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30 Columbia Blvd.

Clarksburg, WV 26301

TYPE NAME/ADDRESS HERE

Thrasher Engineering, Inc.

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

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ENVIRONMENTAL PROTECTION DEPARTMENT OF OFFICE OF AML&R 601 57TH STREET SE CHARLESTON, WV 25304

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P .O. Box 1532 Clarksburg, WV 26301 www.thrashereng.com

Fax: 624•7831 thrasher@thrashereng.com

October 21, 2008

West Virginia Department of Environmental Protection Office of Abandoned Mine Lands and Reclamation c/o State of West Virginia Department of Administration Purchasing Division 2019 Washington Street, East Charleston, WV 25305

RE: Expression of Interest – Georges Creek Portals / Putney Impoundment Requisition # DEP14417

To the Members of the Selection Committee:

Thrasher Engineering, Inc. appreciates the opportunity to submit this expression of interest and qualifications to provide engineering design services for the Georges Creek Portals and Putney Impoundment project in Kanawha County. Our qualifications as West Virginia's largest full service civil engineering firm will provide the Department of Environmental Protection's Office of Abandoned Mine Lands and Reclamation with quality service in a timely and cost efficient manner.

Following our review of the project we have developed a thorough understanding of the project needs. With that understanding, we offer the following qualifications that the selection of Thrasher Engineering for this project will bring to the DEP and the Office of Abandoned Mine Lands:

## EXPERIENCE TO MEET THE SCOPE OF SERVICES

As stated in the RFQ, services that will be required for the scope of the project include civil, structural, geological and hydrological. Thrasher Engineering, Inc. brings the full complement of these areas to the DEP with Novel Geo-Environmental on our team for geo-technical services. As demonstrated in our experience, we have provided engineering design services for numerous projects requiring the same scope as those in this RFQ. Of particular interest to the Putney impoundment aspect of this project is our experience with the rehabilitation of dams. Our expertise in this area is included in our statement of qualifications.

## **PROJECT TEAM**

The qualifications of professionals on the team we have assembled to provide design services for this project are unmatched for this type of work. We have 25 engineers on staff, 14 of who are Registered Professional Engineers. This specific project team includes the design services of Wes Morrow; Wes led an interdisciplinary NRCS planning team during the initial stages of the Aging Dam Rehabilitation Program in West Virginia. Our Environmental Manager, Sheirl Fletcher, has over 20 years of

RFQ # DEP 14417 Page 2

environmental experience with a major coal company, with specific experience in acid mine drainage reclamation. Additionally, Thrasher Engineering offers 15 fully staffed survey crews with experience in mining survey including pre and post subsidence and acid mine drainage

With our experience with AML and drainage projects, our qualified personnel and our expertise, Thrasher Engineering is the right choice for this AML project.

Following the instructions outlined in the RFQ, this proposal contains information regarding Thrasher Engineering's history, qualifications and management and staffing capabilities along with the required DEP /AML Consultant's Confidential Qualifications Questionnaire, and an affidavit stating Thrasher Engineering has no debt owed to the State of West Virginia.

We thank you for your consideration of our qualifications and look forward to the opportunity to present our qualifications and project methodology to you in person.

Sincerely,

THRASHER ENGINEERING, INC.

CHADWICK D. BILLER, P.E.

Principal-In-Charge / Project Manager

## STATEMENT OF QUALIFICATIONS

## FIRM OVERVIEW

## THRASHER ENGINEERING, INC.

#### Established

1983

### Officers

H. Wood Thrasher, P.E., Kenneth P. Moran, P.E., P.S.

Kurt L. Newbrough, P.S.

**Partners** 

Wm. Randy Watson Chadwick Biller, P.E.

Chad Riley, P.E. Clay P. Riley, P.E.

Daniel E. Ferrell, P.E.

President

Vice-President

Secretary / Treasurer

Public Utilities

Site Development / Highways / Airports

Site Development Public Utilities

Public Utilities



Thrasher Engineering, Inc. Office – Clarksburg, WV

## THRASHER ENVIRONMENTAL, INC.

### Officers

H. Wood Thrasher, P.E., Kenneth P. Moran, P.E., P.S. Jonathan Carpenter, P.E. President Vice-President Secretary / Treasurer

## Scope of Services

Public Work - Water / Sewer / Treatment Plants /

Facility Plans

/Business and Industrial Parks Site Development – Industrial/ Business

/ Commercial / Residential

General Civil Engineering - Municipal Engineering /

Subdivisions/

Paving

Highway/ Roadways / Recreational Trails Design

**Environmental Engineering** 

Architecture

Landscape Architecture

Land Surveying, Platting, Legal Description Preparation Construction Management / Materials Testing / Inspection

GIS Mapping and Software Development

### Offices

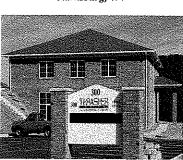
30 Columbia Boulevard, Clarksburg, WV

300 Association Drive, Charleston, WV - Thrasher Environmental

3000 Thayer Center, Oakland, MD

Main Street, Moorefield, WV - Field Office

Martinsburg, WV – The Berkeley Associates- Affiliate Princeton, WV – Pentree, Incorporated – Affiliate



Thrasher Environmental, Inc. Office
- Charleston, WV

## STATEMENT OF QUALIFICATIONS

Thrasher Engineering, Inc. is a civil engineering consulting firm, specializing in public works projects. The majority of Thrasher Engineering's work involves publicly funded water treatment and distribution systems, sewage collection and treatment systems, and industrial and business parks. Over \$600 million in water, sewer, site development, survey and construction management projects have been designed and supervised by the firm

H. Wood Thrasher and Henry A. Thrasher formed the company in 1983 with a commitment to excellence and professionalism in engineering. H. Wood Thrasher, P.E. remains principal of the company; also serving as principals are Kenneth P. Moran, P.E., and Kurt L. Newbrough, P.S.

Providing a full range of professional engineering services, Thrasher Engineering, Inc. currently maintains a staff of 170 full-time employees with. Our staff includes registered professional engineers, graduate engineers, registered professional surveyors, and support staffing of surveyors, design technicians, CADD technicians, construction managers, and secretarial/clerical personnel. This professional staff has a wealth of experience and is our greatest asset. This includes not only the principals but also the technicians, surveyors, construction managers, and office support staff. Combining education with experience, the qualified staff of Thrasher Engineering strives to provide service that is second to none and is committed to maintaining a strong reputation for quality work. The company's full and diverse staff has the resources to handle many projects, both large and small, simultaneously.

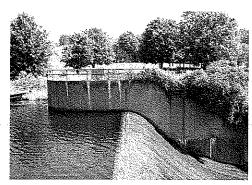
### SERVICES

The expertise of our company is confirmed in the variety of projects successfully completed. Areas of expertise that we believe are most beneficial to the WV Department of Environmental Protection Office of Abandoned Mine Lands and Reclamation for the DEP AML Georges Creek and Putney Impoundment Project include:

### DAM SAFETY ENGINEERING INVESTIGATION

Thrasher Engineering, Inc. engineers have conducted dam safety (hazard classification / rehabilitation assessment) investigations on a total of 11 structures, for both public and private clients. The dams investigated vary in function from single purpose structures (flood prevention or recreation) to multiple-purpose structures (flood prevention, water supply, and/or recreation).

Our objective in dam safety engineering investigation is to go beyond just the engineering aspect of the project; we work as a team with our clients to understand their present and future needs. With that information, we coordinate with each client to evaluate their dam and to offer the most effective solution that best suits their short and long-term goals.



Buffalo Lake Dam Spillway

Our Dam Safety Engineering Investigation Services Include:

<u>Determining Existing Condition of Dam</u> – by reviewing available design documentation and Dam Safety Inspection (Operation and Maintenance) Reports, the current Monitoring and Emergency Action Plan; and by conducting an on-site inspection of the structure in order to establish the present condition of the dam including problems and deficiencies; and how it functions with respect to the original design purpose(s).

<u>Hazard Classification Determination</u> – by reviewing available structure and downstream development information which was used to determine the existing hazard classification. Hazard classification is determined using current State Dam Safety Regulations and other applicable state codes and/or regulations, using updated downstream development information.

<u>Determining Dam Rehabilitation Needs</u> – using results of the hazard classification determination, recommendations from available Dam Safety Inspection Reports, and the on-site inspection to determine rehabilitation requirements.

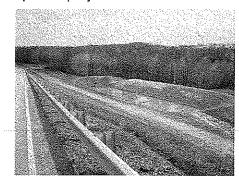
Capabilities in dam safety engineering investigation and rehabilitation recommendations include:

- Dam hydrology and hydraulic studies
- Dam hazard classifications
- Sedimentation requirements
- Geologic investigations
- □ Earth embankment and foundation design
- Principal and auxiliary spillway design

## SITE DEVELOPMENT

Thrasher Engineering has planned, surveyed, designed and provided construction management services for over 30 site development projects for both public and private clients. Projects ranging from sites for residential housing to business and industrial parks to multi purpose "live, work and play" communities are included in our range of site development projects.

Our objective in site development engineering is to go beyond just the engineering aspect of the project; we work as a team with our clients to understand their present and future needs. With that information, we work with them to evaluate site locations that best suit their short and long- term goals.



Our Site Development Services Include:

<u>Planning and Conceptual Design</u>- evaluation of potential sites; recommendation of most functional, most cost-effective alternative; layout of site reflecting best use of land available; design of off-site and on-site (underground) including water service, sanitary sewer service, storm drainage facilities, telephore

Storm water Pond, Canaan Federal Prison, Scranton, PA

service, sanitary sewer service, storm drainage facilities, telephone, electrical service, and

television cable service; obtaining all permits necessary to allow construction including State Health Department for extension of water and sewer lines, WV Division of Environmental Protection Sediment and Erosion Control Permit, WV Division of Highways entrance permit, as well as any local permits required; roadway design; layout of industrial lighting; and construction management services to assure compliance with design.

<u>Grading Plans</u> - which includes development of cut and fill quantities and construction plans (showing existing and proposed contours, structures, and facilities on site) to allow for the best use of available land.

<u>Utility Layout/Mapping</u> - includes design of utility extensions to serve existing and proposed facilities, as well as the complete mapping of existing utilities.

# STORM WATER DRAINAGE / SEDIMENT AND EROSION CONTROL

Our experience includes development of Sediment and Erosion Control measures on all types of construction sites as required by the WV Division of Environmental Protection, design of drainage facilities including piping, intake structures, etc., for site stabilization and flood control.

Our staff members have considerable hydrologic and hydraulic design experience and have successfully obtained local, state, and federal erosion and sediment control permits and National



Pollutant Discharge Elimination System (NPDES) permits for point source and storm water discharges.

Capabilities in the evaluation and design storm water drainage include:

- Hydrology Studies / Hydrographic Mapping
- Storm Water Collection Systems
- Detention Ponds
- Injection Wells
- Underground Storage
- Combined Sewer Overload (CSO) separation

## **ENVIRONMENTAL REPORTING SERVICES**

Thrasher Engineering, Inc. provides full environmental assessment and clearance services. We have more than 18 years of experience conducting environmental/natural resource compliance consultation with West Virginia Division of Environmental Protection, (WVDEP), Federal Aviation Administration and Federal Highways Administration, US Department of Agriculture-Rural Development Utility Program, and US Environmental Protection Agency (EPA).

## Experience includes:

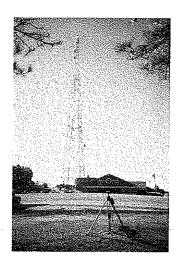
- ☐ Permitting Related Activities (401 and 404)
- □ NEPA Environmental Document Preparation
- □ Wetland Delineation and Mitigation
- □ Rare, Threatened and Endangered Species Section 7 Informal Consultation
- Rare, Threatened and Endangered Species Section 10 Habitat Conservation Plans
- Water Use and Water Quality
- □ Air and Noise Impacts, Assessments, and Controls
- □ Soils and Geological Resources
- Cultural Resources –(Sub contracted to a reputable and approved Cultural Resource Consultant)
- Hazardous Materials
- Sediment and Erosion Control
- Consent Orders
- Compliance Schedules
- Site investigations
- SPCC Plans, Contingency Plans, Ground Water Protection Plans and Storm Water Pollution Prevention Plans
- □ Waste Treatment and Site Remediation
- □ Waste Disposal
- □ Channel Restoration
- Stream Bank Stabilization
- Enforcement Actions

### SURVEY

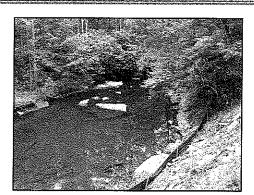
In addition to a full service professional engineering staff, Thrasher Engineering maintains a complete surveying department which includes four licensed professional land surveyors, ten full-time survey crews, CADD technicians, and office support staff.

We perform our work utilizing the most current methods and equipment available. Our survey work is accomplished using global positioning systems (GPS) and electronic distance measuring (EDM) survey stations with data gathering capabilities.

The type of surveys provided by Thrasher Engineering varies greatly as well and covers virtually all aspects of land surveying, such as:



<u>Pre- and Post-Mining Surveys</u> - vertical and horizontal control, inspector's report of protected structures, interior and exterior photographs, and videos. For Eastern Associated Coal Corporation, approximately 90 pre- and post-mining surveys were done in 1997. These surveys required photographs and videotaping of existing structures. Additional services performed for



Eastern includes construction layout for impoundments, shaft site boundary and topographic surveys, map editing, and collection of well inventory data

**Boundary Surveys** - verification of land owners, traverse and location of existing monuments, computations of closure, establishment of property corners, actual field stakeout, and preparation of plats and legal descriptions for property owners.

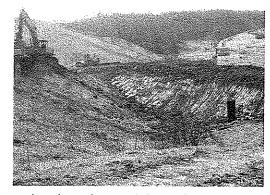
<u>Topographic Surveys</u> - location of existing features and determination of contours used in engineering layout of water distribution systems, sewer collection systems, industrial park layouts, etc.

<u>Construction Layout</u> - providing horizontal and vertical control for contractor's use and using this information to establish construction controls.

**GPS Surveys** - horizontal and vertical control networks

## CONSTRUCTION MANAGEMENT AND INSPECTION

Thrasher Engineering knows how projects should be built. We can provide the knowledgeable and experienced personnel necessary to manage the construction phase of your project. Our project managers and inspectors are experienced in all types of construction activities. From utilities, site development and storm water management to roads, bridges and airports, we apply our construction management and inspection expertise to ensure successful projects. Our construction managers and our inspectors have years of experience; many of our inspectors are certified by the West Virginia



Department of Transportation / Division of Highways for roadwork and materials testing.

