

THRASHER ENGINEERING

Statement of Qualifications

Prepared for

The West Virginia
Department of
Environmental
Protection, Office of
Abandoned Mine Lands
& Reclamation

For

*DEP 15603 Orgas Keith
Portals Design*

November 17, 2011

30 Columbia Boulevard
Clarksburg, West Virginia 26301
304-624-4108
304-624-7831-Fax
thrasher@thrashereng.com
www.thrashereng.com

CLARKSBURG, WV
CHARLESTON, WV
BECKLEY, WV
OAKLAND, MD

RECEIVED

2011 NOV -4 A 9:59

PROCUREMENT DIVISION
STATE OF WV



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

Request for Quotation

RFQ NUMBER
DEP15603

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
CHUCK BOWMAN 304-558-2157

VENDOR

RFQ COPY
 TYPE NAME/ADDRESS HERE
 Thrasher Engineering, Inc.
 30 Columbia Boulevard
 PO Box 1532
 Clarksburg, WV 26301

SHIP TO

ENVIRONMENTAL PROTECTION
 DEPARTMENT OF
 OFFICE OF AML&R
 601 57TH STREET SE
 CHARLESTON, WV
 25304 304-926-0499

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
10/11/2011				

BID OPENING DATE: 11/17/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29		
		ORGAS KEITH PORTALS		DESIGN		
EXPRESSION OF INTEREST						
<p>THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE ORGAS KEITH PORTALS PROJECT IN BOONE COUNTY, WEST VIRGINIA PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.</p>						
<p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THIS CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Chad Bill</i>	TELEPHONE 304-624-4108	DATE 11/17/11
TITLE Principal-in-Charge	FEIN 55-0633596-6	ADDRESS CHANGES TO BE NOTED ABOVE

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

RFQ No. DEP15603

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 owned 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 instrumentally 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 performance of a vendor contract with the party receiving an amount that meets or exceeds 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.

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

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Thrasher Engineering, Inc.

Authorized Signature: *Chad Biller* Date: 11/17/11

State of West Virginia

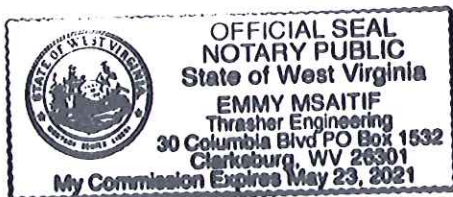
County of Harrison, to-wit:

Taken, subscribed, and sworn to before me this 1st day of November 20 11

My Commission expires May 23, 20 21

AFFIX SEAL HERE

NOTARY PUBLIC *Emmy MSAITIF*



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

PROJECT NAME
 Orgas Keith Portals Design
 DEP 15603

DATE (DAY, MONTH, YEAR)
 JANUARY 1, 2011

FEIN
 55-0633596-6

1. FIRM NAME
 THRASHER ENGINEERING, INC.

2. HOME OFFICE BUSINESS ADDRESS
 30 COLUMBIA BLVD., CLARKSBURG, WV
 26301

3. FORMER FIRM NAME
 NOT APPLICABLE

4. HOME OFFICE TELEPHONE
 304-624-4108

5. ESTABLISHED (YEAR)
 1983

6. TYPE OWNERSHIP
 Individual Corporation X
 Partnership Joint-Venture
 YES NO X

6a. WV REGISTERED DBE
 (Disadvantaged Business Enterprise)
 YES NO X

7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE
 30 COLUMBIA BLVD, CLARKSBURG, WV / 304-624-4108 / KENNETH P. MORAN, P.E., VICE PRESIDENT / 12
 300 ASSOCIATION DRIVE, CHARLESTON, WV / 304-343-7601 / JONATHAN CARPENTER, MANAGING PARTNER / 2

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM
 H. Wood Thrasher, P.E. - President
 Kenneth P. Moran, P.E. - Vice President

8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS
 WM. RANDY WATSON -304-624-4108 - PARTNER
 CHAD BILLER, P.E.-304-624-4108 -PARTNER
 CHAD M. RILEY, P.E.-304-624-4108 - PARTNER
 CLAY P. RILEY, P.E.-304-624-4108-PARTNER
 DANIEL E. FERRELL, P.E. -304-624-4108 -PARTNER
 AARON DENHAM -304-624-4108 -PARTNER
 RON STANLEY, CPA -304-624-4108
 JONATHAN CARPENTER, P.E. -304-343-7601

