

*Expression of Interest for*

## **Engineering Design Services**

*for the*

### **Lake (Bell) Portals & Drainage Solicitation No. CEOI 0313 DEP1900000003**

*submitted to*

**State of West Virginia  
Department of Administration  
Purchasing Division  
Charleston, WV**

September 2018 ©

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WV PURCHASING  
DIVISION





615 West Highland Avenue  
Ebensburg, PA 15931  
814.472.7700  
814.472.7712  
[www.lrkimball.com](http://www.lrkimball.com)

September 10, 2018

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

Re: Expression of Interest, Engineering Design Services  
Lake (Bell) Portals & Drainage (CEOI 0313 DEP1900000003)

Attention: Bid Clerk

CDI-Infrastructure, LLC dba L.R. Kimball is pleased to submit one (1) copy of our Response to the Expression of Interest request for Engineering Design Services for the Lake (Bell) Portals and Drainage site. CDI-Infrastructure, LLC dba L.R. Kimball representatives have reviewed the request for proposal thoroughly. Upon selection, CDI requests the opportunity to negotiate mutually agreeable terms and conditions.

L.R. Kimball is a diversified organization of consulting engineers, architects, planners, environmental scientists and construction managers. With over 65 years of quality service, we are annually ranked in the top 50 engineering / architectural design and construction management firms in the nation by *Engineering News Record*. The firm is headquartered in Ebensburg, Pennsylvania, and has various regional offices including Charleston, West Virginia, and Pittsburgh, State College, Harrisburg and Philadelphia, Pennsylvania. Our firm employs many professional, technical and administrative personnel. Among this staff is our Civil Design Group that consists of engineers, geologists and other specialists who have years of experience in the assessment, mapping, geotechnical investigation, remediation design and construction oversight for Abandoned Mine Land sites in West Virginia, Pennsylvania, Ohio, Virginia and Kentucky.

We have extensive experience with the design of site grading, access roads, erosion and sedimentation controls, stormwater management, permitting and post-construction site remediation. L.R. Kimball is experienced in the development of construction drawings, specifications and bid packages for abandoned mine land reclamation. We have also worked on several abandoned mine land projects that included wet-seals and dry-seals of exposed mine openings, as well as one project which required installation of mine tunnel seals with special bat openings.

Thank you for the opportunity to submit our Expression of Interest. With your selection of L.R. Kimball, we will ensure that your goals and objectives for Abandoned Mine Land remediation are satisfied in the most professional and expeditious manner. Please contact us if you have any questions or need additional information.

Sincerely,

David G. Minnear, PE  
Sr, Project Manager  
814-719-7865 / Email [David.Minnear@cdicorp.com](mailto:David.Minnear@cdicorp.com)

Richard E. Genday, PE  
Vice President  
814-419-7873 / Email [Rick.Genday@cdicorp.com](mailto:Rick.Genday@cdicorp.com)

DGM/reb

Enclosure

K:\EBG\_T\_DRIVE\Proposals\_Presentations\C\_e\Y2018\E45 Water Wastewater\WV DEP AML&R\Lake (Bell) Portals Due 20180912\PR 20180910 WV Lake Bell Portals Proposal.docx



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: 463772

Doc Description: EOI - Lake (Bell) Portals

Proc Type: Central Purchase Order

Date issued	Solicitation Closes	Solicitation No	Version
2018-08-16	2018-09-12 13:30:00	CEOI 0313 DEP1900000003	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:  
 CDI-Infrastructure, LLC dba L.R. Kimball  
 615 West Highland Avenue  
 Ebensburg, PA 15931  
 814-419-7873

**FOR INFORMATION CONTACT THE BUYER**

Brittany E Ingraham  
 (304) 558-2157  
 brittany.e.ingraham@wv.gov

Signature X

FEIN # 27-2620523

DATE September 10, 2018

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

Upon award, we kindly request the opportunity to discuss the terms of the agreement.

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# 1. DESCRIPTION OF THE FIRM/TEAM

## 1a. Company Overview

### L.R. Kimball (a CDI Company)



In 1953, L.R. Kimball was founded as a Consulting Engineering Firm. After college graduation, L. Robert Kimball, our founder, received a commission in the Army Air Corps. During World War II he served as lead navigator in B-17 aircraft with the Bloody 100th Bomb Group stationed in Thorpes-Abbotts, England. Through his flying service, he was awarded the Distinguished Flying Cross and other medals. Upon returning, he started a two-person consulting engineering firm specializing in civil engineering and surveying. In 1962, the Kimball family purchased what was once a historic inn, in Mr. Kimball's hometown of Ebensburg, PA and moved the

headquarters there, where it remains to this day.

L.R. Kimball is among the nation's leading professional service companies offering its clients architectural and structural, mechanical and electrical design services, security systems designs, civil, environmental and transportation engineering expertise. We have served more than 1,500 clients throughout the United States. Over the course of six decades, clients have valued L.R. Kimball's steadfast principles and bedrock reputation which have produced exceptional results for our clients. On June 28, 2010, L.R. Kimball became a business unit of CDI Engineering, which also operates as CDI-Infrastructure, LLC; CDI Architects Group LLC; CDI Architects, Inc.; Comprehensive Designer PLLC; CDI Engineering (Michigan) PLLC; and CDI Engineering (NY) LLC. CDI Engineering offers project management, engineering design services, and engineering staffing solutions to firms in the government services, infrastructure, life sciences, and process and industrial markets.

Our firm continues to rank among the leading design firms in Engineering News Record (ENR), the publication of record for over 70,000 engineering and construction industry professionals throughout North America. ENR published its Top 500 Engineering Design Firm rankings for 2018, and once again we have ranked among the leading design firms in North America. Our rankings include:



- Top 20 Design Firms for Manufacturing Sector: #13
- Top 100 Pure Designers: #39
- Top 20 Design Firms for Industrial Process/Petroleum Sector: #19
- Top 50 Design Firms in International Markets: #35
- Top 500 Design Firms: #35



**Targeted Results. Expertly Managed  
We Stake Our Reputation On It.**

### About CDI / L.R. Kimball

On June 28, 2010, L. Robert Kimball & Associates, Inc. (L.R. Kimball) was acquired by CDI Corporation. For more than 65 years, CDI has delivered engineering and technology solutions and recruitment and staffing services to Fortune 1000 clients with operations in markets around the world. Some of the growing industries that CDI serves include power, energy, chemicals & infrastructure, and defense. CDI has approximately 6500 employees in North America.

L.R. Kimball is a business unit of CDI Engineering, which also operates as CDI-Infrastructure, LLC; CDI Architects Group LLC; CDI Architects, Inc.; Comprehensive Designer PLLC; CDI Engineering (Michigan) PLLC; and CDI Engineering (NY) LLC. CDI Engineering offers project management, engineering design services, and engineering staffing solutions to firms in the government services, infrastructure, life sciences, and process and industrial markets. Learn more at [www.cdicorp.com](http://www.cdicorp.com)

### Business Description Information

<b>Name and title of individual submitting the proposal:</b>	Richard E. Genday, PE, Vice President
<b>Name of company:</b>	CDI-Infrastructure, LLC dba L.R. Kimball
<b>Company office address (clearly indicate home office address and local office address if they differ):</b>	See below for specific Office Location
<b>Website address:</b>	<a href="http://www.lrkimball.com">www.lrkimball.com</a>

<b>Federal taxpayer identification number or federal employer identification number:</b>	27-2620523
<b>Number of employees:</b>	129
<b>Daytime phone number:</b>	814-419-7873
<b>Fax number:</b>	814-472-7700
<b>Email address:</b>	<a href="mailto:Rick.Genday@CDIcorp.com">Rick.Genday@CDIcorp.com</a>

**Primary Contact**

<b>Primary Contact Name and job title:</b>	David Minnear, PE, Senior Project Manager
<b>Office address:</b>	615 West Highland Avenue Ebensburg, PA 15931
<b>Telephone number:</b>	814-419-7865
<b>Fax number:</b>	814-472-7700
<b>Email address:</b>	<a href="mailto:dave.minnear@CDIcorp.com">dave.minnear@CDIcorp.com</a>

**Business Background**

CDI-Infrastructure, LLC dba L.R. Kimball was founded in 2010 following the acquisition of L. Robert Kimball & Associates. Our parent company is CDI-Infrastructure Holdings, Inc.

**L.R. Kimball Office Locations**

L.R. Kimball takes prides in our diversity to provide our clients with full-service capabilities for any type of project. Management of our projects is completed by our single point of contact, the L.R. Kimball Project Manager. This person has access to fully trained individuals at his/her disposal for use on any project.

L.R. Kimball's corporate office is headquartered in Ebensburg, Pennsylvania serving a prestigious list of clients throughout the United States. Our work has earned numerous national and international awards for design and engineering excellence, including rankings in such publications as World Architecture Magazine, Engineering News-Record, and Building Design and Construction. L.R. Kimball's corporate office offers services in Architectural Engineering, and Transportation and Environmental Engineering Services. Our home office also includes a 7,000 sf testing facility and houses state-of-the-art architectural and engineering hardware and software. This office maintains a permanent staff of professionals who are experienced in virtually every aspect of planning, design and construction administration. This makes L.R. Kimball a full-service firm with "seamless" capabilities.

L.R. Kimball's headquarters is strategically located to provide immediate response to projects while maintaining high quality, cost-effectiveness, and timeliness.



**Additional Office Locations**

500 Corporate Landing, 2nd Floor  
 Charleston, WV 25311  
 304-746-3657  
 David P. Hill, PE, MSE  
 127 employees

615 W. Highland Avenue  
 Ebensburg, PA 15931  
 814-472-7700  
 Martin S. Karlovic  
 109 employees

Frick Building  
 437 Grant Street, Suite 812  
 Pittsburgh, PA 15219  
 412-201-4900  
 Geoffrey S. Holmes, PE, CBSI  
 23 employees

4400 Deer Path Road, Suite 105  
 Harrisburg, PA 17110  
 717-221-8820  
 7 employees

328 Innovation Boulevard, Suite 222  
 State College, PA 16803  
 814-867-4566  
 2 employees

1735 Market Street, Suite 200  
 Philadelphia, PA 19103  
 215-665-0308  
 2 employees

**CDI-Infrastructure, LLC dba L.R. Kimball - Principals**

Martin S. Karlovic	President	215-665-0308
Brian D. Short	Vice President	215-636-1129
Richard E. Genday, PE	Vice President	814-419-7873
Edward J. Jones	Vice President	814-244-0628
David S. Kimmel	CFO & Treasurer	215.282.8723
Rory Morrison Smith	Assistant Treasurer	215-282-8220
Craig H. Lewis	Secretary	215-636-1115

**WEST VIRGINIA  
STATE TAX DEPARTMENT  
BUSINESS REGISTRATION  
CERTIFICATE**

ISSUED TO:  
**CDI-INFRASTRUCTURE, LLC  
DBA L.R. KIMBALL  
615 W HIGHLAND AVE  
EBENSBURG, PA 15931-1048**

**BUSINESS REGISTRATION ACCOUNT NUMBER: 2243-7324**

This certificate is issued on: 04/22/2011

*This certificate is issued by  
the West Virginia State Tax Commissioner  
in accordance with Chapter 11, Article 12, of the West Virginia Code*

*The person or organization identified on this certificate is registered  
to conduct business in the State of West Virginia at the location above.*

This certificate is not transferrable and must be displayed at the location for which issued.  
This certificate shall be permanent until cessation of the business for which the certificate of registration  
was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new  
certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.  
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of  
this certificate displayed at every job site within West Virginia.



**L.R. Kimball's Primary Services**



**Civil and Environmental.** Since the 1950's, we have built an outstanding reputation in civil and environmental consulting services. The wide spectrum of our clients includes industry, institutions, commercial facilities, utilities, private developers, and military and governmental agencies. Starting with the client, our project team conducts assessments and planning, siting, testing, permitting, design and construction monitoring, with the goal of creating innovative solutions to complex, critical issues.

Our clients can expect full civil and environmental support for their projects. Our services also include full engineering support for facility and site designs, site assessments, hazardous materials management, geotechnical investigations and analysis, employee health and safety management and environmental permitting. These projects run the gamut of multimillion-dollar commercial, resort and hotel developments; industrial park and office complex developments; subdivisions; water and wastewater facilities; military facilities; solid and hazardous waste disposal operations; industrial facilities; utilities; and manufacturing facilities. We also assist the client with planning, financing options, grant assistance, cost of service studies, construction monitoring, and operations consulting.



**Transportation.** Highways, bridges, airports – the infrastructure that supports the movement of people and goods throughout the country. The design, construction, and maintenance of that infrastructure is critical to the economy and to the health and safety of the population. Structural integrity, safety, environmental impact, and design criteria of air and ground transportation facilities require a seasoned, knowledgeable staff who are well-versed in all aspects of integrated planning and context sensitive design. L.R. Kimball's Transportation Division can provide that team.

Using the latest technology, we offer a full complement of planning, project administration, design, environmental permitting, construction inspection, and environmental studies for large and small projects. We take pride in our track record of maintaining successful, long-term relationships with our clients, including state departments of transportation, turnpike commissions, airport authorities, counties, municipalities, and developers.



**Mapping Sciences.** We offer full-service mapping sciences, including: surveying, aerial photography, analytical aerotriangulation, photogrammetry, planimetric and topographic mapping, digital orthophoto production, cadastral mapping, E9-1-1 addressing, environmental mapping and GIS. Our self-contained mapping operation is supported by an array of technical personnel. Throughout the years, L.R. Kimball has evolved to meet the ever-changing needs of our clients, from traditional land surveys to the most advanced digital mapping, remote sensing and GIS applications. With over 50 mapping experts, we have the capacity, expertise and equipment resources to undertake projects of varying sizes and technical complexity.



**Architecture and Engineering Building Systems.** Our services include innovative design for new buildings as well as renovation and adaptive reuse of existing buildings. A L.R. Kimball project is designed not only with aesthetics in mind, but also to meet the specific environmental needs of the people who work, learn, or live in that space. We consider the responsible stewardship of natural resources and energy sources in our projects to be a top priority. We have established a reputation as leaders in high-performance sustainable green building design.

A successful architectural project requires an integrated approach from all of our divisions. Every project is assigned to a design team under the direction of a talented project manager, who coordinates the work of all involved.