### **MATERIALS TESTING**

Thrasher Engineering's Materials Testing Department is capable of performing a wide range of field and laboratory tests. Our laboratory at our Clarksburg, WV office is one of only three nationally certified facilities in the State of West Virginia .Additionally, our engineers and technicians who perform tests both in the field and in the lab are also certified by the State.

Servic	ces include:
	Concrete Testing and Inspection
	Soil Testing and Inspection
	Aggregate Testing and Inspection
	Mortar and Grout
	Asphalt
	Subsidence Inspecting
	Caisson and Piling Inspection

### **GEO-TECHNICAL SERVICES**

For these projects, we will utilize Novell Geo-Environmental, a Certified Minority/ Women Business Enterprise (MBE/WBE).

## **EQUIPMENT AND SOFTWARE**

Thrasher Engineering, Incorporated provides one of the largest networks of computer aided design (CAD) equipment, software and trained personnel in the State of West Virginia.

AutoCAD Landdesktop 2008 and Microstation V8 software is utilized at 48 CAD stations within the Group. Additionally, equipment includes 10 large format (size E) plotters and 5 large format plotter / scanners.

CAD plans are prepared by both dedicated CAD employees and by staff engineers and engineering technicians in each of the firm's offices. This equipment allows our design department to perform accurate work quickly and efficiently. All departments have the capability to electronically transmit data to clients requesting this service. This blend of experienced personnel utilizing modern equipment results in successful projects and satisfied clients

## FIRM MANAGEMENT AND STAFFING

Thrasher Engineering offers the largest engineering staff in the State of West Virginia. The expertise of the Thrasher Engineering staff is a combination of education and experience; it is reflected in all aspects of our services. The firm is led by a talented group of principals and partners who are dedicated to the success of our projects and the satisfaction of our clients.

## FIRM OFFICERS AND PARTNERS

H. Wood Thrasher, P.E. - President Kenneth P. Moran, P.E. - Vice-President Kurt L. Newbrough, P.S.

Wm. Randy Watson Chadwick Biller, P.E.

Chad Riley, P.E. Clay P. Riley, P.E. Daniel E. Ferrell, P.E. Administration
Chief Engineer
Survey / Inspection /
Materials Testing
Public Utilities
Site Development / Highways
/Airports
Site Development
Public Utilities
Public Utilities

**H. Wood "Woody" Thrasher, P.E.** President of Thrasher Engineering, Inc. graduated from West Virginia University in 1977 with a degree in Civil Engineering. Since that time, he has utilized his engineering skills and entrepreneurial spirit to build Thrasher Engineering, Inc. into West Virginia's largest civil and consulting engineering firm. Mr. Thrasher has extensive experience in all aspects of the engineering process, with emphasis on management and administration of multi-million dollar projects including funding and regulatory issues. Mr. Thrasher forms and supervises multi-project design teams and conducts client needs assessments.

**Kenneth P. Moran, P.E.** is Vice-President and Chief Engineer. Mr. Moran has 24 years of experience in civil engineering. He provides project management and technical review for both site development and public utilities projects. A graduate of Fairmont State University, Mr. Moran is a registered Professional Engineer (P.E.) in addition to a registered Professional Land Surveyor (P.S).

Also a partner and principal of Thrasher Engineering is **Kurt L. Newbrough**, **P.S**. Mr. Newbrough provides supervision of all survey activities for the firm performed by ten full-time survey teams. Mr. Newbrough is a licensed Professional Surveyor and has specialized training in OSHA Hazardous Waste Operations and Emergency Response Center in Addition to the US Department of Labor / Mine Safety and Health Administration. He also serves in the elected position as Harrison County (WV) Surveyor.

Public utilities system projects are the responsibility of **Wm. Randall Watson**. A graduate of Fairmont State University, Mr. Watson joined Thrasher Engineering in 1984 and is a firm partner. **Clay P. Riley, P.E.,** also a firm partner, is involved in both water and sanitary sewer utilities projects. He is a graduate of the West Virginia University College of Engineering. **Daniel E. Ferrell, P.E.** is a graduate of West Virginia University and received his Master of Science Degree in Civil Engineering from Old Dominion University. He also is responsible for public utilities projects.

**Chadwick Biller, P.E.** and **Chad M. Riley P.E.**, round out the senior managers of the company. Mr. Riley is a graduate engineer from Fairmont State University and supervises site development projects. Mr. Biller received his engineering degree from West Virginia University. He is responsible for highways, roads, bridges and airport projects, in addition to site development.

## **PROJECT TEAM**

Thrasher Engineering has assigned a team of experienced professionals to the Georges Creek / Putney project.

**Kenneth P. Moran, P.E.** will serve as **Principal-In-Charge and Chief Engineer** for the project. Mr. Moran is Vice-President of Thrasher Engineering, Inc. and oversees all engineering services provided by the firm.

Chadwick D. Biller, P.E. will be the Project Manager. His role in this project will be to oversee all design aspects of the project and work closely with the DEP/ AML office to ensure timeliness client satisfaction and oversee budgetary aspects. Mr. Biller is a Partner in Thrasher Engineering, Inc. and manages site development projects, many of which include remediation, soil and erosion control and drainage aspects.

**Jeffrey L. Gola, P.E.** as **Project Engineer** will be responsible for design of the project. Mr. Gola's experience includes drainage design projects for site development as well as numerous projects for the West Virginia Department of Highways. Additionally, Mr. Gola is trained and experienced in hydrology and hydraulics.

Wes Morrow, Project Engineer will be responsible for assisting in design of the projects. Mr. Morrow joined Thrasher Engineering, Inc. in 2007, following 30 years with the National Resources Conservation Service (NRCS), where he served as Planning Engineer, Design Engineer, State Design Engineer, and Aging Dam Rehabilitation Assessment Project Team Leader. His experience focused primarily on the planning and design of federally funded Public Law-566 flood control dams and channel modifications, and conducting rehabilitation assessments of aging NRCS dams and preparation of assessment reports for the NRCS Aging Dam Rehabilitation Program in West Virginia. Mr. Morrow's technical background includes considerable experience with dam hydrology, hydraulics, geology, sedimentation, principal and auxiliary spillway performance, embankment and foundation stability, quantity and cost estimates, development of contract specifications and construction drawings, and contract documentation.

Environmental services will be managed by **Sheirl Fletcher**, Environmental Manager for Thrasher Engineering, Inc. Ms. Fletcher joined Thrasher Engineering, Inc. after serving 23 years as a geologist, hydrologist and environmental specialist with Consol Energy, Corporation. In that position, she participated in the engineering and final reclamation of five Consol Energy mines in Monongalia County.

The survey aspects of the project will be under the direction of **Kurt Newbrough**, **P.S.**Mr. Newbrough has over 20 years of experience in survey projects and significant project experience in pre and post mine subsidence surveys. These surveys have been conducted for numerous coal companies at sites throughout the state. Mr. Newbrough will assign and oversee the work of the experienced survey crew.

Geo-technical services will be under the direction of Larry Nottingham of Novel Geo-Environmental, a Certified DBE business.

Should the DEP choose to retain Thrasher Engineering, Inc. for the construction monitoring aspect of the project, Thrasher Engineering, Inc. has one of the largest construction inspection teams in the State. Nearly 30 inspectors are available to provide services for the project. **Aaron Denham** serves as supervisor of Construction Management and Materials Testing. He is a graduate of Fairmont State University and is a Level V Certified Inspector by the WV DOH.

Resumes of the project team members follow as additions to the information included in the AML Consultant's Confidential Qualifications Questionnaire.

# KENNETH P. MORAN, P.E., P.S. Vice President / Chief Engineer

23 YEARS EXPERIENCE

## **SUMMARY OF EXPERIENCE**

Mr. Moran joined Thrasher Engineering in 1991 and currently serves as Vice President and Chief Engineer. Mr. Moran is responsible for feasibility studies and design of public utility projects (sanitary sewer, water and storm water) for state, federal and private clients. Additionally, Mr. Moran has extensive experience in all aspects of engineering and with funding and regulatory agencies in conjunction with projects.

## **PROJECT EXPERIENCE**

## Sanitary Sewer Projects

- Hamrick Public Service District Sanitary Sewer Project
- City of Parsons Wastewater Treatment Plant Upgrade
- City of Belmont, Chief Engineer for Sewer Project
- Brooke County PSD, Chief Engineer on Sewer Project
- Town of Junior, Chief Engineer on Sewer Project
- Greater Harrison County PSD, WWTP, Collection System, Extensions
- Huttonsville PSD, WWTP, Collection System, Extensions
- Pea Ridge PSD, WWTP, Collection System, Extensions
- Scott's Run PSD, WWTP, Collection System, Extensions
- Canaan Valley, Sewer collection and Wastewater Treatment Plant Planning Studies
- Pocahontas County PSD, WWTP, Collection System, Extensions
- City of Bridgeport, Lift Station Improvements, WWTP Upgrades
- City of Clarksburg, I&I, WWTP Upgrades, Colonial Village Line Replacement
- Town of Terra Alta, Sewer Collection Improvements and WWTP
- Hundred-Littleton PSD, New Collection and Treatment System

## Site Development/Roadways

- Preston EDA, Chief Engineer for Water Extension to Prison
- Preston EDA, Chief Engineer for Park Utilities at Northpointe Industrial Park
- Food Lion, Clarksburg, Nutter Fort, Sabraton, Kingwood
- US Army Reserve Center, Clarksburg and Jane Lew
- Mineral Co High School

### **EDUCATION:**

B.S., Civil Engineering Technology, 1983 – Fairmont State University

### REGISTRATIONS:

- Registered Professional Engineer (PE), State of West Virginia
- Registered Professional Engineer (PE), State of Virginia
- Registered Professional Engineer (PE), State of Ohio
- Professional Land Surveyor (PS), State of West Virginia

## **AFFILATIONS:**

- Friendship Lodge No.56 A.F. & A.M.
- WV Society of Professional Engineers
- Member of American Society of Civil Engineers

## CHADWICK D. BILLER, P.E. Project Engineer & Manager, Partner

15 YEARS EXPERIENCE

## SUMMARY OF EXPERIENCE

Mr. Biller joined Thrasher Engineering in 1999 and serves as Partner in the firm. Mr. Biller's paramount responsibility is supervision of design and construction of all Thrasher Engineering WVDOH projects and airport projects. Mr. Biller has experience in all aspects of engineering with specific emphasis on site development, highways, roads, bridges, and airports.

## **PROJECT EXPERIENCE**

## Site Development Projects

- Taylor County Commission, Re-roofing of Courthouse and Jail
- Fairmont State University Aerospace Center
- Raleigh County Memorial Airport Industrial Park
- Putnam Business Park
- Wood Products Business Park
- Aurora Flight Sciences
- Various Subdivision in Berkeley County Ranging From 12 to 420 Lots
- Site Plan for Hi-Tech Consortium Expansion, Fairmont, WV
- Site Plans for Nippon Thermostat, Green Metals and Schwans, Putnam County
- Pendleton County Courthouse Annex
- Wingate Hotel, Charles Pointe, Bridgeport, WV
- Daycare Center and USDA Parking Lot, Hardy County
- City of Pleasant Valley, Sidewalks
- Snowshoe Mountain Resort / Intrawest The Seneca
- Wetland Replacement Project, Putnam County
- Hurricane Business Park
- Shinnston City Park, Including Pool and Bathhouse
- City of Bridgeport, Walking Trail and Bridge

### Highway/Road/Bridge Projects

- Old Bridgeport Hill New Storm Drainage System
- Snowshoe Drive Upgrade
- King Coal Highway
- Terra Alta Curve
- Lodgeville Road
- North Bridgeport Bypass
- Corridor H
- Upgrade of US Route 19
- East Street and US Route 50, Parkersburg
- Merrick Creek Connector
- City of Bridgeport, Valley Drive, Chenoweth Drive, Village Drive and Meadowbrook Mall Road
- Lodgeville Bridge
- Indian Fork Bridge
- Jakes Run Bridge
- Littleton and Watersnake Bridges
- Verner Bridge

- Rehabilitation of the 5<sup>th</sup> Street Bridge, Parkersburg Rehabilitation of the 35<sup>th</sup> and 36<sup>th</sup> Street Bridges, Charleston
- Kittonsville Bridge Replacement, Lewis Co.
- Water Street Bridge Replacement, Logan Co.
- Wayne County High School Bridge Replacement
- David Morgan Memorial Bridge, Marion County

## **Airports**

- Harrison Marion Regional Airport Improvement Master Plan
- Raleigh County Airport Business Park and Master Plan
- Grafton Hospital, Helipad Relocation

## **EDUCATION:**

B.S., Civil Engineering, 1992 – West Virginia University

### **REGISTRATIONS:**

- Registered Professional Engineer (PE), State of West Virginia
- Registered Professional Engineer (PE), State of Pennsylvania
- Registered Professional Engineer (PE), State of Ohio

### **AFFILATIONS:**

- American Society of Civil Engineers
- Society of American Military Engineers
- National Society of Professional Engineers

## JEFFREY L. GOLA, P.E. Project Engineer

# 10 YEARS EXPERIENCE

## SUMMARY OF EXPERIENCE

Mr. Gola joined Thrasher Engineering in 1998 and serves as Project Engineer for the firm. He is responsible for hydrology and hydraulic studies, structural design and erosion and sediment control aspects of highway, roads, bridges, airports, site development and community improvement projects. Additionally, Mr. Gola is experienced directing the bidding process, drafting using both AutoCAD and Microstation and managing the overall budget of construction projects.

