detailed health and safety plan; permitting; and other miscellaneous engineering services for the stabilization and closure of a 3-acre sludge basin and a 1-acre sludge pond. The project included management of a pilot-scale demonstration, procurement of stabilization reagents from multiple providers, and development of an adjacent soil borrow area.

Design; preparation of drawings, technical specifications, contractor's bid sheet, engineer's cost estimate, contract, and cap acceptability evaluation; evaluation of contractor

bids, and construction monitoring associated with the capping and closure of a 2.5-acre cell of an industrial waste landfill facility. Cap included a multi-layer geocomposite system to minimize infiltration and the production and leachate to improve the areas groundwater quality.

Final design and preparation of construction drawings, detailed technical specifications, and engineer's construction cost estimate for the construction of a 1.9-million-gallon double-lined pond and 5 acres of a landfill liner system. This project included development of an ultimate facility layout plan, a two-year detailed development plan, and construction monitoring. Project also included negotiations with regulatory agency to obtain approval of the permit.

Response to regulatory agency review comments and redesign of a pond liner system and piggyback landfill liner system for a 20-acre landfill in West Virginia.

DuPont Environmental Remediation Services – Consulting regarding the design of a final cover/cap for an industrial waste landfill located in West Virginia.

West Virginia Public Service Commission – Site reconnaissance, development of alternative capping/closure systems, and preparation of engineer's cost estimates for the closure of two West Virginia municipal waste landfills in support of rate making testimony and hearings.

American Cyanamid Company – Project manager/engineer for independent quality assurance/quality control monitoring associated with closure of a three-acre SWMU consisting of a waste impoundment. Project included construction of an earthen buttress to improve slope stability, in-place waste stabilization using fly ash and kiln dust, and construction of a RCRA cap. Responsible for field design revisions to overcome problems, conformance testing, and preparation of certifications and a summary report. Project included sampling and analysis of raw and stabilized sludge.

American Cyanamid Company – Coordination of field activities associated with construction monitoring and laboratory testing for RCRA hazardous waste impoundment (the first permitted and constructed in EPA Region III) in Willow Island, West Virginia, including earth moving, construction of a soil-bentonite liner,

monitoring of three, sealed double-ring infiltrometers, and construction of an HDPE double-lined impoundment.

Pennsylvania Electric Company – Field (construction) monitoring for development of a residual waste landfill including compaction testing for heavy earth moving, synthetic (PVC) liner installation, concrete testing, and other miscellaneous testing.

Virginia Power Company – Consultant for site development and construction of a fly ash disposal facility including a review of site operations, developing a maintenance program, compaction testing and review, and problem shooting.

Rhone-Poulenc Ag Company – Design and permitting for a proposed industrial solid waste landfill. Project included complete hydrogeologic evaluation including several borings and installation of seven monitoring wells; documentation of soils, geology, water quality and hydrogeology; detailed site design of leachate ponds, liner system, storm water collection system, access road, and capping/closure system. Multi-volume permit application prepared including Operations Manual, Quality Assurance/Quality Control Plan, Technical Specifications, Permit Application, and Design Drawings.

Rhone-Poulenc Ag Company – Leachate Minimization Study for a RCRA Hazardous Waste Landfill. Project included assessment of existing landfill operation and recommendations to reduce quantity of contaminated runoff from over 8 million gallons per year (MGY) to between 2 and 3 MGY. Detailed staging and operating plan, storm water management plan, and cost estimates prepared.

American Cyanamid Company – Closure plan and permit application for closure of a three-acre surface impoundment containing sludge and tar. Stability concerns for an existing embankment containing the waste lead to the development of a lightweight cap. Subsurface investigation and field surveying completed. Closure application as required by the West Virginia Division of Environmental Protection provided.

Soundings and sampling of three basins containing sludge. Two basins contained sludge from secondary biological treatment of industrial wastewater. One basin contained petroleum product sludges. Sludge quantities determined from soundings and cross sections prepared.

Samples obtained for laboratory analysis to characterize wastes.

- Rhone-Poulenc Ag Company
- Ashland Petroleum Company

Monongalia County Sanitary Landfill – Engineer responsible for expansions, planning, and upgrades for the Monongalia County Sanitary Landfill from 1990 through 1992. Activities included:

- Three expansions (seven acres total) of the landfill liner and leachate collection system, including grading, groundwater collection drains, landfill liner system and leachate drains, protective cover, and surface drainage control
- Construction monitoring
- Certification of landfill expansions
- Construction of a 1.6-million-gallon leachate storage basin, including clay liner, double synthetic liner, synthetic drainage layer, protective cover, and drainage control devices
- Annual landfill volume reports, including surveyed cross sections
- Two borrow area investigations to identify clay liner sources
- Feasibility study for expansion and continued operation of the facility
- Final closure plan for the facility including a multi-layered cap and drainage control plan

Rhone-Poulenc AG Company – Evaluation of an emergency fly ash pond for a chemical plant in Institute, West Virginia. Recommendations, including conceptual design drawings and an engineer's cost estimate, to increase the settling efficiency of the pond. Special design elements, including a polymer feed system, submerged manifold pipe, splitter dike, and an overflow weir.

Hampton-Clarke, Inc. – Project Manager for Independent Quality Assurance Testing (IQAT) services for removal of contaminated soils and placing clean soil backfill at the site of a former cullet pile disposal area.

Stormwater

Expert witness for plaintiff damaged as a result of flooding caused by lack of maintenance at a culvert system in Westoreland, Wayne County, West Virginia.

Stormwater drainage plans for site development projects including pre- and post- development discharges, design of sediment control devices, preparation of stormwater general permit application, and consulting for numerous construction projects in West Virginia.

Evaluation of stormwater drainage system (culverts and channels) to alleviate flooding problems for a church in Kanawha County, West Virginia. Project included computer modeling to identify culvert capacities and to identify repair options.

Expert retained to support a property owner damaged as a result of flooding caused by downstream obstructions. Reviewed regulatory agency files, conducted site inspections, evaluated possible remedial measures, and provided support in anticipation of litigation.

Expert witness for plaintiff damaged as a result of flooding from upstream construction. Visited site to observe problem areas, reviewed construction practices/procedures, reviewed regulatory permits, and provided testimony as to the cause of flooding.

Developed stormwater management plans, including calculation of peak runoff rates, storm volumes, and design of stormwater management devices including culverts, ditches, sumps, ponds, principal pipe spillways, and emergency spillways for the following projects:

- Site development projects including commercial, retail, and industrial sites ranging from ¼ acre to more than 100 acres.
- Abandoned mine lands reclamation projects, including landslides, refuse piles, slurry ponds, and subsidence control projects.
- Commercial and industrial waste landfill projects.
- Roadway design projects.
- Other projects involving the disturbance of the ground surface.

Water Lines, Water Storage Tanks, and Water Treatment Plants

WVDEP-AML – Detailed design and preparation of construction drawings, specifications, contractor's bid sheet, and engineer's cost estimate for six-mile water line extension including fire protection. Included in project were 90,000-gallon water tank, booster station, and pressure relief valves. Extension tied into Norton Harding Jimtown PSD System and served town of Cassity in Randolph County.

Design for waterline extension projects including preparation of construction drawings, specifications, and engineer's cost estimates for the West Virginia Division of Environmental Protection, Office of Abandoned Mine Lands and Reclamation.

- Cassity Fork Waterline
- Beaver Creek Waterline Extension
- Godby Branch Waterline Extension

Design, preparation of construction drawings, preparation of permit applications, and other related activities for the construction of waterline projects. Line sizes ranged from 16 inches to 2 inches. Materials of construction included polyvinyl chloride and ductile iron pipe. Drawings included planimetric maps, topographic maps, and aerial photograph formats to depict proposed construction. Permit applications included Bureau of Public Health, Public lands Corporation Stream Activity Permits, Division of Highways Occupancy Permits, and General Storm Water NPDES Construction.

- Cabell County 2000 Project, 23 miles of new waterline construction, West Virginia American Water Company (WVAWC)
- Poca River Road Waterline Extension, 13 miles of new waterline construction, WVAWC
- Route 60 Contract 3 Waterline Extension, 3 miles of new waterline construction, WVAWC
- Buff Creek/Trace Fork Waterline Extension, 6 miles of new waterline construction, WVAWC
- Route 60 Contract 4 Waterline Extension, 2 miles of new waterline construction, WVAWC
- Yorktowne Subdivision, 3,000 linear feet of waterline serving a 50-lot subdivision.

ESAs (Phase I and II)

Numerous Phase I Environmental Site Assessments including reclamation liability assessments for mining and industrial properties in West Virginia and Kentucky. Projects typically focused on solid waste disposal practices, potential acid mine drainage discharges, underground storage tank status, areas of hydrocarbon soil contamination, PCB transformer concerns, and other environmental liabilities.

Phase II environmental site assessment for an abandoned mining complex located in Fayette County, West Virginia. The new owners wished to identify any liabilities and determine approximate clean-up costs for negotiations with the previous owners. The areas evaluated included two aerial tram head houses, a drum storage area, truck maintenance garage, mine machinery repair shop, two commercial properties, a lamp house, and other storage areas. Numerous areas of petroleum hydrocarbon contamination were identified, and the extent of contamination documented. An on-site laboratory was used to expedite testing and establishing the boundary of areas requiring remediation. The results of the investigation were summarized in a report, including a detailed description of sampling and laboratory analysis methods, drawings showing sample locations, laboratory results, estimated volumes of contaminated soils, and recommendations for cleanup.

West Virginia Regional Jail and Correctional Facility Authority – Phase I Environmental Site Assessment to document potential liability for a tract being considered for a regional jail site in Kanawha County, West Virginia. Activities included historic records search, interviews, site reconnaissance and preparation of a report documenting the findings.

DiMucci Development – Phase I Environmental Site Assessment for property proposed for development as a strip mall.

The Multicare Companies, Inc. – Completion of eight Phase I Environmental Site Assessments for nursing and rehabilitation care facilities in West Virginia.

Virginia Electric Power Company – Assistance with site design and engineer's construction cost estimate for the remedial design of a CERCLIS waste disposal facility.

Phase I environmental site assessments for feedstock recovery sites associated with three coal-based synthetic fuel manufacturing plants. The feedstock recovery sites included numerous coal waste slurry impoundments, dry refuse piles, and mixed refuse disposal areas. Assessments focused on potential acid mine drainage problems, former waste disposal areas, and other mining-related environmental liabilities. A report was prepared detailing the findings for each site.

Storage Tanks

Columbia Gas Transmission – Project manager for completion of over 350 AST Registrations, Inspections/Certifications, and site-specific Spill Prevention Response Plans for 40 facilities.

- Followed the Aboveground Storage Tank Act §22-30 Title 47 Interpretive Rule Series 62 and the Draft Emergency Rule additionally conferring with the West Virginia Department of Environmental Protection (WVDEP) to establish accurate classification and compliance.
- Met all regulatory deadlines.
- Reviewed comprehensive electronic documentation comprising of completed inspection sheets, photographs, detailed deficiencies.
- Provided recommendations and schedule for abatement for deficient secondary containment structures.

Rhone-Poulenc AG Company – Geotechnical and environmental investigation for two proposed above-ground reinforced concrete tanks to serve as secondary wastewater treatment unit. Investigation included soil drilling, sampling, laboratory analysis for engineering properties, and analysis for contamination. Field survey completed to locate existing structures. Report prepared outlining soils/geology, environmental concerns and foundation recommendations.

Closure of 13 aboveground RCRA storage tanks. Closure services included review of agency approved closure plan to determine compliance items, visual inspection of tank interiors and earthen containment berm areas, review of rinsate analyses, review of soils testing analysis from berm areas, and preparation of closure documentation and certification.

- Rhone-Poulenc AG Company
- American Cyanamid Company

Cannelton, Inc. – Abandoned underground storage tank investigation including sampling of tank contents, geoprobe investigation, and field and laboratory analysis of soil samples.

Sewer Lines and WWTPs

Project manager/project engineer for the Fleming Landfill Sanitary Sewer Extension project in Kanawha County, West Virginia. Project included design, permitting, construction monitoring, and certification of 9,900 linear feet of gravity and force main sanitary sewer, a new duplex pump station, and rehabilitation/upgrade of an existing pump station. The construction contract was over \$1 million. The completed sewer extension was turned over from the West Virginia Department of Environmental Protection to the Sissonville Public Service District for ownership and operations.

Project engineer for sanitary sewer system including 8-inch gravity sewer, pump station, and force main sewer serving the Gettysburg Subdivision in Charleston, West Virginia. Project included an alternate mainline extension agreement with Charleston Sanitary Board, construction monitoring, surveying, road design and subdivision plans.

Project manager/engineer for an industrial wastewater sewer extension. Project included design engineering, permitting, and construction monitoring associated with a 5 million gallon, double-lined storage impoundment, duplex pump station with 70 horsepower pumps, and 5,200 linear feet of force main sewer in Monongalia County, West Virginia.

Design, permitting and construction monitoring associated with a 138,000-gallon double containment storage tank, duplex pump station, and force main piping associated with closure of the Jackson County Sanitary Landfill near Ripley, West Virginia.

Oil and Gas

Columbia Gas Transmission Corp – Project Manager for in-house consulting services provided for environmental reports and permit applications for natural gas pipeline transmission projects.

Columbia Gas Transmission – Field reconnaissance of approximately 16 miles of pipeline route, preparation of erosion and sediment control measures, and preparation of stream crossing permits for the NJET project.

Spill Prevention, Control & Countermeasure Plans

Union Carbide Corporation, South Charleston Plant – Audit of chemical manufacturing plant to determine compliance with the facility Spill Prevention Control and Countermeasures (SPCC) plan. Project included review of SPCC plan prepared by facility staff, on-site inspection of over 50 storage areas to ascertain compliance with the SPCC plan and pertinent regulations, preparation of a list of observed deficiencies, and certification of the SPCC plan by a professional engineer.

Stream/Wetland Delineation, Permitting, and Mitigation

Columbia Gas Transmission Corp – Design of stream stabilization and restoration plan for a section of East Fork of Queer Creek in Hocking County, Ohio. Project included obtaining 401/404 certification and preparation of a detailed construction plan.

VICTOR M. DAWSON, P.S.

Professional Surveyor



EDUCATION

A.S. Land Surveying
Glenville State College

EMPLOYMENT HISTORY

1998-Present	Potesta & Associates, Inc.
1993-1998	Dunn Engineers
1988-1993	Woolpert Consultants
1986-1988	W. K. Dickson and Company
1986	Clary-Miller and Associates
1985-1986	William F. Knight Land Surveying
1984-1985	Morris Exploration Company
1983-1984	William F. Knight Land Surveying
1981-1983	Columbia Gas Transmission Company

PROFESSIONAL REGISTRATIONS

Registered Land Surveyor – North Carolina, South Carolina, and West Virginia

PROFESSIONAL AFFILIATIONS

- North Carolina Society of Land Surveyors
- South Carolina Society of Land Surveyors
- American Congress on Surveying and Mapping
- West Virginia Society of Professional Surveyors, Board of Directors, Greater Kanawha Valley Chapter, 2012-present

AREAS OF SPECIALIZATION

Expert Witness/Case Preparation, Accident Surveys, ground control, construction stakeout, topographic mapping, boundary and property surveys including ALTA/NSPS surveys, As-built drawings, and quantity measurements. Related areas include courthouse research, location/verification of utilities, preparation of right-of-way plans, and verification of property owners.

PROFESSIONAL EXPERIENCE

Surveying

Transportation:

- Merritt's Creek Connector Road, WVDOT – Preliminary route survey of four-lane roadway. Crew Chief/Project Manager for work that included courthouse research, property owner questionnaires, stake proposed centerline, tie to properties, set and reference construction control points in Barboursville, West Virginia.
- Benton's Ferry Bridge Replacement, WVDOH – Chief/Project Manager for work that included topo survey of project area, property owner questionnaires, tie to property lines, river cross sections, stake and reference centerline and construction control points in Fairmont, West Virginia.
- Corridor H, WVDOH, Section 16 – Project Manager for route/location/design survey in Elkins, West Virginia.
- Tablers Station, WVDOH – Project Manager/Crew Chief for route/location/design survey in Berkeley County, West Virginia.
- North Bridgeport Connector Road, WVDOH – Crew Chief/Project Manager for work that included GPS control survey of project area, preliminary route survey of centerline, tie to property lines, stake and reference centerline and construction control points, courthouse research, property owner questionnaires in North Bridgeport, West Virginia.
- Corridor H, WVDOH, Section 15 – Crew Chief/Project Manager for work that included courthouse research, property owner questionnaires, GPS control of project area, preliminary route survey of centerline, tie to property lines, stake and reference centerline and construction control points in Elkins, West Virginia.