**CE Services**

L.R. Kimball provides a wide range of civil and environmental services to industry, institutions, commercial facilities, and utilities, as well as local, state, and federal government. We work with many of our clients on acquiring project financing, grant applications, administration and implementation plans to assist them in reaching their goals. Our approach to civil and environmental projects is to provide cost-effective, value-conscious solutions while reducing the project risk for our clients. These solutions have often demonstrated significant "bottom line" improvements. The following pages illustrate our primary service areas.

**Civil and Environmental Services**

- Abandoned Mine Land Reclamation
- Land Development and Site Design
- Demolition Consulting
- Geotechnical Engineering
- Drilling
- Stockpile Inventories
- Hazardous Waste Management
- Environmental Site Assessment and Permitting
- Solid Waste Management
- Electric Utility
- Environmental Management Systems
- Air Quality Compliance and Permitting
- Water and Wastewater Engineering
- Water Resource Management
- Stormwater Management



**Land Development and Site Design**



L.R. Kimball knows what it takes to get the job done right the first time. From providing land planning, civil and environmental services for small community parks to big box retail, commercial, and industrial facilities, L.R. Kimball knows what is important to you.

L.R. Kimball has completed numerous land development projects including retail, residential, commercial, office, educational, recreational, and brownfields. A wide variety of comprehensive and master plans have been developed for local and county governments; state agencies; regional authorities; and residential, commercial, and industrial developers.



L.R. Kimball's expertise in the acquisition of regulatory approvals for land development projects is unsurpassed. From municipal zoning approvals to state transportation and environmental permits, L.R. Kimball has successfully secured permits for small- and large-scale land development projects.

*"Kimball can be proud of the quality of work the staff is producing and be assured that it is noticed and appreciated. I have no reservations in recommending Kimball to any client requiring similar work."*

*-Jeffrey J. Raymond, President*

**Services**

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Pre-development feasibility</li> <li>• Plan processing and regulatory approvals</li> <li>• Stormwater management</li> <li>• Land planning and landscape architecture</li> <li>• Survey and mapping</li> <li>• Site and civil engineering</li> <li>• Environmental site assessments</li> <li>• Brownfields evaluations</li> <li>• Utility transmission line design and coordination</li> <li>• Pavement designs</li> </ul> | <ul style="list-style-type: none"> <li>• Right-of-way acquisitions</li> <li>• Subdivision and land development compliance</li> <li>• Erosion and sediment control plans preparation</li> <li>• NPDES permitting</li> <li>• Comprehensive and master planning</li> <li>• Geotechnical evaluations</li> <li>• Wetland investigations</li> <li>• Photo enhancements and renderings</li> <li>• Project siting studies</li> <li>• 3-D visualization services</li> <li>• Zoning approvals</li> </ul> |
|--|--|

**Geotechnical**



Geotechnical engineering is vital to the success of any construction project. Early inclusion of geotechnical engineering professionals into the planning stages of a project is critical in identifying and minimizing potential problems. Geotechnical engineering adds value to projects and saves money.

Our in-house geotechnical laboratory has been accredited by the American Association of State Highway and Transportation Officials (AASHTO) Accreditation Program (AAP) in the fields of soils and Portland cement concrete testing. This accreditation includes the participation in semi-annual reference sample analysis and bi-annual inspections by AASHTO's Materials Reference Laboratory and Cement and Concrete Reference Laboratory. Our laboratory has also been validated by the Army Corp of Engineers to perform concrete and soils testing for their projects.

**Services**

- Slope stability analysis and design
- Transportation project investigation and design
- Dam design, inspection, and analysis
- Soils, concrete, and aggregate laboratory testing
- Geophysical surveys
- Permitting studies
- Site selection feasibility studies
- Landslides and other soil and rock instability assessments
- Landfill investigation, design, and closure
- Foundation investigation
- Geosynthetic QA/QC
- Material stockpile density determinations (Nuclear Methods)
- Groundwater studies
- Construction inspection and management
- Mine and quarry investigations
- Hazardous mine entry investigations
- Geologic hazards analyses
- Subsidence investigations
- Mine subsidence studies
- Mine and refuse fires assessments
- Ground improvement engineering
- Earth retention systems
- Project reviews



*"The geotechnical engineering services...have been professional and responsive. With Kimball input, we have developed a drilled shaft foundation solution that will save costs for our customer. the Pennsylvania Turnpike Commission."*

William J. Rohleder, Jr.  
Figg Bridge Engineers, Inc

**Drilling**



L.R. Kimball has been providing comprehensive drilling services for over 30 years. We have experienced crews that provide services on a full-time, year-round basis with modern drilling equipment. We maintain four drill rigs, including an all-terrain rig for use on engineering and environmental projects.

Our drillers have an average of over 10 years of experience, qualifying us to perform drilling services in very diverse subsurface conditions and terrain. Crews are experienced using 4.25, 6.25, and 8.25 inch I.D. hollow-stem augers; HQ, NX, and NQ2" rock and concrete coring; continuous split-spoon sampling using 2-inch and 3-inch spoons; CME continuous sampling; thin-wall tube sampling; and geotechnical in-situ testing. Drilling and sampling operations are conducted in accordance with ASTM standards. Our drillers are OSHA HAZWOPER trained.

**Services**

- Geotechnical borings
- NQ2" and HQ wire line rock and concrete coring
- Angle and horizontal borings
- Monitoring wells
- Unconsolidated material coring
- Slope indicator installation and instrumentation
- Down hole nuclear density testing
- Concrete coring and analysis
- 40-Hour OSHA trained and medically qualified crews
- Standard split-spoon and undisturbed sample collection
- Underground storage tank investigations, inspection, and analyses



*"L. Robert Kimball is very customer service oriented and performs a valuable professional service. The department thanks you for current service and is looking forward to this continued service in the future."*  
 David J. Whitatch, PE  
 PennDOT

**Water and Wastewater Engineering**



L.R. Kimball has successfully produced and/or assisted in the evaluation, design, financing, construction and implementation of hundreds of water and wastewater facilities projects for the past 50 years. L.R. Kimball is capable of completing all elements of the planning project. We have developed work plans involving the application of unique planning and design strategies developed in response to stringent compliance orders, statutory or regulatory requirements, and financial and institutional issues related to authority needs. L.R. Kimball is experienced in working with (and within) multi-jurisdictional authorities and has achieved great success in meeting state and/or local permitting and other regulatory requirements. We are pro-active with regulatory and financial agencies and maintain routine contact with agency personnel. This approach ensures that project issues and constraints are understood by all parties, facilitates the permit and funding approval process, and minimizes potential delays in project implementation. L.R. Kimball has assembled an experienced project team of dedicated professionals who have established working relationships with federal, state, county, and local agencies.

**Water Services**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Water facility and corrective action planning</li> <li>• Surface and groundwater source investigations</li> <li>• Hydrologic and hydrogeologic modeling</li> <li>• Wellfield designs</li> </ul> | <ul style="list-style-type: none"> <li>• Dam designs and inspection</li> <li>• Water storage and distribution designs</li> <li>• Water treatment facility designs</li> <li>• Project financing, administration, and implementation plans</li> <li>• Underground utilities</li> <li>• Wellhead protection studies</li> </ul> |
|--|---|

**Wastewater Services**

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Wastewater collections</li> <li>• Treatment plant designs</li> <li>• Industrial pre-treatment</li> <li>• Sludge disposal planning and permitting</li> <li>• Corrective Action Plans</li> <li>• Combined Sewer Overflow (CSO) studies and permitting</li> <li>• Flow monitoring studies</li> <li>• Smoke and dye testing</li> <li>• Project financing, administration, and implementation plans</li> </ul> | <ul style="list-style-type: none"> <li>• Video inspection of sewer lines</li> <li>• Construction inspection</li> <li>• Surveying and mapping</li> <li>• Funding assistance/grantsmanship</li> <li>• Geographic Information Systems (GIS)                     <ul style="list-style-type: none"> <li>- Data management services</li> </ul> </li> <li>• Operations and maintenance programs</li> <li>• Permitting</li> <li>• Subsurface geotechnical investigations and designs</li> </ul> |
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*"We wish to extend our sincere compliments regarding the manner in which you handled our wastewater treatment plant upgrade project. Your input beyond the treatment project on various problems of the system has been proven to be productive."*

Sandra L. Teeter, General Manager  
North & South Sherando Joint Municipal Authority

**Water Resource Management**



L.R. Kimball has been supplying consulting services associated with water control, supply, treatment and protection to homeowners; industry; watershed organizations; and local, state, and federal government agencies since 1953. L.R. Kimball's professional staff of civil engineers, geologists, hydrologists, geotechnical engineers and hydrogeologists are experienced in the preparation of water resources projects for private development, industrial site expansion, and government-funded restoration and reclamation. We can provide professional services necessary for the development of these projects, from environmental site assessments and geotechnical investigations, through the preparation of necessary permits, to final construction quality assurance. We have also participated in water resources public meetings to address local concerns, and have prepared educational materials for presentation of stormwater management and water allocation issues to municipal leaders.

**Services**

- High- and low-hazard dam safety inspections and assessments
- Coal mine tailings dam insurance certifications
- Emergency action plan preparation for permitted dams
- Dam break analyses and inundation mapping
- Federal Energy Regulatory Commission dam inspections and report preparation
- Water supply dam designs and mass balance analyses
- Erosion and sedimentation control dam designs
- Stormwater control impoundment and infiltration basin designs
- NPDES permit application preparation
- Miscellaneous permit application preparations for stream crossings
- Construction quality assurance for water resources projects
- Flood control structure designs and assessments
- FEMA flood insurance studies and existing study modification
- Regional stormwater management studies and ordinance preparation
- Abandoned mine drainage remediation assessment and designs
- Wetland assessments, delineation, and mitigation site designs



*"I just wanted to thank you and commend you on the exceptional work that you have performed. Thank you for providing us with an invaluable tool for watershed conservation, protection, and remediation, but also setting a standard for all future assessments."*

**Ryan D Koch, Watershed Specialist**  
Schuykill Conservation District

**Stormwater Management**



Since 1953, L.R. Kimball has provided comprehensive environmental and engineering services related to stormwater management for various commercial, industrial, municipal, government and private clients. We utilize evolving stormwater management practices based on the philosophy of maintaining, as nearly as possible, natural runoff flow characteristics. Our stormwater management practices include structural (detention ponds, pipes, etc.) and/or non-structural (land use planning to effectively preserve existing drainage patterns, vegetation, pervious areas, etc.) methodologies in which we provide the basic elements of a stormwater management program. The effectiveness of a stormwater management program is a result of good planning and engineering design, based on current concepts and practices.

L.R. Kimball's stormwater management experience is two-fold. We have experience in providing comprehensive watershed stormwater management plans utilizing state-of-the-art GIS based modeling technology. These plans support the development of which results in municipal land development and stormwater ordinances for regulatory based clients. We also have experience in providing services to numerous private sector landowners and developers to comply with federal, state, watershed-specific, county, and municipal stormwater management requirements and ordinances. This experience provides us with a clear understanding of currently accepted stormwater management methods and techniques, agency expectations and review processes, and the implementation of practical, yet economical, best management practices for our clients.

*Services*

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Comprehensive stormwater management master planning</li> <li>• Municipal stormwater management ordinance development</li> <li>• Stormwater management ordinance compliance</li> <li>• Regulatory stormwater permit compliance</li> <li>• Phase II NPDES assessment and permitting</li> <li>• Regulatory erosion and sedimentation control compliance</li> <li>• Emergency action plans</li> <li>• Annual dam inspections</li> </ul> | <ul style="list-style-type: none"> <li>• Flood assessment and control</li> <li>• Geographic Information System (GIS) development</li> <li>• Floodway and floodplain assessments</li> <li>• Construction monitoring and documentation</li> <li>• Stormwater and drainage assessment, analysis, evaluation and designs</li> <li>• Stormwater quality control</li> <li>• Stormwater monitoring, sampling and analyses</li> <li>• Existing facility and site expansion, improvement or rehabilitation</li> </ul> |
|--|--|



"I wish to extend our sincere compliments regarding the manner in which you handled our project. You can be proud of the quality of work your staff is producing and be assured that it is noticed and appreciated."  
 Tyrone Petrich, President  
 Enon Valley Borough Council

## 2. RELEVANT EXPERIENCE AND REFERENCES

### Galloway RAMP Site Remediation and Refuse Fire Quenching, USDA/SCS, Barbour County, WV

Kimball provided surveying, mapping, geotechnical and engineering services for the investigation, assessment and design of site remediation for the Galloway Refuse area, located on both sides of Route 76, just west of the Town. Portions of the site had burning gob, and the geotechnical investigation was used to identify "hot spots", with a subsequent design to permit quenching as part of the site regrading. The project also involved an abandoned deep mine entry, which required installation of piping and valves to reduce the mine pool prior to closure. The project was transferred from the USDA to the WV DEP after being finalized, and ultimately completed by the State under a separate contract.

### OSM Emergency Response Contract, Multi-Year Agreement for the Region Encompassing Southern WV / Western VA / Eastern KY

Kimball obtained a multi-year agreement with the USDI / Office of Surface Mining for Emergency Responses to Abandoned Mine Land projects throughout the Region noted above. Services required in response to these emergencies included geotechnical investigations, site survey and mapping, the design of access roads and retaining walls, fire quenching, site regrading, and stormwater management. Since these were emergency responses, the projects required site visits within days of the events, followed by rapid response designs.

Kimball completed approximately 25 emergency projects in a 4 year period. Fifteen of these projects came during a 2 month period when heavy rains and a flood occurred in the middle Appalachian states. Many of these projects threatened the life of many individuals. Kimball was selected to perform an assessment of whether the project was an emergency and was related to mining. Kimball performed a field investigation, surveying and remedial design to cure the problem. All projects required very rapid response. For a number of the projects, Kimball completed an interim emergency action as a first step to reduce the emergency. Some of these actions included: cleaning of debris, moving of a house, stabilization, filling of mine openings or subsidence holes. The projects included: landslides, subsidence, mine blow-outs, refuse fires, and mine openings.

### Yellow Creek Watershed AMD Treatment Systems Phased Restoration Plan, Blacklick Creek Watershed Association, Indiana County, PA

The Yellow Creek Watershed is a sub-watershed of the Blacklick Creek Watershed, which encompasses an area of approximately 420 square miles in Indiana and Cambria Counties. The Yellow Creek Watershed covers an area of approximately 52 square miles. The upper portion is of exceptional value and classified as a cold water fishery. The fishery resources of the Lower Yellow Creek Watershed are impacted by non-point sources of acid mine drainage (AMD) and siltation, especially the section of Yellow Creek below the Route 954 bridge which is not included in the Pennsylvania Fish and Boat Commission trout-stocking program because of AMD.