## **PROJECT EXPERIENCE**

- WVDOH Indian Fork Bridge, Design of Roadway and Bridge, Hydraulic Analysis and Design
- Raleigh County Memorial & Industrial Park, Design of Roadway, Drainage and Erosion and Sediment Control Plan; Design
- City of Pleasant Valley 1000 foot Sidewalk, Project Engineer
- City of Ripley Sidewalks, Project Engineer
- Eight Rivers at Snowshoe Resorts; Project Engineer
- Fairmont State University Squibb Wilson and Locust Area Demolition and Parking Lots; Project Engineer
- Route 279 Bridgeport Bypass, Construction Phases and Temporary Pollution Control
- Buffalo Lake Dam Break Analysis; Hydraulic Analysis
- City of Clarksburg, Design for Staley Slip Repair
- Greystone Development, Emergency Design for Development
- WVDOH Corridor H Davis-Bismark, Design of Roadway and Bridges
- WVDOH Musselman High School, Assistance in Design of Turning Lanes
- WVDOH Lodgeville Road, Assisted in Design and Analysis of Roadway and Bridge
- WVDOH Old Bridgeport Hill, Design of Stormwater System
- WVDOH Verner Bridge Replacement, Assisting in Design and Analysis
- WVDOH Jakes Run Bridge Replacement; Preliminary Design and Draftsman
- Brookside Subdivision; Hydraulics for Bridge Crossing
- WV High Tech Consortium Site Preparation and Mine Stabilization; Assisted in Design
- City of Mannington, Specs, Bidding and Permitting for Demolition
- Harrison-Marion Regional Airport, Assisted on Design for Taxiway Widening and Deicing Pa

### **EDUCATION:**

B.S., Civil Engineering Technology – West Virginia University, Summa Cum Laude 1998

## **REGISTRATIONS:**

- Registered Professional Engineer (PE), State of West Virginia
- Surveying, Transportation Technology
- Highway Engineering, Water Quality Management
- Hydrology, Fluid Mechanics, Soil Mechanics
- Material, Structural Analysis, Concrete Foundation, Steel Design

### **AFFILATIONS:**

- American Society of Civil Engineers
- City of Mannington Code Enforcement Appeal Board

# WYNARD (WES) A. MORROW PROJECT ENGINEER

# 30 YEARS EXPERIENCE

## **EDUCATION**

B.S. in Civil Engineering - West Virginia University, Morgantown, WV

## **AFFILIATIONS**

■ American Society of Civil Engineers – Past Member

## SUMMARY OF EXPERIENCE

Mr. Morrow joined Thrasher Engineering in 2007 following thirty years with the Natural Resources Conservation Service where he served as a Civil Engineer and Project Leader for the Water Resources Technology Team, State Design Engineer, Design Engineer and Planning Engineer.

## **ACCOMPLISHMENTS:**

- Performance Spot Award for "Leadership in development of NRCS Dam Rehabilitation Assessment Reports for Brush Creek Site 7A and Upper Deckers Creek Site 6"
- Outstanding Performance Award (NRCS) for "Providing Leadership to the Design Unit while serving as Acting State Design Engineer"
- Superior Performance Awards (NRCS) and certificates of merit for "Superior team performance in the development of water resource conservation, flood control and recreational development efforts"
- Co-author of the SCS engineering guide "Planning Non-structural Measures in West Virginia"

## <u>EXPERIENCE</u>

Natural Resources Conservation Service (NRCS)

- Morgantown, WV
- Project Leader: Responsible for leading an interdisciplinary team of natural resource conservation specialists for the NRCS Aging Dam Rehabilitation program in West Virginia.
- **State Design Engineer (Design Unit Head)**: Supervised and provided leadership to a staff of three civil engineers and three civil engineering technicians for the design and review of flood control measures including dams, stream channel modifications, non-structural measures, and emergency watershed protection projects throughout West Virginia
- **Design Engineer (Design Unit):** Served as design engineer for the design of flood control measures including dams (Howard Creek 12, Wheeling Creek 3), stream channel modifications, non-structural measures, and emergency watershed protection projects in West Virginia.
- Soil Conservation Service (SCS)

Morgantown, WV

- Planning Engineering (Watershed Planning): Served as planning engineer for conducting feasibility studies for flood control measures including dams (Howard Creek 12, Upper Mud River 2A, Wheeling Creek 3), stream channel modifications (Howard Creek Channel, Cranberry Creek Channel, Little Whitestick Channel, Upper Buffalo Creek Channel, Lower Mud River Channel, Evitt's Run), non-structural measures, and emergency watershed protection projects. Served as engineer on SCS and NRCS damage survey teams tasked with assessing damage caused by sever flooding incidents and developing designs for rehabilitation of the damaged areas. Served as project engineer for the construction of emergency watershed rehabilitation projects.
- US Army

Fort Bragg, NC

■ Lieutenant, 82<sup>nd</sup> Airborne Division (paratrooper, combat engineer)

## SHEIRL L. FLETCHER Environmental Manager

## 22 YEARS EXPERIENCE

## **SUMMARY OF EXPERIENCE**

Sheirl Fletcher joined Thrasher Engineering, Inc. in 2007 and serves as Environmental Manager for the firm. Prior to joining Thrasher, Sheirl served as Environmental Manager for a major coal firm. She has more than 20 years experience and brings comprehensive knowledge of environmental regulatory programs and reporting requirements in multiple states to our clients' projects, along with technical expertise in environmental engineering, geology and hydrology

## **EXPERIENCE:**

En	viro	nmental Management and Safety Compliance
		wastewater and construction projects ensuring compliance with all state and federal regulatory
		requirements.
		Responsible for compliance with all environmental regulations, including interface with environmental regulators, in a manner consistent with company's policies and procedures.
		Assure full compliance with OSHA (Occupational Safety and Health Administration) regulations
		Developed Probable Hydrologic Impact Studies and provided technical report of findings.
		Compiled and reported environmental statistics and remedial initiatives to Corporate Environmental Quality Control.
		Monitored projects to ensure that they were on task in reaching goals and objectives while staying within budgetary limits.
		Inspected construction sites, and waste water treatment and disposal facilities and systems for conformance with federal, state, or local regulations.
		Informed company personnel of inspection findings and explained how problems were prevented or corrected.
		Contributed to the development of company policies, goals, objectives, and procedures, with respect to compliance of environmental regulations.
		Oversaw activities of outside consultants providing necessary services.
		Managed staff, prepared work schedules and assigned specific duties.
		ology
		Analyzed and interpreted geological, geochemical, and geophysical information from sources such as survey data, well logs, bore holes, and aerial photos.
		Planned and conducted geological field studies and surveys by: development of drilling pad sites, soils and subsurface drilling to collect data for interpretation
		Prepared geological maps, cross-sectional diagrams, charts, and reports concerning mineral extraction, land use, and resource management, using results of field work and laboratory research.

Ну	drology
	Studied and documented quantities, distribution, disposition, and development of underground and
_	surface waters.
	Designed and conducted scientific hydro-geologic investigations to ensure that accurate and
	appropriate information was available for use in water resource management decisions.  Coordinated and supervised the work of professional and technical staff, including consultants,
_	engineers, technologists, and technicians.
	Drafted final reports describing research results, including illustrations, appendices, maps, and
_	other attachments.
	Studied wastewater and storm water issues, including flood and drought risks, water quality, wastewater, and impacts on wetland habitats.
	Assessed ground and surface water movement to provide advice regarding issues such as waste
	management, route and site selection, and the restoration of contaminated sites.
	Applied research findings to help minimize the environmental impacts of pollution, water-borne
_	diseases, erosion, and sedimentation.
	Investigated complaints or conflicts related to the alteration of public waters, gathering information,
_	recommending alternatives, informing participants of progress, and preparing draft orders.
	Determined sampling locations and methods, and collected water or wastewater samples for
	analysis, preserving samples with appropriate containers and preservation methods.
F	DUCATION/TRAINING:
	West Virginia University, Morgantown, WV - Bachelor of Science- Geology
	Troot trigina onitoloty, morganiown, to the Edundio of Colonic Colongy
Ad	ditional Training
	Contemporary Supervision
	Conflict Management
	Influence Management

# KURT NEWBROUGH, P.S. Survey Supervisor, Principal

## 23 YEARS EXPERIENCE

## **SUMMARY OF EXPERIENCE**

Mr. Newbrough joined Thrasher Engineering in 1990 and is Principal and Partner in the firm. Mr. Newbrough serves as Survey Supervisor and is responsible for assignment and review of all survey activities. Mr. Newbrough has extensive experience in all aspects of surveys, including but not limited to boundary and easement surveys and the preparation of plats and legal descriptions. Mr. Newbrough also performs courthouse research, computes field data for construction layout, and processes GPS raw data for both public and private clientele in conjunction with Thrasher Engineering projects as well as separate contracts. He also serves in the elected position of Harrison County (WV) Surveyor.

## **PROJECT EXPERIENCE**

## **Boundary Surveys**

- North and South Levee Areas for the Town of Moorefield
- Flood Control for the US Army Corps of Engineers
- FBI Fingerprint Identification Complex for the US Department of Justice
- Hardy County Rural Development Authority
- USARC sites for the US Army Corps of Engineers
- Private Surveys

## **Topographic Surveys**

- West Virginia Division of Transportation. Department of Highways
- Harrison County Board of Education
- Gandee and Partners for Huntington Summit High School
- William A. Bruce, AIA for Food Lion Stores

## **GPS Surveys**

- US Army Corps of Engineers, Baltimore Dist
- Benatech Associates
- IDG, Inc.
- Carter Van Dyke Associates

### **EDUCATION**

- Surveying John Tyler Community College, Chester, VA
- United Career Center, Clarksburg, WV

### REGISTRATIONS

- Professional Land Surveyor (PS), West Virginia #1618 1995
- OSHA Hazardous Waste Operations and Emergency Response Center 29 CFR 1910.120
- US Department of Labor/Mine Safety and Health Administration

### **AFFILIATIONS**

- West Virginia Association of Land Surveyors
- American Congress on Surveying and Mapping
- Member Strathmore's Who's Who
- Calvert Excavating and Paving, Inc.
- Howard Concrete
- Dodd Corporation
- Mid Atlantic Storage Systems, Inc.

## Larry C. Nottingham, PhD, PE

Mr. Nottinhham served as a Principal Engineer at Triad Engineering, Inc. for over 25 years before joining the professional staff at NGE. During that time he has accumulated a broad range of experience in the numerous disciplines of geotechnical engineering. Mr. Nottingham also served as a professor and department chair of the Civil Engineering Department at the West Virginia University Institute of Technology in Montgomery, West Virginia. Mr. Nottingham was involved with consultation and review of many subsidence-related projects performed for BRIM as well as the WVDEP.



### Fields of Competence

- · Foundation Investigations
- Landslide Analysis & Remedial Design
- Mine Subsidence Investigations
- Highway & Airport Geotechnical Design
- Pavement Analysis & Design
- Retaining Wall Design
- · Forensic & Insurance Investigations
- Expert Witness Consultation
- Ground Water and Seepage Analysis & Design
- Dam Analysis & Design
- Personnel Management
- Project Management
- Project Estimating

#### Education

- B.S.C.E., Civil Engineering, West Virginia Institute of Technology, 1965
- M.S.C.E., Civil Engineering, University of Pittsburgh, 1966
- Ph.D., Civil Engineering, University of Florida, 1975

### Registration/Certifications

Registered Professional Engineer in West Virginia,

## Kentucky, and Ohio Employment History

• May 2005 - Present

Senior Engineer, Novel Geo-Environmental, PLLC

• 1979 - May, 2005

Principal Engineer, Triad Engineering, Inc.

• 1989 - 1994

Professor and Department of Civil Engineering

Chair, West Virginia Institute of Technology

• 1975 - 1979

Senior Engineer, Fugro Gulf, Inc., Houston, Texas

• 1970 - 1974

Project Engineer, Florida Department of

Transportation

1967 – 1970

Project Engineer - Ackenheil & Associates, Inc.

## AARON DENHAM

Construction Management and Materials Testing

## SUMMARY OF EXPERIENCE

Engineering Specialization

Mr. Denham joined Thrasher Engineering in 2000 and serves as Field Supervisor for the firm. Mr. Denham is responsible for construction management, inspection and materials testing for highway, airport, site development, structural and public utilities projects.

☐ Fairmont State University Level V Certification – Transportation Engineering Technologist –

## **EDUCATION**

☐ B.S. Civil Engineering Technology, 1999 – Fairmont State University

## **CERTIFICATIONS**

☐ Fetterman Bridge

	WVDOH Compaction Inspector
	WVDOH Concrete Inspector/Technician
	WVDOH Aggregate Sampling Inspector
	WVDOH Aggregate Technician/Inspector
	WVDOH Bituminous Inspector/Technician
	WVDOH Radiation Safety
	Troxler Basic Safety – Nuclear Compaction Gauge
REPR	RESENTATIVE PROJECT EXPERIENCE
	Army Corp of Engineers, Tygart Dam
	Benedum Airport Authority 2001 Master Plan
	Benedum Airport Authority 2002 Master Plan
	Benedum Airport Authority 2003 Master Plan
	Benedum Airport Authority, 2004 Master Plan
	Ruby Memorial Hospital NE Addition
	Health Science Learning Center
	WV National Cemetery Expansion
	Fairmont State University
	Institute for Scientific Research
	I-68 Welcome Center
	Stockmeier Urethanes
	Fairmont State University Squibb Wilson Boulevard Demolition and Parking Lots; Lead
	Inspector & Testing
	Fairmont State University Renovation; Testing
	City of Pleasant Valley Sidewalk Project; Lead Inspector & Testing
	WVDOH South High Street Bridge
<b>— –</b>	Wheeling Route 2 Bypass
	Lake Floyd Dam
	Baker Dam Site 10
	City of Bridgeport 279 By-Pass
	Mon-Fayette Expressway
	WVDOH Meadowbrook Road

## REPRESENTATIVE EXPERIENCE

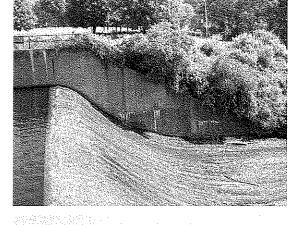
Thrasher Engineering offers significant experience in open drainage and sediment and erosion projects in addition to abandoned mine lands projects, covering a broad range of expertise. In the following section are examples of our experience in each of these areas related to the George's Creek and Putney projects.

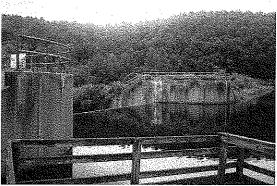
## **BUFFALO LAKE DAM**

Thrasher Engineering, Inc. conducted a dam safety inspection and assessment, and development of a rehabilitation plan and Monitoring and Emergency Action Plan (EAP) for Buffalo Lake Dam (WV03305)

.Buffalo Creek Reservoir was originally designed and constructed during the late 1950's for the Clarksburg Water Board as a source of a domestic water intake. The lake has a normal pool elevation of 1018.5 ft covering a surface area of approximately 55 acres and a storage capacity of 903 acre-ft. The actual top of spillway is 1028.5 ft while the top of dam is at elevation 1028 with a surface area of an 82.3 acres and a storage capacity of 1579 acre-ft. The source of outflow is a concrete ogee spillway that crests at elevation 1018.5 ft. and has a width of 85 ft. Based off of the dimensions of the existing spillway, the approach depth was 10 ft. in height and has a design head of approximately 10 ft. Once the water leaves the dam it travels down Buffalo Creek, under US Rt. 19 and dumps into West Fork River.