9. PERSONNEL BY DISCIPLINE

22 ADMINISTRATIVE	—	ECOLOGISTS	1	LANDSCAPE ARCHITECTS	—	STRUCTURAL ENGINEERS
4 ARCHITECTS	—	ECONOMISTS	—	MECHANICAL ENGINEERS	—	SURVEYORS
— BIOLOGIST	—	ELECTRICAL ENGINEERS	—	MINING ENGINEERS	—	TRAFFIC ENGINEERS
20 CADD OPERATORS	2	ENVIRONMENTALISTS	3	PHOTOGRAMMETRISTS	10	OTHER
— CHEMICAL ENGINEERS	—	ESTIMATORS	—	PLANNERS: URBAN/REGIONAL	—	
38 CIVIL ENGINEERS	1	GEOLOGISTS	—	SANITARY ENGINEERS	—	
33 CONSTRUCTION INSPECTORS	—	HISTORIANS	—	SOILS ENGINEERS	—	
2 DESIGNERS	—	HYDROLOGISTS	2	SPECIFICATION WRITERS	—	196 TOTAL PERSONNEL
— DRAFTSMEN						

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 12

*RPES other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.

10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE? YES NO NOT APPLICABLE

11. OUTS ' KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO USED. Attach "AML Consultant Confidential Quali ation
 Ques. _nnnaire".

NAME AND ADDRESS: NOVEL GEO-ENVIRONMENTAL	SPECIALTY: GEO-TECHNICAL SERVICES	WORKED WITH BEFORE <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No

12. A Is your firm experienced in Abandoned Mine Land Remediation/Mine Reclamation Engineering?
YES Description and Number of Project: THRASHER ENGINEERING HAS PERFORMED ENGINEERING DESIGN SERVICES TO THE WV DEP FOR BOTH DRAINAGE AND PORTAL AML PROJECTS AS WELL AS FOR WATER LINE AND WATER TREATMENT PLANT PROJECTS RELATED TO AML. NUMEROUS PROJECTS INVOLVING LAND REMEDIATION, STORM WATER DRAINAGE, SLIP REPAIR, MASS GRADING IN RELATION TO SITE DEVELOPMENT AND HIGHWAY PROJECTS.

B. Is your firm experienced in Soil Analysis?
YES Description and Number of Projects: THRASHER ENGINEERING MAINTAINS AN AASHTO CERTIFIED MATERIALS TESTING AND ANALYSIS LAB AT ITS CLARKSBURG AND BECKLEY OFFICES. SOIL ANALYSIS EXPERIENCE IS SPECIFICALLY IN GRADATIONS AND CLASSIFICATION.

C. Is your firm experienced in hydrology and hydraulics?
YES Description and Number of Projects: 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 EXPERIENCE IN HYDROLOGY. WE ALSO HAVE EXTENSION EXPERIENCE IN HYDRAULIC MODELING FOR WATER AND WASTEWATER PROJECTS THROUGHOUT WEST VIRGINIA.

D. Does your firm produce its own Aerial Photography and Develop Contour Mapping?
YES Description and Number of Projects:

NO WE UTILIZE THE SERVICES OF NUMEROUS FIRMS, INCLUDING PENTREE, INC. WHICH IS AN AFFILIATE COMPANY OF THRASHER ENGINEERING INC. THROUGH THE RESOURCE ENGINEERING GROUP HOLDING COMPANY.

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

F. Is your firm experienced in Acid Mine Drainage Evaluation and Abatement Design?
YES Description and Number of Projects: TEI RECENTLY DESIGNED TWO RECLAMATION PROJECTS FOR WVDEP RELATED SPECIFICALLY TO ACID MINE DRAINAGE AND ABATEMENT, ONE IS LOCATED IN BARBOUR COUNTY AND ONE IN RANDOLPH COUNTY, WEST VIRGINIA. THE CHARLESTON WV BRANCH OF OUR COMPANY DESIGNED AN AWARD WINNING WATER TREATMENT PLANT FOR MARTINKA MINES IN MARION COUNTY, WEST VIRGINIA TO TREAT DRAINAGE. TEI HAS COMPLETED THE DESIGN OF TWO MORE AML PROJECTS. OVERFIELD IN BARBOUR COUNTY AND SOUIRES CREEK IN PRESTON COUNTY. BOTH OF THESE PROJECTS ARE OUT TO BID NOW. WE CURRENTLY ARE DESIGNING TWO PROJECTS FOR AML. LAUREL RUN PRESTON COUNTY AND LYONS LANDSLIDE IN HARRISON COUNTY.