#### Phase IA and IB AMD Remediation

This Phase I restoration plan was completed by Kimball in 2000. This phase consisted of two treatment "modules" consisting of settling ponds, anaerobic wetlands, vertical flow reactor (VFR) drain systems, and a clean water "polishing wetland." A unique aspect of these projects was that they incorporated approximately 2.3 acres of mitigation wetlands ("polishing wetlands") as a final treatment prior to discharge to Yellow Creek.

This project was a true public/private/volunteer partnership supported by the Pennsylvania Game Commission, Natural Resources Conservation Service, PADEP, Indiana County Conservation District, Indiana University of Pennsylvania, Pennsylvania Boat and Fish Commission, and the Heinz Endowment.

Funding for Phases IA and IB was from a combination of EPA Act 319, PA Growing Greener and the Heinz Endowment, along with numerous hours of voluntary time by Watershed members and others.

#### Phase IIA AMD Remediation

The Phase II subwatershed represents the second portion of the five-phase restoration area, and includes multiple coal refuse disposal areas, numerous AMD mine discharges and extensive highly-eroded areas resulting from the AMD flows. Following completion of the Phase I portion of the site (with construction of the IA and IB passive treatment modules), the BCWA and Kimball were awarded additional funding for the development of the Phase IIA area, located immediately downstream of the current sites. The Phase IIA portion incorporates a modular system for AMD treatment and construction was completed in 2001.

The Phase IIA system is capable of treating up to 150 gallons of acidic mine discharge per minute. Funding for the majority of this work was supplied by PA Growing Greener and Act 319 funds. Since a considerable volume of fill was required for the Phase IA and IB modules, the Phase IIA passive treatment system was designed to be constructed using the excavation required for the IA/IB soil borrow.





Kimball prepared mapping for this facility as well as site environmental investigation, design, construction oversight and post-construction monitoring.

Following completion of the construction, a series of additional modifications were made, including the implementation of an experimental treatment pond (site IIB, by another consultant) which discharges into the Phase IIA final pond. These changes have rendered the outlet pond inadequate for settlement of the suspended solids treated by the systems, and a modification of the final pond was implemented in 2004 to incorporate a larger, U-shaped settling pond. These modifications have resulted in substantial improvements in the treatment system effluent.

### Phase IIC AMD Remediation

The Phase IIC project included the geotechnical site investigation, development of mapping and site design for AMD Remediation, and is located roughly ½ mile downstream from the previously completed Phase IIA project.

This site included collection of AMD from a deep mine discharge, and treatment in a state-of-the-art system utilizing sulfate reducing bacteria (SRB) and an aerobic wetland. This work was funded by a combined grant from PA Growing Greener and Act 319.

Prior to the start of the Phase IIC work, the local AMD discharge location had been known as “the borehole”, since flow exited from a vertical hole adjacent to the stream. Before beginning the construction, Kimball staff and BCWA members attempted to insert a pipe into “the borehole” to estimate the static head available. However, in the process, it was discovered that the vertical hole was actually the end of a horizontal pipeline buried roughly 3’ below grade. Tracing the pipeline upslope, we found a roughly 150’ long terra cotta pipeline leading to a previously unknown deep mine portal, apparently constructed to drain the mine workings. This discovery forced a complete modification in the construction concept, but was fortunately identified early in the design process.

In 2006, the Phase IIC system was modified to incorporate AMD flows from the adjacent Judy 14 Tributary, which are routed through a holding pond, and then into the SRB treatment system. During this construction modification, the final pond was expanded to permit increased settling of suspended solids, and the system is again working very well.

Contact: Dr. Robert Eppley

52 Oakland Avenue, Indiana, PA  
724-479-0672

### Laurel Run Site #2 AMD Remediation, Blacklick Creek Watershed Association, Indiana County, PA



Kimball prepared a site remediation plan for the Laurel Run #2 abandoned mine land site in Indiana County, PA. The project included aerial photography and mapping of the site limits, geotechnical investigations of the existing spoil material, installation of several borehole/monitoring wells above the highwall, design of the acid mine drainage (AMD) remediation technique, and preparation of a construction bid package, as well as periodic site observation during and after construction.

The site was extremely complex in that it resulted from a face-up type strip mine, and two subsequent deep mine entries. The smaller of the two mines began near the highwall and extended for a short distance to the west. There is little information regarding this entry, and it may have been a “house mine”. The larger mine

was quite extensive, and the Laurel Run #2 location represented the low spot in the mine, so there was a considerable flow from the entry. The area immediately below the highwall had an extensive pool of accumulated iron sludge, and this had created a substantial fringe wetland along the perimeter. Portions of this wetland were considered “mining impacted” but other sections were not.

As such, the reclamation design required two mine seals (one “dry” and one “wet”), backfilling of a dangerous highwall, collection of the AMD from the wet seal, and development of a passive treatment facility for the collected AMD. All of this had to be created without negative consequences to the non-mining impacted wetlands.

With cooperation from a local ash hauling contractor, the highwall and sludge pool backfill was completed using ash material from a nearby fluidized bed power plant. This permitted creation of a stable backfill using material designated as a beneficial use product.

The passive treatment system was created using two parallel, state-of-the-art sulfate-reducing bacteria vertical flow reactors (SRB Systems), which drain to a settling basin, and then into a serpentine polishing wetland prior to discharge into the stream. The system is working extremely well with substantial excess alkalinity and low iron and aluminum concentrations at the effluent.

Contact: Dr. Robert Eppley

52 Oakland Avenue, Indiana, PA  
724-479-0672

**PADEP Palo Alto Mine Void Location, Palo Alto, Schuylkill County, PA**

Multiple residences were impacted by potential mine subsidence associated with a horizontal drainage portal constructed to drain a deep mine. Since the mine and portal were abandoned, there were inadequate maps showing the location of the portal. The PADEP hired Kimball to investigate the area, and attempt to identify surface features to assist with location of the mine and portal. Once the portal location was approximated, a series of borings were completed to identify the limits of the boring, and obtain video of the voids. This information (both location and void condition) were then used to develop a mine portal sealing recommendation, that was subsequently used by the PADEP to install a permanent drain and void seal. This project was particularly challenging given the proximity of the residences to the portal void, requiring the drilling crews to coordinate with the landowners.

**PADEP Mount Carmel Mine Subsidence Project, Mount Carmel, Northumberland County, PA**

A substantial sinkhole had developed in an intersection of a residential neighborhood, associated with an adjacent abandoned deep mine. The PADEP hired Kimball to georeferenced the available mine maps to attempt to locate the mine workings that might be impacting the sinkhole. Following preliminary location of the mine workings, a series of borings were completed to evaluate the mine voids (both approximate location, depth and condition). This data was then utilized to develop recommendations for closure of the mine void by the PADEP.

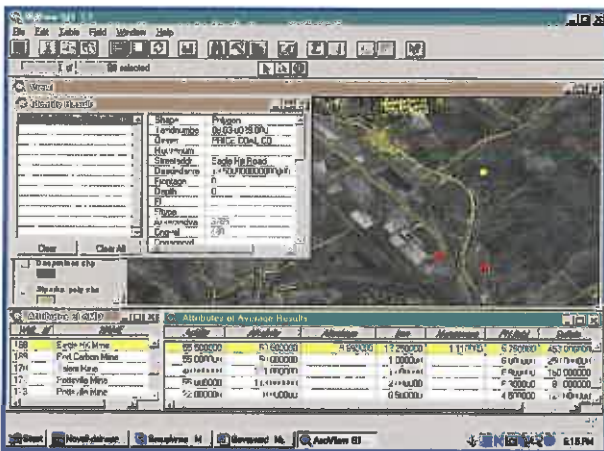
**PADEP Mill Street Mine Void Location, Pittston, Luzerne County, PA**

There is an historic abandoned mine extending below large portions of the Town of Pittston, with much of the mine having a very shallow cover. Reports of mine subsidence were received by the PADEP in the area of Mill Street, and Kimball was subsequently hired to assess the condition of the mine(s). Historic mine maps were gathered, georeferenced for horizontal location within the Town, and then the mining maps were "draped" over a vertical surface representing the coal contours. This was used to create a 3D representation of the mines lying below the Mill Street area. This 3D map was used to select multiple locations for borings to assess the condition of the mine voids, and to collect better information regarding the depth to the voids. Recommendations were subsequently developed regarding likely subsidence locations, and these were used by the PADEP to prepare a long-term strategy for sealing the voids.

**PADEP Drifton Estates Mine Void Location, South Freeland, Luzerne County, PA**

An abandoned deep mine void with a very steep dip was located below a housing development in the Drifton Estates portion of South Freeland. A series of subsidence related incidents were documented and the PADEP hired Kimball to assess the site conditions and provide recommendations for remedial repairs. The mine void dip was so severe that the coal seam outcropped in front of several of the houses, and yet was fifty feet deep at the south end of the development. Kimball completed a series of borings throughout the development to create a 3D representation of the mine, showing the depth to mine roof and floor throughout the site. The volume of the void was estimated and the critical subsidence areas were identified for use by the PADEP in their void remediation efforts.

**Upper and Little Schuylkill River Comprehensive Watershed Assessments  
Schuylkill County Conservation District, Pottsville, PA**



Kimball personnel completed the development of a watershed assessment utilizing a GIS database for the Upper Schuylkill River Watershed for the Schuylkill County Conservation District/Schuylkill Riverkeeper. This project began in December 1999, and included the development of a database of non-point source pollution locations throughout the watershed extending from the river's source near Tuscarora to the confluence of the Schuylkill and the West Branch in Schuylkill Haven. The Watershed Action Strategy included identification and assessment of non-point source (NPS) impacts in the region, a prioritization of AMD sites, and general recommendations for future remediation and mitigation strategies. Existing data were input to the system and geo-referenced to readily available commercial base mapping products creating a powerful system for viewing, querying, and tracking the status of all identified AMD sites within the study area. The

system provides tabular data, custom reports and visual representations of site locations, geology, hydrogeology, land use/cover, property ownership, water quality and extent of AMD impacts. Custom interfaces and queries were built into the system to facilitate the prioritization of sites based on location, extent and magnitude of impacts or other selected criteria. The Watershed Action Strategy served as the foundation for subsequent selection and implementation of remediation strategies at prioritized sites and provided overall guidance and direction for the management of the tributary system.

**This project was awarded the 2001 Governor’s Award for Watershed Stewardship.**

In October 2000, Kimball personnel began a similar project for the Little Schuylkill River Watershed, also for the Schuylkill County Conservation District/Schuylkill Riverkeeper. This project included the development of a database of non-point source pollution locations throughout the watershed extending from north of Tamaqua to the confluence of the Schuylkill River and the mainstream of the Schuylkill River near Port Clinton. The Watershed Action Strategy included the identification and assessment of non-point source (NPS) impacts in the region, a prioritization of abandoned mine seeps, agricultural runoff, industrial discharges, and a list of general recommendations for future remediation and mitigation strategies. The principal difference between the reports completed for the Upper and the Little Schuylkill Watersheds was that water quality issues for the former project were primarily a result of abandoned mine land runoff, whereas those for the latter were primarily agricultural and industrial runoff issues.

**The Little Schuylkill Watershed project was awarded the 2002 Governor’s Award for Watershed Stewardship.**

The Watershed Action Strategy served as the foundation for subsequent selection and implementation of remediation strategies at prioritized sites and provided overall guidance and direction for the management of the tributary system.

Contact: Mr. Craig Morgan

1206 AG Center Drive, Pottsville, PA  
570-622-4124



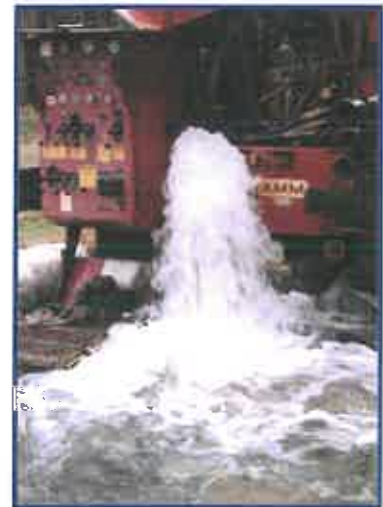
**Borehole Relocation, Saint Vincent Archabbey College and Seminary, Latrobe, PA**

This project involved both the initial study phase and the development of a remedial action plan for the relocation of the borehole, known as the “bubbler”, which is located along Monastery Run, on the Saint Vincent College and Seminary grounds.

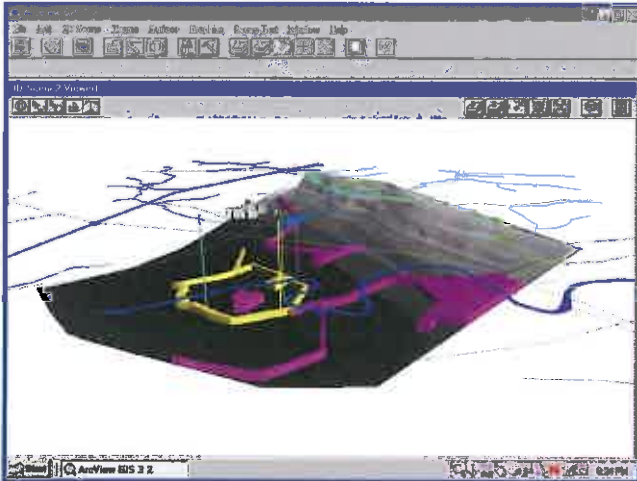
The borehole is a remnant of an abandoned mine borehole that was originally drilled to relieve water pressure from an extensive deep mine. The hole is up to 250 feet deep, extends to the mined coal seam, and penetrates heavily fractured overburden strata.

The mine workings form a “honeycomb” of void areas, lying in a narrow, steeply sided basin formed by the Uniontown-Latrobe Syncline. Most of the mine workings lie beneath drainage of local streams in this area, and as a result, have filled with ground water. The workings are continually recharged at the outcrop of the Pittsburgh Coal and other permeable strata, such as sandstone.

Naturally occurring fracture systems, and those formed by subsidence over the mine workings, facilitate movement of ground water into and out of the mine workings. Pressure created by the pool of water in the workings has forced groundwater along the workings to the outcrop and upwards through fractures (and other conduits, such as boreholes) to the surface, causing surface discharges.