- Corridor D, WVDOH, Martown Section – Crew Chief/Project Manager for work that included courthouse research, property owner questionnaires, GPS control of project area, preliminary route survey of centerline, tie to property lines, stake and reference centerline and construction control points in Parkersburg, West Virginia.
- Martha Truss Bridge Replacement, WVDOH – Crew Chief/Project Manager for work that included topo survey of project area, property owner questionnaires, tie to property lines, river cross sections, stake and reference centerline and construction control points in Milton, West Virginia.
- Martha Girder Bridge Replacement, WVDOH – Crew Chief/Project Manager for work that included topo survey of project area, property owner questionnaires, tie to property lines, river cross sections, stake and reference centerline and construction control points in Milton, West Virginia.
- Smith Bridge – Project Manager for work that included topo survey of project area, property owner questionnaires, tie to property lines, river cross sections, stake and reference centerline and construction control points in Wetzel County, West Virginia.
- Opaquen Bridge, WVDOH – Project Manager for work included topo survey of project area, property owner questionnaires, tie to property lines, river cross sections, stake and reference centerline and construction control points in Wetzel County, West Virginia.
- King Coal Highway, WVDOH – Project Manager for work that included courthouse research, property owner questionnaires, GPS control of project area, preliminary route survey of centerline, tie to property lines, stake and reference centerline and construction control points in Mingo County, West Virginia.
- Sharon Heights Connector Road, WVDOH – Project Manager for work that included courthouse research, property owner questionnaires, GPS control of project area, preliminary route survey of centerline, tie to property lines, stake and reference centerline and construction control points in Mingo County, West Virginia.
- Kanawha Turnpike, WVDOH, Charleston – Project Manager for work that included courthouse research, property owner questionnaires, GPS control of project area, preliminary route survey of centerline, tie to property lines, stake and reference centerline and construction control points in Charleston, West Virginia.
- East Huntington Bridge, WVDOH – Crew Chief/Surveying Supervisor for work that included annual bridge inspection survey of cable stay bridge over the Ohio River in Huntington, West Virginia.
- Corridor H, WVDOT, Section 16 – Project Manager/Crew Chief for preliminary route/design survey in Elkins, West Virginia.
- VDOT – Route 265 in Danville, Virginia.
- NCDOT – NC 218 hydraulics in Wilkesboro, North Carolina.
- NCDOT – B-1277 Bridge hydraulics in Marion, North Carolina.
- NCDOT – NC 1318 Bridge in Taylorsville, North Carolina.
- NCDOT – Charlotte Outerloop Drainage in Charlotte, North Carolina.
- NCDOT – NC 90 Drainage in Charlotte, North Carolina.
- Crew Chief for Sardis Monroe Intersection Widening in Charlotte, North Carolina.
- WVDOT – Crew Chief for Corridor G in Charleston, West Virginia.
- Florida DOT – Crew Chief for Dame’s Point Bridge in Jacksonville, Florida.
- Corps of Engineers – Crew Chief/Quality Control Representative for St. George Harbor in St. George Island, Alaska.

Ground Control:

- Peabody Coal – Project Manager for ground control for 20 square miles of mapping in Putnam and Mason Counties, West Virginia.
- Crew Chief/Project Manager for Belmont Community Development in Charlotte, North Carolina.
- Crew Chief/Project Manager for Asheville Regional Airport in Asheville, North Carolina.
- Lenoir Rhyne College – Crew Chief for aerial photo control in Hickory, North Carolina.
- Crew Chief for Wilkinson Boulevard aerial photo control in Charlotte, West Virginia.
- Crew Chief for Park Road aerial photo control in Charlotte, North Carolina.
- Crew Chief for Beatties Ford Road aerial photo control in Charlotte, North Carolina.
- Crew Chief/Project Manager for Freedom Park aerial photo control in Charlotte, North Carolina.
- Crew Chief for ERM Ground Control Survey in Aberdeen, North Carolina.

Utilities:

- Cogentrix Energy – Surveying Supervisor for work included GPS control survey of project area, boundary survey of 292 acres, topographic survey of 177 acres for site construction, courthouse research in Marshall County, West Virginia.
- Big Sandy Peaker Plant, Constellation Power – Crew Chief/Surveying Supervisor for work that included GPS control survey of project area, boundary and topographic of 42 acres, boundary and route survey for 1 mile of transmission lines, construction stakeout in Cabell County, West Virginia.
- Paintsville Power Plant, Energy Services – Survey Supervisor for work that included control and topographic survey of a 180-acre site for proposed power plant in Paintsville, Kentucky.
- Greenbrier Pipeline, Dominion – Survey Supervisor for work that included control and preliminary route survey of a 264-mile pipeline running from Corton, West Virginia to Raleigh, North Carolina.
- Upshur County Power Plant, Dominion – Survey Supervisor for work that included control survey and construction survey of a 170-acre power plant in Upshur County, West Virginia.
- Nextel - Crew Chief/Survey Supervisor for cellular telephone tower sites for work that included courthouse research, boundary and topographic survey for 86 tower locations in West Virginia, Kentucky, and Ohio.
- Crew Chief/Project Manager for Little Sugar Creek Channel Improvements in Mecklenburg County, North Carolina.
- Crew Chief/Project Manager for Charlotte Stormwater Management in Charlotte, North Carolina.
- Crew Chief for Boy Scout Camp in Mecklenburg County, North Carolina.
- Crew Chief for Manchester Creek HEC Study for Rock Hill, South Carolina.
- Crew Chief Thermoco-Welco Water and Sewer in Kings Mountain, North Carolina.
- Crew Chief for proposed sewer route survey in Spencer, North Carolina.
- Moores Chapel, McIntyre East and West Plant Road, Hampton Park, Charlotte-Mecklenburg Utility Department in Charlotte, North Carolina.
- Crew Chief for Charlotte-Mecklenburg Utility Department in Charlotte, North Carolina.
- West Virginia American Water Company – Crew Chief/Survey supervisor for boundary survey for 180 water tank sites throughout West Virginia.
- Crew Chief for Chester Waterline Extension in Chester, South Carolina.
- Crew Chief for Lancaster Sewer Extension in Lancaster, South Carolina.
- Crew Chief for Marshville Sewer in Marshville, North Carolina.
- Crew Chief for Sewer Route Survey for Norwood in Norwood, North Carolina.
- Crew Chief for Lenoir Water and Sewer Extension in Lenoir, North Carolina.
- Crew Chief for Kings Mountain Route 75 Waterline Extension in Kings Mountain, North Carolina.
- Project Manager for route survey/seismic survey for SM-80 gas pipeline in Cross Lanes, West Virginia

Office, Business, Industrial:

- Walmart – Construction layout for parking, roadways, curb and gutter, and utilities for new store in Barboursville, West Virginia.
- River Ridge – Construction layout for new church building, parking and utilities in Charleston, West Virginia.
- National Lumber Plant – Chief/Survey Supervisor for boundary and topographic survey, construction stakeout for plant site in Roane County, West Virginia.
- Buckskin Council Boy Scout Camp, Boys Scouts of America – Survey Supervisor for topographic survey and construction stakeout for new water and sewer system in Pocahontas County, West Virginia.
- Hampton-Clarke, Philips Lighting Company – Crew Chief/Survey Supervisor for boundary and topographic survey, construction stakeout for cullet pile of hazardous waste site in Fairmont, West Virginia.
- BIDCO – Boundary and topographic survey for several parcels in the development, also stakeout of spec building and parking lots in Kanawha County, West Virginia.
- Crew Chief for Bojangles on Sam Furr Road in Charlotte, North Carolina.
- Crew Chief/Project Manager for Lowe's of Pineville, North Carolina.
- Crew Chief/Project Manager for Firestone Fibers and Textiles in Kings Mountain, North Carolina.
- Crew Chief/Project Manager for Rural Hills in Mecklenburg County, North Carolina.

- Crew Chief/Project Manager for Huntersville Business Park in Huntersville, North Carolina.
- Crew Chief for TransWest Office Building in Charlotte, North Carolina.
- Crew Chief/Project Manager for Chatham Properties in Charlotte, North Carolina.
- Crew Chief/Project Manager for WTVI Transmitter Tower in Charlotte, North Carolina.
- Crew Chief/Project Manager for Greenbrier Business Park in Charlotte, North Carolina.
- Crew Chief/Project Manager for Dickerson Carolina, Inc. in Charlotte, North Carolina.
- Crew Chief for Oakboro Industrial Park in Oakboro, North Carolina.
- Crew Chief for Baxter Medical Warehouse in Charlotte, North Carolina.
- Crew Chief/Project Manager in TechPark Business Center in Rock Hill, South Carolina.
- Crew Chief for Coffey Creek II and III in Charlotte, North Carolina.
- Crew Chief for Red Fez Club in Lake Wylie, South Carolina.
- Crew Chief for Hickory Grove Business Park in Charlotte, North Carolina.
- Crew Chief for Minit Lube in Charlotte, North Carolina.
- Crew Chief for Crescent Gateway in Belmont, North Carolina.
- Crew Chief for Roto Rooter in Charlotte, North Carolina.

Construction Stakeout:

- Charleston Federal Building – Crew Chief/Project Manager for staked foundation, anchor bolts, interior and exterior wall lines in Charleston, West Virginia.
- Courthouse Parking Building – Crew Chief for staked foundation and wall lines in Charleston, West Virginia.

Boundary & ALTA/NSPS Surveys:

- E.I. DuPont – Project Manager of all property owned by E.I. DuPont in the state of West Virginia totaling over 3, 927 acres.
- Coolfont Resort – Project Manager for boundary survey on 920 acres in Morgan County, West Virginia.
- Pison Development – Crew Chief/Project Manager for ALTA survey and construction layout for six

housing developments in Kanawha, Mason, Randolph, and Ritchie Counties, West Virginia.

- Charleston Housing Authority – Crew Chief/Project Manager for ALTA survey for 4 housing projects located in City of Charleston in Kanawha County, West Virginia.
- Emmanuel Baptist Church – Crew Chief/Project Manager for church in Charleston, West Virginia.
- Coldwater Creek – Crew Chief/Project Manager for ALTA survey of 38-acre distribution site in Mineral Wells, Wood County, West Virginia.
- Big Sandy Peaker Plant, Constellation Energy – Crew Chief/Project Manager ALTA survey of 42-acre plant site and 1 mile of transmission lines in Cabell County, West Virginia.

Expert Witness/Case Preparation/Accident Surveys:

- Flowe Construction v. Woolpett Consultants – Rutherford County Airport in Rutherford, North Carolina.
- Sizemore v. Carte – Boundary dispute in Clay County, West Virginia.
- Boundary dispute for case preparation over placement of gas well in Putnam County, West Virginia.
- Columbia Gas – Case preparation over a gas release and spill from a gas storage well in Sissonville, West Virginia.
- Boundary location settlement to determine location of property line due to a tree falling resulting in death in Nicholas County, West Virginia.
- Three-dimensional survey of a pallet crusher and survey a piece of machinery and surrounding structures in a case resulting in a loss of legs in Parkersburg, Wood County, West Virginia.
- Conducted boundary survey and mapping for court documents over a disputed right-of-way through a piece of property to an adjoining tract in Pinch, West Virginia.
- Three-dimensional survey of Huntington Bank parking garage to help determine cause of building collapse resulting in multiple deaths.

Hazardous Waste/Disposal Facilities:

- Winfield ACF Site, ACF/Corps of Engineers – Work included boundary, topographic, construction layout and sample point layout of 15 acres along the Kanawha River. This project had over 12,000 sample

points laid out on a 3' grid in Winfield, West Virginia.

- Fike/Artel Superfund Site, DeMaximus – Surveying Supervisor for work that included boundary, topographic and sample layout for the cleanup and monitoring of the Fike/Artel Site and surrounding properties in Nitro, West Virginia.
- Phillips Lighting, Fairmont Site, Hampton Clark – Surveying Supervisor for work that included boundary, topographic, structure location and sample layout of the Phillips Lighting glass collect pile and surrounding areas along the Monongahela River in Fairmont, West Virginia.
- Poor Charlie and Company, Riverside Site; Poor Charlie, Sattes Site; Poor Charlie, Cramer Metals Site – Surveying Supervisor for work that included boundary, topographic, location and boring stakeout of various VERA sites and adjoining properties in Glasgow, Nitro and Parkersburg, West Virginia.
- Elkem Metals Disposal Facility, Elkem Metals – Surveying Supervisor for work that included control network, boundary, topographic surveys, and yearly volume reports in Alloy, West Virginia.
- Solutia – Surveying Supervisor for work that included boundary, topographic and location Surveys for various projects, disposal facility caps, charcoal filtering systems, and monitoring well control network throughout the site and adjoining properties in Nitro, West Virginia.
- Nicholas County Landfill – Surveying Supervisor for work included control network, boundary and topographic surveys for expansion of cells and yearly volume reports in Summersville, West Virginia.
- Pocahontas County Landfill – Surveying Supervisor for work that included control network, boundary and topographic surveys for expansion cells and yearly volume reports in Pocahontas County Landfill in Pocahontas County, West Virginia.
- Fleming Landfill, WVDEP – Surveyor Supervisor for work that included boundary and topographic surveys, along with control network and baseline stakeout for landfill closure in Sissonville, West Virginia.
- Cunard Landfill, WVDEP – Survey Supervisor for work that included topographic and construction layout for landfill closure in Fayetteville, West Virginia.
- City of Charleston Landfill – Construction layout for new waste cells in Charleston, West Virginia.
- Putnam County Landfill – Construction layout for new waste cells in Hurricane, West Virginia.
- Berkeley County Landfill – Crew Chief/Project Manager for construction layout for closure.
- Hampshire County Landfill – Crew Chief/Project Manager for construction layout for closure.
- Mingo County Landfill, J & B Contracting – Survey Supervisor for work that included topographic and construction layout for landfill closure in Mingo County, West Virginia.
- Mercer County Landfill, Jimmy Dunn – Survey Supervisor for work that included topographic and construction layout for landfill closure in Mercer County, West Virginia.

Parks and Recreation:

- Crew Chief/Project Manager for Freedom Park in Charlotte, North Carolina.
- Crew Chief/Project Manager for Mallard Creek Park in Charlotte, North Carolina.
- Crew Chief for York Park in York, South Carolina.
- Crew Chief for Hargett Park in Rock Hill, South Carolina.
- Crew Chief for York Road Renaissance Park in Charlotte, North Carolina.
- Crew Chief for Lockrain Subdivision and Golf Course in Orange Park, Florida.
- Crew Chief for Amelia Island Golf Course in Amelia Island, Florida.

Aviation:

- Yeager Airport – Stake out P.A.P.I. lights for Runway 15 in Charleston, West Virginia.
- Summersville Airport – Crew Chief/Project Manager for topographic and tree location for glide path in Summersville, West Virginia.
- Rutherford County Airport – Rutherford, North Carolina.
- Seymour Johnson Air Force Base – Goldsboro, North Carolina.
- Statesville Regional Airport – Statesville, North Carolina.
- Asheville Regional Airport – Asheville, North Carolina.
- Anderson County Airport – Anderson County, South Carolina.

Motel:

- Crew Chief for Knights Inn Motels in Statesville, Asheville, Gastonia, and Charlotte, North Carolina.

- Crew Chief for Fairfield Inn Motel in Charlotte, North Carolina.
- Coal Mines:

Kanawha Eagle Mine – Crew Chief/Survey Supervisor for work that included topographic and construction staking of refuse impoundments, drainage runoff ponds, and stake clearing limits of new mine face in Kanawha County, West Virginia.

Housing and Subdivision:

Yorktowne Subdivision – Crew Chief/Survey Supervisor for work that included boundary survey of exterior tract, construction stakeout of roads and utilities, stake boundaries of lots in Kanawha County, West Virginia.

The Pointe at Northgate – Project Manager for topographic and construction layout for subdivision.

Crew Chief/Project Manager for Woodside Falls Subdivision in Pineville, North Carolina.

Stonegate Subdivision – Crew Chief/Survey Supervisor for work that included boundary survey of exterior tract, construction stakeout of roads and utilities, stake boundaries of lots in Putnam County, West Virginia.

Crew Chief/Project Manager for Amberwood Subdivision in Charlotte, North Carolina.

Crew Chief for Thompson Plantation in Charlotte, North Carolina.

Crew Chief for Wells Crossing Apartments in Orange Park, Florida.

Crew Chief for Park Lake Apartments in Charlotte, North Carolina.

Crew Chief for Lakes of Mayport Apartments in Mayport, Florida.

Crew Chief for Cross Creek Apartments in Charlotte, North Carolina.

Military:

Crew Chief for Seymour Johnson Air Force Base, United States Air Force in Goldsboro, North Carolina.

St. George Harbor, U.S. Corps of Engineers –Contractor Quality Control Representative in St. George Island, Alaska.

Crew Chief for Camp Butner, United States Army in Durham, North Carolina.

Streetscapes:

Crew Chief for Idlewild Road in Charlotte, North Carolina.

Crew Chief/Project Manager for Florida Street in Charleston, West Virginia.

Crew Chief for Streetscape Mapping Project in Charlotte, North Carolina.