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
MORAN, KENNETH P.	7	17	24

Mr. Moran joined Thrasher Engineering in 1991 and currently serves as Vice President and Chief Operations Officer and Chief Engineer.

Mr. Moran is responsible for management feasibility studies and design of public utility and site development projects for local 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.

EDUCATION (Degree, Year, Specialization)	B.S., Civil Engineering Technology, 1983 - Fairmont State University
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	<input type="checkbox"/> Registered Professional Engineer (PE), State of West Virginia #11309 <input type="checkbox"/> Registered Professional Engineer (PE), State of Virginia #0102021855 <input type="checkbox"/> Registered Professional Engineer (PE), State of Ohio #64412 <input type="checkbox"/> Professional Land Surveyor (PS), State of West Virginia #1333

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
BILLER, CHADWICK D. P.E.	4	18	18

Brief Explanation of Responsibilities: Mr. Biller has experience in all aspects of engineering with specific emphasis on site development, highways, roads, bridges, and airports. Mr. Biller joined Thrasher Engineering in 1999 and is a partner of Thrasher Engineering. For Thrasher Engineering, Mr. Biller is responsible for WV DEP AML project and public and private site development projects, specializing in airports, highways, roads and bridges. As Project Manager for all of the firm's WVDOT/DOH projects, he has extensive knowledge of state and federal building standards.

EDUCATION (Degree, Year, Specialization)	<input type="checkbox"/> B.S., Civil Engineering, 1992 - West Virginia University
--	---

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	<input type="checkbox"/> American Society of Civil Engineers <input type="checkbox"/> Society of American Military Engineers <input type="checkbox"/> National Society of Professional Engineers
REGISTRATION (Type, Year, State)	<input type="checkbox"/> Registered Professional Engineer (PE), State of West Virginia #13620 <input type="checkbox"/> Registered Professional Engineer (PE), State of Pennsylvania #PE056012E <input type="checkbox"/> Registered Professional Engineer (PE), State of Ohio #64594

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

NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
<p>NESTOR, MICHAEL - PROJECT ENGINEER</p> <p>Brief Explanation of Responsibilities Mr. Nestor joined Thrasher Engineering in 2005 and serves as Project Manager and Engineer. Mr. Nestor has a wide range of experience in residential and commercial site developments of projects, utilizing all aspects of infrastructure design including street and lot layout, street profiles, extensions of public sewer and water systems, storm water drainage, storm water management, erosion and sediment control plans, and NPDES permitting. In addition, Mr. Nestor oversees all general operations within The Berkeley Associates, directing administrative staff, CAD technicians, and staff engineers to ensure successful completion of projects covering site development, surveying, material testing, and environmental services.</p>			
2	7		
<p>EDUCATION (Degree, Year, Specialization)</p> <p><input type="checkbox"/> B.S. Civil Engineering Technology - Fairmont State University, 2003</p>			
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</p> <p><input type="checkbox"/> American Society of Civil Engineers</p> <p><input type="checkbox"/> Eastern Panhandle Home Builders Association</p>			
REGISTRATION (Type, Year, State)		<input type="checkbox"/> PROFESSIONAL ENGINEER (P.E.), 2009, State of West Virginia	
<p>13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)</p>			
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
ROHRBAUGH, APRIL		YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:
		1	6
<p>Brief Explanation of Responsibilities</p> <p>Mrs. Rohrbaugh joined Thrasher Engineering in January of 2006 and serves as Staff Engineer in the site department at the Oakland Maryland Branch. Mrs. Rohrbaugh has experience in all aspects of site engineering, taking projects from survey to concept to construction. Her responsibilities with AML projects include: Design of wet and modified mine seals, grading associated with reclaiming, storm water management, and erosion and sediment control. Mrs. Rohrbaugh's other responsibilities include: Design Surveying consisting of both field traversing and survey locations and aerial mapping. Conceptual Planning: planning for residential, commercial, and recreational developments. Site/Land Development Engineering: geometric layout of sites, subdivisions, and roads, grading, drainage, storm water management, erosion and sediment control, and various regulatory permitting requirements.</p>			
<p>EDUCATION (Degree, Year, Specialization)</p> <p><input type="checkbox"/> B.S. Civil Engineering - West Virginia University, 2005, Civil Engineering</p>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	