The existing dam would pass a 58% PMP/6 hour design storm; therefore modifications to the existing





dam would have to be made to safely pass the 70% PMP/6 hour design storm. In order to achieve that goal, TEI determined that the most efficient and economical solution would be to raise the dam to elevation 1031. To achieve the extra height a proposed concrete retaining would be installed along the top of the existing dam and the sections of the existing concrete spillway would have to be raised. The extra impoundment of water will not affect any existing structure or roadways upstream of the dam that were not previous disturbed by the original dam impoundment

The rehabilitation plans, specifications, and EAP were subsequently reviewed and approved by the West Virginia Department of Environmental Protection, pending completion of legal advertisement requirements.

Thrasher Engineering, Inc.'s scope of services for the project included:

- Collecting survey data: obtaining dimensions and elevations of the existing spillway, surveying cross sections of the stream from the dam to the West Fork River, and locating any structures or roadways adjacent or surrounding the stream.
- Obtaining flow values from watershed and PMP storm event
- > Setting up the hydraulic model in the HEC-RAS program; performing hydraulic analysis using all three conditions and determining the hazard classification
- > Defining classification and providing additional analysis
- Compiling input and results from the dam break analysis and making recommendations
- Determining adequacy of lake and dam under Dam Safety Regulations and providing solutions
- Providing Construction Plans
- Performing slope stability test on dam and spillway
- Providing final report to DEP with geo-technical data and construction plans for approval.

## MANNINGTON WATER SUPPLY DAM - HUEYS RUN

Thrasher Engineering, Inc. performed a safety inspection and developed an EAP for the Mannington Water Supply Dam (WV04921).

## EXPERIENCE OF WES MORROW, PROJECT ENGINEER

NRCS Aging Dam Rehabilitation Program - Project Team Leader / Engineer

Mr. Morrow led an interdisciplinary NRCS planning team during the initial stages of the Aging Dam Rehabilitation Program in West Virginia. The process involved developing a description of each dam (engineering design parameters), an assessment of current structure conditions and status of operation of maintenance, a determination of eligibility under the NRCS Watershed Rehabilitation Program, and the scope of potential rehabilitation alternatives; including structural solutions such as upgrading the principal spillway system and / or auxiliary spillway, and raising top of dam.

Dams that were evaluated included:

- Upper Deckers Creek Site 1 (WV07706) performed engineering assessment and developed assessment report
- Upper Deckers Creek Site 6 (WV07712) -performed engineering assessment, conducted sediment survey (which determined that over 50% of sediment pool capacity was still available), and developed assessment report
- Salem Fork 11 (WV03308) performed engineering assessment and developed assessment report
- Salem Fork 11A (WV03309) performed engineering assessment and developed assessment report

- Brush Creek 7A (WV05506) performed engineering assessment, directed sediment survey (which determined that over 50% of sediment pool capacity was still available, and developed assessment report
- Brush Creek 19A (WV05531) performed engineering assessment and developed assessment report
- Patterson Creek 37 (WV05714) performed engineering assessment and developed
- New Creek 14 (WV02404) performed engineering assessment and developed assessment report. Recommended protocol for sediment pool survey. The NRCS has subsequently developed a "draft" Supplemental Watershed Plan Environmental Assessment for the project.
- New Creek 16 (WV05705) performed engineering assessment and developed assessment report

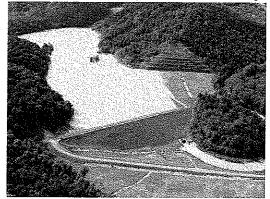
Mr. Morrow has also served as planning engineer, design engineer, and state design engineer for implementation of NRCS flood control dams in West Virginia. These dams include the following:

Upper Mud River 2A (WV04307) – as planning engineer, he developed all aspects of the dam (structure size, spillway sizes and capacities) to a planning level of detail, which was included in the Watershed Plan and Environmental Impact Statement. This effort included development of dam hydrology and hydraulics, embankment and foundation design, sediment requirements, quantity and costs estimates. This dam was subsequently installed under the SCS PL-566 Program.

Wheeling Creek 3 (WV05120) – as design engineer, he co-designed the final design

of the dam. This effort included development of dam hydrology and hydraulics, embankment and foundation design, sediment requirements, quantity and costs estimates, construction drawings, contract specifications, instructions to the project (field engineer), and contract documentation. This dam was subsequently installed under the NRCS PL-566 Program.

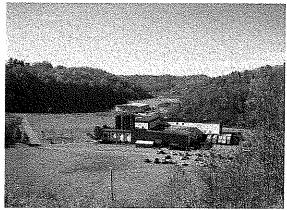
Howard Creek 12 (WV02507) – as design engineer, he developed final design of the dam. This effort included development of dam hydrology and hydraulics, embankment and foundation design, sediment requirements, quantity and costs estimates, construction drawings, as



Wheeling Creek #3 Nearly Full During Hurricane Ivan

costs estimates, construction drawings, contract specifications, instructions to the project (field engineer), and contract documentation. This dam was subsequently installed under the NRCS PL-566 Program.

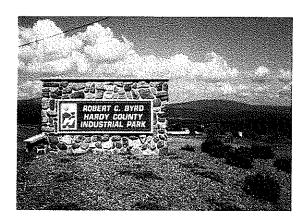
## <u>SITE DEVELOPMENT PROJECTS – SEDIMENT AND EROSION MEASURES</u>

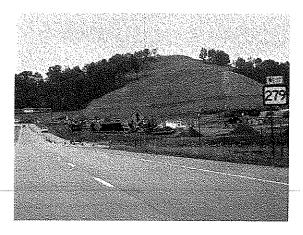


Harrison County Business and Technology
Park
Robert C. Byrd Industrial Park – Hardy
County

White Oaks Business Park - Harrison County

Thrasher Engineering provided survey, site planning, and engineering design services for each of these business/industrial parks which were developed on abandoned mine lands. The design of each project included plans for landslide / erosion and sediment control within grading plans.





## Mingo County Wood Products Industrial Park, Mingo County, West Virginia

Client:

Mingo County Redevelopment Authority

Mike Whitt, Executive Director

304-235-0042

**Project Description:** This project consisted of the development of conceptual layout and final design drawings for the park. The work consisted of drainage, sediment, erosion measures, and on-site utilities including water and sanitary sewer, along with the design and permitting of a 12,000 gpd wastewater treatment plant. Also included in this

project was a roadway design conforming to WV Department of Highways specifications and criteria. Construction management services were also provided.



## Indian Ridge Industrial Park / McDowell County Prison

Client:

Federal Bureau of Prisons

202-514-6461

McDowell County Commission

304-436-8548

**Project Description:** The objective of this project was to push back an existing highwall and enlarge the flat area on the McDowell County's Indian Ridge Industrial Park, a portion of which is being used to accommodate a Federal



Prison. Thrasher Engineering is now providing the site development engineering services for that facility. This project consisted of the design, bidding, and construction management for the preparation of an industrial park/federal prison site. The construction involved moving 20,000,000 CY of earth to create approximately 250 relatively flat acres for development. Inclusive in our scope of work was site grading, sediment and erosion control, stream relocations, and wetland mitigation. This work involved laying back an existing highwall and placing the excavated material into a nearby valley to increase the developable acreage of the site. The valley fill serves as a buffer and will be used for non-structural uses.

### **Belington Industrial Park**

Client:

**Barbour County** 

Office for Economic Development

304-456-1225

This project consisted of the development and conceptual layout and final design drawings for the park. The work



consisted of on-site utilities including water and sanitary sewer. Specifically, this project included:

■ 8,000 LF of water line,

□ 2,700 LF of gravity sewer line,

Manholes, and Fire hydrants.

Additionally, this project included an access road conforming to WV DOT/Department of Highways specifications and criteria, earthwork for building site preparation and storm water detention. Construction management services were also provided.

## West Virginia National Cemetery

Client:

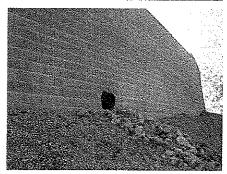
U.S. Department of Veterans Affairs

Peter Fernandez, National Cemetery

Administration

Carter VanDyke Associates

215-345-5053



**Project Description:** The project consisted of the planning, design and bidding for the expansion of the WV National Cemetery. The scope of the work included site utilities, storm sewers, roads, sidewalks, retaining walls, pre-cast concrete crypt burial areas, site grading and sediment and erosion control. Construction management and survey services were also provided.

## Fairmont State University

Client:

Fairmont State University
Dr. Dan Bradley, P.E. President

304-367-4000



Thrasher Engineering is providing civil engineering services throughout the Fairmont State University campus within



the scope of FSU's 10-year \$10 million master plan for infrastructure improvements. This portion of the project included storm water management during and after construction. During the construction phase erosion and sediment control was contained by installing silt fence, water barriers, temporary sediment traps, inlet protection, diversion ditches and utility matting. The final site improvements contain swales, ditches, vegetation, landscaping and culverts to control the storm water and limit the pollution from the site. Ditches are protected from erosion and all unpaved areas are stabilized with vegetation.

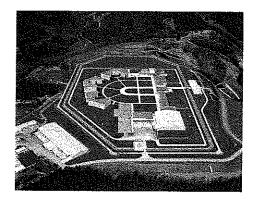
## Glenville Correctional Institution, Gilmer County, West Virginia

Client:

Federal Bureau of Prisons

202-514-6461

**Project Description:** This project consisted of the design/build of a U.S. Correctional Facility. Inclusive in our scope of work were the site utilities (sewer, water, stormwater management gas) site grading, sediment & erosion control, layout of facilities, on site roads and parking, various site elements and oversight during the construction phase.



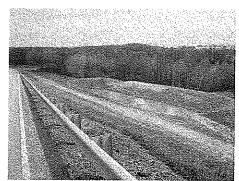
## Canaan Federal Prison, Scranton, Pennsylvania

Client:

Federal Bureau of Prisons

202-514-6461.

**Project Description**: Thrasher Engineering served as a Team Member on this design-build project of US Penitentiary and Federal Prison Camp. The scope of services included sewer, water, storm water management and gas utilities, site grading, sediment and erosion control, relocation of a township road, layout of the facility and



oversight during construction. The drainage ofn this project required the design of a storm water detention pond.

## West Virginia Division of Highways, Harrison County, West Virginia

Client:

West Virginia Division of Highways

304-558-2830

Total Project Cost: \$1,200,000

**Project Description:** This project consisted of developing construction drawings and right-of-way documents for a new storm drain system along Old Bridgeport Hill. The existing storm drain system was 25 to 30 feet deep and was collapsing in several areas; therefore, a new system of inlets and pipes were designed to collect surface water.

## ABANDONED MINE LAND PROJECTS

# WV DEP ABANDONED MINE LANDS - AMHERSTDALE (LOGAN COUNTY) PRE-SETTLING BASIN AND PRE-TREATMENT FACILITY PROJECT

Client:

**WV DEP** 

Office of Abandoned Mine Lands and Reclamation

304-926-0485

**Project Description:** The AML affected area is located in Logan County on CR 16, west of the city limits of Man, a distance of approximately 12.6 Miles.

The scope of the project is the design and construction of a pre-settling basin and pre-treatment system to remove metals and turbidity from the existing water sources, allowing the water existing treatment facility to utilize the surface and groundwater.

The scope of services Thrasher Engineering provided for this project included:

Survey, supervision of subsurface investigation, environmental review, preparation of design, drawings, development of construction documents. .

# <u>WV DEP ABANDONED MINE LANDS – RAGLAND( MINGO COUNTY) WATER LINE EXTENSION PROJECT</u>

Client:

**WV DEP** 

Office of Abandoned Mine Lands and Reclamation

304-926-0485

**Project Description:** The AML affected area is located in the Midwestern portion of Mingo County. The area is approximately 2.6 square miles The scope of services Thrasher Engineering provided for this project included: survey, supervision of subsurface investigation, environmental review, design, development of construction documents. Upon construction, Thrasher will provide construction management services.

### ACID MINE DRAINAGE / COAL COMPANY EXPERIENCE

## **Martinka Water Treatment Plant**

Client: Martinka Coal

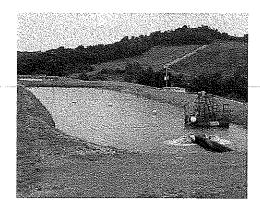
Mr. Gary Timms

Water Treatment Plant Supervisor

Fairmont, WV 304-366-5516

Project Cost: \$6.5 Million

This project consisted of the design of a 17.3 MGD Water Treatment Plan to blend mine borehole water with acid mine drainage; the plan removes iron (1000 mg/l (ferric hydroxide) to less than 1 mg/l.



## The plant design included:

- Aeration Blending and Stripping Carbon Dioxide
- □ Feed Hydrogen Peroxide Shifts chemical equilibrium for utilization of naturally calcium carbonate for neutralization
- □ Coagulation/Flocculation Three (3) stage tapered flocculation with axial flow propeller mixers and variable frequency drives
- Sedimentation Six (6) settling ponds with ferric hydroxide sludge removal and underground injection wells
- □ Polishing Pond Sodium hexamataphosphate for calcium stabilization.

Dayton Carpenter, P.E., DEE, Project Engineer was rewarded the following for the project:

- □ 2002 WV ACEC Gold Award Engineering Excellence
- 2002 WV Manufacturer's Association Environmental Leadership Award for Innovative Technology

## EXPERIENCE OF SHEIRL FLETCHER, ENVIRONMENTAL MANAGER

## Consol Coal Company: Abandoned Mine Lands Remediation / Mine Reclamation

The projects included engineering and final reclamation of the following Consol Energy mines in Monongalia County, West Virginia: Blacksville No. 1, Pursglove Mine, Arkwright Mine, Osage Mine and Humphrey Mine.

Final reclamation included AMD and site remediation of the following types of surface support facilities:

- Refuse / slurry impoundments
- AMD treatment plants including impoundments and sludge lagoons
- Preparation plants and coal stockpile areas
- Shaft and drift openings
- Boreholes.

## Consol Coal Company – Hydrology and Hydraulics

During the final abandonment of the Morgantown operations of Consolidation Coal Company, performed geologic hydrologic study of the Arkwright, Osage, Pusglove and Humphrey Mine pools and their inter-relationship to one another and to adjacent mining operations.