Crew Chief for Rock Hill Gateway in Rock Hill, South Carolina.

Crew Chief for boundary/topographic plans for Crescent Gateway Project in Belmont, North Carolina.

Colleges/Universities/Schools:

University of Charleston – Crew Chief/Survey Supervisor for work that included boundary survey of several parcels of land for student housing and parking lot in Charleston, West Virginia.

Marshall University – Survey Supervisor for work that included boundary and location survey of research complex in Charleston, West Virginia.

Marshall University – Crew Chief/Survey Supervisor for work that included courthouse research, boundary and topographic survey of several city blocks for student housing and parking buildings in Huntington, West Virginia.

University of Charleston – Crew Chief/Project Manager for stakeout of new pharmacy school building in Charleston, West Virginia.

Blackwell Field – Crew Chief/Project Manager for stakeout of sports complex for University of Charleston in Charleston, West Virginia.

Ivydale Elementary School – Crew Chief/Project Manager for boundary survey for disputed property line in Clay, West Virginia.

Big Otter Elementary School – Crew Chief/Project Manager for boundary survey for new school in Clay County, West Virginia.

Landfills/Abandoned Mine Lands:

WVDEP AML – Crew Chief/Project Manager for control/topographic survey for Sundial Project.

Jackson County Landfill – Crew Chief/Project Manager for work that included GPS control survey, boundary and topographic survey, construction stakeout for landfill closure in Jackson County, West Virginia.

Nicholas County Landfill – Survey Supervisor for work that included boundary and topographic surveys for biannually reports in Nicholas County Landfill in Nicholas County, West Virginia.

Pocahontas County Landfill – Survey Supervisor for work that included boundary and topographic surveys for biannual reports and construction stakeout in Pocahontas County, West Virginia.

Mercer County Landfill – Crew Chief/Survey Supervisor for work that included GPS control survey, boundary and topographic survey, construction stakeout for landfill closure in Mercer County, West Virginia.

CHRISTOPHER A. GROSE, L.R.S.

Senior Engineering Associate



EDUCATION

- M.S. Geological Engineering, 1990
University of Missouri-Rolla
- B.S. Civil Engineering, 1988
West Virginia Institute of Technology

EMPLOYMENT HISTORY

- 1997-Present Potesta & Associates, Inc.
1994-1997 Terradon Corporation
1990-1994 GAI Consultants, Inc.
1989-1990 University of Missouri-Rolla
1989 Triad Engineering Consultants
(summer)
1988 West Virginia Institute of Technology
1983-1988 Clint Bryan & Associates Architects
(summers)

PROFESSIONAL REGISTRATIONS

Licensed Remediation Specialist – West Virginia

PROFESSIONAL CERTIFICATIONS

- Hazardous Waste Site Operations and Superfund Worker Protection Training
- American Red Cross Standard First Aid and CPR
- Troxler Moisture-Density Gauge

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers
- Association of Engineering Geologists
- Society of America Military Engineers

AREAS OF SPECIALIZATION

Geological/Geotechnical engineering related to subsurface exploration studies, soil and rock slope design, landslide causation studies, foundation system design, surface/subsurface hydrogeology, ground subsidence, contaminant transport and groundwater flow modeling. Planning, design, and permitting of natural gas production well pads and access roads. Geological study of hazardous waste remediation sites, CERCLA/SARA, RI, and FS report compilation, geological and geotechnical aspects of siting and design of municipal and industrial waste landfills.

PROFESSIONAL EXPERIENCE

Civil/Site Design

Civil/Site design included slope stability of both cut and fill slopes in soil and rock for various well production pads in northeastern West Virginia associated with natural gas production in the Marcellus well field. Work consisted of the management of a design engineering team including ground survey crews to development site topographic base mapping, coordination with client regarding land ownership, access roadway alignments, site drainage control, and number/location of production wells. Additional work also included gathering and midstream transmission pipeline locations. The scope of services for these projects also included the preparation of permit documents and attachments for submittal to the WV Department of Environmental Protection-Office of Oil and Gas.

- Stone Energy Corporation
 - Higgins East pad and road
 - Higgins West pad and road
 - Conley Well pad, road, and access bridge
 - Mills-Wetzel No. 3 pad and road
 - Hunter/Pethel well pad
 - Talkington-nice pad and road
 - Bowyers well pad and road
- Viking Oil & Gas
 - United Disciples of Christ well pad

Geotechnical

Completion of numerous subsurface exploration studies for active soil slope landslide failures associated with the development of natural gas production well pads and access roads. Work included the layout, surveying, and logging of subsurface borings to determine the depth and extent of the slope failures. Following collection of soil/rock samples, materials were tested for characteristic and strength properties. Following testing efforts, the failed slopes were modeled using computer-based slope stability design models to determine a stable configuration including the addition of rock buttresses, toe keys, underdrains, mid-slope keys, etc. Final stabilization plans were then prepared for the client allowing bidding and selection of a repair and stabilization contractor to perform the work.

- Stone Energy Corporation
 - Mills-Wetzel No. 2 well pad landslide repair
 - Potoczny well pad landslide repair
 - Mills-Wetzel access road landslide repair
 - Pribble Tank landslide repair
 - Haines Branch pipeline landslide repair
- Columbia Pipeline Group (TransCanada Pipeline)
 - SM8 pipeline landslide repair
 - SM80 Loop pipeline landslide repair
- Chesapeake Energy Corporation – R. Baker well pad landslide causation study
- TransEnergy Corporation – Dewhurst well pad landslide repair
- Reserve Oil & Gas – Reed No. 1 well pad access road landslide repair

West Virginia Division of Highways – Geotechnical engineer on geotechnical/landslide master services agreement for on-call services for a three-year period.

Forensic study, expert testimony, and legal support related to the failure of numerous soil/rock slopes throughout West Virginia. This work included extensive review of relevant project case documents, site reconnaissance visits, interviews with project personnel, and deposition testimony.

Lynn Elementary School – Technical insight and recommendations to attorneys representing an adjacent property owner related to the contributing factors related to the formation and continued failure of an excavated soil slope. The toe of the slope was excavated during the site development of the proposed elementary school site in Lynn, West Virginia.

Crichton & Crichton – Landslide formed along a wooded hillside below a residential driveway on Pleasant Lane in Wood County, West Virginia. The slope failure was noted during a substantial leak in an existing water main. The work included a review of case documents, interviews with various residents (plaintiffs in the case) and the development of supporting causation theory for the formation of the landslide. The work also includes the development of repair alternatives and associated construction estimates to be considered during the dispute hearing between the plaintiff and defendants.

Chesapeake Appalachia/Law Office of Jeffrey Mahal (R. Baker Natural Gas Production) – Provided technical study and file review of case documents related to the grading contractor's construction work efforts to prepare a well pad for the installation of a series of horizontal gas production wells in Marshall County, West Virginia. The work included the removal of soil and rock from an existing hilltop. The resulting material was placed or wasted in series of three side hill fills along the edges of the resulting well pad. All three of these fills experienced progressive and ongoing failures following the construction effort. Reviewed design documents, construction records, and details related to several repair attempts to result in the development of a professional opinion related to the various factors contributing to the multiple slope failures.

Nationwide Trial Division/Khan & Wheeler (Ross v. WVAW Landslide Case) – Provided professional opinion related to the formation of a slope failure along the Elk River immediately behind several commercial and residential homes near the Town of Elkview, West Virginia. The initial landslide occurred immediately following a main waterline break along the front of the structures. The regressive and prolonged failure continued over several weeks and ultimately damaged a gravity sanitary line as well as several of the structures. Work included an extensive review of several years of case records provided for the case including a review of existing utility maintenance records, historic climatologic data, river stage information and depositional testimony from many of the affected parties. A summary of professional opinion report was prepared describing a number of factors including lack of maintenance storm culverts in the area as well as an increase of saturation along the slope from the failed water main as the cause of the slide. It was determined that several of the structures were supported on previously placed fill material which was placed along the river bank in the early 1900's in

conjunction with the initial roadway construction. This coupled with the lack of maintenance and presence of deteriorated drainage culverts likely contributed to the slope failure. The initial installation of this fill material was determined through an extensive study of the historic topographic mapping of the area.

Responsible for development of geotechnical and geological recommendations as well as development of stabilization designs for many failed soil/rock slopes in West Virginia. This work included initial site reconnaissance visits, development of a subsurface exploration study and materials testing program, evaluation of stabilization alternatives, and construction plan preparation.

Travelers Insurance/City of Charleston – Project included a subsurface exploration study, engineering design, and global stability evaluation of a failed soil slope in a residential neighborhood on Bona Vista Drive for the City of Charleston, West Virginia. The slide was caused by a water main break along an existing residential neighborhood paved roadway. The recommended slope stabilization method was to install a soldier beam and lagging retaining wall along an existing paved roadway (supporting the buried utilities) with the remainder of the failed slope below being removed and replaced with compacted soil backfill.

Stone Energy Pribble Tank – Work included the exploration and study of a failed soil/weathered rock slope which was loaded through the placement of fill near the top of the slope to provide adequate area for the construction of 2- 2,400,000-gallon water storage tanks in New Martinsville, West Virginia. Shortly following the installation of the tanks, a large section of the hillside failed leaving one of the tank foundation partially unsupported. Following the subsurface exploration and drilling work, a stabilization plan was developed which included the removal of the failed soil mass (>50,000 CY) followed by the replacement of compacted soil material behind a large toe key and buttress. The repair also included surface diversion drainage ditches and numerous bond benches along the underlying rock line which were fitted with under drains to collect subsurface seepage.

NiSource/Columbia Gas Pipeline Group SM-80 Loop Gas Transmission Line – Development of a subsurface exploration and drilling plan to determine the extent and depth of a soil and weathered rock slope failure which threatened the performance and stability of a 30-inch high

pressure natural gas transmission line in Kanawha County, West Virginia. The slide location was remote and situated along a steep hillside. The stabilization plan recommended the use of soil nail technology due to the remote location and rather inaccessible nature of the location. This repair and stabilization technique allowed for the in-situ repair of the failed slope without extensive excavation and backfill which was deemed difficult and would have required more land disturbance resulting in additional slope stability concerns.

EQT Rockport #7244 Natural Gas Storage Well Pad – Project involved the assessment and repair recommendations for a section of failed fill slope immediately below existing and active natural gas storage well near the community of Rockport in Jackson County, West Virginia. The failed slope was caused by improper surface drainage control along the pad and access road. The stabilization plan included the excavation and removal of the failed slope following “shut-in” of the storage well. The upper failure scarp was situated immediately adjacent the well head which was protected during the stabilization work. Following installation of a rock toe buttress and key way, the failed soil material was amended using lime to reduce the moisture content which was required to achieve the recommended in place density during placement and compaction. Following the regrading effort, the slope was trimmed and seeded followed by the grading a several diversion and collection ditched to control runoff from the upper portion of the hillside below the well pad.

City of Charleston – Geotechnical assessment and development of regrading construction plans for the repair of a failed soil slope below Grandview Drive for the City of Charleston, West Virginia. The slope failure occurred between two adjacent residential structures and encompassed a sanitary sewer main as well as a storm drainage pipe receiving storm drainage from Grandview Drive. The stabilization plan involved the removal of the failed mass beginning at the toe of the slope and then working progressively upslope to result in a stabilized and regraded slope surface. The work required the removal of all failed material to the underlying rock surface and included the installation of a shot rock toe buttress which was installed along a natural topographic bench near the toe. Following completion of the work the affected utilities were installed either below the fill material or outside the regraded slide area.

Greer Industries Cheat River Quarry Haulroad – Project included the development of stabilization and repair recommendations for a failed soil slope which impacted a critical haulroad utilized by the quarry operator to move raw shot rock material from the quarry to the crusher at the aggregate plant in Rowlesburg, West Virginia. The landslide occurred because of the failure of a cross drainage culvert in the haulroad. The failed soil mass was removed to the underlying bedrock and following installation of a stone toe buttress and toe key, the material was blended with aggregate material from the plant and placed in compacted lifts. The underlying rock surface was excavated to result in a series of “bond benches” allowing for the installation of underdrains below the compacted fill to collect groundwater and seepage from the underlying rock. This prevented saturation of the fill material.

Responsible for the design, management, and inspection of a geotechnical investigation of a proposed five-mile rail extension located in Nicholas County, West Virginia. Investigation included study and design of planned rock cuts, and track foundation materials.

General Services Administration – Site evaluation, including continuous HNU scanning of collected soil samples and installation of piezometers for two proposed sites near Charleston, West Virginia.

West Virginia Department of Environmental Protection – Foundation design for a proposed 1,000,000-gallon potable water storage tank and valve pit near Cassidy, West Virginia.

Rhone Poulenc Ag Company – Subsurface sample collection, resistivity measurements, explosivity measurements, and decontamination procedures for an organic contamination study at Institute, West Virginia.

Preparation of foundation investigations for several large structures including a parking garage and student housing complex at Marshall University in Huntington, West Virginia. Tasks included development of subsurface exploration program, soils/rock sampling, testing program, and preparation of a final geotechnical report.

Roadway Design

Geotechnical engineer for various bridge and highway projects including:

- North Bridgeport Bypass
- McDowell County Schools
- Corridor H
- Dundon Bridge
- Sulphur Springs Bridge Replacement
- Smith Creek Bridge
- Martha Truss Bridge
- Martha Concrete Girder Bridge Replacement
- Dry Run Interchange
- I-81 Upgrade
- Platinum Drive
- Kenna Ridge Business Industrial Park/Access Road

Hardy County Rural Development Authority – Engineering services for the study, design, and preparation of construction contract plans, related documents, and construction oversight services for an industrial access road for the Baker Business Park District.

Roane County Development Authority – Site development construction documents for National Industrial Wholesale Lumber located in Roane County’s industrial park.

ZMM – Site design and engineering for a new elementary school and new high school in Bradshaw, West Virginia on the site of an existing elementary school.

West Virginia Department of Highways – Evaluation of subsurface conditions including both soil and rock to provide geotechnical recommendations related to potential bridge abutment foundation systems near Martinsburg, West Virginia. Alternatives included both shallow and deep foundations. Deep foundations were required at several abutments due to voids encountered in limestone bedrock.

Abandoned Mine Lands

WVDEP Abandoned Mine Lands and Reclamation – Preparation of Phase I and II water studies throughout the state of West Virginia. Work items included interview of area residents to determine major quality and quantity problems, field and records research to determine the location of known pre-law mining activity (which could potentially affect groundwater quality), collection of groundwater samples, and design of water distribution facilities.

WVDEP Abandoned Mine Lands and Reclamation – Subsurface investigation to determine the extent of a landslide for Courtright Highwall AML Project in Bridgeport, West Virginia. Field surveying was completed 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.

WVDEP Abandoned Mine Lands and Reclamation – Subsurface investigation, surveying, and design for reclamation of a large coal refuse pile and two mine entries for Vivian Refuse Pile AML Project in Vivian, West Virginia. 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.

WVDEP Abandoned Mine Lands and Reclamation – Subsurface investigation, surveying, and design for reclamation of three coal refuse piles and six mine entries for Kimball Refuse Pile AML Project in Kimball, West Virginia. 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, permit for new well, and other supporting documents for reclaiming this large site with over ½ million cubic yards of regarding.

WVDEP Abandoned Mine Lands and Reclamation – Project Engineer for the Mulberry (Stover) AML Landslide Project in Fayette County, West Virginia. Work included a difficult subsurface investigation, design of a remediation of landslide associated with abandoned mines, and preparation of plans and specifications for a reclamation project.

WVDEP Abandoned Mine Lands and Reclamation – Project Engineer for assessment of the Covey Creek Mine Fire AML Project Boone County, West Virginia. Work included subsurface investigation and temperature assessments inside an abandoned burning deep mine.

Oil and Gas

Columbia Gas Transmission Corporation – Design of stream relocation plans including preparation and coordination of applicable environmental permits. The

relocation was required due to an adjacent gas pipeline near the stream.

Columbia Gas Transmission Corporation – Preparation of several spill prevention control and countermeasure plans for gas storage well sites in Pennsylvania and West Virginia.

Mining

West Virginia Division of Environmental Protection – Engineering evaluations, including collection and analysis of core samples, for possible subsidence-related fracturing of several areas potentially affected by mining subsidence.

Peabody Coal Company – Subsidence evaluation and slope monitoring, using extensometers and tilt plates located on the slope face, of a 60-foot road cut experiencing subsidence-induced fracturing near Kopperston, West Virginia.

Mingo Logan Coal Company – Completion of formal subsidence control plan for a proposed 14,000-acre long-wall mining operation at the Mountaineer Mine in Wharncliff, West Virginia.

Peabody Coal Company – Evaluation of potential stream flow attributed to long-wall deep mining subsidence in minimal overburden areas in southern West Virginia. Responsibilities included the review of mine maps, stream reconnaissance studies, and the establishment of three in-stream V-notch weirs. The weirs were monitored and maintained during a seasonal study period to generate direct flow measurements. The WVDEP also prepared a study for the site that was reviewed, and comments prepared for the results.