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

NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
HOVATTER, RICHARD - PROJECT MANAGER		YEARS OF AML DESIGN EXPERIENCE: 8	YEARS OF AML RELATED DESIGN EXPERIENCE: 8
Brief Explanation of Responsibilities: Richard Hovatter Jr. joined Thrasher Engineering, Inc. in 2011 and serves as Project Manager from TEI's Clarksburg Office. As a graduate of Fairmont State University and previous experience Mr. Hovatter has extensive knowledge of abandoned mine land and emergency situations such as landslides and mine subsidence of abandoned mine land. Mr. Hovatter is responsible for the designs, scheduling, collection and reporting of mine surface, sediment erosion control plans and waterline feasibility studies.			
EDUCATION (Degree, Year, Specialization) <input type="checkbox"/> Bachelor of Science, 2002, Civil Engineering Technology - Fairmont State University			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	
		<input type="checkbox"/> Professional Engineer (P.E.), 2009, State of West Virginia <input type="checkbox"/> Professional Engineer (P.E.), 2010, State of Pennsylvania	
13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)			
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
NEWBROUGH, KURT		YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE: 24
Brief Explanation of Responsibilities Mr. Newbrough joined Thrasher Engineering in 1990. 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.			
EDUCATION (Degree, Year, Specialization) <input type="checkbox"/> Surveying - John Tyler Community College, Chester, VA <input type="checkbox"/> United Career Center, Clarksburg, WV			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	
<input type="checkbox"/> West Virginia Association of Land Surveyors <input type="checkbox"/> American Congress on Surveying and Mapping <input type="checkbox"/> Member Strathmore's Who's Who		<input checked="" type="checkbox"/> Professional Land Surveyor (PS), West Virginia #1618 - 1995 <input checked="" type="checkbox"/> OSHA Hazardous Waste Operations and Emergency Response Center 29 CFR 1910.120 <input checked="" type="checkbox"/> US Department of Labor/Mine Safety and Health Administration	

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

Civil 3D, Carlson and Microstation V8 software is utilized at 70 CAD stations throughout our locations. 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.

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 T502 Total Station Instrument
- Trimble GPS
- Leica Geosystem System 500 GPS
- Leica Ski Post Processing Software
- Topcon G600 Total Station Instrument
- Leica 303 Total Station Instrument
- Leica 307 Total Station Instrument
- Leica 403 Total Station Instrument
- Leica 405 Total Station Instrument
- Leica 407 Total Station Instrument
- Leica 703 Total Station Instrument

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD: SITE DEVELOPMENT PROJECTS

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
ANGLIN'S RUN AND ROARING CREEK STREAM AML RECLAMATION BARBOUR AND RANDOLPH COUNTIES, WV	WV DEP-DEPARTMENT OF AML 601 57th Street, SE Charleston, WV 25304	ENGINEERING DESIGN FOR PORTAL SEALING, DRAINAGE AND RECLAMATION	\$700,000.00	100%
OVERFIELD LAFFERTY CSP BARBOUR COUNTY, WV	WV DEP-DEPARTMENT OF AML 601 57th STREET, SE CHARLESTON, WV 25304	ENGINEERING DESIGN FOR PORTAL SEALING, DRAINAGE AND RETAINING WALL	\$450,000.00	95%
SQUIRES CREEK PORTALS / REFUSE PRESTON COUNTY, WV	WV DEP-DEPARTMENT OF AML 601 57th STREET, SE CHARLESTON, WV 25304	ENGINEERING DESIGN FOR PORTAL SEALING, DRAINAGE AND BACKFILLING HIGHWALL WITH REFUSE	\$500,000.00	95%
WHITE OAKS BUSINESS PARK SITE DEVELOPMENT AND UTILITIES HARRISON COUNTY, WV	HIGH TECH CORRIDOR DEVELOPMENT, LLC MR. JACK KEELEY PO BOX 1532 CLARKSBURG, WV 26302	SITE DEVELOPMENT DESIGN (LAND PLANNING, GRADING, UTILITIES) SURVEY, CONST. MGT, MATERIALS TESTING	\$12,100,000.00	95%
MCHENRY BUSINESS PARK SITE DEVELOPMENT AND UTILITIES GARRETT COUNTY, MD	GARRETT COUNTY EDA 203 SOUTH 4TH STREET COURTHOUSE ROOM 208 OAKLAND, MD 21550 301-334-1921	SITE DEVELOPMENT DESIGN (LAND PLANNING, GRADING, UTILITIES) SURVEY, CONST. MGT, MATERIALS TESTING	\$3,500,000.00	65%
LYONS LANDSLIDE HARRISON COUNTY, WV	WV DEP-DEPARTMENT OF AML 601 57th STREET, SE CHARLESTON, WV 25304	REPAIR SLIP AREA WITH A PILE RETAINING WALL	\$700,000.00	50%
LAUREL RUN #1 PRESTON COUNTY, WV	WV DEP-DEPARTMENT OF AML 601 57th STREET, SE CHARLESTON, WV 25304	ENGINEERING DESIGN FOR PORTAL SEALING, DRAINAGE AND BACKFILLING HIGHWALL WITH REFUSE	\$1,500,000.00	40%
NORTH CENTRAL WV AIRPORT HARRISON COUNTY, WV VARIOUS - HANGERS /STORM WATER	BENEDUM AIRPORT AUTHORITY RICK ROCK, AIRPORT DIRECTOR 2000 AVIATION WAY BRIDGEPORT, WV	SITE DEVELOPMENT DESIGN (LAND PLANNING, GRADING, UTILITIES) SURVEY, CONST. MGT, MATERIALS TESTING	\$500,000 to \$1,000,000.00	ON-GOING