## MINING RELATED SURVEY PROJECT EXPERIENCE

## **Eastern Associated Coal Corporation**

Client:

Eastern Associated Coal Corporation

Allen Moore, Project Manager

304-449-1911

**Project Description:** This ongoing project consists of performing pre and post-mining subsidence surveys on structures and dwellings located within and surrounding the permit boundaries of the Federal No. 2 Mine.

A typical project of this nature consists of establishing horizontal and vertical control, preservation of control points, elevations on critical structure points, baseline establishment and profile, collection of water samples for springs and wells, inspectors report of protected structures, interior and exterior digital photography, and digital CADD mapping of the field survey.

## **Eastern Associated Coal Corporation**

Client:

Eastern Associated Coal Corporation

Allen Moore, Project Manager

304-449-1911

**Project Description:** Past and ongoing projects have been preformed at the Federal No. 2 Mine which include:

- Water line surveys and design for replacement of existing water sources
- Structure identification surveys, water well inventories, and stream monitoring surveys
- Ground control for aerial mapping
- Gas well locations for down-hole surveys
- Subsidence stream locations and profiles
- Permit boundary staking
- Construction layout for refuse impoundments
- Scott's Run Railroad Bypass project design survey, design, and construction layout
- Boundary surveys for fee purchase property acquisitions
- Construction layout for new shaft sites
- Powerline profiles and construction layout
- Topographic design surveys and soundings for impoundment ponds
- Drainage control surveys and design for surface water runoff

## **Martinka Coal Company**

Client: Martinka Coal Company

Gary Timms, Project Manager

304-366-5516

**Project Description:** This project consisted of the collection of data to be used in conjunction with the design of an acid mine drainage facility, designed by Thrasher Engineering, Located at the Tygart River Mine.

Critical land survey components consisted of the following:

- Topographic surveys and digital mapping of approximately 50 acres
- Dewatering borehole layout
- Downstream cross-section surveys for volume computations
- Protected structures identification and mapping
- · Pre-blasting surveys on nearly 200 structures
- · Construction layout of the entire facility

## Martinka Coal Company - Fairmont, WV

Client: Martinka Coal Company

Gary Timms, Project Manager

304-366-5516

**Project Description:** Past and ongoing projects have been performed at the Tygart River Mine including:

- Dewatering borehole computations and layout
- Stockpile surveys
- Certification of drainage system, ponds 5, 6, and 7 Permit No. 1001-87
- Topographic survey and construction layout of the existing Guyses Run AMD Facility
- Boundary surveys for fee purchase property acquisitions
- Subsidence stream locations and profiles
- Construction layout for refuse impoundment
- Ground control for aerial mapping
- Scanned mapping digital overlays
- Conceptual site plan for recreational facilities

## PROJECT APPROACH

Thrasher Engineering, Inc.'s has developed the following project approach and mapping to demonstrate our technical abilities and straight forward method of design and construction.

This project approach is a general approach that will be used on any WVDEP reclamation project and may need to be modified depending on the existing information that is available for the specific project. Also, some steps may not be needed on every project.

## Step #1 Obtain adequate mapping.

The limits of construction will be flown and digitally mapped or, if the area is small enough, survey crews will field survey the area. Thrasher will then provide 1"=50' scale mapping with 2' contours. Spot elevations and critical cross sections may be completed in the field if necessary to make tie-ins.

## Step #2 Design the project.

Thrasher will work closely with the WVDEP in designing the project. Field reviews will be conducted to determine the most cost effective method to be used to reclaim the area. A preliminary design based on the field reviews will be submitted to the WVDEP. After receiving comments or corrections, Thrasher will submit the final plans, specifications and design report. The design report will consist of the bore logs, piezometer elevations, quantity calculations, right of entry forms and any other assumptions that were made during the design.

## Step #3 Prepare for construction.

Thrasher will also set up reference points, benchmarks and control points outside of the construction limits so the contractor will be able to construct the project in the future. Thrasher will complete any permits, right of ways, and easements that are necessary to construct the project. The project manager and engineer will attend the pre-bid meetings to answer any questions that contractors may have about the design.

### Step # 4 Construct the project.

The project manager will be available during construction to answer any questions the contractor or inspector may have. Thrasher inspectors that are certified by the State of WV are available to be used if the WVDEP requests this service.

	WEST VIRGINIA AML CONSULTANT	INIA DEPARTMENT	F ENVIRONMENTAL	DROTECTION Attack Sut NEW
PROJECT NAME GEORGES CREEK PORTALS/PUTNEY IMPOUNDMENT DEP 14417	_		ear)	
1. FIRM NAME THRASHER ENGINEERING,	INC.	2. HOME OFFICE BUSINESS 30 COLUMBIA BLVD., CLARE 26301	SINESS ADDRESS , CLARKSBURG, WV	3. FORMER FIRM NAME NOT APPLICABLE
4. HOME OFFICE TELEPHONE 304-624-4108	5. ESTABLISHED 1983	(YEAR	6. TYPE OWNERSHIP Individual Corporation <b>X</b> Partnership Joint-Venture	cion X (Disadvantaged Business Enterprise)
7. PRIMARY AML DESIGN OFFI 30 COLUMBIA BLVD, CLAR 300 ASSOCIATION DRIVE,	CE: ADDRESS/ KSBURG, WV / CHARLESTON,	TELEPHONE/ PERSON 304-624-4108 / KENN WV / 304-343-7601	IN CHARGE/ NO. AML DES NETH P. MORAN, P.E., V / JONATHAN CARPENTER,	PERSONNEL EACH OFFICE PRESIDENT / 12 GING PARTNER / 2
8. NAMES OF PRINCIPAL OFFICERS H. Wood Thrasher, P.E Presi Kenneth P. Moran, P.E Vice Kurt Newbrough, P.S Secret	FICERS OR MEMBERS - President - Vice President Secretary	S OF FIRM	8a. NAME, TITLE, & TELEPHONE NUME. RANDY WATSON -304-624-4108 - CHAD BILLER, P.E304-624-4108 - CHAD M. RILEY, P.E304-624-4108 CLAY P. RILEY, P.E304-624-4108 DANIEL E. FERRELL, P.E304-324	TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS WATSON -304-624-4108 - PARTNER IR, P.E304-624-4108 - PARTNER LEY, P.E304-624-4108 - PARTNER LEY, P.E304-624-4108-PARTNER FERRELL, P.E304-324-4108 - PARTNER
9. PERSONNEL BY DISCIPLINE	ы			
22 ADMINISTRATIVE 3 ARCHITECTS — BIOLOGIST 27 CADD OPERATORS — CHEMICAL ENGINEERS 26 CIVIL ENGINEERS 36 CONSTRUCTION INSPECTORS — DESIGNERS — DRAFTSMEN	m   H	ECOLOGISTS ECONOMISTS ELECTRICAL ENGINEERS ENVIRONMENTALISTS ESTIMATORS GEOLOGISTS HYDROLOGISTS	1 LANDSCAPE ARCHITECTS 1 MECHANICAL ENGINEERS 2 MINING ENGINEERS 2 PHOTOGRAMMETRISTS 4 PLANNERS: URBAN/REGIONAL 5 SANITARY ENGINEERS 5 SPECIFICATION WRITERS	CTS 1 STRUCTURAL ENGINEERS ERS 47 SURVEYORS 3 — TRAFFIC ENGINEERS — OTHER EGIONAL S 170 TOTAL PERSONNEL
TOTAL NUMBER OF WV REC *RPEs other than Civil supervise and perform	FISTERED and Mini this typ	ENG	INEERS IN PRIMARY OFFICE: 1. supporting documentation that	14 it qualifies them to
10. HAS THIS JOINT-VENTURE	JOINT-VENTURE WORKED TOGETHER	HER BEFORE?	YES   NO NOT APPLI	APPLICABLE

Qu ionnaire".	Que ionnaire".	
NAME AND ADDRESS: NOVEL GEO-ENVIRONMENTAL	SPECIALTY: GBO-TECHNICAL SERVICES	WORKED WITH BEFORE
		X Yes
NAME AND ADDRESS:	SPECIALTY:	NO WORKED WITH BEFORE
		Yes
NAME AND ADDRESS:	SPECIAL TV:	No NOBVER WITH DESCRIP
		WORKED WITH BEFORE Yes
		ON ON
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
		Yes
NAME AND ADDRESS:	SPECIALTY:	NO WORKED WITH BEFORE
		Yes
NAME AND ADDRESS:	SPECIALTY:	No WORKED WITH BEFORE
		Yes
		o'N ———
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
		Yes
NAME AND ADDRESS:	SPECIALTY:	No WORKED WITH BEFORE
		Yes
NAME AND ADDRESS.	SPECTALTIC:	No N
		WORKED WITH BEFORE  Yes
		S N
		UNT

- Description and Number of Project: THRA RENGINEERING HAS PERFORMED NUMEROUS PROJECTS IN JVING STORM WATER DRAINAGE, SLIP REPAIR AND MASS GRADING IN RELATION TO SITE DEVELOPMENT, WATER LINE AND SANITARY SEWER PROJECTS, OUR DESIGN TEAM ENVIRONMENTAL MANAGER HAS 23 YEARS OF EXPERIENCE AS GEOLOGIST, HYDROLOGIST THRASHER ENGINEERING, INC.'S CHARLESTON, WEST VIRGINIA OFFICE WAS AWARDED TWO WATER LINE PROJECTS FOR AML AFFECTED THE THRASHER ENGINEERING SURVEY DEPARTMENT HAS PERFORMED SERVICES FOR PRE AND POST MINE SUBSIDENCE FOR MAJOR COAL COMPANIES. ADDITIONALLY AND ENVIRONMENTAL SPECIALIST WITH CONSOL ENERGY. PROJECTS INCLUDED THE ENGINEERING AND FINAL RECLAMATION OF THE AREAS IN 2005. THESE PROJECTS WERE THE AMHERSTDALE PROJECT AND THE RAGLAND PROJECT IN MINGO / LOGAN COUNTIES. R ENGINEERING HAS PERFORMED NUMEROUS PROJECTS IN Remediation/Mine Reclamation Engineering? BLACKSVILLE NO.1D, PURSGLOVE, ARKWRIGHT, OSAGE AND HUMPHREY MINES IN MONONGALIA COUNTY Is your firm experienced in Abandoned Mine La Description and Number of Project: THRA LAND REMEDIATION,
- YES Description and Number of Projects: THRASHER ENGINEERING MAINTAINS A MATERIALS TESTING AND ANALYSIS LAB AT ITS CLARKSBURG, WV OFFICE. SOIL ANALYSIS EXPERIENCE IS SPECIFICALLY IN GRADATIONS AND CLASSIFICATION WE PERFORM THESE SOIL ANALYSES ON ALL OUR PRIVATELY FUNDED SITE DEVELOPMENT PROJECTS. Is your firm experienced in Soil Analysis? щ Щ
- OUR TEAM ENVIRONMENTAL MANAGER PARTICIPATED IN THE ENGINEERING AACID MINE DRAINAGE TREATMENT FACILITIES AND PLANT DESIGN. THROUGH OUR WORK IN THE PLANNING AND DESIGN OF BRIDGES FOR THE WEST VIRGINIA DEPARTMENT OF HIGHWAYS AND WATER LINE EXTENSION PROJECTS, THRASHER ENGINEERING HAS EXTENSIVE RELATIONSHIP TO ONE ANOTHER AND TO ADJACENT MINING OPERATIONS. SHE ALSO WAS INVOLVED IN THE STRATEGIC PLACEMENT OF EXPERIENCE IN HYDROLOGY. WE ALSO HAVE EXTENSION EXPERIENCE IN HYDRAULIC MODELING FOR WATER AND WASTEWATER PROJECTS AND ENVIRONMENTAL PERMITTING OF THE FINAL ABANDONMENT OF THE MORGANTOWN OPERATIONS OF CONSOL COAL COMPANY. THIS INCLUDED THE GEOLOGIC HYDROLOGY STUDY OF THE ARKWRIGHT, OSAGE PURSGLOVE AND HUMPHREY MINE POOLS AND THER INTER-Is your firm experienced in hydrology and hydraulics? Description and Number of Projects: THROUGHOUT WEST VIRGINIA. υ.
- produce its own Aerial Photography and Develop Contour Mapping? Description and Number of Does your firm YES Descripti Ď. Projects

WE UTILIZE THE SERVICES OF NUMEROUS FIRMS, INCLUDING PENTREE, INC. WHICH IS AN AFFILIATE COMPANY OF ENGINEERING INC. THROUGH THE RESOURCE ENGINEERING GROUP HOLDING COMPANY. 2 THRASHER

- THRASHER ENGINEERING BOOSTER STATIONS, WATER TREATMENT PLANTS, AND STORAGE FACILITIES. MANY OF THESE PROJECTS ARE IN AREAS WITH AML YES Description and Number of Projects: DESCRIPTION AND NUMBER OF PROJECTS: THRASHER ENGINEES, HAS DESIGNED OVER 100 WATER LINE EXTENSION PROJECTS IN THE PAST 20 YEARS OF BUSINESS. PROJECTS INCLUDE LINES. (Include any experience your firm has in evaluation of aquifer degradation as a result of mining.)
  YES Description and Number of Projects: DESCRIPTION 1 Is your firm experienced in domestic waterline design? AFFECTED WATER EZ]
- Is your firm experienced in Acid Mine Drainage Evaluation and Abatement Design?