Evaluation of numerous failed soil fill slopes to determine probable failure mechanisms in order to develop remediation alternatives. Responsible for the development of regrading plans which included subsurface drains, benching schemes, and toe buttresses.

Completion of several environmental assessments for coal properties. Work included emphasis on both environmental and reclamation liabilities associated with pre-and post SMCRA sites on the properties.

- Massey Coal Services, Inc.
- Eastern Associated Coal Corporation

West Virginia Department of Environmental Protection – Engineering design of several wetland habitat areas relating to the effective remediation of a coal refuse disposal site in Glenville, West Virginia.

Preparation of several Article 3 surface mining permit applications for various West Virginia coal companies:

- Eastern Associated Coal Corporation – Proposed deep mine using longwall mining techniques in Boone County, WV, located in the Eagle coal seam.
- Hobet Mining, Inc. – Deep mine using conventional mining techniques near Madison in Boone County, WV. Located in the No. 2 Gas (Campbell's Creek) coal seam.
- Rum Creek Coal Sales – Deep mine using conventional mining techniques near Logan in Logan County, WV. Located in the Alma coal seam.
- Eastern Associated Coal Corporation – Surface mine mountain top removal techniques near Twilight in Boone County, WV. Located in the Coalburg and Lower Kittanning seams.

Landfills/Solid Waste/Waste Disposal

WVDEP Closure Assistance Program – Design of final landfill closure for abandoned solid waste facility. Design included diversion and collection channels, cap design, leachate collection system, and 150,000-gallon leachate storage tank in Montgomery, West Virginia.

American Cyanamid – Engineering design for the closure of a chemical waste landfill in Parkersburg, West Virginia. Completion of a settlement analysis to determine the expected consolidation of waste during dewatering. Cover design incorporated a composite liner system with synthetic drains. The cap utilized synthetic reinforcement to minimize consolidation-induced stresses on the synthetic liner.

West Virginia Department of Environmental Protection – Responsible for the development and design of several interim or maintenance related items associated with drainage at the Monongalia County Landfill in Morgantown, West Virginia. Included the design and upgrade of both new and existing channels, diversions to berms to minimize surface water infiltration and minimizing the amount of leachate generation.

American Cyanamid – Permit completion for closure of a chemical sludge impoundment near Parkersburg, West

Virginia. Analysis of existing monitoring well configuration.

Design, management, and project oversight during construction for the closure of a 7-acre biological sludge pond in Nitro, West Virginia. Preliminary design studies included the completion of batch tests to evaluate stabilization materials. Also handled the development and submittal of several permits associated with the project including erosion and sediment control plan, Army Corps of Engineers permit, and a wetlands investigation and nationwide 404 permit.

Development of closure design for a 14-acre inactive waste water treatment pond in Nitro, West Virginia. Responsibilities included evaluation of sludge stabilization technologies, types of reagent and mixing ratios to achieve the required in-place strengths. Conducted contractor interviews with the owner, as well as providing assistance to the owner during preparation of the construction contract. During construction, conducted weekly safety meetings on-site with the contractor. This project was also expanded to provide stabilization of a 1.5-acre digester basin adjacent to 14-acre pond. The original contract was extended to cover stabilization of this pond. Stabilization efforts included submittal of an Army Corps of Engineers' nationwide permit to stabilize the bank of the Kanawha River and application of a West Virginia NPDES General Stormwater Construction Permit.

North Fork Landfill – Permit completion for a new municipal landfill, including design and construction of monitoring wells to monitor several aquifers in Wheeling, West Virginia.

Sycamore Landfill – Part I permit completion, design, and implementation of a drilling program, including evaluation of an existing monitoring well configuration. Testing of existing site soils for sources of suitable liner material.

Rhone Poulenc Ag Company – Completion of several Part I Solid Waste Facility permits including the design and implementation of drilling programs, formal geological studies, hydrogeological analysis of proposed sites, and locations and development of upgradient and downgradient groundwater monitoring wells. Design, construction, and development of seven monitoring wells for a proposed 13-acre industrial waste disposal facility near Institute, West Virginia.

Storage Tanks

West Virginia Division of Natural Resources – Underground storage tank contamination study in Jesse, West Virginia. Delineation of a subsurface hydrocarbon contamination plume as well as possible flow direction to determine potential receptors.

Groundwater

Operation and maintenance of several groundwater remediation systems including pump and treat and sparge systems for a large chemical manufacturer in Nitro, West Virginia. The pump and treat technology is designed to recover kerosene in one instance and TCE in another. Both systems are safety oriented and are fully automatic. The sparge system is a study/field test to determine the impact that oxygen injection will have on the degradation of phenolic compounds existing in the groundwater.

Columbia Gas Transmission Corporation – Evaluation of numerous groundwater monitoring wells to determine the direction of migration and the feasibility of utilizing them in a planned pump and treat recovery system. The site was an active compressor facility located in Eastern Kentucky.

Design and completion of several geological and hydrologic investigations to determine nature and direction of groundwater flow associated with proposed limestone quarry sites in Nitro, West Virginia. The sites were all associated with Karst terrain and dual permeability systems and primarily fractured flow regimes. Studies included the deployment of drilling equipment to install groundwater monitoring wells.

Measurement of stratified in-site permeability of rock strata in NX boreholes in Hurricane, West Virginia. The permeability measurements were reviewed and evaluated to develop groundwater monitoring systems associated with both existing and proposed municipal landfill disposal facilities.

Rhone Poulenc Ag Company – Analysis and study of elevated levels of organic constituents and elevated pH values in existing monitoring wells. Study to determine if well construction techniques or development procedures contributed to the presence of these constituents.

Dilley's Mill – Review of regional groundwater information for a summer Boy Scout camp facility to locate and construct a replacement drinking water well for the facility. Responsibilities included the development and review of existing facility usage, determination of the location and depth of the proposed water well and design of the well to meet with the requirements of the State of West Virginia Department of Health standards.

Union Carbide Corporation – Design and completion of several monitoring wells to monitor an abandoned fly ash disposal area. Included hydrologic analysis of site geology to determine major aquifers present in the area.

Completion of several groundwater contamination studies in West Virginia. Contaminants included diesel fuel, gasoline, chlorobenzene and benzene. Studies included field exploration utilizing various methods including air and mud rotary drilling. Responsible for the setup, calibration, and analysis of groundwater computer models to lend insight into the flow regimes and dispersion characteristics of the potentially affected areas.

Preparation of Phase I, II, and III water studies throughout the state of West Virginia for the West Virginia Division of Environmental Protection, AML section. Work items included interview of area residents to determine major quality and quantity problems, field and records research to determine the location of known pre-law mining activity, which could potentially affect groundwater quality, collection of groundwater samples, and design of water distribution facilities.

ESAs (Phase I and II)

Responsible for the design and implementation of drilling and sampling programs for several Phase I and Phase II environmental assessments.

TERENCE C. MORAN, P.E.

Senior Engineer



EDUCATION

M.S. Civil Engineering, 1989
West Virginia University

B.S. Civil Engineering, 1987
West Virginia University

EMPLOYMENT HISTORY

1999-Present Potesta & Associates, Inc.
1989-1999 GAI Consultants
1987-1989 West Virginia University
1985-1987 West Virginia Division of Highways
(summers)

PROFESSIONAL REGISTRATION

Professional Engineer – West Virginia, Virginia

PROFESSIONAL CERTIFICATION

- Troxler Moisture-Density Gauge
- American Red Cross Standard First Aid and CPR
- OSHA 40-Hour Hazardous Waste Worker Training

AREAS OF SPECIALIZATION

Water and wastewater engineering and permitting; preparation of studies, design calculations, drawings, technical specifications, and cost estimates; bidding phase services; and construction phase services, including construction administration.

PROFESSIONAL EXPERIENCE

Water Lines, Water Storage Tanks, and Water Treatment Plants

Project Manager/Project Engineer for more than 70 water supply projects involving design and, permitting of water treatment facilities, water line extensions, water storage tanks, booster stations, chlorine boosters, pressure reducing valve stations, service connections and providing fire flow demands. Tasks include client/contract management; mapping development; hydraulic design; geotechnical investigations; preparation of drawings, specifications, and cost estimates; and preparation of Bureau of Public Health, Public Lands Corporation, United States Army Corps of Engineers, West Virginia Division of Highways, and NPDES permit applications.

- Projects funded by federal, state and private funding including small cities block grant, United States Department of Agriculture, Rural Economic Development Agency, Drinking Water Treatment Revolving Fund (DWTRF), West Virginia Infrastructure and Job Development Council, Congressional Supplemental Appropriations (SAP), Abandoned Mine lands, United States Army Corps of Engineers, Governor's office funding, county commissions and private funding.

West Virginia Bureau for Public Health (Region III and Region VI Planning and Redevelopment Councils) – Project Manager for 5 contracts for source water protection:

- Source water reports for 133 public water systems
- Preparation and presentation of state-wide source water awareness symposiums
- Source water assessment and protection plan reports for 68 public water systems
- Engineering study for contingency planning for public water systems

Town of Ceredo – Project Manager for 20,000 feet of water line replacement, water tanks, telemetry, and booster stations.

Boone County Public Service District – Project Manager for 15+ water supply extension projects in Boone County District from 2004 to present. Included were Preliminary

Engineering Reports (PER), and design bidding and construction phase tasks.

Project Manager for Mill Creek Regional Water Supply Extension Project. Design included 34 miles of waterline, booster stations, tanks, and a water treatment plant. Included design of storm water ditches and culverts, and crossings of a railroad. Approval was obtained from CSX Transportation, WVDOH, PLC, USCOE, and West Virginia Bureau for Public Health. Deliverables included drawings, specifications, and cost estimates.

- West Virginia Division of Environmental Protection
- Logan County Public Service District

West Virginia American Water – Project Manager for construction administration/monitoring for the Poca River Road Waterline Extension Project; Cabell County Waterline Extension Project, Contract No. 7; Spite Road Waterline Extension Project; and Fisher Ridge Waterline Extension Project. Work included construction monitoring, preparation of weekly reports, review of contractor submittals, review of contractor invoices, and preparation of record drawings for 100,000+ linear feet of waterline extensions.

City of Philippi – Project Manager for municipal water system upgrade project. Work included design of two replacement booster stations, two new water storage tanks, new pumps for an existing booster station, a 1,500-foot waterline extension, and telemetry systems. Drawings, specifications, and a cost estimate were prepared.

West Virginia American Water – Design of main line pressure reducing valve and vault for the Glenwood Avenue Extension of the Cabell County Waterline Extension Project, Contract No. 6. Work included hydraulic sizing and preparation of drawing.

West Virginia American Water – Design, permitting, bidding and contract documents, and construction phase services for residuals handling facility at largest water treatment plant in West Virginia, including 1,000,000-gallon gravity thickener, sludge pumping stations, two belt filter presses, and a plate settler.

West Virginia Department of Environmental Protection – Project Manager/Project Engineer for design of multiple waterline extension in West Virginia. Included was design of six water storage tanks, five booster stations,

pressure reducing valves, master meters, and telemetry systems. Work included surveying, subsurface explorations, hydraulic design, preparation of drawings, specifications, cost estimates, and permit applications, and assistance with bidding. Representative projects included:

- 10-Mile-South Putnam Water Supply Extension Project in Lincoln and Putnam Counties;
- 5-Mile-Cline Hollow, Younger Drive, Left Hand Fork of Lens Creek, and Emmons-Grippe Water Supply Extension project in Kanawha County;
- 2.5-Mile Godby Branch Water Supply Extension Project in Logan County;
- 20-Mile Cow Creek-Sarah Ann Water Supply Extension project in Logan County;
- 8-Mile Cassidy Fork Water Supply Extension project in Randolph County; and
- 10-Mile Olive/Marshville/Catfish Hollow Water Supply Extension project in Harrison County

Tucker County Development Authority – Project Engineer for design of approximately 10,000 feet of water line and sewer line to serve an industrial park, including a lift station. Drawings, specifications, and a cost estimate were prepared. Also performed construction administration services.

West Virginia Division of Environmental Protection - Project Engineer for preparation of conceptual design and cost estimate for the Mill Creek – Isom Community (Logan County Public Service District) Water Supply Extension Project.

West Virginia American Water – Evaluation of water treatment plant and water distribution system, including observation of system during site visit, records review, discussions with regulatory officials, and issuance of findings in a report for the Town of Pineville.

West Virginia Division of Environmental Protection – Project Manager for technical review of the Gauley River Area Waterline Extension proposed by the Gauley River Public Service District and the Heizer/Manilla Creek Waterline Extension proposed by West Virginia American Water. Included hydraulic analysis, evaluation of line size, review of drawings and specifications, and reporting on the evaluation in letter format.

City of Philippi – Relocation of waterlines due to proposed roadway. Relocation included approximately

4,000 feet of 1-inch to 12-inch diameter pipe, fire hydrants, meters, and valves. Prepared construction drawings, specifications, and quantities.

Short Line Public Service District/Harrison County Planning Commission – Project Manager for feasibility/rates analysis study for the proposed Reynoldsville, Wallace, and Clarksburg Water Supply Extension Project. Included evaluation of six options at multiple loan/grant funding scenarios.

West Virginia American Water – Hydraulic analysis for water supply extensions (total of 23 miles) in Cabell County, West Virginia, including line sizing and design of booster station and PRVs.

West Virginia Division of Environmental Protection – Project Manager/Project Engineer for numerous conceptual waterline designs for 20 unserved areas (between 1991 and 2007) in coal mining areas in West Virginia. Included hydraulic evaluation, booster station, and water storage tanks sizing, waterline sizing, and estimation of construction cost. Work completed in Barbour, Boone, Brooke, Fayette, Harrison, Lincoln, Logan, McDowell, Putnam, and Randolph Counties.

West Virginia Division of Environmental Protection – Project Manager for design of booster station upgrade for the Clinton Water Association's Ringgold pump station, including preparation of drawings, specifications, and cost estimate.

West Virginia Department of Energy – Groundwater contamination study for drinking water wells near Cassity, Randolph County, West Virginia, including water supply inventory of over 50 residents, collecting and analyzing well and surface water samples, and researching records to determine the percentage of homes whose water supply had been degraded by acid mine drainage.

Public Utility General – Project Manager for construction administration including preconstruction meetings, shop drawing review, coordination with construction technician team(s), contractor pay application review, public record drawings, and public interface for 15+ water and wastewater utility and/or infrastructure projects including utility line extension and upgrades, construction and modifications of treatment facilities. Clients include municipalities, public service districts, industry, county development authorities and private utilities.

Construction included water and sewer lines, booster stations, tanks, lift stations, vacuum sewer stations, treatment basins, dewatering equipment, clarifiers, chemical feed systems, buildings associated with treatment systems, outfall modifications, and diffusers.

Mingo Logan Coal Company – Project Manager for design, building, and permitting services for potable water system at the new Mountain Laurel Mine in Logan County, West Virginia. Project includes booster station, water storage tank, and 10,000 feet of HDPE pipe.

Sewer Lines and WWTPs

Project Manager for more than 30 wastewater projects, including municipal sanitary sewer treatment systems, industrial pretreatment systems, modification of sewer treatment plants, outfall modifications including diffuser installation, and upgrades to municipal collection systems. Also included were completions of studies mandated by the West Virginia Public Service Commission.

- Projects funded by State Revolving Fund (SRF), West Virginia Infrastructure and Jobs Development Council, United States Economic Development Agency and Private Funding sources.

Boone County Public Service District – Preliminary engineering, funding application, and final design for WWTP upgrade. Funding proposed through the Clean Water State Revolving Fund (SRF).

- Mechanical bar screen replacement
- Grit removal system replacement
- Mechanical aerator replacement
- Addition of third clarifier
- RAS pump addition
- UV unit replacement
- Belt filter press replacement
- Wash water system upgrade
- Other upgrades

Town of Ceredo – Perform design, bidding, and construction phase services for upgrade of existing sanitary sewer collection system, including upgrades to gravity and force main lines, and a lift station. Funding was thru the Clean Water State Revolving Fund (SRF).

Town of Ceredo – Evaluation of remaining capacity of grinder pump system.

Salt Rock Sewer Public Service District Master Service Agreement:

- Specification for WWTP wash line
- Preparation of NPDES modification for sludge disposal from a publicly owned treatment works
- Preparation of odor control study mandated by the West Virginia Public Service Commission (WVPSC)
- Preparation of cost estimates for requests for service
- Evaluation of lift station overflows

Town of Moorefield – Study on costs of \$30,000,000 sanitary sewer system (plant and collection system).

South Putnam Public Service District – Project Engineer for review of sewage disposal options for large county-wide sanitary sewer provider. Work included interviews with various publicly-owned treatment works (POTWs), interviews with regulatory agencies, review of regulatory agency files, development of costs, and preparation of a report summarizing findings, including recommendations for future treatment of sewage in West Virginia.