The “bubbler” borehole has an estimated flow of 500 gallons per minute (gpm). It had been cased and connected to a piping system for transport of the collected acid mine drainage to an existing passive treatment system. The borehole casing had been leaking for several years, and due to the artesian flow conditions, required replacement and abandonment to prevent direct discharges to the adjacent stream.



Kimball hydrogeologists prepared a simple 3D model, depicting the mine workings, the overlying strata, and locations of overlying coal seams with respect to the valley of Fourmile and Monastery Runs. Based on an analysis of the model, a report was developed identifying alternative methods for collection of the artesian flows for treatment in the MRIP. The report discussed each alternative and included a list of recommendations, including reuse of the current location.

The 3D model, geologic cross sections and recommended alternative remedial measures were presented at a Public Meeting at the College. Present at this meeting were various members of the coalition, including College staff, PADEP and County Conservation District personnel, and interested citizens involved in the local watershed association.

Following presentation of the 3D model and discussion of the various remedial measures at the Public Meeting, a specific methodology was

selected by the coalition members, and Kimball engineers prepared a bid package, including drawings and specifications, for the installation of the new well and abandonment of "the Bubbler". This work was subsequently completed, with Kimball providing construction oversight of the abandonment and installation of the new well.

Contact: Ms. Angela Belli

St. Vincent College Env. Ed. Center

300 Fraser Purchase Drive, Latrobe, PA  
724-537-4555



### Enon Valley Watershed Assessment and Restoration Plan, Enon Valley Borough, Lawrence County, PA

This project involved the development of a Watershed Assessment of an unnamed tributary of the North Fork Little Beaver Creek, Enon Valley Borough, Lawrence County, PA. The project included identification and assessment of point source and non-point source pollutant baseline levels, and stormwater management problem areas.

Deliverables included a general watershed hydrologic and hydraulic study, stormwater management ordinance, and Restoration Plan, and creation of a GIS for water quality data access and presentation.

The upper portions of the watershed include an abandoned strip mine area that is significantly overgrown. This area was initially considered a minimal source of pollution to the area, based on the extensive vegetation; however, initial water quality samples indicated significant metals loadings in a natural wetland below the AML site, indicating years of AMD discharges.



Enon Valley Borough utilizes septic systems and shallow dug wells for potable water supply. Some of the on-lot septic systems appear to be inadequate, and significantly high levels of total coliforms were noted at the downstream end of town.

In addition, many of the culverts throughout the town have been shown to be inadequate, as a result of being undersized, partially filled with debris, or a combination of both factors.

The combination of these factors (AMD from the AML source upstream, inadequately-treated discharges from on-lot sewage facilities, undersized/blocked culverts, and shallow potable wells) has created a water quality issue for the Borough. The Watershed Assessment will be used to solicit additional funding for repairs to the various problems noted.

Contact: Mr. Tyrone Petrich

PO Box 295, Enon Valley, PA  
724-336-2661

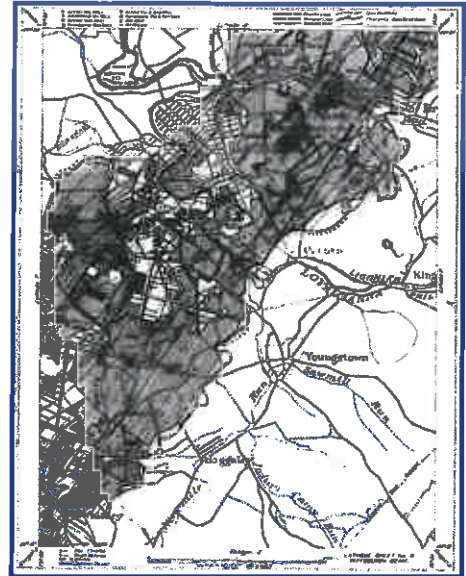
### Loyalhanna Watershed Acid Mine Drainage Consolidation, Loyalhanna Watershed Association, Inc., Latrobe, PA

There are a series of boreholes along the Loyalhanna Creek through Latrobe, PA, which were drilled to permit release of mine water during the underground mining in the area. This mining occurred in the first half of the 20th Century, and the resulting AMD discharges had polluted a significant portion of Loyalhanna Creek.

The Watershed Association hoped to collect the water from these boreholes, and direct it to a passive treatment system for remediation. However, the boreholes are located adjacent to, and in some places in, the creek. As such, there is a need to close the existing boreholes and replace them with new holes, at more convenient locations.

Kimball provided an initial study of these boreholes, which involved a study of the local mine pool hydrology, geology, and historical mining activities. From this study, Kimball evaluated the feasibility of drilling into the mine pool located beneath Latrobe Foundation property in Westmoreland County. The final goal was to obtain an artesian flow of mine water which will be treated on-site.

Part of this project involved the collection and georeferencing of historic mine maps so that the extent of the mine voids could be established. This was a particularly difficult effort since the mining in this basin is quite extensive, and was generated by multiple mines over many years. Some of the mines were found to overlap, requiring careful fitting of the maps to surface features.



The final product of the first phase was an assessment of the mine pool hydrology and a discussion of the feasibility of drilling into the mine pool on the Latrobe Foundation property for the purpose of obtaining an artesian flow of mine water. This report was discussed at a public meeting utilizing a Power Point presentation for clarity. The Loyalhanna Watershed Association obtained partial funding for the Phase II operations, which included sealing of some of the boreholes and drilling new access holes for passive treatment at the selected locations. This process is continuing, following the sealing of the first two boreholes and creation of a new borehole near a passive treatment system (designed by the USDA). Kimball geologists have been involved in each step of the process, and continue to assist as project funding permits.

The map shown on above is indicative of the complex nature of the coal mining and the interaction with Loyalhanna Creek.

Contact: Mr. Drew Banas

18 Old Lincoln Highway West, Ligonier, PA  
724-238-7560

### Gulston Refuse Fire Reclamation Project, US Department of the Interior, Office of Surface Mining, Perry County, KY

Kimball performed field investigations, including site reconnaissance, drilling, sampling, and temperature monitoring, geotechnical evaluation, and remedial design drawings, specifications and cost estimates for the federal Office of Surface Mining Reclamation and Enforcement for this burning coal refuse pile underlying a wooden church in Gulston, Perry County, Kentucky. The remedial solution involved excavation of the burning and hot coal refuse below the toe of the church foundation, quenching in bench ponds, compaction of the exposed refuse, and placement of a compacted layer of soil to seal the refuse pile from air. The proposed remedy was effective in stopping the refuse fire and eliminating the danger to the wooden church and its congregation.

### Blaine Gob Pile II Reclamation Project, ODNR Division of Reclamation and Abandoned Mine Lands, Belmont County, OH

Kimball prepared a reclamation construction package for the abandoned surface mining lands associated with the Blaine Mine Site. The site had been subdivided by the ODNR into two sections, Blaine Gob Piles I and II, and the former site was reclaimed at an earlier date by others. The Blaine Gob Pile II project involved an approximate 60 acre abandoned strip mine site and two appurtenant areas. These areas were then further subdivided into 3 sites, with very different requirements.

Site 1 was a three acre residential area, which was experiencing slope stability problems resulting from subsurface seepage from the adjacent stripped areas. This area was investigated using a series of test borings and a series of rock underdrains and retaining walls designed to protect the houses from continued earth movement. The second site was the partially mined, and there was evidence of some auger and deep mining areas. The principal design consideration for this site was to regrade the area to approximate original contour, cover the regraded areas with material obtained from the spoil piles, and provided erosion and sedimentation controls until these areas could be revegetated. Site 3 was a series of small gob piles adjacent to the railroad tracks approximately ½ mile from the strip mine area.

This area had apparently once been the site of a small prep plant and the refuse material probably was a result of mining at the Blaine Mine and possible others. The refuse piles encompassed a total area of approximately 17 acres, and again, the principal design consideration was to provide a grading plan to return the area to approximate to the gob piles for soil cover and a construction package prepared which include erosion and sedimentation controls.

### **Marinucci Subsidence Area, US Department of Interior, Office of Surface Mining, Belmont County, OH**

Beginning in 1988, numerous residences east of Flushing, Belmont County, Ohio began experiencing unexplained structural damage. This included: tension cracking, floor slabs separating from basement walls, cracks in masonry block basement walls, water loss in one well, apparent uplift of the furnace into floor joists, basement walls bulging inward, cracking and separation of concrete sidewalks, "staircase" style cracks between and through exterior brick walls, broken water lines, septic system failure, and main floor support beam lifted of pilasters. Based on a site visit and conversations with the residents, three possible causes for the problems were postulated. The options examined were: expansive soils, landslides, mine subsidence. The Pittsburgh No. 8 coal was deep mined from 180 to 220 feet below the site during the mid 70's. The third option, mine subsidence, was concluded to be the most likely cause of the problems. The types of distress and the general trend of the cracking are indicative of mine subsidence. It was determined that roof spalling had occurred in the roof strata above the mine. The height of failure was estimated to range from 1 foot to 13 feet above the top of mine. This resulted in an unstable pillar configuration that was unable to adequately support the roof in some areas. It appeared as though roof failure had contributed to the subsidence. Pillar failure was the primary cause of subsidence in the study area with roof failure as a probably contributing factor.

### **3. WV FORMS**

**Attachment B - AML Consultant Qualification Questionnaire**

**Attachment C – Project Experience Requirements**

**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
AML CONSULTANT QUALIFICATION QUESTIONNAIRE**

Attachment "B"

PROJECT NAME EOI - Lake (Bell) Portals		DATE (DAY, MONTH, YEAR) September 6, 2018	FEIN 27-2620523
1. FIRM NAME  CDI-Infrastructure, LLC dba L.R. Kimball		2. HOME OFFICE BUSINESS ADDRESS 615 West Highland Avenue Ebensburg, PA 15931	3. FORMER FIRM NAME L. Robert Kimball & Associates, Inc. (1992-2010) L. Robert Kimball & Associates (a sole proprietorship) 1953 - 1991
4. HOME OFFICE TELEPHONE Phone: 814-472-7700 Fax: 814-472-7712	5. ESTABLISHED (YEAR)  1953	6. TYPE OWNERSHIP <input type="checkbox"/> Individual <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Joint-Venture	6a. WV REGISTERED DBE (Disadvantaged Business Enterprise) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE  See Expression of Interest Response			

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM Richard E. Genday, PE, Vice President	8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS See Expression of Interest Response
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20 Administrative 8 Architects 3 CADD Technician/Draftsperson 0 Cartographers 0 Chemical Engineers 1 Chemists 4 Civil Designers 24 Civil Engineers 0 Civil Technicians 4 Computer Specialists 6 Construction Manager	0 Construction Administrator 19 Construction Inspectors 3 Designers 11 Drillers 13 Electrical Engineers 5 Environmental Scientists 1 Estimator 0 Foundation/Geotechnical 1 GIS Specialists 4 Geologists 8 Geotechnicians	0 Industrial Hygienists 1 Interior Designer 1 Landscape Architects 1 Mapping Specialists 9 Mechanical Designers 2 Mechanical Engineers 3 Photogrammetrists 24 Piping 2 Planners 1 Specification Writers 9 Structural Engineers	16 Support Staff 1 Surveyors 13 Transportation EIT 5 Transportation Designers 16 Transportation Engineers 31 Other 270 Total
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TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 16  
 \*RPEs other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.

Brad Blickenderfer	Richard Genday	Diane Glarrow	Richard Holes
Edward Jones	Stephen Landgrebe	Michael Leigh	Ryan Meitzler
David Minnear	Cameron Mock	Christophehr Nasuti	Robert Renzi
David Rispoli	Gregory Schrock	John Vitez	

10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE?     YES     NO    N/A



11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. Attach "AML Consultant qualification questionnaire".

<p><b>NAME AND ADDRESS:</b>                  J. Hockenberry Environmental Services, Inc.                  1464 Clapboard Run Road                  Johnstown, PA 15909</p>	<p><b>SPECIALTY:</b>                  Groundwater hydrology, acid base accounting, coal geology</p>	<p><b>WORKED WITH BEFORE</b>  <input checked="" type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p><b>NAME AND ADDRESS:</b>                  Air Photographics, Inc.                  2115 Kelly Island Road                  Martinsburg, WV 25405</p>	<p><b>SPECIALTY:</b>                  Aerial photography</p>	<p><b>WORKED WITH BEFORE</b>  <input checked="" type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>

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

YES Description and Number of Projects: L.R. Kimball has performed dozens of AML Remediation projects, in West Virginia, Pennsylvania, Virginia, Kentucky, Ohio and Maryland

NO

B. Is your firm experienced in Soil Analysis?

YES Description and Number of Projects: L.R. Kimball has a full-service Geotechnical Testing Laboratory and Geotechnical Drilling Services, including dozens of projects on AML Sites

NO

C. Is your firm experienced in hydrology and hydraulics?

YES Description and Number of Projects: L.R. Kimball is experienced in Regional and Site-specific Rainfall Hydrology as well as Groundwater Hydrology, and with Hydraulic analysis and design of lakes, streams, channels and pipes.

NO

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

YES Description and Number of Projects: L.R. Kimball subcontracts the actual collection of aerial photographs, but performs all other aerial mapping services in-house.

NO

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

YES Description and Number of Projects: L.R. Kimball has prepared assessments, designs and construction oversights for dozens of domestic waterline projects in West Virginia and Pennsylvania.

NO

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

YES Description and Number of Projects: L.R. Kimball has completed assessments, designs and construction oversights for numerous small and large AMD projects. These have included seep collection and treatment projects, as well as deep mine seals to minimize seepage. We have prepared both passive and active treatment systems for AMD sites.

NO

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Minnear, David G., PE	30	35	5

Brief Explanation of Responsibilities

Primary designer and project manager for AML related projects for Kimball. History of emergency response AML projects, as well as remediation of AMD sites, dangerous high walls, and refuse regrading sites.

EDUCATION (Degree, Year, Specialization)

BS in Civil Engineering, 1978, General Civil with emphasis in Hydrology and Hydraulics

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
Cambria County Solid Waste Management Authority National Society of Professional Engineers Professional Recyclers of Pennsylvania Association of State Dam Safety Officials Pennsylvania Society of Professional Engineers	WV Professional Engineer, 1985 - 2018

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Mock, Cameron R., PE	2	25	30

Brief Explanation of Responsibilities

Alternate Project Manager for AML sites. Long history with domestic water and wastewater projects and AML remediation.