Description and Number of Projects: OUR TEAM ENVIRONMENTAL MANAGER PARTICIPATED IN THE ENGINEERING RELATIONSHIP TO ONE ANOTHER AND TO ADJACENT MINING OPERATIONS. SHE ALSO WAS INVOLVED IN THESTRATEGIC PLACEMENT OF AACID MINE DRAINAGE TREATMENT FACILITIES AND PLANT DESIGN. IN ADDITION, THRASHER ENVIRONMENTAL, THE CHARLESTON WV AND ENVIRONMENTAL PERMITTING OF THE FINAL ABANDONMENT OF THE MORGANTOWN OPERATIONS OF CONSOL COAL COMPANY. THIS BRANCH OF OUR COMPANY DESIGNED AN AWARD WINNING WATER TREATMENT PLANT FOR MARTINKA MINES IN MARION COUNTY, WEST INCLUDED THE GEOLOGIC HYDROLOGY STUDY OF THE ARKWRIGHT, OSAGE PURSGLOVE AND HUMPHREY MINE POOLS AND THER INTER-VIRGINIA TO TREAT DRAINAGE YES

MORAN, KENNETH P.  Brief Explanation of Responsibilities Mr. Moran joined Thrasher Engineering in responsible for feasibility studies and state, federal and private clients. Addi with funding and regulatory agencies in EDUCATION (Degree, Year, Specialization)	YEARS OF AML DESIGN EXPERIENCE: 5	L RELATED DESIGN YEARS OF D
		EXPERIENCE: 15 EXPERIENCE: EXPERIENCE:
EDUCATION (Degree, Year, Specialization	ig in 1991 and currently serves and design of public utility pradditionally, Mr. Moran has exitin conjunction with projects.	es as Vice President and Chief Engineer. Mr. Moran projects (sanitary sewer, water and storm water) extensive experience in all aspects of engineerings.
	on) B.S., Civil Engineering	ng Technology, 1983 - Fairmont State University
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  Friendship Lodge No.56 A.F. & A.M.  WV Society of Professional Engineers  Member of American Society of Civil E	AANIZATIONS & A.M. Engineers of Civil Engineers	REGISTRATION (Type, Year, State)  Registered Professional Engineer (PE), State West Virginia  Registered Professional Engineer (PE), State Virginia  Registered Professional Engineer (PE), State
		State
HISTORY STATEMENT OF keep to essentials)	PRINCIPALS AND ASSOCIATES RESPO	RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE
BILLER CHADWICK D. P.E. BX.	YEARS OF AML DESIGN EXPERIENCE: 1	YEARS OF AML RELATED DESIGN YEARS OF DOMESTIC EXPERIENCE: 15 EXPERIENCE: 15
Brief Explanation of Responsibilities: Mr. Bille firm. Mr. Biller's paramount responsibility is development, highway and bridges and airport proa Partner in Thrasher Engineering, Inc. he also of Thrasher Engineering within the Resource Engalssociates is a civil engineering firm focusing	ler joined Thras supervision of rojects in the p serves as Pres jineering Group,	her Engineering in 1999 and serves as Partner in the design and construction of Thrasher Engineering site osition of Principal In-Charge and Project Manager. A ident of Berkeley Associates, Inc, an affiliate companInc. Located in Martinsburg, West Virginia, Berkeley pment for commercial and residential developments
EDUCATION (Degree, Year, Specialization B.S., Civil Engineering, 1992 - West	n: t Virginia University	
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  American Society of Civil Engineers  Society of American Military Engineers  National Society of Professional Engineers	NS sers	REGISTRATION (Type, Year, State)  Registered Professional Engineer (PE), State West Virginia Registered Professional Engineer (PE), State Pennsylvania Registered Professional Engineer (PE), State Ohio

<u>د</u> - ين	F PRINCIPALS AND ASSOCIAT	RESPONSIBLE FOR AML PROJECT DESIGN (Furnish	N (Furnish compare
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
GOLA, JEFFREY L.	YEARS OF AML DESIGN EXPERIENCE: 1	YEARS OF AML RELATED DESIGN EXPERIENCE: 10	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 10
Brief Explanation of Responsibilities Mr. the firm. He is responsible for hydrology aspects of highway, roads, bridges, airpos Gola is experienced directing the bidding overall budget of construction projects.	Gola and rts, proc	joined Thrasher Engineering in 1998 and serves as P. hydraulic studies, structural design and erosion and site development and community improvement projects. Sess, drafting using both AutoCAD and Microstation and	serves as Project Engineer for erosion and sediment control t projects. Additionally, Mr. ostation and managing the
EDUCATION (Degree, Year, Specializati	Specialization) g Technology - West Virginia University,	, Summa Cum Laude 1998	
MEMBERSHIP IN PROFESSIONAL ORGANIZATION  American Society of Civil Engineers  City of Mannington Code Enforcement	ORGANIZATIONS 1 Engineers Enforcement Appeal Board	REGISTRATION (Type, Year, St Registered Professional E West Virginia	State) Engineer (PE), State of
13. PERSONAL HISTORY STATEMENT O data but keep to essentials)	F PRINCIPALS AND ASSOCIATES	RESPONSIBLE FOR AML PROJECT DESIGN	N (Furnish complete
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
FLETCHER, SHEIRL	YEARS OF AML DESIGN EXPERIENCE: -23	AML CE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: -
Brief Explanation of Responsibilities Sheirl Fletcher joined Thrasher Engin joining Thrasher, Sheirl served as Enand brings comprehensive knowledge of to our clients' projects, along with	4 50	ring, Inc. in 2007 and serves as Environmental Manager for the firm. Pricronmental Manager for a major coal firm. She has more than 20 years experenvironmental regulatory programs and reporting requirements in multiple echnical expertise in environmental engineering, geology and hydrology	lvironmental Manager for the firm. Prior to firm. She has more than 20 years experience and reporting requirements in multiple states. engineering, geology and hydrology
EDUCATION (Degree, Year, Spec	Specialization)		
G B.S., West Virginia Uni	University, Morgantown, WV - Bachelor of	of Science- Geology	
MEMBERSHIP IN PROFESSIONAL OR	ORGANIZATIONS	REGISTRATION (Type, Year, St	State) <b>NA</b>

ONAL HISTORY

13.

DESIGN SERVICES

Thrasher Engineering, Inc. will design work for AML utilizing one of the largest networks of computer aided design (CAD) equipment, software and trained personnel in the State of West Virginia. Connected through a Virtual Private Network, our CAD staff has the ability to share necessary plans among our locations. This will allow work designed for AML to be prepared and updated at the office location that best meets the needs of the scope of services.

Additionally, equipment includes 10 large format (size E) plotters and 5 large format plotter / scanners.CAD plans prepared by both dedicated CAD employees and by staff engineers and engineering technicians in each of the firm's AutoCAD Landdesktop 2008 and Microstation V8 software is utilized at 48 CAD stations throughout our locations. offices. Thrasher Engineering, Inc. also utilized top-of-the line survey equipment. Our survey work is accomplished with global positioning systems (GPS) and electronic distance measuring (EDM) survey stations with data gathering capabilities. This equipment includes: The equipment used to complete survey services for AML projects includes:

- Leica Geosystem System 500 GPS
- Leica Ski Post Processing Software
- Topcon G600 Total Station Instrument
- Leica 303 Total Station Instrument
- Leica 303 Total Station Instrument
- Leica 403 Total Station Instrument
- Leica 405 Total Station Instrument
- Lecia 407 Total Station Instrument
- Lecia 703 Total Station Instrument

VI DROJECTIC	PERCENT COMPLETE		45%	25 %	15%	40%	ON-GOING	ON-GOING	
RECORD: SITE DEVELOPMENT PROJECTS	ESTIMATE	COST	\$2,500,000.00	\$1,500,000.00	\$2,000,000.00	\$12,100,000.00	\$1,000,000. to \$8,000,000.00	\$500,000 to \$1,000,000.00	TED CONSTRUCTION COSTS:
E DESIGNAL ENGINEER OF	NATURE OF YOUR FIRM'	RESPONSIBILITY	SITE DEVELOPMENT DESIGN (LAND PLANNING, GRADING, UTILITIES) SURVEY, CONST. MGT, MATERIALS TESTING	ENGINEERING DESIGN FOR STORM WATER SYSTEM AT BENEDUM INDUSTRIAL PARK - DESIGN, SURVEY, CONSTRUCTION MANAGEMENT AND INSPECTION. MATERIALS TESTING	SITE DEVELOPMENT DESIGN (LAND PLANNING, GRADING, UTILITIES) SURVEY, CONST. MGT, MATERIALS TESTING	SITE DEVELOPMENT DESIGN (LAND PLANNING, GRADING, UTILITIES) SURVEY, CONST. MGT, MATERIALS TESTING	SITE DEVELOPMENT DESIGN (LAND PLANNING, GRADING, UTILITIES) SURVEY, CONST. MGT, MATERIALS TESTING	SITE DEVELOPMENT DESIGN (LAND PLANNING, GRADING, UTILITIES) SURVEY, CONST. MGT, MATERIALS TESTING	TOTAL ESTIMATED \$18,600,000.00
ON WHICH YOUR FIRM IS THE	ND ADDRESS OF	OWNER	NICHOLAS CO BLDG COMMISSION 700 MAIN STREET, SUITE 1 SUMMERSVILLE, WV 26651	MID-ATLANTIC AEROSPACE COMPLEX, INC. (MAAC) NORTH CENTRAL WEST VIRGINIA AIRPORT CROSSWIND INDUSTRIAL PARK SAC BUILDING, 2ND FLOOR BRIDGEPORT, WV 26330	RITCHIE COUNTY ECONOMIC DEVELOPMENT AUTHORITY 217 WEST MAIN STREET HARRISVILLE, WV 26362	HIGH TECH CORRIDOR DEVELOPMENT, LLC MR. JACK KEELEY PO BOX 1532 CLARKSBURG, WV 26302	INTRAWEST RESORTS, INC. 301 E. PINE STREET, STE 450 ORLANDO, FL 32801	BENEDUM AIRPORT AUTHORITY JAMES R. GRIFFILY, AIRPORT MGR. 2000 AVIATION WAY BRIDGEPORT, WV	SITE DEVELOPMENT
15. CL 3NT ACTIVITIES C	PROJECT NAME, TYPE AND	LOCATION	NICHOLAS COUNTY BUSINESS PARK, NICHOLAS COUNTY, WV SITE DEVELOPMENT	MID ATLANTIC AEROSPACE COMPLEX STORMWATER PROJECT HARRISON COUNTY, WV	RITCHIE COUNTY BUSINESS PARK SITE DEVELOPMENT RITCHIE COUNTY	WHITE OAKS BUSINESS PARK SITE DEVELOPMENT AND UTILITIES HARRISON COUNTY, WV	INTRAWEST CORPORATION SNOWSHOE MOUNTAIN RESORT POCAHONTAS COUNTY, WV SITE DEVELOPMENT	HARRISON MARION REGIONAL AIRPORT HARRISON COUNTY, WV VARIOUS - HANGERS /STLRM WATER	TOTAL NUMBER OF PROJECTS: 6 (TOTAL IN FULL APPROXIMATELY 30 APPROXIMATELY 40 MILLION)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
CHESTNUT RIDGE PSD BARBOUR/PRESTON EXTENSION BARBOUR COUNTY, WV	CHESTNUT RIDGE PSD 209 S MAIN STREET P.O. BOX 386 PHILIPPI, WV 26416	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION.	\$9,500,000	40%
JESSICA LYNCH WATER LINE EXTENSION WIRT COUNTY, WV	TWN OF ELIZABETH 200 BEVERLY STREET P.O. BOX 478 ELIZABETH, WV 26143	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$3,600,000	%09
GILMER COUNTY PSD DUSK CAMP WATER LINE EXTENSION GILMER COUNTY, WV	GILMER COUNTY PSD 232 W. MAIN STREET GLENVILLE, WV 26351	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$2,500,000	60%
HAMRICK PSD MOORE/PORTERWOOD EXTENSION TUCKER COUNTY, WV	HAMRICK PSD PO BOX 228 HENDRICKS, WV 26271	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$1,100,000.	25%
CITY OF CAMERON WATER STORAGE TANK MARSHALL COUNTY, WV	CITY OF CAMERON 44 MAIN STREET CAMERON, WV 26033	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$200,000.00	95%
TOWN OF ROWLESBURG WATER TREATMENT PLANT/ EXT. PRESTON COUNTY, WV	TOWN OF ROWLESBURG PO BOX 458 42 POPLAR STREET ROWLESBURG, WV 26425	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$4,500,000.	& 10 &
	SOUTHWESTERN WATER PUBLIC SERVICE DISTRICT P. O. BOX 98 FLEMINGTON, WV 26347	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$10,430,000.00	30%
TOTAL NUMBER OF PROJECTS: 7 REPRESENTED (APPI ADDITIONAL CURRENTLY IN PRELIMINARY / DESIGN PHASES	SOXIN OR	TATELY 20 TOTAL ESTIMATED CONSTRUCTION \$32,830,000.00 ESTIMATED COST	TOTAL ESTIMATED CONSTRUCTION COSTS: \$32,830,000.00 REPRESENTED ESTIMATED COST OF ALL JOBS APPROXIMATELY	: \$110,000,000,00

15. CUT SNT ACTIVITIES	ENT ACTIVITIES ON WHICH YOUR FIRM IS TH	HE DESIGNAT ENGINEER OF	RECORD: SANITARY SEWER	PROJECTS
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSTRILLING	ESTIMATED CONSTRUCTION	PERCENT COMPLETE
BROOKE COUNTY PSD REPLACEMENT AND EXTENSION BROOKE COUNTY, WV	BROOKE CO. PSD 711 CHARLES ST. P. O. BOX 150 WELLSBURG, WV 26070	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$22,000,000	65%
GREATER HARRISON COUNTY PSD PHASE II HARRISON COUNTY, WV	GREATER HARRISON COUNTY PSD P.O. BOX 190 WEST MILFORD, WV 26451	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$11,600,000	45%
SANITARY SEWER EXTENSION UPSHUR COUNTY, WV	TENNEKTON PSD 188 FAYETTE ST. BUCKHANNON, WV 26201	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$1,675,000.	75%
FOCAHONIAS COUNTY PSD WWTP AND COLLECTION SYSTEM POCAHONTAS COUNTY, WV	POCAHONTAS COUNTY PSD HC 63 BOX 122 FRANK, WV 24920	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$11,600,000	30%
HEPIZIBAH PSD SANITARY SEWER EXTENSION HARRISON COUNTY, WV	ENLARGED HEPZIBAH DRAWER H HEPZIBAH, WV 26369	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$3,400,000	20%
MALDEN PUBLIC SERVICE DISTRICT SANITARY SEWER REHABILITATION KANAWHA COUNTY, WY	MALDEN PUBLIC SERVICE DISTRICT P.O. BOX 350 TAD, WV 25201-0350	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$13,600,000.	25%
CANTON FUBLIC SERVICE SANITARY SEWER UPGRADE AND EXT MONONGALIA COUNTY, WV	CANYON PSD 12 WICHITA STREET MORGANTOWN, WV 26508	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$6,500,000.	50%
TOTAL ACTIVE SANITRY SEWER	7 REPRESENTED R PROJECTS APPROXIMATELY 32	TOTAL ESTIMATE TOTAL FOR ALL	ED CONSTRUCTION COSTS: PROJECTS APPROXIMATELY	\$70,300,000.00