TOTAL NUMBER OF PROJECTS:
6 (TOTAL FULL DEVELOPMENT -
APPROXIMATELY 40 MILLION)

APPROXIMATELY 30 SITE DEVELOPMENT -

TOTAL ESTIMATED CONSTRUCTION COSTS:
18,600,000.00 +

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD: WATER TREATMENT AND DISTRIBUTION PROJECTS

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, FIELD CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION.	\$9,500,000	30%
JESSICA LYNCH WATER LINE EXTENSION WIRT COUNTY, WV	TOWN OF ELIZABETH 200 BEVERLY STREET P.O. BOX 478 ELIZABETH, WV 26143	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, FIELD CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$3,600,000	80%
SOUTHWESTERN PSD WATER LINE EXTENSION / REPLACEMENT	SOUTHWESTERN WATER PUBLIC SERVICE DISTRICT P. O. BOX 98 FLEMINGTON, WV 26347	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, FIELD CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$10,430,000.	30%
HAMRICK PSD MOORE/PORTERWOOD EXTENSION TUCKER COUNTY, WV	HAMRICK PSD PO BOX 228 HENDRICKS, WV 26271	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, FIELD CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$1,100,000.	25%
LINCOLN COUNTY PSD WATER LINE EXTENSION PROJECTS	LINCOLN PSD P.O. BOX 38 240 LITTLE COAL RIVER RD. ALUM CREEK, WV 25003	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, FIELD CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$6,920,000.	25%
POCAHONTAS COUNTY PSD WATER LINE REPLACEMENT DURBIN / BARTOW/FRANK	POCAHONTAS COUNTY PSD HC 63 BOX 122 FRANK, WV 24920	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, FIELD CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$10,456,000.	25%
CITY OF SALEM, WEST VIRGINIA WATER LINE REPLACEMENT	SALEM, CITY OF P.O. BOX 352 229 W. MAIN SALEM, WV 26426	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, FIELD CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$1,500,000.	80%
TOTAL NUMBER OF PROJECTS: 7 REPRESENTED (APPROXIMATELY 20 ADDITIONAL CURRENTLY IN PRELIMINARY / DESIGN OR CONSTRUCTION PHASES)		TOTAL ESTIMATED CONSTRUCTION COSTS: \$32,830,000.00 REPRESENTED ESTIMATED COST OF ALL JOBS APPROXIMATELY \$150,000,000.00		

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD: SANITARY SEWER PROJECTS

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
KINGWOOD SEWER REPLACEMENT AND SERVICE EXTENSIONS KINGWOOD, WV	CITY OF KINGWOOD 313 TUNNELTON STREET KINGWOOD, WV 26537	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$10,000,000	40%
GREATER HARRISON COUNTY PSD PHASE II-B 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	\$6,000,000	65%
TENNERTON PSD PHASE III SANITARY SEWER EXTENSION UPSHUR COUNTY, WV	TENNERTON PSD 188 FAYETTE ST. BUCKHANNON, WV 26201	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$6,800,000	5%
POCAHONTAS COUNTY PSD WTP 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	95%
HEPZIBAH 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	95%
MALDEN PUBLIC SERVICE DISTRICT SANITARY SEWER REHABILITATION KANAWHA COUNTY, WV	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.	89%
CANYON PUBLIC SERVICE DISTRICT 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.	95%
TOTAL NUMBER OF PROJECTS: 7 REPRESENTED			TOTAL ESTIMATED CONSTRUCTION COSTS: \$70,300,000.00	
TOTAL ACTIVE SANITARY SEWER PROJECTS APPROXIMATELY 32			TOTAL FOR ALL PROJECTS APPROXIMATELY \$150,000,000	