EDUCATION (Degree, Year, Specialization)

BS in Civil Engineering Technology, 1977, General Civil with emphasis in Water/Wastewater issues

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers Pennsylvania Society of Professional Engineers American Water Works Association National Society of Professional Engineers American Society of Highway Engineers	WV Professional Engineer, 1985 - 2018

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Wright, George B., PE	5	10	10

Brief Explanation of Responsibilities

Project Engineer specializing in site grading, stormwater management, erosion and sedimentation control and construction drawing development

EDUCATION (Degree, Year, Specialization)

BS GeoEnvironmental Engineering, 1999, Geosciences specialization

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  
Association of State Dam Safety Officials

REGISTRATION (Type, Year, State)  
PA Professional Engineer, 2007 - 2019 [REDACTED]

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Marhefka, James R., PG	5	20	5

Brief Explanation of Responsibilities

Project Geologist specializing in geotechnical investigations, soil analyses, drilling and monitoring wells

EDUCATION (Degree, Year, Specialization)

BS Geology, 1987, Geotechnical

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  
Pennsylvania Council of Professional Geologists, National Groundwater Association

REGISTRATION (Type, Year, State)  
PA Professional Geologist, 1995 [REDACTED]

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Genday, Richard E., PE, Vice President	37	37	

Brief Explanation of Responsibilities

Mr. Genday is L.R. Kimball's Vice President. Mr. Genday has over 37 years of experience and is Principal-in-Charge for all of the firm's transportation and civil Engineering related projects, including highway, bridge, airport and construction inspection contracts..

EDUCATION (Degree, Year, Specialization)

BS in Civil Engineering, 1980, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

National Society of Professional Engineers  
 American Association of Airport Executives (AAAE)  
 American Society of Highway Engineers  
 Design Structure Quality Institute  
 Aviation Council of Pennsylvania (ACP)

REGISTRATION (Type, Year, State)

WV Professional Engineer, 1997 - 2018

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:

Brief Explanation of Responsibilities

EDUCATION (Degree, Year, Specialization)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)

14. PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE AML DESIGN SERVICES

**Survey Equipment**

Trimble R8 GNSS GPS Units (4)  
Trimble R10 GNSS GPS Units (2)  
Trimble S6 Robotic/Prismless Total Station (2)  
Trimble S3 Robotic/Prismless Total Station (2)  
Trimble TSC2 Data collectors (6)  
Trimble TSC3 Data collectors (2)  
Trimble GX Terrestrial Laser Scanner  
Wild NA-2 Levels  
Magnetic Locators  
Airport-Band Radios

**Digital Photogrammetric Mapping, Digital Aerial Triangulation, and Digital Orthophoto Hardware**

DELL Precision T7810 workstations (2)  
DELL Precision T5500 workstation (1)  
DELL Precision T3500 workstations (2)  
Alienware 3D HD Monitors  
(20) Maxtor 1TB hard drives  
(1) Lacie 4TB hard drive  
EPSON CD/DVD label printer  
HP DesignJet 5500PS  
Dell Precision T3500 KLT/Atlas Softcopy and Orthophoto Workstations

**Surveying, Photogrammetric, and CADD Software**

AutoCAD Civil 3D Software  
Bentley Systems Microstation V.8 CAD  
GrafNAV / GrafNET ABGPS Post-Processing  
ESRI  
KLTATLAS Photogrammetric Mapping and Digital Orthophoto Software  
Adobe Photoshop (versions CS2 and CS3)  
Lizard Tech MrSid Image Compression Software (version 7)



15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
Central West Virginia Regional Airport Authority, General Engineering, Kanawha Co. WV	Yeager Airport, 100 Airport Road 175, Charleston, WV 25311	Runway Rehab engineering and construction QA, stormwater control engineering, master planning	\$1.4 Million	75%
Fairmont-Marion Co Reg Arpt Auth, General Engineering, Marion Co. WV	Fairmont Municipal Airport, P.O. Box 387 Fairmont, WV 26555-0387	General Civil and Surveying, Permitting, Apron expansion, obstruction removal, master planning	\$400,000	80%
Arch Coal Inc. topographic mapping Services, multiple sites in West Virginia	Arch Coal, Inc., One CityPlace Drive, Suite 300, St. Louis, MO 63141	Topographic mapping, stockpile volume computations, orthophoto development	Annual budget of roughly \$100,000	On-going efforts
West Virginia DOT, Multiple projects at multiple sites throughout the State	West Virginia DOT, 1900 Kanawha Blvd E Charleston, WV 25305	Environmental and geotechnical assessments of various sites throughout the state	\$100,000	On-going efforts
CPV Power Plant, 1000 MW gas fired power plant, Cambria County PA	CPV 50 Braintree Hill Office Park, Suite 300 Braintree, MA 02184	General Civil and Surveying, Permitting, design of water supply piping and pump stations	\$900 Million	75%
Panda Hummel Power Plant, 1000 MW gas fired power plant, Snyder County, PA	Panda Power Funds 5001 Spring Valley Road Suite 1150 West Dallas, TX 75244	General Civil and Surveying, Permitting, design of stormwater management and site general arrangement layout	\$900 Million	98%
Cambria Somerset Auth., Industrial Water Supplier to 2-county region, Cambria and Somerset Counties, PA	Cambria Somerset Auth Central Park Complex 110 Franklin Street, Suite 200 Johnstown, PA 15901-1831	Engineer of Record for operations and maintenance, permitting and design changes to 100-year old system with 5 dams	Annual budget of roughly \$1.2 Million	On-going efforts

TOTAL NUMBER OF PROJECTS:

Corporately we have hundreds of projects, and the individuals highlight herein are involved in roughly 100

TOTAL ESTIMATED CONSTRUCTION COSTS: \$

As noted, we have corporate projects with construction costs totaling in the multi-\$millions. The individuals highlighted herein are currently involved with projects up to \$20 Million



15. PRESENT ACTIVITIES ON WHICH YOU ARE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	PERCENTAGE COMPLETED
Mon/Fayette 53A, Highway Design Jefferson Hills Borough, PA	Pennsylvania Turnpike Commission Harrisburg, PA	\$1,325	55 %
E00958 - SR 6219, Sec 020, Highway Design Somerset Borough, PA	PennDOT District 9-0 Hollidaysburg, PA	\$13,944	97 %
E02341 – Schaefferstown Road Intersection, Highway Design, Jefferson Township, PA	PennDOT District 5-0 Allentown, PA	\$720	75 %
E02530 – 36 Corridor, Highway Design South Woodbury Township, PA	PennDOT District 9-0 Hollidaysburg, PA	\$498	95 %
E02589 – SR 519 @ SR 980, Highway Design North Strabane Township, PA	PennDOT District 12-0 Uniontown, PA	\$1,604	55 %
E02662 – SR 84, Section 450, Highway Design Greene and Palmyra Townships, PA	PennDOT District 4-0 Dunmore, PA	\$4,170	40 %
E02746 – SR 244 over Ellisburg Creek, Construction Services, Genesee Township, PA	PennDOT District 2-0 Clearfield, PA	\$25	99 %
Stockpile Services Various Sites, Michigan	Consumers Energy Jackson, MI	\$198	95 %
New Correctional Facility, Architectural Services Cape May Court House, NJ	Cape May County of New Jersey Cape May, NJ	\$25,000	80 %
Open End Geotechnical Services Various Sites, KY	PPL Corporation Mountoursville, PA	\$169	95 %
E02909 – SR 2004, Highway Design Reading, PA	PennDOT District 5-0 Allentown, PA	\$382	75 %
Construct New Headquarters Facility, P&S/Garage and Crime Lab, Summit Township, PA	Pennsylvania Department of General Services, Harrisburg, PA	\$918	20 %
GA Detention Center, Complex Improvements Savannah, GA	Chatham County of Georgia Savannah, GA	\$1,167	60 %
New Sheetz Headquarters, Architectural Services Claysburg, PA	Altoona-Blair County Development Corp Altoona, PA	\$24,000	93 %
Maryland IT Radio Systems Annapolis, MD	State of Maryland Dept of Information Tech, Annapolis, MD	\$342	62 %
Governor's Office of CA, Next Generation 9-1-1 Emergency Services, CA	State of California Sacramento, CA	\$134	70 %
VA Public Safety Communications Consulting Services, Powhatan, VA	Powhatan County of Virginia Powhatan, VA	\$89	75 %
State of North Dakota University System Network Security, Bismarck ND	State of North Dakota Bismarck, ND	\$298	60 %
Develop DBE Plan Reporting for Yeager Airport, Airport Services, Charleston, WV	Yeager Airport Charleston, WV	\$15	70 %
NRG Ash Facility, Mapping Services New Jersey	NRG Energy, Inc. Princeton, NJ	\$62	40 %
New Regency Park Elementary School, Architectural Services, Plum Borough, PA	Plum Borough School District Plum, PA	\$492	80 %

15. PRESENT ACTIVITIES ON WHICH YOU ARE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	PERCENTAGE COMPLETED
Rowan College Renovations, Architectural Services Mt. Laurel, NJ	Rowan College at Burlington Co., NJ Mt. Laurel, NJ	\$1,795	75 %
PEMA, Webtool Support PA	Pennsylvania Emergency Management Agency, PA	\$186	70 %
New Garden Flying Field, Reconstruction and Widening of Runway 6-24, Landenburg, PA	New Garden Township Landenberg, PA	\$755	40 %
Washington County Airport/Remove Obstructions, Design and Permitting, Washington, PA	Redevelopment Authority of the County of Washington, Washington, PA	\$63	90 %
Allegheny Tunnel Transportation Improvement Project Allegheny County, PA	Pennsylvania Turnpike Commission 400 North Street Harrisburg, PA	\$4,042	95 %
Rehabilitate GA Terminal Apron, Phase II- Construction-CA Services Wings Field Airport, Blue Bell, PA	Wings Field Preservation Assocs. Blue Bell, PA	\$256	83 %
University Park Airport, Hangar Site Design and Permitting Services State College, PA	Miller Brothers Construction, Inc. Haven, PA	\$31	95 %
Rehabilitate Taxiways Johnstown, PA	Johnstown-Cambria County Airport Authority Johnstown, PA	\$223	50 %
Rehabilitate Apron, Phase II Construction Friedens, PA	Somerset County Airport Somerset, PA	\$69	80 %
Remove Obstructions at Airport Friedens, PA	Somerset County Airport Somerset, PA	\$72	20 %
Wilkes-Barre/Scranton Airport, Taxiway B Lighting, Construction Avoca, PA	Bi-County Board for Luzerne & Lackawanna Counties Avoca, PA	\$68	15 %
Wilkes-Barre/Scranton Airport, Taxiway B Paving, Construction Avoca, PA	Bi-County Board for Luzerne & Lackawanna Counties Avoca, PA	\$222	20 %
Update Disadvantaged Business Enterprise Plan at Reading Airport Reading, PA	Reading Regional Airport Authority Reading, PA	\$14	20 %
Construction Airport Security Fencing, Phase 1, Design at Reading Airport Reading, PA	Reading Regional Airport Authority Reading, PA	\$157	10 %
Airport Maintenance Hangar Development, Site Preparation at Bedford Airport Bedford, PA	Bedford County Airport Authority Bedford, PA	\$83	13 %
Terminal Building Aviation Assistance Services at Williamsport Airport Montoursville, PA	Williamsport Municipal Airport Authority Montoursville, PA	\$10	8 %
Bedford County Airport Proposed Hangar, A/E Services	Bedford County Airport Authority Bedford, PA	\$116	11 %

15. PRESENT ACTIVITIES ON WHICH YOU ARE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	PERCENTAGE COMPLETED
Bedford, PA			
Talen-Ash Facilities Mapping & Coal Stockpile Inventories Various Sites, PA	Talen Generation, LLC Allentown, PA	\$104	85 %
Soil Boring & Engineering Contract for First Energy Various Sites, OH	First Energy Service Company Akron, OH	\$114	55 %
NIPSCO Stockpile Inventories Various, IN	NiSource Merrillville, IN	\$20	65 %
Allegheny Co DPW – Jail Steam Vault Abandonment Pittsburgh, PA	Allegheny County Department of Public Works Pittsburgh, PA	\$35	10 %
CSA Annual Base Services – Engineering Consultant Johnstown, PA	Cambria Somerset Authority Johnstown, PA	\$27	10 %
E02260 - PA 26/36 Culverts, Culvert Replacement Hopewell Township, PA	PennDOT District 9-0 Hollidaysburg, PA	\$762	92 %
E03470 - Brookville 2nd Street Bridge, Bridge Replacement Brookville Borough, PA	PennDOT District 10-0 Indiana, PA	\$290	85 %
Westmoreland County - (L00016) Bridge # 14 Beaver Run, Bridge Design Salem Township, PA	Westmoreland County Department of Public Works Greensburg, PA	\$280	65 %
RACW-California Technology Drive Reconstruction, Full Depth Pavement Reconstruction California, PA	Redevelopment Authority of the County of Washington Washington, PA	\$155	95 %
Chester Co Airport–2017 Airport Business Planning Chester County, PA	Chester County Airport Authority Coatesville, PA	\$25	51%
Carbon County Airport – Jake Arner Memorial Airport Carbon County, PA	Carbon County Airport Authority Lehighton, PA	\$66	35%
Cenkner – On Call – Geotechnical QC Services Various, PA	Cenkner Engineering, Inc. Bellefonte, PA	\$8	23%
Franklin Borough – Sanitary Sewer Improvements Franklin Borough, PA	Borough of Franklin Johnstown, PA	\$196	12%
Kiewit Corporation – 2017 Site Survey for CPV Fairview Energy Center Jackson Township, PA	Kiewit Corporation Omaha, NE	\$111	15%
Lincoln Park Airport – 2017 Master Plan Update Lincoln Park, NJ	Lincoln Park Airport, Inc. Lincoln Park, NJ	\$288	55%
Munster Twp – Spinner Road NBIS Munster Township, PA	Munster Township Loretto, PA	\$5	33%
PA Turnpike – New Warehouse Building Canonsburg, PA	Pennsylvania Turnpike Commission Harrisburg, PA	\$275	12%
PennDOT District 10-0 – On-Call Laboratory Testing Various, PA	PennDOT District 10-0 Indiana, PA	\$50	42%
Rosebud Mining – Fulton Run Site Indiana, PA	Rosebud Mining Company Kittanning, PA	\$18	25%