West Virginia American Water – Assessment of City of Oak Hill and City of White Sulphur Springs publicly owned treatment works (POTW) to recommend improvements in operation and maintenance.

Town of Bradshaw – Design of collection system for two new schools, and design, permitting, bidding, and certain construction phase services for equalization basin/lift station, and upgrades to vacuum station and buffer tanks.

Tucker County Development Authority – Design, permitting, bidding, and construction phase services for gravity collection system, force main, and lift station for industrial park.

Boone County Public Service District – Preliminary engineering report for collection system and sequencing bench reactor (SBR) wastewater treatment plant for the Town of Nellus.

MDG Homes – Preparation of hydraulic calculations and record drawings for variable grade effluent sewer system at large development in eastern panhandle.

Client Confidential – Coordination of treatability study for industrial treatment plant.

Design of numerous sanitary sewer extensions associated with private developers, including design of gravity and force main lines and lift stations, including approvals by local public utilities such as Jefferson Utilities, and approvals by West Virginia Department of Environmental Protection.

Pocahontas County Public Service District/Wastewater Management – Study on replacement of Hawthorn Loop Sanitary Sewer System.

Step toe & Johnson/York Bronze Company – Design of batch chemical pretreatment system for bronze facility in northern West Virginia. Included were sizing of units and building to house treatment system, and preparation of drawings, specifications, and cost estimate.

Columbia Gas Transmission Corporation:

- Design of sump/pump and storage tank to allow treatment and storing of waste water; and negotiation with hauler and POTW to allow disposal of waste water at Files Creek Compressor Station.
- Design of an oil/water separator, sump/pump, and storage tank to allow treatment and storing of waste water; and negotiation with hauler and POTW to allow disposal of waste water at Cleveland Compressor Station.
- Design of a waste water treatment plant for compliance with a compressor station's NPDES permit. Included was preparation of facilities preliminary and final engineering plans, selection of treatment (chemical precipitation, activated carbon and filtration), and detailed drawings and specifications.
- Evaluation of effectiveness of existing ozonator/activated carbon wastewater treatment system at a natural gas compressor station. Evaluation included 30-day composite sampling plan of wastewater, compilation of results, comparison with treatment system capacity, and issuance of findings in a report. Also included was issuance of a report summarizing technical feasibility and costs for alternate treatment options.
- Project Manager for conceptual design of oil/water separator at the Crawford Compressor Station in Ohio.

Tetra Technology – Preparation of operation and maintenance manual for a waste water treatment plant at the Yak Tunnel Superfund site in Leadville, Colorado.

Project Engineer for design and permitting of sanitary waste water treatment system for coal mines in Logan and Raleigh Counties, West Virginia. Included was preparation of drawings and specifications.

- Eastern Associated Coal Corp.
- Rum Creek Coal Sales

West Virginia Department of Environmental Protection, LCAP – Design of 1.2 miles of pressure and gravity sewer line at the Jackson County Landfill to convey landfill leachate to an existing sanitary collection system. Included were provisions for servicing residences along the pathway, hydraulic sizing, and preparation of drawings, specifications and a cost estimate.

West Virginia University – Research assistant for developing an interactive optimal sewer design program SODES.

Evaluation of options for future treatment of wastewater at a chemical industrial facility along the Ohio River in West Virginia. Included were evaluation of options, estimation of capital and O&M costs, and preparation of a report to a law firm in West Virginia.

Mining

Estimation of AMD treatability and treatment costs at multiple mining sites in West Virginia as part of preacquisition site assessments, including records review of 303(d) TMDL list.

Eastern Associated Coal Corporation – Project Manager for oversight of water supply inventory of structures over a 3200-acre SMCRA permit expansion (during 1994-1995) of the Federal No. 2 longwall deep mine in Monongalia County, West Virginia. Included were negotiations with the West Virginia Division of Environmental Protection (WVDEP) of the locations of permanent surface and groundwater monitoring points.

Eastern Associated Coal Corporation – Project Manager for design of Guyses Run AMD facility. Design included a 3,000,000-gallon pond, 180 feet of relocated stream, and stream crossings. Included was regulatory approval from USCOE, PLC, and WVDEP. Deliverables included drawings, specifications, and a cost estimate.

Old Ben Coal Company – Project Engineer for preparation of PHC statement for SMCRA permit

application for the Nile Stone Slurry Impoundment in Mingo County, West Virginia.

Pre-mining, pre-blast surveys, including field investigations and report preparation, for various coal companies in Ohio, Virginia and West Virginia.

- Elk Run Coal Company
- Island Creek Coal Corporation
- Oneida Coal Company
- Southern Ohio Coal Company

Eastern Associated Coal Corporation – Project Manager for preparation for SMCRA Incidental Boundary Revision and NPDES permit modification applications for addition of 3.7-million-gallon mine drainage treatment pond at Martinka Coal Company's Guyses Run AMD facility.

Southern Ohio Coal Company – Project Manager for water supply interviews with occupants of 70 structures in Gallia, Meigs, and Vinton Counties, Ohio.

Project Engineer for grouting project to abate acid mine drainage at the Omega Mine Complex project in Monongalia County, West Virginia. Project involved collaboration of private/public agencies to provide resources for approximate \$2,500,000 project.

Meadow River Coal Company – Project Manager for water supply inventory of 37 structures over a deep mine in Fayette County, West Virginia, and preparation of subsequent SMCRA permit revision to incorporate water supply inventory to existing permit.

Eastern Associated Coal Corporation – Project Engineer for identification of permanent groundwater and surface water monitoring points including negotiation of locations with the West Virginia Division of Environmental Protection (WVDEP) for 1,750-acre and 3,200-acre SMCRA permit expansions of the Federal No. 2 longwall deep mine in Monongalia County, West Virginia.

Rum Creek Coal Sales, Inc. – Project Engineer for preparation of probable hydrologic consequences (PHC) statement for SMCRA permit application for below drainage deep mine in Logan County, West Virginia.

Eastern Associated Coal Corporation – Project Engineer for preparation of probable hydrologic consequences (PHC) statement for SMCRA permit application for 5000+ acre Montcoal Eagle longwall deep mine,

including establishment of permanent surface and ground water monitoring points.

Ranger Fuel Corporation – Project Manager for SMCRA Incidental Boundary Revision (IBR) for new face-up and portal at the Clinton No. 4 mine in Boone County, West Virginia.

Southern Ohio Coal Company – Completion of drawdown field tests and estimation of well yields for over 12 wells.

West Virginia Division of Environmental Protection – Project Manager for evaluation and design of passive AMD treatment system at the Owings Mine Complex site in Harrison County, West Virginia. Included were detailed sampling plan, issuance of pre-construction water quality report, and preparation of construction drawings, specifications, and cost estimate.

West Virginia Division of Environmental Protection – Project Manager for Harris AMD reclamation project. Design included 400 feet of ditch, one culvert, manholes, 500 feet of subsurface drains, and sealing of mine portals. Deliverables included drawings, specifications, and a cost estimate.

Southern Ohio Coal Company – Project Manager for preparation of SMCRA permit application for the remaining life of the Meigs No. 2 and No. 31 mines in Ohio, including inventory of water supplies of over 200 residents.

Abandoned Mine Lands

Project Manager/Project Engineer for the design and development of reclamation plans and feasibility studies for more than 60 abandoned mine land projects for the WVDEP, Office of Abandoned Mine Lands and Reclamation, and the Commonwealth of Virginia, Abandoned Mine Lands Program. Tasks included:

- Client/contract management
- Mapping development
- Hydrologic evaluations
- Reclamation design
- Subsidence evaluation and abatement
- AMD evaluation and abatement
- Hydraulic design
- Geotechnical investigations

- Preparation of drawings, specifications, and cost estimates
- Preparation of Public Lands Corporation, U.S. Army Corps of Engineers, West Virginia Division of Highways, and NPDES permit applications.

West Virginia Division of Environmental Protection – Project Manager for Left Hand Fork reclamation project. Design included 1,600 feet of storm water ditch, 1,900 feet of riprap toe protection, culverts, relocation of a road, and regrading of refuse. Regulatory approval was obtained. Deliverables included drawings, specifications, and a cost estimate

West Virginia Division of Environmental Protection – Project Manager for reclamation design for the Owings Mine Complex site in Harrison County, West Virginia. Design included 8,300 feet of storm water ditch (including relocation of stream), 1,000 feet of culvert/subsurface drains, manholes, and a box culvert in addition to reclamation of refuse piles and sealing of mine portals. Deliverables included drawings, specifications, and a cost estimate. Included was interaction with the WVDOH, and obtainment of USCOE approval for relocation of a stream.

West Virginia Division of Environmental Protection – Project Manager for the Majesty Mine Complex project. Design included storm water ditches, stream relocations, culverts, and regrading of refuse piles and sealing of mine portals. Regulatory approval from the WVDOH and USCOE were obtained. Deliverables included drawings, specifications, and a cost estimate.

West Virginia Department of Energy, Abandoned Mine Lands – Stabilization program for mine subsidence at the Doug Gray Site in Fairmont, West Virginia, including a subsurface investigation, development of an injection plan, preparation of construction quantities, and a pre-bid meeting.

West Virginia Division of Environmental Protection – Project Manager for stabilization program for mine subsidence at the Glen Morgan (Lilly) site in Raleigh County, West Virginia, and the Mainella Site in Marion County, West Virginia. Included were development of injection plan, construction drawings and specifications, and cost estimate.

Assisted on St. John's Road Subsidence Project, Brooke County, West Virginia. Subsurface investigation and

development of specifications and construction drawings for remedial work on mine subsidence affecting 30 acres and 50 homes were conducted.

Project Engineer for Holden (Padgett) Subsidence Project, Whitman Junction, West Virginia. 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.

Assisted on Jonben (Haga) Subsidence Project, Jonben, West Virginia. 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.

West Virginia Division of Environmental Protection – Project Manager for 380 residence water supply inventory (including sampling) as part of the Phase II Water feasibility study for the New Haven Study Area in Fayette County, West Virginia.

West Virginia Division of Environmental Protection – Project Manager for 600 resident water supply inventory (including sampling) as part of the Phase II Water feasibility study for the Mill Creek Study Area in Boone, Lincoln, and Logan Counties, West Virginia.

West Virginia Division of Environmental Protection – Project Manager for 200+ residence water supply inventory as part of the Phase II water feasibility study for the Gauley River Study Area in Fayette and Nicholas Counties, West Virginia.

West Virginia Department of Energy – Abandoned Mine Lands – Project Manager for Phase II groundwater contamination study for drinking water wells in the Crooked Creek, Cow Creek, and Upper Rum Creek communities in Logan County, West Virginia. Work included water supply inventories of 250+ residences, collection and analyzing surface and well water samples, researching water quality records, designing and costing remedial measures, and calculating the percent of wells that had been degraded by mining activity.

Environmental Assessments/Impact Statements

Environmental site assessments, including record searches and field investigations, for numerous sites in West Virginia, Virginia, Ohio, and North Carolina. Specialization in large acre tracts, typically ranging from 1,000 acres to 65,000 acres, including coal properties:

- Dominion Resources
- Goldman Associates
- DiMucci Development
- FDIC
- Rhone-Poulenc Ag Company
- GSA
- General Electric
- West Virginia University
- Peabody Coal Company
- Massey Coal Services
- Kanawha County Solid Waste Authority
- Capel, Incorporated
- Plasma Processing Corporation
- Sun Bank South Florida
- Vaughan Railroad Company
- Foodland
- Jackson & Kelly
- Spilman, Thomas and Battle

University of North Carolina – Preparation of an Environmental Assessment showing no significant environmental impact for a proposed 1,400-foot television tower near Chapel Hill, North Carolina.

West Virginia Division of Highways – Project Engineer for completion of hazardous waste portion of environmental assessment for 22 miles of proposed upgrade to US 19, north of Summersville, West Virginia. Included site reconnaissance, interviews, and records search to identify potential hazardous waste sites along path of proposed upgrade.

Storage Tanks

Marshall University – Project Engineer for closure, sampling, and remediation activities associated with an UST closure at a new football stadium.

Project Engineer for sampling associated with an underground storage tank removal at a site in Harrison County, West Virginia.

West Virginia Division of Environmental Protection – Project Engineer for sampling associated with two abandoned underground storage tanks at a former mine site in Harrison County, West Virginia.

Goldman Associates – Project Engineer for closure, sampling, and remediation activities associated with an UST closure at a commercial establishment.

Contamination assessment for a national coal company for leaking UST at a coal facility in southern West Virginia, including multiple aquifer well installations, preparation of corrective action plan, and subsequent installation of air sparging system and oil/water separator.

West Virginia Department of Natural Resources – Contamination assessment for leaking underground storage tanks at the Rite Way Packette site in Jesse, West Virginia.

Project Engineer for excavation and off-site disposal of contaminated soil associated with a UST gasoline leak at a coal preparation facility in Kentucky.

Plasma Processing Corporation – Preparation of an underground injection control (UIC) permit application for a secondary aluminum facility.

Hazardous Waste/RCRA/Corrective Action

Project Engineer for PCB sampling at numerous mine sites in McDowell, Nicholas, Raleigh, and Wyoming Counties, West Virginia.

Project Engineer for excavation and off-site disposal of a diesel fuel spill on a slurry impoundment in Kentucky.

Regional Solid Waste Disposal Company – Project Engineer for guidance of contamination assessment and remediation activities with a fuel spill at a waste transfer facility in South Carolina.

Island Creek Corporation – Contamination assessment for petroleum products, battery acid, and PCBs at a coal preparation plant in Kentucky.

Feasibility study for future disposal options of residual wet waste from steam plants at a chemical plant in West Virginia.

Remediation

Project Engineer for remediation activities for a diesel fuel spill at a tank farm at a coal preparation plant in Kentucky.

Project Engineer for three PCB site remediations for a national coal company by excavation and off-site disposal at a coal preparation plant in Kentucky.

Vandalia Mining Corporation – Project Engineer for a contamination assessment and remedial activities a hydraulic fuel spill in Clay County, West Virginia.

Landfills/Solid Waste/Waste Disposal

Project Manager/Engineer for more than 60 private and public solid waste disposal facility projects involving evaluation, design, permitting and construction of disposal cells, closures, and leachate management facilities. Tasks included:

- Client/contract management
- Mapping and development
- Hydrology evaluation and hydraulic design of stormwater structures
- Geotechnical investigations
- Preparation of drawings, specifications, and cost estimates
- Preparation of solid waste and NPDES permit applications
- Construction observation/administration tasks such as full-time observation of construction, review of contractor submittals, review of contractor pay requests, and preparation of record drawings

Project Manager/Project Engineer for study, design, bidding, and construction phase services for 10+ solid waste disposal projects, including lined cell development and closures.

S&S Grading, Inc.:

- Renegotiation of a municipal waste water treatment plant NPDES permit at Grant Union Public Service District, including preparation of corrective action plan for facility, to allow for acceptance of more landfill leachate.
- Project Engineer for preparation of revised Part 2 permit application for S&S Landfill in Harrison County, West Virginia. Work included design of

landfill facilities including storm water structures, drawings, permit application text, NPDES permit application, and negotiations with the WVDEP until permit issuance.

- Project Manager for preparation of construction documents for Phase 1, 2, 2B and 3 expansions of the S&S Landfill in Harrison County, West Virginia. Work included design of liner system and storm water drainage structures, drawings, specifications, quantities, assistance in bidding and contractor selection.
- Project Manager for construction monitoring of the Phase 1, 2, 2B and 3 expansions of S&S Landfill in Harrison County, West Virginia. Work included regular meetings with contractor, preparation of weekly progress reports, preparation of liner system certifications, and submittal to the WVDEP of final certification. Included was construction monitoring of storm water drainage structures.
- Project Manager for preparation of drawings and specification for closure of the old S&S Landfill in Harrison County, West Virginia. Work also included designing proposed grade, storm water structures, landfill cap features, and preparation of quantities.
- Design of a landfill leachate pump station, force main, and primary and secondary containment tanks, including preparation of drawings, technical specifications, quantities, and a cost estimate.
- Renegotiation of a municipal waste water treatment plant NPDES permit, including preparation of corrective action plan for facility, to allow for acceptance of more landfill leachate.
- Project manager for design of valve vault for leachate handling facilities at the S&S Landfill in Harrison County, West Virginia.
- Project manager for construction of additional sedimentation pond at the S&S Landfill in Harrison County, West Virginia.
- Project engineer for permit modifications to allow alternate landfill liner systems at the S&S Landfill in Harrison County, West Virginia.

West Virginia Solid Waste Management Board – Technical review of proposed batch treatment plant/sludge handling equipment for treating landfill leachate.

Feasibility study for future disposal options of residual wet waste from steam plants at a chemical plant in West Virginia.

West Virginia Division of Environmental Protection, LCAP – Assistance with QA/QC review for construction drawings and specifications for the Central Landfill project in Braxton County, West Virginia and the Mingo County Landfill project in Mingo County, West Virginia.