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
KING COAL HIGHWAY MINGO COUNTY, WV	WVDOT/DOH 1900 KANAWHA BLVD EAST CHARLESTON, WV 25305	PRELIMINARY ENGINEERING, DESIGN, SURVEY	\$22,000,000.	2% PROPERTY AND DEED RESEARCH COMPLETE - PROJECT ON HOLD
CORRIDOR H GRANI COUNIY, WV	WYDOI/DOH 1900 KANAWHA BLVD BAST CHARLESTON, WV 25305	PRELIMINARY ENGINEERING, DESIGN, SURVEY	\$22,000,000.	75% - NEED FINAL COMMENTS / FINAL FIELD REVIEW
	WVDOT/DOH 1900 KANAWHA BLVD EAST CHARLESTON, WV 25305	PRELIMINARY ENGINEERING, DESIGN, SURVEY	\$1,300,000.	90% FINAL OFFICE REVIEW
MINERAL WELLS ROUTE 2 WOOD COUNTY	WVDOT/DOH 1900 KANAWHA BLVD EAST CHARLESTON, WV 25305	PRELIMINARY ENGINEERING, DESIGN, SURVEY	TBD - JUST AWARDED	JUST AWARDED
CITY OF RIPLEY - MAIN STREET REVITALIZATION - JACKSON CO.	CITY OF RIPLEY TIM KING, CITY SUPERINTENDENT 203 SOUTH CHURCH ST. RIPLEY, WV 25271	PRELIMINARY ENGINEERING, DESIGN, SURVEY, CONTRACT DOCUMENTS, BIDDING SERVICES, CONSTRUCTION INSPECTION, MATERIALS TESTING	\$1,200,000.	% 06
ICG - THREE FORKS BRIDGE TAYLOR COUNTY	INTERNATIONAL COAL GROUP, INC. 2000 ASHLAND DRIVE ASHLAND, KY 41101	PRELIMINARY ENGINEERING, FINAL DESIGN, SURVEY, CONTRACT DOCUMENTS.	\$1,119,000.00	*06
TOTAL NUMBER OF PROJECTS: 6 (TOTAL IN FULL APPROXIMATELY APPROXIMATELY 40 MILLION)	TATELY 30 SITE DEVELOPMENT	TOTAL ESTIMATED \$46,300,000. +	FED CONSTRUCTION COSTS:	

15. CV ENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNAT ENGINEER OF RECORD: HIGHWAY, BRIDGE, SIDEWALKS

<b>*</b>				 		-
	ESTIMATED CONSTRUCTION COST	YOUR FIRMS RESPONSIBILITY	\$50,000,000.			
ERS	ESTIMATED CON	ENTIRE PROJECT	\$220,000,000.			
7B-CONSULTANT TO OTHERS	ESTIMATED COMPLETION DATE		2010			
IS SERVING AS ?	NAME AND ADDRESS OF OWNER		US DEPARTMENT OF JUSTICE FEDERAL BUREAU OF PRISONS DESIGN AND CONSTRUCTION BRANCH 500 FIRST STREET NW WASHINGTON, DC 20534			
ENT ACTIVITIES ON WHICH YOUR FIRM	NATURE OF FIRMS RESPONSIBILITY		SITE DEVELOPMENT ENGINEERING DESIGN (GRADING/ STORM WATER/UTILITIES/ ROADS)			
16. CT ENT ACTIVIT	PROJECT NAME, TYPE AND LOCATION		MC DOWELL COUNTY FEDERAL PRISON WELCH, WV SITE DEVELOPMENT			

	ON WHICH YOUR FI	WAS THE DESIGNATED ENGINEER OF RECORD		
PROJECT NAME, TYPE AND LOCATION	WE AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION CO	YEAR	CONSTRUCTED
RALEIGH MEMORIAL AIRPORT RALEIGH COUNTY, WV	RALEIGH CO AIRPORT AUTHORITY 176 AIRPORT CIRCLE, ROOM 115 BEAVER, WV 25813-9475	\$5,000,000.00 - PHASE I	2007	5
WOLFE CREEK PARK FAYETTE COUNTY, WV	FAYETTE COUNTY COMMISSION FAYETTE COUNTY COURTHOUSE 100 COURT STREET FAYETTE, WV 25840-0307	\$4,500,000 PHASE 1	2007	YES
PINECREST DEVELOPMENT RALEIGH COUNTY, WV	PINECREST DEV AUTHORITY 200 MAIN STREET BECKLEY, WV 25801-4613	\$1,500,000.00	2007	YES
CITY OF PARSONS SANITARY SEWER LINE EXTENSION TUCKER COUNTY, WV	PARSONS, CITY OF 341 2ND ST. PARSONS, WV 26287	\$ 900,000	2007	YES
TOWN OF FARMINGTON WATER LINE REPLACEMENT PROJECT MARION COUNTY, WV	TOWN OF FARMINGTON 1314 MILL STREET FARMINGTON, WV 26571	\$1,300,000.	2007	YES
CITY OF KINGWOOD WHETSELL SETTLEMENT WATER LINE EXTENSION PRESTON COUNTY, WV	KINGWOOD, CITY OF 313 TUNNELTON ST. KINGWOOD, WV 26537-1462	\$ 420,000.	2007	YES
NG-JIMTOWN PSD KTENSION NTY, WV	NORTON-HARDING-JIMTOWN PSD P.O. BOX 87 SCOTT ROAD NORTON, WV 26285	\$1,000,000	2007	YES
TOWN OF BATH - BERKELEY SPRINGS WATER WORKS MORGAN COUNTY, WV	TOWN OF BATH 271 WILKES STREET BERKELEY SPRINGS, WV 25411	\$2,000,000	2007	YES

17. COMPLETED WORK WITHIN LAST 5	YEARS ON WHICH YOU WERE THE	DESIGNATED ENGINEER OF RECORD		
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	STIMATED CON	YEAR	CONSTRUCTED (YES OR NO)
TOWN OF TUNNELTON, PRESTON COUNTY, WEST VIRGINIA;	TOWN OF TUNNELTON P.O. BOX 396 - BANK STREET TUNNELTON, WV 26444	\$2,630,000	2003	YES
BUILDING COLLECTION SYSTEM AND AERATED LAGOON; SEWER LINES, MANHOLES, SANITARY LIFT STATIONS				
RALEIGH COUNTY PUBLIC SERVICE DISTRICT 2 WATER LINE EXTENSIONS	RALEIGH COUNTY PSD 224 EAST MAIN PO BOX 1286 SOPHIA, WV	\$3,700,000.	2006	YES
TOWN OF TERRA ALTA, PRESTON COUNTY, WEST VIRGINIA; REPLACEMENT OF COLLECTION SYSTEM AND WASTEWATER FACILITY	TOWN OF TERRA ALTA 701-A STATE AVENUE TERRA ALTA, WV 26764	\$5,750,000	2002	YES
HODGESVILLE PUBLIC SERVICE DISTRICT; DESIGN AND CONSTRUCTION OF WATER LINE EXTENSION, BOOSTER STATIONS, AND WATER STORAGE TANK	HODGESVILLE PUBLIC SERVICE DISTRICT 188 FAYETTE STREET P.O. BOX 758 BUCKHANNON, WV 26201	\$3,100,000	2004	YES
CITY OF WEIRTON; RENOVATION OF SOLIDS CONTACT CLARIFIERS	CITY OF WEIRTON 200 MUNICIPAL PLAZA 3031 BIRCH DRIVE WEIRTON, WV 26062	\$2,800,000	2003	YES
HAMRICK PUBLIC SERVICE DISTRICT, TUCKER COUNTY, WEST VIRGINIA; DESIGN, PREPARATION AND CONSTRUCTION MANAGEMENT TO UPGRADE THE WATER TREATMENT PLANT	HAMRICK PUBLIC SERVICE DISTRICT P.O. BOX 228 HENDRICKS, WV 26271	\$2,461,000	2004	YES
PUTNAM COUNTY BUSINESS PARK; MITIGATION OF 13 ACRES OF IMPACTED WETLAND	PUTNAM COUNTY DEVELOPMENT AUTHORITY P.O. BOX 167 SCOIT DEPOI, WV 25560	\$1,500,000	2004	YES
WOOD PRODUCTS INDUSTRIAL PARK; DEVELOPMENT, CONCEPTUAL LAYOUT, AND FINAL DESIGN FOR INDUSTRIAL PARK	MINGO COUNTY REDEVELOPMENT AUTHORITY P.O. BOX 298 68 WEST 4 <sup>TH</sup> AVENUE WILLIAMSON, WV 25661	\$2,000,000	2002	YES

	17. CONTRIBUTION WITHIN LAST STEAKS ON WHICH YOU WERE THE DESIGNATED	GNATED ENGINEER OF RECORD		
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
DEVELOGION INDUSTRIAL PARK; DEVELOPMENT, CONCEPTUAL LAYOUT, AND DESIGN FOR INDUSTRIAL PARK	BARBOUR CO DEVELOPMENT AUTHORITY 124 N. MAIN ST. PHILIPPI, WV 26416	\$1,430,000	2003	YES
ONT INDUSTRIAL SITE WORK, UTI AY FOR PHASE II OPMENT	FAIRMONT INDUSTRIAL & CREDIT CORP 110 ADAMS STREET FAIRMONT, WV 26554	\$790,000	2004	YES
TOWN OF LUMBERPORT; REPLACEMENT OF A PORTION OF THE DISTRIBUTION SYSTEM AND WATER TANK	TOWN OF LUMBERPORT PO BOX 519 LUMBERPORT, WV 26386	\$2,200,000	2003	YES
RIVER ROAD PUBLIC SERVICE DISTRICT; WATER LINE REPLACEMENT, EXTENSION AND STANDPIPE	RIVER ROAD PSD 179 OLD LOCK 13 ROAD MORGANTOWN, WV 26501	\$1,068,000	2004	YES
HUNDRED-LITTLETON PUBLIC SERVICE DISTRICT; WATER LINE RELOCATION	HUNDRED-LITTLETON PSD PO BOX 880 8 PENNSYLVANIA AVENUE HUNDRED, WV 26575	\$40,000	2002	YES
RT 16 WATER CORPORATION; WATER LINE EXTENSION	ROUTE 16 WATER CORP PO BOX 149 ST MARYS, WV 26170	\$900,000	2003	YES

FIRM ASSOCIATED A YOUR DESIGN ALLIANCE OMNI ASSOCIATES 5 E VOA ARCHITECTS VOA ARCHITECTS 19. USE THIS SPACE TO PROVIDE ANY ADDITIONAL INFORMATION OR DESCRIPTION OF RESOURCES SUPPORTING YOUR FIRM'S QUALIFICATIONS PERFORM WORK FOR THE WV ABANDONED MINE LANDS PROGRAM BELL JUSTICE BELL JUSTICE MARCH-WESTIN MITH FACILITIES FACILITIES OCTOBER 21, 2008 FOR STATED WITH OTHER FIRMS (INDICATE PHASE OF WORK CONSTRUCTED (YES OR NO) DATE: YES YES YES YES YES YES YEAR TILE: VICE-PRESIDENT / CHIEF ENGINEER 2003 2002 2004 2003 2005 2007 ATED CONSTRUCTION COST OF YOUR FIRM'S PORTION \$120,000,000 ESTIMATED 396,000,000 5 YEARS ON WHICH YOU WERE A. \$6,000,000 \$4,000,000 \$400,000. \$100,000 VICE PRESIDENT FAIRMONT STATE UNIVERSITY FEDERAL BUREAU OF PRISONS 320 1<sup>ST</sup> STREET NW 500-6 FEDERAL BUREAU OF PRISONS FAIRMONT STATE UNIVERSITY FAIRMONT STATE UNIVERSITY FAIRMONT STATE UNIVERSITY 26554-2491 FAIRMONT, WV 26554-2491 FAIRMONT, WV 26554-2491 26554-2491 320 1<sup>ST</sup> STREET NW 500-6 NAME AND ADDRESS WASHINGTON, DC 20534 WASHINGTON, DC 20534 STATEMENT OF QUALIFICATIONS 1201 LOCUST AVENUE 1201 LOCUST AVENUE 1201 LOCUST AVENUE 1201 LOCUST AVENUE OF OWNER FAIRMONT, WV FAIRMONT, WV 면.표. Ö LAST STATEMENT PRINTED NÁME: KENNETH P. MORAN, OMPLETED WORK WITHIN - PARKING GARAGE- SITE FAIRMONT STATE COLLEGE FAIRMONT STATE COLLEGE DEVELOPMENT -FAIRMONT, THE FOREGOING IS A - STUDENT DORMITORY -FIRM WAS RESPONSIBLE) PROJECT NAME, TYPE ARTS AND ENGINEERING UNIVERSITY CREATIVE UNIVERSITY FEASTER TECH BUILDING SITE CORRECTIONAL INST. AND LOCATION GLENVILLE FEDERAL GILMER COUNTY, WV FEDERAL BUREAU OF SITE DEVELOPMENT-SITE DEVELOPMENT SEE ATTACHMENT -PRISONS -CANAAN FACILITY - SITE FAIRMONT STATE FAIRMONT STATE DEVELOPMENT -DEVELOPMENT -SCRANTON, PA FAIRMONT, WV FAIRMONT, WV FAIRMONT, WV SIGNATURE: X CENTER SITE DEVELOPMENT 20.