15. PRESENT ACTIVITIES ON WHICH YOU ARE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	PERCENTAGE COMPLETED
Renovations to Rowan College Burlington County, NJ	Rowan College Mt. Laurel, NJ	\$7	15%
Reading Regional Airport – Security Fencing Reading, PA	Reading Regional Airport Authority Reading, PA	\$285	60%
Sheetz – White Block Renovation Austintown, OH	Sheetz, Inc. Altoona, PA	\$88	22%
Santee Cooper Stockpile Inventories South Carolina	South Carolina Public Service Authority Moncks Corner, SC	\$42	39%
US Gypsum – Stormwater Design Washingtonville, PA	United States Gypsum Corporation Chicago, IL	\$17	28%
USJMA – SR 403 Sanitary Sewer Relocation Stoystown, PA	Upper Stonycreek Joint Municipal Auth Stoystown, PA	\$31	23%
Venango – Acquire Land Runway 3 Franklin, PA	Venango Co. Board of Commissioners Franklin, PA	\$8	58%
Washington Co Airport–Rehab ABC Hangar & Apron Washington, PA	Red Auth of the Co of Washington Washington, PA	\$59	37%
Indian Creek Water Plant Intake Wall Repair Westmoreland Co, PA	Municipal Authority of Westmoreland County New Stanton, PA	\$32	45%
Wagner College – Master Plan Update Staten Island, NY	Wagner College Staten Island, NY	\$52	29%
TOTAL NUMBER OF PROJECTS:  67		TOTAL ESTIMATED CONSTRUCTION COSTS: \$87,164 (in thousands)	

16. PRESENT ACTIVITIES ON WHICH YOU ARE ASSOCIATED WITH OTHERS

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT (in thousands)	YOUR FIRMS RESPONSIBILITY
9 <sup>th</sup> Street Bridge Bridge Design Pittsburgh, PA	Bridge Rehab.	Owner - Allegheny County Pittsburgh, PA Client - Michael Baker Moon Township, PA	2018	\$1800	\$113
E03172 - US 222 Widening Roadway Project Berks County, PA	Roadway	Owner - PennDOT 5-0 Allentown, PA Client - Urban Engineers Philadelphia, PA	2018	\$3,814	\$167
E02747 - SR 209/0115 Intersection, Roadways Monroe County, PA	Roadway	Owner - PennDOT 5-0 Allentown, PA Client - RK&K King of Prussia, PA	2018	N/A	\$148
FAA Hughes, HVAC Upgrade Atlantic City, NJ	Design/Engineering	Owner - FAA Client - Maser Consult Red Bank, NJF	2018	N/A	\$113
IUP FF&E for Keith and Leonard Halls Indiana, PA	Renovation	Owner - Indiana University of PA Indiana, PA Client - Massaro Corp Pittsburgh, PA	2018	N/A	\$79
DE Dept of Correction, Powerhouse Design Delaware	A/E Services	Owner - Delaware Corrections Client - R G Architects Middletown, DE	2018	N/A	\$25
Metropolitan Washington Airport, Planning Services Washington, DC	Planning	Owner - Metropolitan Washington Airport Washington, DC Client - Ricondo & Associates Alexandria, VA	2018	N/A	\$9
T-436 Carney's Crossing Road, Geotechnical Lilly, PA	Drilling	Owner - PennDOT 9-0 Hollidaysburg, PA Client - Keller Engineers Hollidaysburg, PA	2018	N/A	\$3
MilePost 49 to 53 - Lowering of Hulton Road Pittsburgh, PA	Design Engineering	Owner - PA Turnpike Commission Harrisburg, PA Client - Mackin Engineering Pittsburgh, PA	2019	N/A	\$378



17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
Quemahoning Pipeline, modifications to 66" diameter pipeline, Johnstown PA	Cambria Somerset Auth Central Park Complex 110 Franklin Street, Suite 200 Johnstown, PA 15901-1831	\$600,000	2016	Yes
Potable Water Storage Tank Recondition, Westmoreland County PA	Westmoreland County Water Authority, 124 Park and Pool Rd New Stanton, PA 15672		2017	Yes
Central West Virginia Regional Airport Runway Rehab	Yeager Airport, 100 Airport Road 175, Charleston, WV 25311			

17. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE THE DESIGNATED ENGINEER OF RECORD				
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	YEAR	CONSTRUCTED (YES OR NO)
WVU-Downtown Tunnel Inspection & Evaluation Morgantown, WV	West Virginia University One Waterfront Place, Room 6301 Morgantown, WV 26506	\$21	2008	N/A
Cabell County Emergency Services Center Cabell County, WV	Cabell County, WV Commission, Cabell County Courthouse Suite 300 750 5th Ave. Huntington, WV 25701	\$6,400	2009	Yes
Central WV Regional Airport Auth. 2007 Yeager Rehabilitate T/W A&B at Main Apron, Design, Bidding, and Construction Management Charleston, WV	Central West Virginia Regional Airport Authority, Yeager Airport 100 Airport Rd. Ste. 175 Charleston, WV 25311	\$3,706	2009	N/A
Design Services for Hal Greer Blvd., Planning, Design, and Construction Services Huntington, WV	City of Huntington Sanitary Board, 1217 Adams Ave. Huntington, WV 25704	\$429	2009	No
Harrison County, WV Digital Parcel Conversion and GIS Project Clarksburg, WV	Harrison County WV Assessor's Office Clarksburg, WV	\$210	2009	N/A
Putnam County Parcel Map Conversion Putnam County, WV	Putnam County Winfield, WV	\$403	2009	N/A
Hancock County Public Services District - Rt. 8 Sewer Project Weirton, WV	Hancock County, WV Public Service District, 768 Carothers Rd. Weirton, WV 26062	\$1,614	2009	Yes
Marion County WV Parcel Conversion / GIS, Fairmont, WV	Marion County, WV, 200 Jackson St. 4th Floor Fairmont, WV 26554	\$260	2009	N/A
Allegany County Jail and Public Safety Facility Design Arny, NY	Allegany County, NY, County Office Building, Room 207 7 Court St. Belmont, NY 14813	\$17,958	2006	Yes
Buncombe Countywide Digital Orthophoto Base Mapping Buncombe County, NC	Buncombe County, NC, 20 S. Spruce St. Room 205 Asheville, NC 28801	\$299	2006	N/A
West End Bypass Preliminary Engineering Services & Environmental Studies Pittsburgh, PA	Gannett Fleming, Inc., 207 Senate Ave. Camp Hill, PA 17011	\$775	2006	N/A
SR 0021, Sect. C10 Preliminary Design & Environmental Services, Fayette County, PA	Pennsylvania Department of Transportation District 12-0, 825 N. Gallatin Ave. Ext. Uniontown, PA 15401	\$1,105	2006	N/A
E00165-Open End for Northern Altoona Access Engineering and Environmental Services Altoona, PA	Pennsylvania Department of Transportation, District 9-0 Hollidaysburg, PA	\$3,437	2006	N/A
Allegheny County Airport Authority - Engineering Services for Cherrington Office Park Pittsburgh, PA	Allegheny County Airport Authority, Pittsburgh International Airport PO Box 12370 Ste. 4000 Landside Terminal Pittsburgh, PA 15231	\$885	2006	Yes



17. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	YEAR	CONSTRUCTED (YES OR NO)
GAMESA Allegheny Ridge Wind Farm Survey and Environmental Services Various Locations, PA	GAMESA Energy, USA, LLC, 400 Gamesa Drive-Fairless Hills Philadelphia, PA 19030	\$479	2006	N/A
E00134-WO#22-Bedford Springs Final Design Bedford County, PA	Pennsylvania Department of Transportation, District 9-0, 1620 N. Juniata St. Hollidaysburg, PA 16648	\$290	2006	N/A
Shoplock Sunoco Service Center RI/RASE, Somerville, NJ	New Jersey Department of Environmental Protection, Trenton, NJ	\$166	2006	N/A
New Jersey State Police Emergency Operations Center West Trenton, NJ	New Jersey Department of Treasury, 33 W. State St., 9th Fl. PO Box 034 Trenton, NJ 08625	\$14,377	2006	Yes
Franklin County Jail Chambersburg, PA	Franklin County, PA Board of Commissioners, Franklin County Courthouse 14 N. Main St. Chambersburg, PA 17201	\$24,105	2007	Yes
Sussex County Emergency Operations Center, Georgetown, DE	Sussex County Engineering Department, Sussex County Admin. Bldg. 2 The Circle, 3rd Fl. Georgetown, DE 19947	\$7,161	2007	Yes
TrAIL 500kV Transmission Line Project - Aerial Photogrammetric Surveys Various Locations, PA	Allegheny Energy Supply Company, LLC, 800 Cabin Hill Dr. Greensburg, PA 15601	\$467	2007	N/A
Virginia E-9-1-1 Wireless Phase I & II Project Management Services Various Locations, VA	Commonwealth of Virginia, Department of Technology Planning, Suite 135 110 S. 7th St. Richmond, VA 23219	\$4,563	2007	N/A
Westmoreland County 800 Radio System Design and Implementation Greensburg, PA	Westmoreland County, PA Department of Public Safety, 911 Public Safety Rd. Greensburg, PA 15601-2310	\$421	2007	N/A
York County Emergency Services Center York, PA	York County Controller's Office, 1 Market Way West 4th Fl. York, PA 17401	\$11,882	2007	Yes
Allegheny Co. Small Bridge Inspection/NBIS Inspection, Allegheny County, PA	Allegheny County Department of Public Works, 542 Forbes Avenue, Pittsburgh, PA 15219	\$200	2007	N/A
PennDOT, District 4-0 - E00648-SR 2004, Sect 6 Preliminary Design, Final Design, & Construction Services, Wayne County, PA	Pennsylvania Department of Transportation, District 4-0 55 Keystone Industrial Park Dunmore, PA 18512	\$282	2008	N/A
E00648-SR 1018, Sec 67 Preliminary Engineering, Final Design, and Construction Services Wayne County, PA	Pennsylvania Department of Transportation, District 4-0 55 Keystone Industrial Park Dunmore, PA 18512	\$243	2008	N/A
PennDOT, District 9-0 - Pemberton Bridge Rehab Design & Environmental Services Blair County, PA	Pennsylvania Department of Transportation, District 9-0, 1620 N. Juniata St. Hollidaysburg, PA 16648	\$277	2008	N/A
University Blvd Feasibility Study, Moon Township Allegheny County, PA	Moon Transportation Authority 1000 Beaver Grade Rd. Moon Township, PA 15108	\$362	2008	N/A

17. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	YEAR	CONSTRUCTED (YES OR NO)
Altoona Area School District, Junior High School Architectural Services Altoona, PA	Altoona Area School District 1415 6 <sup>th</sup> Avenue Altoona, PA 16602	\$2,259	2008	Yes
SR 2008 over Daniels Run and SR 4029 over Burgetts Run Design/Build Bridge and Roadway Approach, Washington County, PA	PennDOT District 12-0 Uniontown, PA	\$159	2008	N/A
Berks County, Architectural and Engineering Services for Design of Prison Renovations/Additions, Berks County, PA	Berks County Services Center 633 Court St. 14th Fl. Reading, PA 19601	\$22,000	2008	Yes
Waste Management and Pollution Prevention Services, Open-end Agreement E00352	Pennsylvania Department of Transportation, Bureau of Environmental Quality, 400 North St., 7 <sup>th</sup> Floor Harrisburg, PA 17120-0094	\$1,179	2008	N/A
Kenny Construction - TrAIL Project Soil Boring Study and Core Samples Greene & Washington Counties, PA	Kenny Construction, PO Box 3050, 320 South Adams Street Suite 201 Fairmont, WV 26555	\$458	2008	N/A
SR 30 & 981 (E00875) Construction Inspection Services Westmoreland County, PA	Pennsylvania Department of Transportation, District 12-0, 825 N. Gallatin Ave. Ext PO Box 459 Uniontown, PA 15401	\$18,380	2008	N/A
USG Corporation - Engineering Services for Washingtonville Project Derry Township, PA	United States Gypsum Corporation, 550 W. Adams Chicago, IL 60661	\$1,344	2008	Yes
Butler County Prison New Facility Design Butler, PA	Butler County, PA Board of Commissioners 124 W. Diamond St. Butler, PA	\$34,378	2009	Yes
Design Engineering for Clinton Industrial Park, Pittsburgh, PA	Allegheny County Airport Authority, Pittsburgh, PA	\$309	2009	Yes
City of Alexandria, VA Consolidation Feasibility Study, Alexandria, VA	City of Alexandria, VA General Services Alexandria, VA	\$273	2009	N/A
JRA - RFQ#02-2008 Professional Engineering & Technical Services, Regional Sewer Overflow Elimination Program 2008-2009 Johnstown, PA	Johnstown Redevelopment Authority, Public Safety Building, 4th Floor 401 Washington St. Johnstown, PA 15901	\$1,708	2009	N/A
Franklin Hospital Demolition Consulting Services Franklin, PA	University of Pittsburgh Medical Center Seneca, PA	\$112	2009	N/A
Imperial Oil RE Services Morganville, NJ	New Jersey Department of Environmental Protection, Trenton, NJ	\$1,116	2009	N/A
Beaver County, PA On-Site Consulting Beaver County, PA	Beaver County, PA Emergency Services 250 E. End Ave., Beaver, PA	\$264	2009	N/A
PADEP BAMR Freeland South Mine Subsidence, PADEP BAMR Mill Street Mine Subsidence, and Subsurface Core Drilling Investigation within Areas I & II Evaluation Projects, Various Locations,	PADEP Bureau of Abandoned Mine Reclamation Harrisburg, PA	\$1,220	2009	N/A

17. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	YEAR	CONSTRUCTED (YES OR NO)
PA				
Subsurface Core Drilling Investigations on an As-Needed Basis, Various Locations, PA	Pennsylvania Dept of Environmental Protection, Harrisburg, PA	\$879	2009	N/A
Pittsburgh Ewing Interchange, Traffic Study Allegheny County, PA	Allegheny Co. Airport Authority Pittsburgh, PA	\$215	2009	N/A
FirstEnergy 2008 – 2010 Stockpile Inventory Services Various Locations, PA & OH	FirstEnergy Corporation Akron, OH	\$240	2009	N/A
NGB/JCCSE PA Deployment Phase II Capabilities Gap Analysis Arlington, VA	National Guard Bureau Arlington, VA	\$2,057	2009	N/A
Flaugherty Run Bridge Replacement Preliminary Design Allegheny County, PA	PennDOT District 11-0 Bridgeville, PA	\$218	2009	N/A
State of Maine Telecommunications Consulting Statewide, Maine	State of Maine Emergency Services Communication Bureau Augusta, ME	\$275	2009	N/A
TRB ACRP 2007 Guidebook Preservation of Public Use Airports - Planning Washington, DC	Transportation Research Board of the National Academies Washington, DC	\$522	2009	N/A
City of Pittsburgh Transportation Planner Review Allegheny County, PA	City of Pittsburgh, PA 604 City-County Building, 414 Grant St. Pittsburgh, PA 15219	\$30	2009	N/A
Pennsylvania Emergency Management Agency (PEMA) 2008 Deployment Harrisburg, PA	Pennsylvania Emergency Management Agency Harrisburg, PA	\$743	2009	N/A
Region 13 Continued Network Support for RESInet Wireless 911 Consulting Various Locations, PA	Region 13 Planning and Development Council Pittsburgh, PA	\$624	2009	N/A
On-Call Subsurface Drilling Services Indiana County, PA	PennDOT District 10-0 Indiana, PA	\$1,017	2009	N/A
Eastern Patriot Coal 2009 Stockpile Volumes	Eastern Associated Coal Corporation Wharton, WV	\$75	2010	N/A
Boone County WV Digital Parcel Conversion and GIS Project Madison, WV	Boone County Madison, WV	\$143	2010	N/A
Central West VA Regional Airport Auth. - Yeager Airport Master Plan with GIS Component Planning Charleston, WV	Central West Virginia Regional Airport Authority, Yeager Airport 100 Airport Rd. Ste. 175 Charleston, WV 25311	\$510	2011	N/A

**17. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE THE DESIGNATED ENGINEER OF RECORD**

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	YEAR	CONSTRUCTED (YES OR NO)
State of Michigan Consulting for Safety and Security Services: Internet Protocol (IP) 9-1-1 Feasibility Study Statewide, Michigan	State of Michigan Lansing, MI	\$346	2011	N/A
Texas Commission on State Emergency Communications (CSEC) NG9-11 ESInet Phase II	Texas Commission on State Emergency Communications (CSEC) Austin, TX	\$623	2010	N/A
Allegheny County Airport 2008 AGC Taxiway E Relocation PH II	Allegheny County Airport Authority, Pittsburgh, PA	\$136	2011	N/A
Juniata Transportation Improvement Project Engineering Services Blair County, PA	PennDOT District 9-0 Hollidaysburg, PA	\$2,027	2011	No
City of Williamsport, Trade and Transit Center 2, Williamsport, PA	City of Williamsport, PA City Hall, 245 W. 4th St. Williamsport, PA 17701	\$9,500	2011	N/A
City of Williamsport, Church Street Transportation Center, Williamsport, PA	City of Williamsport, PA City Hall, 245 W. 4th St. Williamsport, PA 17701	\$9,250	2011	N/A
Franklin County, PA Needs Assessment/Specification Development Various, PA	Franklin County Board of Commissioners, Chambersburg, PA	\$402	2011	N/A
Armstrong County, PA Program Management and 9-1-1 Center Enhancements Kittanning, PA	Armstrong County, PA 9-1-1 Courthouse Admin Bldg, Kittanning, PA	\$830	2011	N/A
Indiana County, PA Radio System Procurement and Implementation Services Support Indiana, PA	Indiana Conty, PA Emergency Management Agency Indiana, PA	\$111	2011	N/A
Sullivan County Wireless 9-1-1 Procurement Laporte, PA	Sullivan County Emergency Services Laporte, PA	\$432	2011	N/A
Greater Harris County ALI Database Consulting and Next Generation 9-1-1 Consulting Services Houston, TX	Greater Harris County, TX 9-1-1 Houston, TX	\$1,656	2011	N/A
Rensselaer County Correctional Facility Expansion Troy, NY	Rensselaer County, NY, 1600 7th Ave. Troy, NY 12180	\$2,238	2011	N/A
E00648 - SR 3024, Sec 670 F.D. - Part 11 Final Bridge Design Wayne County, PA	PennDOT, District 4-0, 55 Keystone Industrial Park Dunmore, PA 18512	\$147	2011	No
PWSA - Misc. Engineering Consulting Services - TO#1 Supplemental CADD Staffing Pittsburgh, PA	Pittsburgh Water and Sewer Authority, Penn Liberty Plaza I 1200 Penn Ave. Pittsburgh, PA 15222	\$1,064	2011	N/A

17. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE THE DESIGNATED ENGINEER OF RECORD				
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	YEAR	CONSTRUCTED (YES OR NO)
Route 8 Sewer Project, Weirton, WV	Hancock County Public Services District, Weirton, WV	\$383	2011	N/A
Wal-Mart Kilbuck Engineering Services Kilbuck, Allegheny County, PA	Wal-Mart Stores, Inc. 2001 SE 10th St. Bentonville, AR	\$6,888	2013	N/A
JRA - RFQ#02-2008 Professional Engineering & Technical Services, Regional Sewer Overflow - 2010 Elimination Program, Johnstown, PA	Johnstown Redevelopment Authority 401 Washington St., Johnstown, PA	\$1,200	2012	N/A
Bergen County, NJ PSAP Consolidation Bergen County, NJ	Bergen County, NJ, Hackensack, NJ	\$296	2012	N/A
Blair County PA AMS and Mapped ALI Services Hollidaysburg, PA	Blair County PA 9-1-1, 615 4th St., Altoona, PA	\$277	2012	N/A
District of Columbia Verizon Testimony Services for 2009 Washington D.C.	District of Columbia, Office of Unified Communications Washington, DC	\$150	2012	N/A
SR 6219, Sec 020, Final Design & Construction Consulting, Somerset County, PA	PennDOT District 9-0 Hollidaysburg, PA	\$426	2013	No
Graffius Avenue Bridge Indiana, PA	PennDOT District 10-0 Indiana, PA	\$224	2013	No
Work Order #5 – SR 0030/22R Construction Inspection, Ligonier Township, PA	PennDOT District 12-0 Uniontown, PA	\$152	2013	No
Childrens Home Bridge Design/Build Project Morgan Township, PA	PennDOT District 12-0 Uniontown, PA	\$267	2012	Yes
Department Force Bridge Replacement Design, WO #1, Fayette County, PA	PennDOT District 12-0 Uniontown, PA	\$204	2012	N/A
Countywide Phase II Act 167 Plan Various Locations, Elk County, PA	Elk County Planning Department Ridgway, PA	\$190	2012	N/A
Chestnut Flats Wind Project Environmental Services Logan Township, PA	Garnesa Energy, USA, LLC Philadelphia, PA	\$641	2012	N/A
Hospital Emergency Planning and Integration, Letterkenny Army Depot and Chambersburg Various Locations	Pica:inny Arsenal Pica:inny Arsenal, NJ	\$1,766	2012	N/A
Huntingdon County, PA ALI Management Services Huntingdon, PA	Huntingdon County, PA 9-1-1 Huntingdon, PA	\$185	2012	N/A
Juniata County PA Wireless 9-1-1 Requirements and Mapped ALI and Address Maintenance	Juniata County, PA Emergency Services Mifflintown, PA	\$577	2012	N/A

17. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	YEAR	CONSTRUCTED (YES OR NO)
Mifflintown, PA				
State of Oklahoma Statewide Survey of Radio Communications Equipment Statewide, Oklahoma	State of Oklahoma Department of Central Services Oklahoma City, OK	\$852	2012	N/A
State of Wisconsin Assessment, Conceptual Design and Phased Implementation Project Plan for a Statewide Radio Communications System Statewide, Wisconsin	State of Wisconsin Department of Administration Madison, WI	\$903	2012	N/A
Establish and Operate a 9-1-1 Technical Assistance Center Nationwide	United States Department of Transportation (USDOT) National Highway Traffic Safety Administration Washington, DC	\$2,241	2012	N/A
Allegheny County Airport 2009 Taxiways A and C Rehabilitation Projects	Allegheny County Airport Authority, Pittsburgh, PA	\$276	2012	No
Seward Bridge, Bridge Replacement Westmoreland County, PA	PennDOT District12-0 Uniontown, PA	\$476	2013	Yes
Germany Bridge, Bridge Replacement Indiana County, PA	PennDOT District 10-0 Indiana, PA	\$264	2013	Yes
Department of the Air Force, 911th Airlift Wing - Repair/Renovations to Flight Operations Building 419, Repairs/Alterations to Concrete Paving and POL Access Routes, Repair/Renovations to Visiting Quarters Building 219 and 209, Communications Facility Renovations/Additions Coraopolis, PA	United States Air Force Reserve 911th Airlift Wing CONF/LGC-FA6712 2375 Defense Ave Coraopolis, PA 15108-4495	\$6,466	2012	N/A
Reproductive Health Specialists, Renovation of Former Restaurant Tivoli into a Medical Outpatient Surgery Building (Penn Hills Ambulatory Surgery Center), Pittsburgh, PA	Reproductive Health Specialists 665 Rodi Road, Building 2, 2nd Floor, Pittsburgh, PA 15235	\$3,500	2012	N/A
Luzerne County, Design Services for Correctional Facility, Wilkes-Barre, PA	Luzerne Co. Engineer's Office, Luzerne Co. Courthouse 200 North River St., Wilkes-Barre, PA 18711	\$2,481	2013	N/A
SCI Camp Hill, Renovation/Expansion of Kitchen and Staff Dining Area, Camp Hill, PA	PA Department of General Services 104 Headquarters Building 18th & Herr Streets, Harrisburg, PA 17125	\$4,900	2013	N/A
Archdiocese of Philadelphia Pope John Paul II High School and Lansdale Catholic Regional High School, Philadelphia, PA	Archdiocese of Philadelphia Secretariat for Catholic Education 222 N. 17th St. Philadelphia, PA 19103-1299	\$54,000	2012	N/A

17. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	YEAR	CONSTRUCTED (YES OR NO)
Portage Area School District, Elementary School Renovations, Portage, PA	Portage Area School District 84 Mountain Ave., Portage, PA 15946-1809	\$5,750	2012	N/A
Quaker Valley Recreation Association, Bell Acres Field Layout and Design, Bell Acres, PA	Pittsburgh Public Schools PO Box 74 Leetsdale, PA 15056	\$5,000	2012	N/A
Pittsburgh Public Schools, Concord Elementary School Renovations/ Additions, Pittsburgh, PA	Pittsburgh Public Schools 1305 Muriel St., Pittsburgh, PA 15203-1513	\$14,600	2013	N/A
Portage Area School District, Portage Area Junior/Senior High School and Football Stadium Additions/ Alterations, Portage, PA	Portage Area School District 84 Mountain Ave., Portage, PA 15946-1809	\$2,384	2012	N/A
Blairsville-Saltsburg School District, Saltsburg Middle-High School Renovations/ Saltsburg Elementary School Addition, Saltsburg, PA	Blairsville-Saltsburg School District 102 School Ln. Blairsville, PA 15717-9683	\$1,340	2012	N/A
Johnstown Area Heritage Association, Festival Park Additions and Alterations, Johnstown, PA	Johnstown Area Heritage Association PO Box 1889, Johnstown, PA 15907	\$3,000	2012	N/A
Bakers Run Bridge, Construction Inspection Green Township, PA	Green Township, 1492 Route 240 Highway Commodore, PA 15729	\$99	2013	N/A
PA Department of General Services, Construction of Readiness Center, Williamsport, PA	PA Department of General Services 104 Headquarters Building 18th & Herr Streets, Harrisburg, PA 17125	\$1,499	2012	N/A
California University of Pennsylvania, Design Services for Multisport Facility at Roadman Park, California, PA	California University of Pennsylvania 250 University Ave.Box 26 California, PA 15419-1341	\$400	2013	No
Indiana University of Pennsylvania, Kovalchick Convocation and Athletic Complex, Indiana, PA	PA Department of General Services 104 Headquarters Building 18th & Herr Streets, Harrisburg, PA 17125	\$3,542	2012	Yes
Central Cambria School District, Additions/Alterations to High School to Accommodate Middle School, Ebensburg, PA	Central Cambria School District 208 Schoolhouse Rd., Rt. 422 West Ebensburg, PA 15931	\$7,250	2012	Yes
Danville Area School District Elementary School and Middle School Renovations/Additions, Danville, PA	Danville Area School District 600 Walnut St. Danville, PA 17821-9131	\$1,803	2012	Yes
California University of Pennsylvania, Convocation Center, California, PA	California University of Pennsylvania 250 University Ave. Box 26, California, PA 15419-1341	\$2,714	2012	Yes
Allegheny County Sanitary Authority, New Operations and Maintenance Facility, Pittsburgh, PA	ALCOSAN (Allegheny County Sanitary Authority) 3300 Preble Ave., Pittsburgh, PA 15233-1092	\$1,344	2012	N/A
Cumberland County, ME VHF Simulcast System Procurement and Implementation Support Windham, ME	Cumberland County, ME Wincham, ME	\$122	2013	N/A
Berkeley County, WV GIS Parcel Conversion Berkeley County, WV	Berkeley County, WV Assessor's Office, 400 W. Stephen St. Suite 208 Martinsburg,	\$587	2013	N/A

17. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	YEAR	CONSTRUCTED (YES OR NO)
	WV 25401			
Brevard County, FL PSAP Consolidation Assessment Titusville, FL	Brevard County Viera, FL	\$148	2012	Yes
The Pennsylvania State University - Softball Stadium University Park, PA	The Pennsylvania State University 235 Deike Building, University Park, PA	\$7,700	2012	N/A
Rensselaer County Correctional Facility Expansion Troy, NY	Rensselaer County, NY, 1600 7th Ave. Troy, NY 12180	\$2,238	2013	N/A
E00648 - SR 3024, Sec 670 F.D. - Part 11 Final Bridge Design Wayne County, PA	Pennsylvania Department of Transportation, District 4-0, 55 Keystone Industrial Park Dunmore, PA 18512	\$147	2012	No
PWSA – Misc. Engineering Consulting Services - TO#1 Supplemental CADD Staffing Pittsburgh, PA	Pittsburgh Water and Sewer Authority, Penn Liberty Plaza I 1200 Penn Ave. Pittsburgh, PA 15222	\$1,064	2012	N/A
GenOn Conemaugh – Engineering Services Cambria County, PA	GenOn Northeast Management Company, Conemaugh Station 1442 Power Plant Rd. New Florence, PA 15944	\$14	2013	N/A
Charleston County SC Dispatch Consolidation	Charlestown County SC Chief Deputy Administrator's Office North Charleston, SC	\$396	2014	N/A
McLaughlin Run & Tank Farm Road, Bridge Replacements, Allegheny & Beaver Counties, PA	PennDOT District 11-0 Bridgeville, PA	\$430	2014	No
Mayport Bridge, Bridge Replacement Clarion County, PA	PennDOT District 10-0 Indiana, PA	\$366	2014	Yes
E02332 – CI for 322/208 Construction Inspection Services Mifflin County, PA	PennDOT 2-0, 70 PennDOT Drive, PO Box 342, Clearfield, PA 16830	\$1,199	2014	N/A
E02446 CI for SR 0001/LHB Construction Inspection Services Bucks County, PA	PennDOT 6-0, 7000 Geerdes Blvd King of Prussia, PA 19406	\$1,382	2014	N/A
Hickes – Construction Services Various, PA	Hickes Associates, Inc. PO Box 379 Alexandria, PA 16611	\$1	2014	N/A
Brodart Facility, Testing & Inspection Services Williamsport, PA	City of Williamsport, PA 245 West 4 <sup>th</sup> Street Williamsport, PA 17701	\$195	2014	N/A
Youngwood Borough, Inspection Services Youngwood, PA	Youngwood Borough Authority 17 South Sixth Street Youngwood, PA 15697	\$2	2014	N/A
KJ Environmental Drilling Services Various	KJ Environmental, Inc. 109 S. Oakland Street Denton, TX 76201	\$23	2014	N/A



17. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	YEAR	CONSTRUCTED (YES OR NO)
AGES – Drilling Services	AGES 4 Grandview Circle Canonsburg, PA 15317	\$1	2015	N/A
GBB Engineering, Drilling Services Various	Garvin Boward Beiko Engineering, Inc. 180 Bilmar Drive Pittsburgh, PA 15205	\$60	2015	N/A
Consumers Energy, Stockpile Services Various, MI	Consumers Energy 1945 W. Parnall Road Jackson, MI 49201	\$52	2015	N/A
First Energy, Geotechnical Services	First Energy Corporation 395 Ghent Road Akron, OH 44333	\$3	2015	N/A
RA Glancy, Construction Quality Control Services Ebensburg, PA	RA Glancy and Sons, Inc. 2361 Venture Dr Gibsonia, PA 15044	\$11	2015	N/A
Musser Engineering, Drilling Services Central City, PA	Musser Engineering, Inc. 7785 Lincoln Highway Central City, PA 15926	\$87	2015	N/A
Mountain Research, Drilling Services Various	Mountain Research 825 25 <sup>th</sup> Street Altoona, PA 156601	\$11	2015	N/A
RJ Albarano, Quality Control Services Various	Ralph J. Albarano & Sons, Inc. PO Box 806 Duncansville, PA 15928	\$3	2015	N/A
CAD Needs Assessment Monterey County, CA	Monterey County of California Salinas, CA	\$167	2016	N/A
Yeager Airport Rehabilitation of Runway 5-23 Access Taxiways, Charleston, WV	Central West Virginia Regional Airport Authority, Charleston, WV	\$277	2016	No
Stockpile Inventory Services Various Sites, PA	PPL Corporation Mountoursville, PA	\$193	2016	N/A
Pittsburgh International Airport, Mapping Services Pittsburgh, PA	Pittsburgh International Airport Pittsburgh, PA	\$161	2016	N/A
PA State Police Hangar at Wilkes-Barre Airport, Site Design & Permitting Services Avoca, PA	Miller Brothers Construction, Inc. Haven, PA	\$27	2016	No
Santee Cooper Stockpile Inventories Various Sites, SC	South Carolina Public Service Authority (Santee Cooper) Moncks Corner, SC	\$40	2016	N/A
4-082 – I-95/I-276 Connection, Construction Inspection, Trevese, PA	Pennsylvania Turnpike Commission Harrisburg, PA	\$7,284	2017	N/A

**18. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE ASSOCIATED WITH OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)**

CDM – Taylor Borough Superfund Site Environmental Services Taylor, PA	Pennsylvania Department of Environmental Protection - Ebensburg, PA	\$354	2008	N/A	CDM Federal Programs Corporation
PBQ&D NJDOT TP-506 Route 49 & 55 Hazardous Waste Screening Study Cumberland County, NJ	New Jersey Department of Transportation Trenton, NJ	\$57	2008	N/A	PB Americas, Inc.
Sunbury Generation LP Units 1-4 AQCS Project Underground Utility Investigation Geotechnical Services & Drilling Shamokin, PA	Sunbury Generation, LLC Old Trail Road - General Delivery, PO Box 517 Shamokin Dam, PA	\$141	2008	N/A	WorleyParsonsGroup
AGES - Subsurface Boring, Sampling & Testing for SR 0985, Section 012 over Beaver Dam Creek, Somerset County, PA	Pennsylvania Department of Transportation, District 9-0 Hollidaysburg, PA	\$10	2008	N/A	American Geotechnical & Environmental Services, Inc. (AGES)
Mercer County WV 9-1-1 Center Consulting	Technology Consulting Services	\$11	2008	N/A	ET Boggess Architect, Inc.
Kenny Construction – TrAIL Project Soil Boring Study and Core Samples, Greene and Washington Counties, PA	Allegheny TrAILco Greensburg, PA	\$458	2008	N/A	Kenny Construction
WorleyParsons - Sunbury Generation LP Units 1-4 AQCS Soil Testing and Inspection Shamokin Dam, PA	Sunbury Generation, LLC Old Trail Road - General Delivery, PO Box 517 Shamokin Dam, PA	\$78	2009	N/A	WorleyParsonsGroup
Kenny PATH Welton Springs Substation Geotechnical Services Welton Springs, WV	Allegheny Energy 800 Cabin Hill Dr. Greensburg, PA	\$56	2009	N/A	Kenny Construction
Cairone & Kaupp, Inc., Washington Crossing National Cemetery Master Plan (Phases 1 through 5) Upper Makefield Township, PA	The Department of Veterans Affairs, National Cemetery Administration, 810 Vermont Avenue, NW - Washington, DC	\$625	2009	N/A	Cairone & Kaupp, Inc.,
US Coast Guard Support Center, Design and Construction of a Rescue Swimmer Training Facility (RSTF)	Dept. of Homeland Security, Civil Engineering Unit, Cleveland 1240 E. 9th St., Cleveland, OH	\$1,700	2009	N/A	The Oak Group, Inc.,
2008 Yeager Airport Obstruction Removal R/W 5 End-Design	Central West Virginia Regional Airport Authority Charleston, WV	\$436	2010	N/A	S&S Engineers

18. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE ASSOCIATED WITH OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

502 Junction/Meadowbrook Geotechnical Services	Allegheny Energy TrAILco Greensburg, PA	\$321	2010	N/A	Kenny Construction
Empire State Development, Midtown Demolition and Site Preparation Project Rochester, NY	Labella Associates, PC Rochester, NY	\$126	2010	N/A	Labella Associates, PC
MTS Technologies DCOC Phase 2 Johnstown, PA and Mobile, AL	MTS Technologies Johnstown, PA	\$150	2010	N/A	MTS Technologies
SR 6219, Sect 019 Somerset County, PA	PennDOT District 9-0 Hollidaysburg, PA	\$9,828	2010	No	McCormick Taylor
I-79 CPR Washington & Allegheny Counties	PennDOT District 12-0 Uniontown, PA	\$542	2010	No	Trumbull Corp.
3-204 – Environmental Open End Statewide, Pennsylvania	Pennsylvania Turnpike Commission Harrisburg, PA	\$750	2010	N/A	Lotus Environmental
Federal Communications Commission (FCC) National Mapping Program	Federal Communications Commission 445 12 <sup>th</sup> Street, SW Washington, DC 20554	\$415	2010	N/A	FCC
CostQuest Associates, Inc. State of Alabama Broadband Interactive Mapping Phase 1	CostQuest Associates, Inc. 6261 Ashbourne Place Cincinnati, OH 45233	\$54	2010	N/A	State of Alabama
Ricondo & Associates Metropolitan Washington Airports Authority (MWAA) Intercom/Paging System	Ricondo & Associates, Inc. 8610 N. New Braunfels Ave. Suite 700 San Antonio, TX 78217	\$40	2010	N/A	Metropolitan Washington Airports Authority
Lackawanna County ALI Management Services Scranton, PA	Lackawanna County Department of Emergency Services Jessup, PA	\$400	2011	N/A	Lackawanna County
John S. Fine Bridge Luzerne County, PA	PennDOT District 4-0 Dunmore, PA	\$821	2011	Yes	Susquehanna Valley Construction

18. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE ASSOCIATED WITH OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

I-81 Conodoguinet Creek Bridge Cumberland County	PennDOT District 8-0 Harrisburg, PA	\$735	2011	Yes	Trumbull Corp.
ALCOSAN Saw Mill Run Facilities Planning Allegheny County, PA	Allegheny County Sanitary Authority Pittsburgh, PA	\$810	2012	N/A	ARCADIS
Routes 1 & 9T (25) Construction Phase Environmental Services	New Jersey Department of Transportation Trenton, NJ	\$270	2012	N/A	NJDOT
E01907 – 005 SR 844/Q10 Highway Washington County, PA	PennDOT District 12-0 Uniontown, PA	\$14	2012	No	HRF Conformance Verification
Symmes, Maini & McKee Associates, Inc. – Essex County MA PSAP Facility Operations and Technology Programming Support	Symmes, Maini & McKee Associates, Inc. 1000 Massachusetts Ave Cambridge, MA 02138	\$98	2013	N/A	Essex County MA PSAP Facility Operations
Picatinny Arsenal – City of Toledo OH Integrated Command Operations Program (ICOP)	Picatinny Arsenal Fire Control Systems and Technology AETC, ARDEC, RDECOM AMSRD-AAR-AEF-H	\$2,682	2013	N/A	U.S. Army
Morris County, NJ Alternative Programming and Design Study	Morris County, NJ Dept. of Law and Public Safety PO Box 900 Morristown, NJ 07963	\$20	2013	N/A	Morris County, NJ
PADEP Surveying and Mapping Various, PA	PADEP Harrisburg, PA	\$13	2013	N/A	Hunt Engineering
Indiana University of PA, Leonard and Chester Halls Quality Control Services Indiana, PA	Indiana University of PA Indiana, PA	\$1	2014	N/A	Enders Plumbing
Conemaugh Fuel Handling Geotechnical Investigation New Florence, PA	Conemaugh Generation Plant New Florence, PA	\$11	2014	N/A	NRG Energy
PADEP Surveying/Mapping Services Various, PA	PADEP Harrisburg, PA	\$31	2014	N/A	Hunt Engineering

18. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE ASSOCIATED WITH OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

Shellbark Slide Drilling Services Bedford County, PA	Harrison Township Bedford, PA	\$43	2015	N/A	SP&K Engineering
PHA Blumberg Demolition Building Demolition Philadelphia, PA	Philadelphia Housing Authority Philadelphia, PA	\$324	2015	N/A	T.N. Ward
Flight 93 Memorial Construction Quality Control Testing Services for Foundation Installation Stoystown, PA	U.S. Department of the Interior National Park Service Washington, PA	\$5	2015	N/A	G.A. & F.C. Wagman, Inc.
Rapid Bridge Replacement P3 Project - Bridge Replacements Various, PA	PennDOT BOD Harrisburg, PA	\$1,080	2016	No	HDR Engineering, Inc.
SR 981 10F, Bridge Scanning Services Various, PA	PennDOT Harrisburg, PA	\$3	2016	N/A	EADS Group
Toms River Schools, Facilities Assessment, Digital Assessment Harrison County, WV	Toms River School District Harrison Co., WV	\$140	2017	N/A	Maser Consulting
Mercer County, GIS Services Various, PA	Mercer County Mercer County, PA	\$288	2017	N/A	PennDOT District 10-0

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH

19. Use this space to provide any additional information or description of resources supporting your firm's qualifications to perform work for the West Virginia Abandoned Mine Lands Program.

20. The foregoing is a statement of facts.

Signature: *Richard E. Genday*

Title: Vice President

Date: September 6, 2018

Printed Name: Richard E. Genday, PE

## Attachment C

AML and RELATED PROJECT EXPERIENCE MATRIX																					
PROJECT	Exp. Basis C=Corp. P=Personnel	Additional Info Provided in Section (e) **	PROJECT EXPERIENCE REQUIREMENTS														PRIMARY STAFF PARTICIPATION/CAPACITY *** M=Management P=Professional				
			Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrological/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Re placement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Dave Minnear, PE (P)	Cameron Mock, PE (P)	George Wright, PE (P)	Jackie Hockenberry, PG (P)
Galloway Refuse Site, Barbour County, WV	C, P	2	X		X	X		X		X		X		X	X	X	X	X			
OSM Emergency Response Projects, for Sites Located in WV/KY/VA	C, P	2			X				X		X			X		X	X	X			
Yellow Creek Watershed AMD Treatment, Indiana County, PA	C, P	2	X	X	X	X	X	X		X	X	X	X		X		X	X	X	X	X
Laurel Run #2 AMD Treatment, Indiana County, PA	C, P	2		X	X	X				X	X	X	X				X	X	X	X	X
Palo Alto Mine Void, Schuylkill County, PA	C, P	2		X	X	X				X						X	X			X	X
Mt. Carmel Mine Subsidence, Northumberland County, PA	C, P	2		X	X					X						X	X			X	X
Mill Street Mine Subsidence, Pittston, Luzerne County, PA	C, P	2		X	X					X		X				X	X			X	X
Drifton Estates Mine Subsidence, South Freeland, Luzerne County, PA	C, P	2		X	X					X						X	X			X	X
Upper and Little Schuylkill River Watershed Assessment, Schuylkill County, PA	C, P	2				X				X	X				X		X			X	
Artesian Borehole Relocation, St. Vincent College, Latrobe, Westmoreland County, PA	C, P	2		X	X	X					X	X	X			X		X	X		
Enon Valley Watershed Assessment, Lawrence County, PA	C, P	2	X	X		X				X	X		X			X		X			

PADEP Spangler AML Site, 317 Acres Mapped, Cambria County, PA	C, P		X																				X
PADEP Parker AML Site, 120 Acres Mapped, Butler County, PA	C, P		X																				X

- \* List whether project experience is corporate or personnel based or both.
- \*\* Use this area to provide specific sections or pages if needed for reference
- \*\*\* List Primary Design personnel and their functional capacity for the projects listed

Attachment "C"