West Virginia Division of Environmental Protection, LCAP – Preparation of construction drawings and specifications for the leachate collection and storage facilities for the closure of the Fleming Landfill in Kanawha County, West Virginia.

West Virginia Solid Waste Management Board – Preparation of an NPDES permit application for a municipal solid waste landfill near Morgantown, West Virginia.

Project manager for preparation of annual cross sections depicting liner elevations, existing elevations, and cap elevations for S&S Landfill in Harrison County, West Virginia and the Carolina Grading, Inc. landfill in South Carolina from 1995 to 1999. Work also included estimating volume of waste disposed, and volume of air space remaining.

- S&S Grading, Inc.
- Carolina Grading, Inc.

Carolina Grading, Inc. – Project manager for redesign of landfill subbase elevations to allow increased airspace at Carolina Grading landfill in South Carolina.

Eastern Environmental Services, Inc. – Project manager for estimation of remaining airspace volume at the Bayside of Marion Landfill in Florida and at a landfill in Maryland.

West Virginia Solid Waste Management Board – Project engineer for study evaluating seven alternatives for future operation of the Monongalia County Landfill.

Air Pollution/Air Services

Plasma Processing Corporation – Preparation of air pollution control permit applications, permit modifications, and compliance testing for secondary aluminum facilities in West Virginia and Tennessee.

Preparation of an air pollution control permit (construction and operating) applications for loadouts, coal preparation plants, and associated areas of coal

preparation plants including coal handling equipment, refuse conveyor, stockpiles, rotary breaker and silos.

- Peabody Coal Company
- Meadow River Coal Company

NPDES Industrial/Municipal Permitting

Project Manager for the acquisition of NPDES permits for construction activities for multiple civil engineering projects, including sanitary sewer collection systems and water supply extensions.

Project Manager for compilation of storm water sampling plans/kits for NPDES permit applications:

- Columbia Gas Transmission Corporation
- Plasma Processing Corporation

Preparation of Stormwater Pollution Prevention Plans (SWPPs) required by NPDES permits for natural gas compressor stations and secondary aluminum facilities:

- Columbia Gas Transmission Corporation
- Plasma Processing Corporation

Preparations of NPDES permit applications for industrial sites, and regulatory liaison associated with the applications:

- Municipal and industrial waste landfills – West Virginia Solid Waste Management Board, S & S Grading, Inc., and Rhone Poulenc, AG
- Water treatment plant – West Virginia Department of Environmental Protection/Logan County Public Service District, and West Virginia-American Water Company
- Secondary aluminum facility – Plasma Processing Corporation

Design of outfall modifications, including diffuser systems on outfalls. Included were hydraulic sizing and preparation of drawings, specifications and cost estimates. Some projects included bidding and construction phase services.

- City of South Charleston WWTP
- Allegheny Energy Services
- Cytec Industries Inc.
- Consol Energy, Inc.
- Akzo Nobel Chemicals

- Kureha, Inc.
- CNX Gas
- Patriot Coal
- Bayer Crop Science
- Momentive, LLC
- First Energy, Inc.

Served on West Virginia Manufacturer's Association Committee to prepare guidance document for preparing Groundwater Protection Plans (GPP's) for facilities regulated by NPDES permits.

Columbia Gas Transmission Corporation:

- Project Manager for preparation of template Groundwater Protection Plan to cover 50+ natural gas industry facilities in West Virginia. Included was preparation of hard copy and digital format version for use by facility personnel.
- Preparation of comments on draft NPDES permits including negotiations on revising permit conditions for multiple natural gas compressor stations in West Virginia.
- Preparation of report evaluating and recommending disposal options for water at Crawford Compressor Station in Ohio, including subsequent negotiations for direct discharge of water without NPDES permit.
- Project Manager for preparation of State of New York SPDES permit application for the Greenwood Storage Field.
- Preparation of default mixing zone model to allow for proposed increase in iron NPDES limits at the Cobb Compressor Station in Kanawha County, West Virginia.

Roadway Design

WVDEP and Logan County Public Service District – Project Manager for the design and layout of the relocated West Virginia County Route 12 (including approval from WVDOH) as part of the water treatment plant site of the Mill Creek Regional Water Supply Extension in Logan County, West Virginia. The design included roadway alignment (including vertical and horizontal curvature, right-of-way, and horizontal clearance with respect to structures), surface and subsurface drainage (including hydraulic calculations and channel and culvert sizing), fill embankment design, cut slope layout, and specifications for pavement, gravel, guardrail, drop inlets, and drainage structures. In addition, the project included compiling

technical specifications including WVDOH standard specifications.

Martinka Coal Company – Project Manager for design of an access road associated with a new 3,700,000-gallon pond at a deep mine in northern West Virginia. Project included subsurface investigation, hydrology calculations, channel and culvert design, cut/fill balance, low water crossing design, embankment design, and selection of road surfacing material. Deliverables included specifications, including references to WVDOH specifications. USCOE and Public Lands Corporation permits were obtained.

S&S Grading, Inc. – Project Manager for design of an access road associated with a closure cap on an old landfill in Harrison County, West Virginia. Project included site grading, hydrology calculations, channel and culvert design, design of subsurface drains under the road, cut/fill balance, embankment design, and selection of road surfacing material. Deliverables included drawings and technical specifications, including references to WVDOH specifications. Roadway quantities were estimated.

Ranger Fuel Corporation – Design of an access road for a new deep mine portal at the Clinton No. 4 Mine in Boone County, West Virginia. Project included site grading, hydrology calculations, channel and culvert design, cut/fill balance, and selection of road surfacing material. Deliverables included drawings and specifications. Regulatory approval was obtained.

West Virginia Division of Environmental Protection – Project Manager for 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 slip in WV Route 16/2. In addition, responsibilities including compiling technical specifications, including WVDOH standard specifications and communications with WVDOH for design approval.



EDUCATION

B.S. Civil Engineering, 1982
West Virginia University

EMPLOYMENT HISTORY

2011-Present	Potesta & Associates, Inc.
1991-2011	West Virginia American Water
1988-1991	Dunn Engineers, Inc.
1982-1988	Kelley, Gidley, Blair & Wolfe, Inc.

PROFESSIONAL REGISTRATIONS

- Professional Engineer – West Virginia
- Professional Surveyor – West Virginia

PROFESSIONAL AFFILIATIONS

- American Water Works Association
- National Society of Professional Engineers

AREAS OF SPECIALIZATION

Water including design of water mains, water storage tanks, booster stations, pressure reducing stations, advanced metering infrastructure – (AMI) and Automated Meter Reading – (AMR) systems. Extensive knowledge in water distribution systems operation and maintenance.

PROFESSIONAL EXPERIENCE

Water Lines, Water Storage Tanks, and Water Treatment Plants

Confidential Coal Company – Onsite water management, reuse and disposal project; services included construction of 8,500 gallon per minute combination high pressure pump/pressure reducing station, controlling a 14 mile 26” HDPE pipe, an 8,500 gallon per minute pressure sustaining valve station, energy dissipation structure, river outfall and SCADA system.

Responsible for engineering at West Virginia American Water (WVAW):

- Supervising an engineering staff of eight, working in conjunction with other departments at WVAW.
- Developing and prioritizing multiple capital projects while developing and managing the multi-million capital budget for West Virginia. Budgeting includes developing and creating large investment projects, multiple public private partnerships and several acquisitions.
- Involved in multiple operational issues/projects including non-revenue water reduction, comprehensive planning studies including interconnection studies to combine operations to increase efficiencies.
- Worked on the automation of Bluestone Water plant which is intended to be the first one shift automated and unattended surface water treatment plant in West Virginia.
- Design of multiple pressure reducing stations and booster stations.
- Overseeing a \$1.5+ million per year tank painting program.
- Managed tank painting program, which included evaluating, prioritizing, draining and refilling tanks, tank inspections, preparation of contract documents, bidding, bid evaluations, contract awards, scheduling, taking tanks out of service while maintaining uninterrupted service to customers.
- Responsible for over 300 tanks in the largest water system in West Virginia.

Responsible for the Fayette AMI project, a \$4.3 million-dollar meter replacement/automation project to automate almost 12,000 water meters in Fayette County, West Virginia. This project was part of an EPA Green Project and the project was successfully publically bid using a

performance specification using stimulus money. Methods were developed to economically work through terrain issues as it related to radio signals to develop a successful project. The project successfully incorporated acoustic listening devices to monitor the distribution system at night to reduce non-revenue water in the Fayette water system.

City of Glenville – Project Manager for the study, design, bidding, and construction phase services for project involving upgrades and construction monitoring to their existing potable treatment and water distribution system.

Town of Mills Creek – Project Manager for the design, permitting, preparation of construction plans, specs, and bidding documents, and construction administration/observation services for the construction of two backwash ponds behind the existing water treatment plant.

Responsible for the project management to complete the WVAW building complex at 1600 Pennsylvania Avenue, Charleston, West Virginia. Provided oversight of the building complex for all operation and maintenance items, as well as liaison with the leasees.

Project Manager of the Kanawha Valley to Montgomery Interconnection Project design which included over 20 miles of 20-inch to 12-inch water mains, two relay booster stations, one storage tank, Kanawha River Crossing, railroad crossings, two pressure reducing stations and radio telemetry.

Project Manager for the EPA IDSE disinfection project to develop the computer water models for the Charleston and Huntington water systems which calibrated the two largest water distribution systems in West Virginia.

Project Manager for the Kanawha County IDB Water Project 2000 which served 33 areas and brought water to over 1,740 families. The total project cost of over \$22 million included over 100 miles of water mains, five boosters and six water storage tanks of various sizes. Oversaw the design work of six consultants, including acquiring the rights-of-way, the bidding of 12 water main contracts, and the construction of those contracts with five consultants handling five contractors, while managing the bidding and construction of the above boosters and water storage tanks.

Prepared specifications and plans for numerous water main extensions, water storage tanks, boosters and hydro

pneumatic booster stations and pressure regulating stations including site work, other utilities, and property acquisition, including bidding, project and construction management.

Parcoal Project, Webster County, consisting of 8-inch water main extension and a 160,000-gallon water storage tank using an ARC Grant.

Southridge Development Project consisting of 16-inch water main extension to serve the Southridge Development on Corridor G.

Responsible for the 55-person department that maintained the Kanawha Valley water distribution system, which repaired an average of 1,500 main breaks per year up to 30-inch PCCP:

- Responsible for providing new water services – the department made an average of 850 taps per year
- Oversaw the leak survey effort to reduce unaccounted for water – developed a system to check night flow in systems using existing telemetry to determine leakage and direct efforts to maximize finding and fixing those leaks
- Coordinated the small diameter main replacement program which averaged over one million dollars per year
- Comprehensive supervisory experience between union and non-union personnel – responsible for five supervisors
- Assisted in union negotiations – developing a process to equalize overtime within the distribution department. Worked with the Manager to develop 24-hour coverage shifts to provide better customer service and reduce O&M costs, including a 12-hour shift schedule using four foremen to provide round the clock coverage
- Served as the liaison with Kanawha County Commission and KCRDA on new water projects to serve un-served areas

Oversaw the completion of the construction of the Consolidated Office Complex for WVAW's corporate headquarters in Charleston in 1997 to 1999.

Kanawha County Water Main Extension Project consisting of waterlines, booster, a 200,000-gallon water storage tank, and four pressure-regulating stations for the Campbells Creek area of Kanawha Valley.

Quarry Creek Subdivision consisting of vertical turbine booster station and a 330,000-gallon water storage tank, with an elevated storage tank bid option and water lines.

Kellys Creek Project consisting of 16-inch water main extension, booster station, and water storage tank along Route 60 using WVDEP, AML funding.

Little Sandy, Aarons Fork and Edens Fork Projects. Construction of water mains, a booster station and a 160,000-gallon storage tank utilizing two Small Cities Block Grants with KCDRA.

Summers-Mercer Water Project included design of an 8-inch water main to Hinton and a 24-inch water main from the new Bluestone plant to Princeton, including the pressure reducing stations along with the 300,000-gallon water storage tank near Pipestem.

Designed and constructed multiple small water main extensions, working with developers, customers and small contractors to serve new subdivisions and unserved areas.

Sewer Lines and WWTPs

Project Manager for the replacement of the Wastewater Treatment Plant at Point Pleasant, West Virginia. This included being responsible for design, plans, specifications, regulatory approval, bidding and bond sale, and construction management.

Inspection of wastewater collection systems, writing Operation and Maintenance Manuals, Facility Plans, and Grant Applications for various clients.

Project Manager for the Big Sandy Sewer Public Service District Vacuum System Project, which included the design and construction of three vacuum sewer stations, two sewage pump stations, a 9-mile force main, and the vacuum sewer collection system. Responsibilities of the above involved the preparations of engineering contracts, planning reports, plans and specifications, bid documents, operation and maintenance manuals, and change orders for state and federally funded wastewater and water projects. The process involved cost-effective analysis, public relations, technical writing, and public speaking.

Project Engineer for the Logan Wastewater Interceptor Project, the Town of Barboursville Lagoon Improvements, and the Philippi Wastewater Project including a new Oxidation Ditch Plant, renovation of an existing pump station, sewer main replacement design, and construction. Experience included designing wastewater treatment plants, sludge handling facilities including belt filter presses, wastewater collectors and pumping systems, site developments, access roads, and combined sewer overflow (CSO) facilities.



EDUCATION

M.S. Environmental Science, 2008
Marshall University

B.S. Safety Technology, 1999
Marshall University

EMPLOYMENT HISTORY

2000-Present Potesta & Associates, Inc.
1997-2000 Clearon Corporation

PROFESSIONAL REGISTRATIONS

- Licensed Remediation Specialist – West Virginia
- Certified Monitoring Well Driller – West Virginia

PROFESSIONAL CERTIFICATIONS

Hazardous Waste Operations and Emergency Response – 40-hour

AREAS OF SPECIALIZATION

Educational background in industrial health/safety and environmental science. Highly experienced with West Virginia Voluntary Remediation and LUST Programs, RCRA, and CERCLA/USEPA Brownfields. Project management and field experience includes site assessment and remediation of commercial, industrial, and residential sites; environmental emergency response; and hazardous waste management.

PROFESSIONAL EXPERIENCE

Hazardous Waste/RCRA/Corrective Action

RCRA compliance assistance regarding waste analysis, recordkeeping, storage areas, applicable exemptions, and point of generation issues. Have also managed large amounts of hazardous and non-hazardous wastes as part of remediation projects.

ESAs (Phase I and II)

Phase I Environmental Site Assessments (ESAs) on various types of sites, including:

- Large land transaction totaling over 145,000 acres.
- Former industrial sites as part of a USEPA Brownfields Assessment Grant.
- Numerous active and former industrial and commercial facilities.
- Undeveloped and residential properties.

Phase II/Sampling ESAs, including soil boring advancement and sampling, monitoring well installation and sampling, surface water sampling, and soil gas sampling:

- West Virginia Voluntary Remediation Program (VRP).
- West Virginia Leaking Underground Storage Tank (LUST) Program.
- Ohio Bureau of Underground Storage Tank Regulation (BUSTR).
- Resource Conservation and Recovery Act (RCRA) Corrective Action.
- Comprehensive Emergency Response, Compensation, and Liability Act (CERCLA) Site Assessment and United States Environmental Protection Agency (USEPA) Brownfields.
- Environmental emergency response (petroleum and chemical spills related to transportation incidents), typically performed under state environmental response or enforcement programs.
- Property transaction-related (*i.e.*, due diligence or baseline ESAs).

Remediation

Experienced with remediation of sites impacted by petroleum, volatile and semi-volatile organics (including

chlorinated solvents), metals, dioxin, and polychlorinated biphenyls (PCBs). Experience with bioremediation (aerobic and anaerobic), excavation, slurry walls, solidification/stabilization, pump and treat, soil vapor extraction, dual phase extraction, capping, and institutional controls.

Environmental Emergency Response

Performed and/or managed environmental response, assessment, and/or remediation on over 40 transportation related incidents in West Virginia, Kentucky, Ohio, Pennsylvania, and Virginia. These have included response to and assessment and remediation of releases from chemical and petroleum tankers and fuel tanks, transfer and/or removal of cargo, and coordination with regulatory agencies and affected property owners.

- Gasoline tanker release of over 3,500 gallons in northern Kentucky onto private property and railroad right of way (ROW). Remediation included excavation of soil and subsurface injection of a bioremedial compound on both sides of railroad ROW.
- Formaldehyde tanker release of 4,500 gallons in western Virginia. Project included initial containment, sampling and monitoring of groundwater contamination, soil remediation, hazardous waste characterization and disposal, US Army Corps of Engineers permitting for access roads, and ambient air sampling.
- Gasoline tanker release of over 3,000 gallons to frozen stream in central Ohio. Remediation included excavation of impacted areas of streambed (with United States Army Corps of Engineers approval) and additional soil, and subsurface injection of a bioremedial compound.
- Trailer load of white paint spilled adjacent to an interstate highway in West Virginia. Remediation included onsite solidification and removal of free liquids.
- Acid and caustic releases requiring stabilization of remaining load and on-site neutralization and removal of spilled material.
- Errant deliveries of products resulting in spills or damage to facility and/or inventory.
- Chemical lime spill to stream in western Virginia requiring long-term biological monitoring.