Attac Lent "B"	FEIN: 52-2365940	3. FORMER FIRM NAME:	WV REGISTERED DBE: YES	NEL BACH OFFICE:	- OTHER PRINCIPALS		STRUCTURAL ENGINEERS SURVEYORS TRAFFIC ENGINEERS 4 DRILLERS & HELPERS 5 OTHER PERSONNEL	them to			
	WVDEP AML Design DATE: February 25, 2008	LLC 171 Montour Road 15108  Moon Township, PA 15108	5. ESTABLISHED: 6. TYPE OWNERSHIP: 6a. 2002 Limited Liability Corporation	FFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSON Office Manager: John E. Nottingham, P.E. WV 25177 No. AML Design Personnel in St. Albans, WV: 5 No. AML Design Personnel in Moon Township, PA	OF FIRM: 8a. NAME, TITLE, & TELEPHONE NUMBER	(Bold Lettering Indicates Minimum Design Team Members)	- ECOLOGISTS - LANDSCAPE ARCHITECTS - ECONOMISTS - MECHANICAL ENGINEERS - MINING ENGINEERS - MINING ENGINEERS - PHOTOGRAMMETRISTS - PHOTOGRAMMETRISTS - PLANNERS: URBAN/REGIONAL SANITARY ENGINEERS - HYDROLOGISTS - SPECIFICATION WRITERS	NED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 2 Mining must provide supporting documentation that qualifies type of work.		THIS JOINT-VENTURE WORKED TOGETHER BEFORE? YBS	
	arious	1. FIRM NAME: Novel Geo-Environmental,	4. HOME OFFICE TELEPHONE: (412) 722-1970	7. PRIMARY AML DESIGN OFF: 806 B Street St. Albans, WV 304-201-5180	8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS Amy L. Veltri - President John E. Nottingham - Vice President	9. PERSONNEL BY DISCIPLINE	- ADMINISTRATIVE - ARCHITECTS - BIOLOGIST 1 CADD OPERATORS - CHEMICAL ENGINEERS 2 CIVIL ENGINEERS 4 CONSTRUCTION INSPECTORS - DESIGNERS - DESIGNERS - DEALTSMEN	TOTAL NUMBER OF WV REGISTER *RPES other than Civil and supervise and perform this		10. HAS THIS JOINT-VENTURE	

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		Yes
NAME AND ADDRESS:	SPECIALTY:	No WORKED WITH BEFORE
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NAME AND ADDRESS:	SPECIALTY:	No WORKED WITH BEFORE
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NAME AND ADDRESS:	SPECIALTY:	No WORKED WITH BEFORE
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	-	Yes
NAME AND ADDRESS:	SPECIALTY:	No WORKED WITH BEFORE
		Yes
		No

ed any AML design work to date, but our WV Offic. Janager Additionally, NGE currently holds a contract with WVDEP-AML for geotechnical drilling for the northern district of WV and project geologist (Chuck Montgomery) have extensive AML experience with their former firm. and has completed several drilling projects under this contract. (NGE) has not perfe Geo-Environmental that Novel (John E. Nottingham) S NO:

B. Is your firm experienced in Soil Analysis?

NGE specializes in Geotechnical Engineering including foundation investigations, subsurface investigations, cut design, mine subsidence investigations, geologic studies, groundwater seepage analysis, foundation design, retaining wall design, pavement design, subsurface drilling and monitoring well installation.

NGE has preformed a total of several hundred geotechnical engineering related projects since the company was formed slope design, fill embankment analysis and design, slope stability analysis, landslide analysis and corrective in 2002

C. Is your firm experienced in hydrology and hydraulics?

While our firm has not performed any hydrology/hydraulics projects to date, our personnel have experience with former employers.

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

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

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dat out keep to essentials)  NAME & LILE (Last, First, Middle Int.)	THE TAXABLE TO SOLVED	7.7mm = 10.0mm = 11.0mm
ingham, John, E.		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Brief Explanation of Responsibilities		
Mr. Nottingham was responsible for supervising field and design work for numerous AMI projects for the WVDEP while under the employment of Triad Engineering, Inc. In addingects, Mr. Nottingham was involved in subsidence determination investigations and Mr. Nottingham worked extensively on "emergency" projects which required quick field designs.		related landslide abatement tion to landslide abatement subsidence abatement projects. investigations and corrective
EDUCATION (Degree, Year, Specialization) Bachelor of Science in Civil Engineering, 1987, WVU, Specialization Masters of Science in Civil Engineering, 1995, WVU, Specialization	- Civil and Geotechnical - Geotechnical Engineerin	Bngineering
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS American Society of Civil Engineering (ASCE) West Virginia Chapter of AIA	REGISTRATION (Type, Year, State Professional Engineering, 1994, Professional Engineering, 2007, Professional Surveyor, 1996, wy	State) 1994, WV 2007, VA
13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPO data but keep to essentials)	L PROJECT I	Furnish complete
TLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
Montgomery, Charles, E. 10	YEARS OF AML RELATED DESIGN EXPERIENCE: 4	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Brief Explanation of Responsibilities		
Mr. Montgomery was responsible for coordinating field activities for AML lawnile employed with Triad Engineering, Inc. Mr. Montgomery has also particutork involving subsidence determinations/abatement and impounded mine pools	field activities for AML landslide abatement projects for the WVDEP Montgomery has also participated in all project phases for other AML int and impounded mine pools.	rojects for the WVDEP ct phases for other AML
EDUCATION (Degree, Year, Specialization)		
Bachelor of Science, Geology, 1991, Marshall University		
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS Association of Engineering Geologists Geological Society of America	REGISTRATION (Type, Year, State) Professional Geologist, 1999,	State) 99, Kentucky

Dr. Nottingham planned and supervised several AML investigation and reclamation projects for WVDEP while employed by Triad Engineering. Projects included burning refuse pile investigations, unstable refuse pile investigations and remedial designs, landslide investigations and remedial designs, subsidence investigations, and underground mine fire 13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AME PROJECT DESIGN (Furnish complete YEARS OF DOMESTIC YEARS OF DOMESTIC Bachelor of Science in Civil Engineering, 1965, Civil Engineering, West Virginia Institute of Technology Master of Science in Civil Engineering, 1966, Geotechnical Engineering, University of Pittsburgh WATERLINE DESIGN EXPERIENCE: WATERLINE DESIGN EXPERIENCE: 0 REGISTRATION (Type, Year, State) 띵 REGISTRATION (Type, Year, State) Professional Engineer, 1969, WV Professional Engineer, 1985, KY PA 1985, 2006, YEARS OF AML RELATED DESIGN EXPERIENCE: YEARS OF AML RELATED DESIGN Professional Engineer, Professional Engineer, YEARS OF EXPERIENCE EXPERIENCE Doctor of Philosophy, 1975, Geotechnical Engineering, University of Florida YEARS OF EXPERIENCE: YEARS OF AML DESIGN EXPERIENCE: YEARS OF AML DESIGN EXPERIENCE: EDUCATION (Degree, Year, Specialization)
Bachelor of Science in Civil Engineering, 1965, Member, American Society of Civil Engineers Member, National Society of Professional Engineers MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS EDUCATION (Degree, Year, Specialization) Brief Explanation of Responsibilities Brief Explanation of Responsibilities NAME & TITLE (Last, First, Middle Int.) NAME & TiflE (Last, First, Middle Int.) ut keep to essentials) data but keep to essentials) Nottingham, Larry C. investigations. dat

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14. PRO E A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN C. PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE DESIGN SERVICES
Three rotary drill rigs, one mounted on a four wheel drive one-ton truck, and two track-mounted rigs. Drills are equipped with hollow stem augers, split-spoon soil sampling equipment, and rock coring tools.
Blectric concrete coring drill.
Two equipment hauling trailers.
Software includes: Word processing, PCSTABL - Slope Stability Analysis, LPILE Plus 4.0 - Pile Foundation Analysis, PYWALL 2.0 - Retaining Wall Analysis, ReSSA 2.0 - Reinforced Soil Slope Analysis, Reslope 3.0 - Reinforced Soil Slope Design
Soil Laboratory Equipment: Soil Oven, Scales, Sieves, Liquid and Plastic Limits Machine

	PERCENT COMPLETE	Ŋ	30			: \$ Unknown
RECORD	ESTIMATED CONSTRUCTION COST	Unknown, Fee = \$6600.00	Опкломп			ESTIMATED CONSTRUCTION COSTS:
DESIGNATI "NGINEER OF	S.M.S	Perform subsurface investigation, develop and provide recommendations for building foundation design	Perform geotechnical (drilling) investigations of abandoned mine land sites as directed by WVDEP/AML personnel.			TOTAL ESTIM
ON WHICH YOUR FIRM IS THE	NAME AND ADDRESS OF OWNER	ergy 6100 N. e, , OK	West Virginia Department of Environmental Protection			
15. CUR! I ACTIVITIES O	E AND	Chesapeake Energy Office & Shop Complex, Geotechnical Investigation, Inez, KY	Annual Geotechnical Drilling Contract, Northern West Virginia			TOTAL NUMBER OF PROJECTS

CONSULTANT TO OTHERS	
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ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS	
YOUR	
WHICH Y	
NO	
ACTIVITIES	
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PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION	STRUCTION COST
3	ſ			ENTIRE PROJECT	YOUR FIRMS
Ten Cell Tower Sites, Geotechnical Investigations, Various Locations Throughout WV	Determine Site Subsurface Conditions, Provide Foundation Design Recommendations.	Terradon Corp. Nitro, WV	March, 2008	Unknown	Fee \$33,000
Six Cell Tower Sites, Geotechnical Investigations, Various Locations Throughout WV	Determine Site Subsurface Conditions		March, 2008	Unknown	Fee = \$12,000
loyota Meeting Room, Geotechnical Investigation, Buffalo, WV	Geotechnical Investigation for New Building Structure	Toyota Corp. Buffalo, WV	March, 2008	Unknown	Fee \$4000
Raj rd. Si.	coss-Hole ding of ation ters	10 A	August, 20008	<b>Unknown</b>	Fee ~ \$17,000
Harrison Co. EMS Station, Geotechnical Investigation, Clarksburg, WV	te dation ons	Harrison Co. BMS Clarksburg, WV	1	Unknown	Fee \$4000
Construction, Construction, Quality Control Testing, Grant Co., WV	ו עיס בכים	west Virginia Dept. of Highways, Charleston, WV	November, 2008	Unknown	Fee = \$75,000
Water Storage Tank, Subsurface Investigation, Gilbert, WV	Determine Site Subsurface Conditions	Gilbert PSD Gilbert, WV	March, 2008	Unknown	Fee \$3000
		•			

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	CONSTRUCTED	Yea				The state of the s	
	YEAR	2003					
AS THE DESIGNATED ENGINEER OF RECORD	ESTIMATED CONSTRUCTION COST	\$30,000					
T 5 YEARS ON WHICH YOUR FI	NAME AND ADDRESS OF OWNER	Greenbrier Sporting Club, White Sulphur Springs, WV			The state of the s		
17. C LETED WORK WITHIN LAST 5	White Sulphur Hill	Development, Retaining Wall Design, White Sulphur Springs, WV					

18. APLETED WORK WITHIN LAST JF WORK FOR WHICH YOUR FIRE PROTECT NAME TYPE   NAME TYPE	WITHIN LAST 5 YEARS ON WHICH YOUR ICH YOUR FIRM WAS RESPONSIBLE)	COUR I HAS BEEN A		TO OTHER FIRMS	(INDI
AND LOCATION		ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED	FIRM ASSOCIATED
S. Mineral Wells Interchange, Geotechnical Study, Mineral Wells, WV	WV Department of Highways Charleston, WV	\$5,000,000	2007	In Process	L. A. Gates Co.
Winefrede RR Overpass Bridge, Geotechnical Investigation, Winefrede, WV	ment n, WV	\$1,500,000	2005	Yes	HNTB Corporation
Performing Arts Center. Geotechnical Investigation, Buckhannon, WV	West Virginia Wesleyan College, Buckhannon, WV	\$500,000	2007	Yes	R. D. Zande & Associates, Inc.
Mt. Gay Overpass Bridge, Geotechnical Investigation, Logan, WV	WV Department of Highways Charleston, WV	\$1,000,000	2004	Yes	HMB Professional Engineers, Inc.
Water Tanks, Geotechnical Investigation, Iager, WV	Iager, WV	\$100,000	2006	Yes	Stafford Consultants
Avenue Bridge, technical estigation, tington, WV	WV Department of Highways Charleston, WV	\$2,500,000	2003	Yes	Modjeski & Masters, Charleston, WV
. Use this space qualifications	provide any additional perform work for the We	formation or description of Virginia Abandoned Mine Lan	sources s Program.	resources supporting your ds Program.	firm's
Signature: 10h.	a statement of facts	Title: Vice President	dent	Date: 3/3/	80

NOTE: THIS DOCUMENT WILL BECOME VOID AFTER DECEMBER 31 IN CALENDAR YEAR OF DATE HEREON.

			A	AML and RELATED	ELATE		PROJECT EXPERIENCE MATRIX	ERIEN	CE MAT	¥												
							PRC	JECT I	EXPER	ENCER	FEQUIRE	PROJECT EXPERIENCE REQUIREMENTS					ď	PARTICIPATION/CAPACITY	TICIPATION/CAP	APACIT	<u> </u>	*
PROJECT	Exp. Basis C=Corp. P=Personal	EXD. Basis Info Provided Carlorp. Paresonal In Section (a)	Abandoned Surface Mine Reclamation	Joandoned Deep Mine Acdsmation	erusolO fishShafto	fydrologic/Hydraulic )esign/Eval.	notisulsv3 grinime?	eni4 estysAth\enik tnemetsd	uotisebilM noitsetieav noitsetilM noitsetieav	etasW auobraste isaoqai	anoitacifications	Rater Quality Ratuation/Nitigation/sylascement Placement Placement	emeganaMnotoeqe	fater Treament rate.	lsvome		eotechnical/Stability	an Moran, P.E. nadwick Bller, P.E.	ied Fletcher		irt Newbrough 20 20 20 20 20 20 20 20 20 20 20 20 20	ynard (Wes) Mrrow
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CANAAN PRISON	ပ	6				×			×		×		×								۵.	
INDIAN RIDGE INDUSTRIAL PARK	ပ	3				×			×		×		×		*		***	<u>a</u>		≥	a	
BELINGTON INDUSTRIAL PARK	ပ	ဇ				×			×		×		×				2			<b>≥</b>		7 2 4 A
MINGO COUNTY INDUSTRIAL PARK	ပ	3				×			×		×		×							2	n	
MARTINKA COAL COMPANY	ပ					×					×	-	×				2					
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WV DEP AMHERSTDALE	၁	3					-				×			×			2					
ROBERT C. BYRD IND. PARK	ပ	e	×			×					×	<u> </u>					\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	۵		<b>2</b>	a	
HARRISON CO. BUS/IND. PARK	ပ	3	×			×					×	•	×				2	٠		>		
BUFFALO DAM RECLAMATION	O	8			×		×			×		×						700			a	٥
* List whether project experience is comparate or negocial because the	vie correct	oto or nore	od logge	od so boo	4															$\left  \right $		

<sup>\*</sup> 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.

## STATE OF WEST VIRGINIA Purchasing Division

## PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate

## **DEFINITIONS:**

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

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from oerformance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

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

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

**CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit **www.state.wv.us/admin/purchase/privacy** for the Notice of Agency Confidentiality Policies.

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

Vendor's Name: THRASHER ENGINEERING INC.	
Authorized Signature:Date: OCTOBER 21,2008	
Purchasing Affidavit (Revised/06/15/07)	