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD: HIGHWAY, BRIDGE, SIDEWALKS

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
COUNTY LINE BRIDGE, MARSHALL COUNTY	WVDOT/DOH 1900 KANAWHA BLVD EAST CHARLESTON, WV 25305	PRELIMINARY ENGINEERING, DESIGN, SURVEY	\$1,800,000.	40%
MINERAL WELLS ROUTE 2 WOOD COUNTY	WVDOT/DOH 1900 KANAWHA BLVD EAST CHARLESTON, WV 25305	PRELIMINARY ENGINEERING, DESIGN, SURVEY	\$6,000,000	10%
TOTAL NUMBER OF PROJECTS: 6 (TOTAL IN FULL APPROXIMATELY 30 SITE DEVELOPMENT - APPROXIMATELY 40 MILLION)	TOTAL ESTIMATED CONSTRUCTION COSTS: \$7,800,000			

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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
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	YES
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 WHETSSELL SETTLEMENT WATER LINE EXTENSION PRESTON COUNTY, WV	KINGWOOD, CITY OF 313 TUNNELTON ST. KINGWOOD, WV 26537-1462	\$ 420,000.	2007	YES
NORTON-HARDING-JIMTOWN PSD WATER LINE EXTENSION RANDOLPH COUNTY, 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	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
NICHOLAS COUNTY BUSINESS PARK, NICHOLAS COUNTY, WV NICHOLAS COUNTY, WV SITE DEVELOPMENT	NICHOLAS CO BLDG COMMISSION 700 MAIN STREET, SUITE 1 SUMMERSVILLE, WV 26651	\$2,500,000.00	2008	YES
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
GILMER COUNTY PSD DUSK CAMP WATER LINE EXTENSION GILMER COUNTY, WV	GILMER COUNTY PSD 232 W. MAIN STREET GLENVILLE, WV 26351	\$2,500,000	2008	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 CAMERON WATER STORAGE TANK MARSHALL COUNTY, WV	CITY OF CAMERON 44 MAIN STREET CAMERON, WV 26033	\$2,000,000.00	2008	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 SCOTT DEPOT, WV 25560	\$1,500,000	2004	YES
TOWN OF ROWLESBURG WATER TREATMENT PLANT/ EXT. PRESTON COUNTY, WV	TOWN OF ROWLESBURG PO BOX 458 42 POPLAR STREET ROWLESBURG, WV 26425	\$4,500,000.	2008	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	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
JAKES RUN BRIDGE MONONGALIA COUNTY, WV	WVDOH/DOH 1900 KANAWHA BLVD EAST CHARLESTON, WV 25305	\$1,300,000.	2008	YES
ICG - THREE FORKS BRIDGE TAYLOR COUNTY	INTERNATIONAL COAL GROUP, INC. 2000 ASHLAND DRIVE ASHLAND, KY 41101	\$1,119,000.00	2008	YES
CITY OF RIPLEY - MAIN STREET REVITALIZATION - JACKSON CO.	CITY OF RIPLEY TIM KING, CITY SUPERINTENDENT 203 SOUTH CHURCH ST. RIPLEY, WV 25271	\$1,200,000.	2008	YES

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOU WERE ASSOCIATED WITH OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH
GLENNVILLE FEDERAL CORRECTIONAL INST. SITE DEVELOPMENT GILMER COUNTY, WV	FEDERAL BUREAU OF PRISONS 320 1 ST STREET NW 500-6 WASHINGTON, DC 20534	\$96,000,000	2003	YES	BELL JUSTICE FACILITIES
FEDERAL BUREAU OF PRISONS -CANAAN FACILITY - SITE DEVELOPMENT - SCRANTON, PA	FEDERAL BUREAU OF PRISONS 320 1 ST STREET NW 500-6 WASHINGTON, DC 20534	\$120,000,000	2002	YES	BELL JUSTICE FACILITIES
FAIRMONT STATE COLLEGE - STUDENT DORMITORY - SITE DEVELOPMENT- FAIRMONT, WV	FAIRMONT STATE UNIVERSITY 1201 LOCUST AVENUE FAIRMONT, WV 26554-2491	\$6,000,000	2004	YES	VOA ARCHITECTS
FAIRMONT STATE COLLEGE - PARKING GARAGE- SITE DEVELOPMENT -FAIRMONT, WV	FAIRMONT STATE UNIVERSITY 1201 LOCUST AVENUE FAIRMONT, WV 26554-2491	\$4,000,000	2003	YES	MARCH-WESTIN
FAIRMONT STATE UNIVERSITY FEASTER CENTER SITE DEVELOPMENT - FAIRMONT, WV	FAIRMONT STATE UNIVERSITY 1201 LOCUST AVENUE FAIRMONT, WV 26554-2491	\$400,000.	2005	YES	VOA ARCHITECTS
FAIRMONT STATE UNIVERSITY CREATIVE ARTS AND ENGINEERING TECH BUILDING SITE DEVELOPMENT FAIRMONT, WV	FAIRMONT STATE UNIVERSITY 1201 LOCUST AVENUE FAIRMONT, WV 26554-2491	\$100,000.	2007	YES	DESIGN ALLIANCE OMNI ASSOCIATES