Additional Experience

Storage Tanks:

- Oversight of removal of USTs in West Virginia, Ohio, and Michigan, and management of UST components from over 30 sites in support of litigation.
- Compliance assistance and management of UST removals.

Biological Studies and Sampling:

- Performed surface water and sediment sampling and benthic invertebrate collection as part of an evaluation of environmental impact of a coal slurry spill.
- Performed baseline water quality sampling for several projects as part of mixing zone and metals translator studies.

Industrial Health and Safety:

- Served as Health and Safety Officer for several WV VRP RCRA and Corrective Action projects.
- Developed Health and Safety Plans for sampling activities for numerous types of projects.

File Review/Environmental Audits:

- Participated in review of more than 1,000 state CERCLIS files as an audit for West Virginia Department of Environmental Protection file system.
- Managed compliance audit field team for client with numerous facilities throughout West Virginia.

BERKELEY SPRINGS STATE PARK
OLD ROMAN BATHHOUSE
RENOVATIONS



Before



Before

West Virginia Division of Natural Resources contracted Montum Architecture to design repairs and improvements to the Old Roman Bathhouse at Berkeley Springs State Park. The structure was built in 1815 with various changes and updates since then. Work includes repairs to the tub structure and plumbing, replacement of the boiler, floor tile replacement, and other updates to fit and finish.



COMPLETION: SPRING 2019

COST: \$782,800

SIZE: 2,500 SF RENOVATED

LOCATION: BERKELEY SPRINGS, WV

CONTACT:
Carolyn Mansberger
DNR Project Manager
304-558-2764

Montum Architecture, LLC

37 ER Path, Keyser, WV 26726 • 304-276-7151 • tom@montumarch.com • montumarch.com

WYOMING COUNTY SCHOOLS WYOMING EAST HIGH SCHOOL HVAC AND ROOF REPLACEMENT



The West Virginia School Building Authority funded replacement of the HVAC systems and roofing at the existing Wyoming East High School in 2017. Montum Architecture is the architect-of-record for the HVAC project and integrated the roofing design consultant's information into bid package scenarios. Work is being performed within an occupied building with close coordination of school daily schedules and calendar of events. Many of the units are being replaced one-for-one with some zones being split into multiple units to allow flexibility of new curriculum within the spaces or needs for additional comfort control. Ceilings are being replaced to meet updated guidelines for educational facility acoustics.

COMPLETION: SUMMER 2019

BUDGET: \$3.2M

SIZE: 130,000 SF EXISTING

LOCATION: NEW RICHMOND, WV

CONTACT:
Donald Clay
Director of Facilities
304-732-6262

Montum Architecture, LLC

37 ER Path, Keyser, WV 26726 • 304-276-7151 • tom@montumarch.com • montumarch.com

BERKELEY SPRINGS STATE PARK POOL BATHHOUSE ROOFING REPLACEMENT

Montum

Architecture



West Virginia Division of Natural Resources contracted Montum Architecture to specify and administer roofing replacement of the Pool Bathhouse at Berkeley Springs State Park. The existing roofing was a combination of EPDM and built-up roofing. Failing wood framing was replaced and ACM abatement was incorporated in the demolition.

COMPLETED: 2018

COST: \$155,400

SIZE: 2,800 SF RENOVATED

LOCATION: BERKELEY SPRINGS, WV

CONTACT:
Carolyn Mansberger
DNR Project Manager
304-558-2764



Before

Montum Architecture, LLC

37 ER Path, Keyser, WV 26726 • 304-276-7151 • tom@montumarch.com • montumarch.com

POTOMAC STATE COLLEGE BACHELORS IN SCIENCE OF NURSING RENOVATION



West Virginia University - Potomac State College received the former National Guard Armory in 2016. In addition to recreational facilities, the newly named J. Edward Kelley Center will house the 4-year WVU School of Nursing BSN program. The project converted former meeting spaces into demonstration nursing laboratories and lecture spaces. Office spaces were renovated. Electrical and HVAC systems were updated to meet the new needs.



COMPLETED: 2018

BUDGET: NOT DISCLOSED

SIZE: 3,900 SF RENOVATED

LOCATION: KEYSER, WV

CONTACT:
Mike Simpson
Director of Facilities
304-788-6886

Montum Architecture, LLC

37 ER Path, Keyser, WV 26726 • 304-276-7151 • tom@montumarch.com • montumarch.com

Project Experience: HVAC Upgrade

Building 22 2nd Floor Upgrades

Charleston, WV

Services Provided:

- Mechanical
- Electric
- Telecommunications
- Construction Administration

Estimated Budget: \$325k

Contract Amount: \$398k

**Owner: State of West Virginia –
General Services Division**



West Virginia State Building 22 required renovations to the 2nd floor, which houses the state tax office. New mail processing equipment which have cooling, power, and data requirements were purchased by the state and the floor plan needed modifications. Miller Engineering, along with Montum Architecture designed the renovations to the 2nd floor to accommodate the changes needed. The existing space was served by a fan powered VAV AHU. The existing air distribution was modified to meet the requirements of the new floor plan. The processing room and server rooms, which require year round cooling, are being served with computer-room air conditioning (CRAC) units. The revised floor plan called for modifications to the power and telecommunications layouts for the integrated furniture systems. The grounding and bonding systems for the server room were upgraded as well. The project is under construction and anticipated to be complete by April 2018.

Project Contact:

*David Parsons, Operations and
Maintenance Manager
State Capitol, Room E-119
(304) 957-7122*

Descriptions of Past Projects Completed – New Construction

Advanced Surgical Rehabilitation Hospital

Services Provided:

- Mechanical
- Electrical
- Plumbing
- Nurse Call
- Fire Protection/Alarm

Estimated Budget: \$17M
Facility Area: 67,000 ft²
Owner: AOR Group



Interactive collaboration with the physician owners and contractor was the guiding principle behind the success of this project. Each and every system within the hospital was designed for and met precise health care compliance standards. Specifications for ventilation, electric, plumbing, HVAC and medical gas safety were all applied to the constructible design. Quality assurance and design aspects were satisfied by many intensive site visits as well as consistent communication with the contractor. Real time answers and coordination enabled the client to meet a fast-paced construction deadline which if missed would have had severe government regulatory repercussions and detrimental business outcomes.

Project Contact:
Rick Briggs
Lutz Myers & Associates, Inc.
(724) 758-5455

Descriptions of Past Projects Completed – HVAC Renovation

Dominion Post – Greer Building

Morgantown, WV

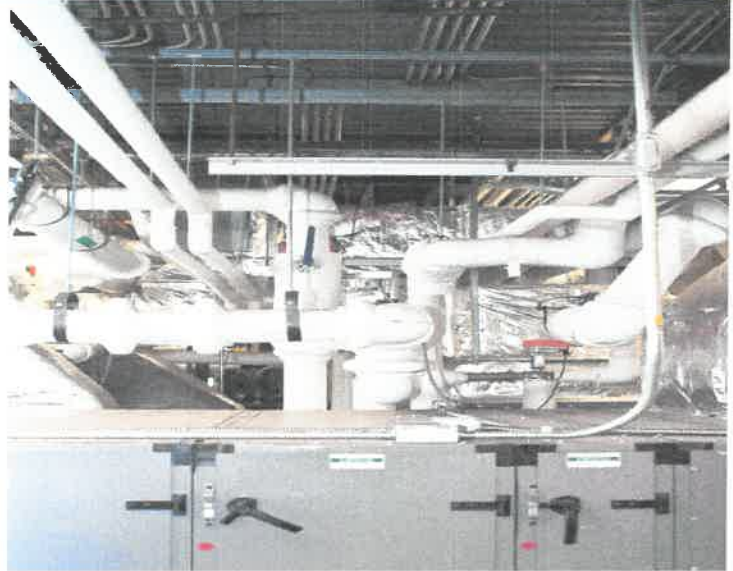
Services Provided:

- Field Study
- HVAC Upgrade
- Electrical
- Construction Administration

Estimated Budget: \$1.8M

Facility Area: 18,000 ft²

Owner: Greer Industries, Inc.



During a field study, Miller Engineering learned of HVAC system disintegration, interconnection of air systems between two levels of the building and the need for the facility to maintain occupancy during the renovation process. The goal of the project was to be a phased approach that integrated, updated and stabilized temperatures throughout the current floor plan, building levels and pending office reconfigurations. The main air handling systems, piping and ductwork were replaced and reconfigured as a necessity to serve the building's multiple levels and floor plan. The project was a success as a newly designed system was implemented into the existing floor plan and designed as scalable for future needs of the building's owner. Temperature control issues were resolved and the residents of the building could enjoy a more hospitable, consistent working environment.

Project Contact:
Chris Halterman, Director of Operations
Greer Industries, Inc.
Phone: (304) 376-2642

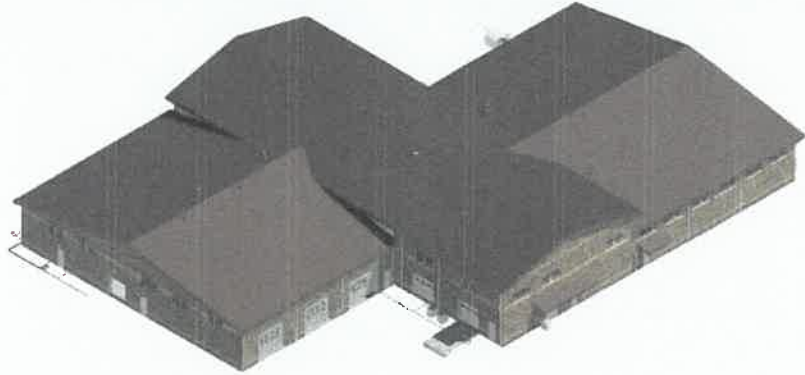
Descriptions of Past Projects Completed – MEP

DOH- D7 Lab & Multipurpose Buildings

Weston, WV

Services Provided:

- HVAC
- Electrical
- Plumbing
- Fire Protection
- Fire Alarm



MEP Budget: \$1.1M

Owner: WVDOH

PROJECT GOALS:

Design both buildings to communicate and interface with rest of D7 campus

The access control, fire alarm, and controls will communicate with the headquarters building. The headquarters fire pumps will also serve the multi-purpose building via underground fire loop.

MEI teamed with Alpha Associates to design a new lab building and multi-purpose building for WVDOH District 7. The lab building consists of office and lab space while the multi-purpose building consists of office space, conference and training rooms, and four large high bay areas for the Building & Grounds, Bridge, General Store, and Signs departments. Both facilities utilize full capacity backup generators. LED lighting was used to reduce electrical usage. The lab building is served by ground mounted make-up air and VAV units. The multi-purpose building uses split systems with ERVs to condition the office and conference areas while the high bay areas use radiant heaters and large fans. Security, access control, and fire alarm for both facilities tie to the District 7 headquarters for central monitoring. To eliminate the need for a fire pump, a fire protection loop will be installed from the headquarters building fire pump to serve the multi-purpose building. The project is designed and awaiting bidding.

Project Contact:
 Timothy Moran
 WV DOH
 (304) 887-2325

Descriptions of Past Projects Completed – Fire Suppression

FMW Composites Building

Services Provided:

- Electrical
- Plumbing
- HVAC
- Fire Protection
- Fire Alarm

Estimated Budget: \$3.8M

Facility Area: 15,000 ft²

Owner: FMW Composite Systems



The facility's production process utilizes explosive hydrogen and propane requiring electrical, HVAC and plumbing systems to be explosion-proof. The project required extensive review of air movement (supply, exhaust, room-to room) within and outside the facility. The processes also use chemicals which can emit vaporous hydrochloric acid, requiring emergency ventilation systems. An extensive code review process was performed as well as design of a foam-based fire suppression system. Process gasses flow from exterior bulk storage to the process equipment through a piping network. Significant complexity was added as the roof structure could not support any HVAC equipment and location, footprint and services were already established during building of the shell.

Project Contact:
Richard Colebank, PE
Alpha Associates
Phone: (304) 296-8216

Descriptions of Past Projects Completed – MEP

Grant Co. Bank Addition & Renovations

Petersburg, WV

Services Provided:

- Electrical
- HVAC
- Plumbing
- Fire Alarm

Addition Size: 3,200 sq ft

Original Bank Size: 13,400 sq ft

MEP Budget:



Miller Engineering teamed up with Alpha Associates to design an addition to the Grant County Bank in Petersburg, WV. The 3,200 sq ft addition consists of a new main lobby, teller space, drive-through, and offices. A new rooftop unit serves the addition for HVAC. MEI provided design services for new electrical, lighting, data, and plumbing. The original bank building received a new fire alarm system in addition to a LED lighting replacement throughout. A backup generator was installed to serve the drive-through, teller area, security system, and data servers. MEI coordinated with bank consultants for power and data requirements for bank security and surveillance. Construction was phased so the original drive-through could remain in operation until the new drive-through area was operable to minimize customer disturbance.

Project Contact:
Rick Colebank, PE
Alpha Associates
(304) 291-2234



Carol A. Stevens, PE, F.ASCE

Structural Engineer

EDUCATION

West Virginia University, BSCE, 1984
Chi Epsilon National Civil Engineering Honorary
The Pennsylvania State University, ME Eng Sci, 1989

PROFESSIONAL REGISTRATION

P.E. 1990 Pennsylvania
P.E. 1991 West Virginia
P.E. 1994 Maryland
P.E. 2008 Ohio
P.E. 2010 Kentucky
P.E. 2013 Virginia

BACKGROUND SUMMARY

2001 – Present President, Structural Engineer
CAS Structural Engineering, Inc.

1999 – 2001 Structural Engineer
Clingenpeel/McBrayer & Assoc, Inc.

1996 – 1999 Transportation Department Manager
Structural Engineer
Chapman Technical Group, Inc.

1995 – 1996 Structural Engineer
Alpha Associates, Inc.

1988 – 1995 Structural Department Manager
Structural Engineer
NuTec Design Associates, Inc.

1982 – 1988 Engineer
AAI Corporation, Inc.

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers
National Society of Professional Engineers
American Concrete Institute
American Institute of Steel Construction
West Virginia University Department of Civil and
Environmental Engineering Advisory Committee
West Virginia University Institute of Technology
Department of Civil Engineering Advisory Committee

EXPERIENCE

West Virginia, Pocahontas County Wellness and Community Center, Marlinton: Structural design of foundations for pre-engineered metal building addition to existing school facility.

West Virginia, Mt. Calvary Baptist Church: Structural design of foundations and second floor framing for a pre-engineered metal building addition to an existing church.

West Virginia, Goldtown Activity Building: Structural design of foundations for pre-engineered metal building.

West Virginia, Hardy County Storage Building: Structural design of foundations for pre-engineered metal building.

West Virginia, Upshur County Hangars: Structural design of foundations for pre-engineered metal building structures utilized as airplane hangars.

West Virginia, Chesapeake Community Center: Structural design of foundations for new pre-engineered metal building.

West Virginia, Landis Pool Addition: Structural design of foundations for pre-engineered metal building enclosure for indoor pool.

West Virginia, Bluefield Area Transit Building: Structural design of foundations for new multi-function transit building.

West Virginia, Executive Air, Yeager Airport: Structural design of foundations for new metal building being utilized as an airplane hangar.

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PREVIOUS EXPERIENCE

Pennsylvania, Friendship Community Church: Performed structural design of foundations for pre-engineered structure for classrooms and multi-purpose room.

Pennsylvania, Gettysburg Baptist Church: Performed structural design of foundations for pre-engineered structure for new multi-purpose facility.

Pennsylvania, First Baptist Church: Performed structural design of foundations for pre-engineered structure for auditorium, choir room, kitchen and classrooms.

Pennsylvania, Covenant Moravian Church: Performed structural design of foundations for pre-engineered structure for addition for classrooms, offices and kitchen.

Pennsylvania, Pine Grove United Methodist Church: Performed structural design of foundations for pre-engineered structure for multi-purpose room, kitchen, nursery, sanctuary and 2-story classroom structure.

Pennsylvania, Eastside Church and Ministries Center: Performed structural design of foundations for pre-engineered structure for classrooms, meeting rooms, kitchen, offices and auditorium.

Pennsylvania, Calvary Baptist Church: Performed structural design of foundations for pre-engineered structure for fellowship hall, classrooms, kitchen and sanctuary.

Pennsylvania, Christian Life Church: Performed structural design of foundations for pre-engineered structure for new sanctuary, multi-purpose room, classrooms, fellowship room, offices and kitchen.

Pennsylvania, Grace Fellowship Church: Performed structural design of foundations for pre-engineered structure for new classrooms, meeting rooms, and multi-purpose room.

Pennsylvania, Hope Reformed Presbyterian Church: Performed structural design of foundations for pre-engineered structure for new sanctuary, narthex, classrooms and offices.

Pennsylvania, Providence Presbyterian Church: Performed structural design of foundations for pre-engineered structure for new auditorium, narthex, classrooms and offices.

GEOTECHNICAL AND CIVIL SITE DESIGN STONERISE HEALTHCARE EASTBROOK ADDITION

*Stonerise Healthcare
Charleston, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by Stonerise Healthcare (Stonerise) to provide geotechnical evaluation and site development services for an approximate 38,000 ft² addition to the existing Eastbrook facility in Charleston, West Virginia. POTESTA first performed a subsurface exploration, which included seven subsurface test borings. POTESTA then prepared the civil site design plans while working closely with the Stonerise architect, as well as the City of Charleston. There were many aspects to this project in which creative solutions were used to work within tight parameters associated with this site. Some of the tasks associated with the geotechnical exploration and civil site design are listed below:



- Designing a box culvert to cover up 275 feet of stream with minimal cover allowed for a parking lot.
- The design of a 120-foot segmental retaining wall.
- Working with the City of Charleston and West Virginia Department of Environmental Protection (WVDEP) to acquire proper permits associated with the addition.
- Design of a new ambulance entrance under tight restrictions associated with planned location and proximity to Chesterfield Avenue.
- Evaluation of the sanitary line with restrictions associated with minimal slope, the box culvert, existing tie in location, and existing buildings connection.

POTESTA prides itself on working closely with the client to deliver a product that POTESTA and the client are happy with. POTESTA has worked on many other similar projects for Stonerise and continues to do so.



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CIVIL AND GEOTECHNICAL ENGINEERING FOR DEVELOPMENT OF MARCELLUS WELL PADS

*Stone Energy Corporation
Various Sites, Wetzel County, West Virginia*

Potesta & Associates, Inc. (POTESTA) has been working with Stone Energy Corporation to provide civil and geotechnical engineering services related to the development of Marcellus production well pads and other infrastructure improvements in northwestern West Virginia. POTESTA has worked with Stone Energy consultants and contractors to evaluate current geotechnical construction practices and design procedures to development standard details and procedures which will be implemented in the field to implement proper installation and earthwork construction techniques to minimize geotechnical failures



associated with not only well pad construction sites but other support facilities such as compressor/treatment sites, pipelines, haulroads, stream crossings, etc.

POTESTA has also been providing review of current permitting packages to determine if adequate environmental due diligence has been provided with regard to environmental permits. Relevant permits include USACE 404 certification, WVDEP 401 certification, WVDEP Construction Stormwater Permit coverage, County Floodplain Ordinance Applications, etc.

POTESTA has also worked on several large projects for Stone Energy to provide primary design, general technical consulting, and environmental permitting services. These projects have ranged from new pad construction and permitting to geotechnical exploration, design consulting, and field construction observation/testing services for several large slope stability projects. These projects include:

- **Pribble Storage Tank Slope Stability Evaluation and Repair** – The project included a large active slide area (250,000 CY) which was impacting the foundation of a large aboveground storage tank used for the recirculation and storage of water for hydraulic fracturing operations in the well field. The slide extended to the foundation of a secondary containment tank resulting in the undermining of approximately 100 of the foundations. Work included completion of a geotechnical study and exploration of the site, development of a regrading plan based on the results of laboratory soils testing and slope stability models, and construction observation and

field compaction testing of the fill material during construction. POTE STA was also responsible for preparing and gaining approval of a Construction/Stormwater Permit for the work.

- Potts Well Pad Slope Stability Evaluation and Repair – This work included a subsurface exploration study, stability evaluation, and construction observation of a section of failed fill slope associated with the completed well pad. The failed slope required the excavation of toe material to install a shot rock toe buttress to protect a water line and gas transmission line near the toe of the slope.
- Mills/Wetzel No. 3 Well Pad Design and Permitting – POTE STA worked with Stone Energy to prepare site grading plans and details for a new production pad site. The work included access roadway design and layout, pad subgrade preparation, cut/fill quantities to result in an earthwork balance of the site, and construction observation and field compaction testing during the work.
- Conley Well Pad Design – POTE STA conducted subsurface site exploration work and developed a site grading plan for the proposed pad area, as well as the site access road and a required stream crossing (bridge). POTE STA also prepared the required permits including the environmental permits such as USACE 404 and WVDEP 401 certification for the planned bridge construction, as well as the preparation of appropriate floodplain and hydraulic models for the County Floodplain Ordinance Application.
- Schupbach Ridge Road Rehabilitation Project – POTE STA worked with the WVDOH to provide construction plans for an approximate 0.9 mile section of Schupbach Ridge Road (CR 20) in Wetzel County, West Virginia. This project included a pavement design that implemented the use of a Full Depth Reclamation (FDR) overlain with the hot-mix asphalt.
- Morris Access Road and Pad Design – POTE STA worked with Stone Energy to provide a site grading plan with cut/fill quantities balanced over the site. POTE STA also provided construction observations and field compaction testing during the construction of the pad and access road.



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SITE PLAN DEVELOPMENT

Dollar General Store Berkeley Springs, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Dollar General Store to develop a site plan for development of a store south of Berkeley Springs along US Route 22. The boundary and topographical mapping was developed by Berkeley Land Surveys. The project consisted of the following:

- Geotechnical evaluation and reporting.
- Development of grading plan to excavate approximately 50,000 cubic yards with steep slopes to situate building and facilitate storm water drainage.
- Development of turn-lanes and pavement widening along Route 522.
- Design commercial entrance.
- Development of erosion and sediment control plans to meet the West Virginia Department of Environmental Protection (WVDEP) National Pollutant Discharge Elimination System application process.

POTESTA represented the client throughout review and approval process. Project involved permitting through WVDEP, West Virginia Department of Highways and Morgan County, West Virginia.



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WATER TREATMENT PLANT MAINTENANCE BUILDING

*Morgantown Utility Board
Morgantown, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by Morgantown Utility Board (MUB) to complete a subsurface exploration to result in geotechnical engineering design recommendations for the planned water treatment plant maintenance building near the existing water treatment plant on Don Knotts Boulevard in Morgantown, West Virginia. This proposed maintenance building is located to the southeast of the existing water treatment plant along the Monongahela River. This project consisted of a maintenance building and proposed foundations for the structure.



POTESTA completed a subsurface exploration of the site which included the completion of five borings to collect samples and determine the underlying depths and properties of the soil. POTESTA completed a Geotechnical Report for the maintenance building. This report included general subsurface conditions, laboratory data, foundation recommendations, and site preparation recommendations. POTESTA determined the differential settlements across the site to aid the structural engineer in the buildings overall design. Poor subgrade soils were encountered during the subsurface exploration, which was expected from the previously completed subsurface exploration and proximity to the river. Due to the nature of the soils at this site, additional recommendations were implemented into the foundation design and construction that allowed the structural engineer to cost-effectively remain with shallow foundations rather than going to deep foundations.



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FAMILY HEALTH ASSOCIATES OFFICE BUILDING

*RC General Contractors
South Charleston, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by the RC General Contractors to provide civil and geotechnical engineering consulting services in support of the development and construction of a one-story physicians' office building in South Charleston, West Virginia. POTESTA completed four soil borings as part of a subsurface exploration and prepared a geotechnical report addressing foundation recommendations and recommendations for site preparation. POTESTA also designed a stormwater management plan for the office building and associated parking areas including downspout drains, drop inlets, culverts, and slotted corrugated metal pipe drains to convey stormwater runoff to the city's storm sewer systems.



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GEOTECHNICAL EVALUATION FOR R. E. MICHEL BUILDING

Alpha Associates, Inc.

Morgantown, Monongalia County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Alpha Associates, Inc. of Morgantown, West Virginia to provide geotechnical related services for the R. E. Michel building now located on the northern side of the intersection between WV State Route 705 and US Route 119, along “The Mileground” in Morgantown, West Virginia. A one-story commercial structure with associated parking and loading/unloading facilities was placed on the property, which was previously used by West Virginia University’s agricultural college as a cornfield.



Four soil borings were completed as part of our scope of the project and to aid in foundation recommendations. Soil depth was between 18 inches and 5 feet, with auger refusal occurring in sandstone bedrock.

In addition to soil boring activities and foundation recommendations, POTESTA performed a limited review of available information relative to coal mining activities. Based on information from the West Virginia Geological Survey (WVGS), the Pittsburgh

coal seam underlies the project site. This seam is typically 5 to 8 feet thick, although areas around Morgantown exhibit seam thickness in excess of 10 feet. According to information gathered from the WVGS, as well as discussions with WVGS personnel, the project area has no records indicating it to be undermined; but given the historical nature of coal mining in the area, it is likely that a portion of the site has been mined. To further review the undermining extent, and the likelihood for subsidence potential, further subsurface exploration, down-hole camera work, and additional research would be necessary. However, given the fact that the building is metal framed, a more forgiving structure to vertical displacements, and the hard sandstone that generally overlies the Pittsburgh seam, no additional services were requested of POTESTA.



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WVU ENGINEERING SCIENCES BUILDING, EAST WING ADDITION

*Alpha Associates, Inc.
Morgantown, West Virginia*



Potesta & Associates, Inc. (POTESTA) was retained by Alpha Associates, Inc. of Morgantown, West Virginia to provide geotechnical engineering services for the East Wing Addition to the Engineering Sciences Building for the West Virginia University College of Engineering and Mineral Resources. The existing Engineering Sciences Building, located on the Evansdale Campus in Morgantown, has a history of problems due to pyrite in the geologic strata below the building.

The multiple-story addition contained a total footprint of approximately 9,963 square feet. Subsurface exploration involved soil boring totaling 146 feet and rock coring of 240 feet through 23 total boring locations. Foundation alternatives considered included spread footings and deep foundations. Ultimately, deep foundations (caissons) were utilized and measures were taken to reduce the potential issues that could occur due to the expansive pyrite found within the geologic strata on which the building addition is located. The project loading was complex as it is a multiple-story structure with floor elevations and associated foundation elements at three different levels. The structure also included integral retaining walls that were evaluated for potential stresses due to potential vertical and horizontal pressures from the expansive pyrites.



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WEST VIRGINIA WATER DEVELOPMENT AUTHORITY OFFICE BUILDING

*Associated Architects, Inc.
Charleston, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by Associated Architects, Inc. to prepare a site topographic survey/utility mapping, geotechnical exploration and foundation recommendations report, civil site design, and permitting for a proposed 14,500 square foot, two-story office building and parking lot. The proposed development was on Pfaff and Smith's existing 2.75-acre site located on the corner of Bullitt Street and Spring Street and along the bank of the Elk River in Charleston, West Virginia.

POTESTA prepared the topographic mapping for the project from ground survey information. The project also included the exploration of four subsurface borings to collect samples for laboratory testing.

During the project, POTESTA was able to help overcome difficult construction obstacles associated with main utility feeds located along the old Elk River road utility corridor. The parking lot was designed with security in mind and included a rod iron fence that completely enclosed the lot and included automated gates with remote access from within the building. POTESTA also prepared landscaping plans for the building and parking lot areas.



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RANDOLPH-MACON ACADEMY STAN FULTON CLASSROOM BUILDING

AIA Architects

Front Royal, Warren County, Virginia

Potesta & Associates, Inc. (POTESTA) developed a site plan for a new three-story “Stan Fulton” classroom building on the Randolph-Macon Academy campus. Design included the location and grading of the proposed building, parking lots, landscaping roadways and walkways, demolition plan of two buildings and their infrastructure; erosion and sediment control plan; water and sewer utilities; and underground stormwater drainage system. The site plan was approved through the Lord Fairfax Soil and Water Conservation District and the Town of Front Royal Planning and Zoning Department. The specific project tasks completed on this project included, but were not limited to, the following:

- Preliminary review, site layout, and mapping development.
- Existing conditions/demolition and erosion and sediment control plans.
- Grading, drainage design and storm water management.
- Utility plan.
- Roadway and intersection design.
- Landscaping/lighting plans.
- Submittal and review of site plan.
- Construction assistance.



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GEOTECHNICAL SERVICES FOR DESIGN OF NEW HIGH AND ELEMENTARY SCHOOLS

*Kanawha County Board of Education
Kanawha County, West Virginia*

Potesta & Associates, Inc. (POTESTA) was contracted by the Kanawha County Board of Education to perform geotechnical services for the design of the new Herbert Hoover High School (HHHS) and the Clendenin Elementary School (CES) in Kanawha County, West Virginia.

POTESTA performed a subsurface exploration consisting of over 40 borings for the HHHS site. Utilizing the data from laboratory testing and boring log data, POTESTA prepared a geotechnical report for the site which addressed excavation and fill placement considerations for the high school, locker rooms, press boxes, and bleacher seating areas. Additional site development considerations included earthwork associated with the main access road, underdrains, storm water management, and underground utilities.



For the CES site, POTESTA drilled 19 borings during the subsurface exploration. This school building will be placed on natural material with auxiliary features, such as parking lots and sports fields on fill. POTESTA prepared earthwork/foundation recommendations for this work based on the boring logs and results of the laboratory testing. The report also addressed construction of the main access road, slope stability, and installation of stormwater conveyance structures and underground utilities. POTESTA also coordinated with local utility providers regarding the provision of water and sewage to the site.



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GEOTECHNICAL EVALUATION MONONGALIA GENERAL HOSPITAL EXPANSION

*Alpha Associates, Inc.
Morgantown, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by Alpha Associates, Inc. (Alpha) to provide geotechnical evaluation services for the expansion of the Monongalia General Hospital (Hospital) in Morgantown, West Virginia. POTESTA performed a subsurface exploration, which included 36 subsurface test borings and are elaborated as follows:

- Five of these borings were completed to make earthwork recommendations related to the possible excavation of the hillside adjacent to the Hospital.
- Three borings were conducted to allow for recommendations related to a proposed Mechanically Stabilized Earth (MSE) wall.
- Four borings were conducted at corner locations of the proposed central plant expansion.
- Nineteen borings were conducted at locations along the perimeter and within the proposed foundation footprint of the proposed main hospital addition.
- Five borings were located within the area of the proposed parking lot addition.

Rock coring was also performed on eight of the aforementioned borings to assist in the geotechnical recommendations. Samples were gathered and tested to provide more information pertaining to the subsurface conditions. Using the data from the subsurface exploration, POTESTA was able to provide recommendations pertaining to, but not limited to, fill material to be used, the MSE wall, earthwork excavation, groundwater, specific shallow foundations, as well as general foundations, settlement, pavement, and provided general geotechnical considerations.



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POCAHONTAS COUNTY WELLNESS AND COMMUNITY CENTER

Marlinton, West Virginia



The new approximately 13,000 SF Wellness Center was constructed adjacent to the existing Marlinton Elementary School. The facility includes a middle-school size gymnasium and basketball court, two multi-purpose rooms, a racquetball court, a wellness center and a warming kitchen/concession stand.



The majority of the structure consists of a pre-engineered metal building, with the entrance being constructed using conventional stick-framed construction.



MT. CALVARY BAPTIST CHURCH

Charleston, West Virginia

Project included an addition to the existing church for an activity building.



Structure is a pre-engineered metal building with a partial second floor and houses classrooms in addition to gym/multi-purpose room space.

A latter addition tied both structures together with a new entrance and elevator/stairs for accessibility.





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

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

Proc Folder: 581555

Doc Description: East Campus Assessment and Metal Building Design

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2019-05-21	2019-06-12 13:30:00	CEOI 0211 GSD1900000011	1

BID RECEIVING LOCATION

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

VENDOR

Vendor Name, Address and Telephone Number:

FOR INFORMATION CONTACT THE BUYER

Melissa Pettrey
 (304) 558-0094
 melissa.k.pettrey@wv.gov

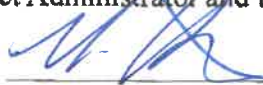
Signature X

FEIN # 82-1385831

DATE June 10, 2019

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

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.

 Member

(Name, Title)
Thomas Pritts, Member

(Printed Name and Title)
37 ER Path, Keyser, WV 26726

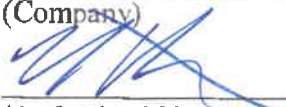
(Address)
304-276-7151

(Phone Number) / (Fax Number)
tom@montumarch.com

(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Montum Architecture LLC

(Company)
 Member

(Authorized Signature) (Representative Name, Title)

Thomas Pritts, Member

(Printed Name and Title of Authorized Representative)

June 10, 2019

(Date)

304-276-7151

(Phone Number) (Fax Number)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: GSD190000011

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

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

Addendum Numbers Received:

(Check the box next to each addendum received)

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

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

Montum Architecture, LLC

Company

Authorized Signature

June 10, 2019

Date

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