19. USE THIS SPACE TO PROVIDE ANY ADDITIONAL INFORMATION OR DESCRIPTION OF RESOURCES SUPPORTING YOUR FIRM'S QUALIFICATIONS TO PERFORM WORK FOR THE WV ABANDONED MINE LANDS PROGRAM

SEE ATTACHMENT - STATEMENT OF QUALIFICATIONS

20. THE FOREGOING IS A STATEMENT OF FACTS.

SIGNATURE:  TITLE: PARTNER / PRINCIPAL-IN-CHARGE DATE: OCTOBER 24, 2011

PRINTED NAME: CHADWICK D. BILLER, P.E.

November 17, 2011

West Virginia Department of Environmental Protection
Office of Abandoned Mine Lands and Reclamation
c/o State of West Virginia Department of Administration
Purchasing Division
601 57th Street, SE
Charleston, WV 25305

RE: DEP 15603, Orgas Keith Portals Design, Expression of Interest

Dear AML Chief and Selection Committee:

Thrasher Engineering, Inc. (TEI) is very interested to provide engineering design services for the Orgas Keith Portals design project in Boone County, West Virginia. We will provide the highest level of service and technical proficiency, in a cost efficient manner, and meet or beat all deadlines.

From the information provided in the RFQ we have developed an understanding of the project needs and approach. TEI has designed numerous drainage systems, installed mine seals, sediment and erosion control measures and other features required by this project.

We have included a summary of our qualifications related to the "Selection Criteria" listed in the RFQ, under the first tab.

We look forward to the opportunity to discuss your needs and how TEI can provide services necessary.

Sincerely,

THRASHER ENGINEERING, INC.



CHAD BILLER, PE
Partner / Principal-in-Charge

SELECTION CRITERIA

- A. West Virginia Professional Engineers (Civil or Mining) in the Primary Office.
Thrasher Engineering, Inc. has **13 West Virginia registered Professional Engineers** in our Primary Office located in Clarksburg, WV.

Woody Thrasher, PE	Chad Biller, PE
Mike Nestor, PE	Daniel Ferrell, PE
Ken Moran, PE	Clay Riley, PE
Matt Fluharty, PE	Tom Urquhart, PE
Chad Riley, PE	Jeff Gola, PE
Doug Forni, PE	Rob Milne, PE
Richard (RJ) Hovatter, PE	

- B. Reclamation engineering design experience of the Primary Office's WV RPE as it relates to the specific project problem areas.

Chadwick Biller, PE, will serve as Principal-in-Charge and has over **19 years** of civil engineering experience with specific emphasis on mine reclamation, site development, highways, roads, bridges, and airports. Mr. Biller has managed the design and construction administration for a number of large grading and drainage projects in West Virginia. These projects have included design for mine reclamation, industrial/business parks, highways, and airports. Mr. Biller is also familiar with reclamation of mine portals, using either wet or dry seals.

Larry Nottingham, PE, with NGE will serve as our Geotechnical sub-consultant. He has over **30 years** of AML design experience.

- C. Available WV-AML Design Teams within the Primary office (A design team should consist of one Project Engineer (Civil or Mining), one CAD person and available support personnel as required by the particular project).

Thrasher Engineering has **11 WV-AML Design Teams** within the Primary Office, and over 120 additional support personnel that are available if required by the project.

Civil Engineer

- 1) Woody Thrasher, PE
- 2) Chad Biller, PE
- 3) Mike Nestor, PE
- 4) Daniel Ferrell, PE
- 5) Ken Moran, PE
- 6) Clay Riley, PE
- 7) Matt Fluharty, PE
- 8) Tom Urquhart, PE
- 9) Chad Riley, PE
- 10) Jeff Gola, PE
- 11) Doug Forni, PE

CAD

- Brady Stutler
- Cliff Cleavenger
- Jeff Pine
- Jason Heflin
- Phil Lantz
- Joe Lowther
- John Sirianni
- Jeff Bonaventura
- Mike Oldaker
- Zack Gain
- Trudy Hiel

STATEMENT OF QUALIFICATIONS

FIRM OVERVIEW

THRASHER ENGINEERING, INC.

Established 1983

Officers

H. Wood Thrasher, P.E.,	President
Kenneth P. Moran, P.E., P.S.	Vice-President
Ron Stanley, CPA	Secretary/Treasurer

Partners

Wm. Randy Watson	Public Utilities
Chadwick Biller, P.E.	Site Development/Highways/Airports/ AML
Chad Riley, P.E.	Site Development
Clay P. Riley, P.E.	Public Utilities
Daniel E. Ferrell, P.E.	Public Utilities
Kenneth P. Moran, P.E., P.S.	Vice-President
Jonathan Carpenter, P.E.	Charleston Branch Manager/ Public Utilities
Aaron Denham	Testing & Inspection

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
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
3000 Thayer Center, Oakland, MD
380 Airport Circle, Beckley, WV – Lab & Field Office
Princeton, WV – Pentree, Incorporated – Affiliate



Thrasher Engineering, Inc. Office – Clarksburg, WV



Thrasher Engineering, Inc. Office – Charleston, WV

STATEMENT OF QUALIFICATIONS

Thrasher Engineering, Inc. (TEI) is a civil engineering consulting firm, specializing in public works projects. The majority of TEI'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 principal is Kenneth P. Moran, P.E.

Providing a full range of professional engineering services, Thrasher Engineering, Inc. currently maintains a staff of 200+ full-time employees. 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 TEI 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 **Orgas Keith Portals** design project include:

SITE DEVELOPMENT

TEI has planned, surveyed, designed and provided construction management services for over 40 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:

Planning and Conceptual Design- 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, 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.

Grading Plans - 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.

Utility Layout/Mapping - 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 19 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, TEI maintains a complete surveying department which includes nine 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 TEI varies greatly as well and covers virtually all aspects of land surveying, such as:



Pre- and Post-Mining Surveys - vertical and horizontal control, inspector's report of protected structures, interior and exterior photographs, and videos. TEI provides these survey services for numerous coal companies, including Eastern and Martinka. 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.

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

Construction Layout - 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

TEI 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

TEI'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.

Services Include:

- Concrete Testing and Inspection
- Soil Testing and Inspection
- Aggregate Testing and Inspection
- Mortar and Grout
- Asphalt
- Paint Coatings
- Sprayed-on Fireproofing
- 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

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

Civil 3D, Carlson and Microstation V8 software is utilized at 70 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

TEI offers the largest engineering staff in the State of West Virginia. The expertise of the TEI 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.

PROJECT TEAM

TEI has assigned a team of experienced professionals to the **Orgas Keith Portals** design project.

Chadwick D. Biller, P.E. will be the **Principal-in-Charge**. 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 TEI and manages site development, transportation and the survey projects.

April Rohrbaugh will serve as **Project Manager** and her responsibilities regarding AML projects includes design of wet and modified mine seals, grading associated with reclaiming, storm water management, and erosion and sediment control.

Mike Nestor, P.E. will serve as **Project Engineer** and be responsible for design of the project. Mr. Nestor's experience includes drainage and sediment control design projects for site development projects. He served as design engineer for the Roaring Creek and Anglin Run AML projects.

Richard (RJ) Hovatter will serve as **Project Engineer** for the project. Mr. Hovatter has extensive knowledge of abandoned mine land and emergency situations such as landslides and mine subsidence of abandoned mine land. Mr. Hovatter is responsible for the designs, scheduling, collection and reporting of mine surface, sediment erosion control plans and waterline feasibility studies.

Geo-technical services will be under the direction of **Larry Nottingham** of **NGE, 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.

CHADWICK D. BILLER, P.E.
Partner / Principal-in-Charge



SUMMARY OF EXPERIENCE

Mr. Biller has experience in all aspects of engineering with specific emphasis on mine reclamation, site development, highways, roads, bridges, and airports. Mr. Biller joined the firm in 1999 and is a partner of Thrasher Engineering. Mr. Biller is responsible for WV DEP AML project and public and private site development projects, specializing in airports, highways, roads and bridges. As Project Manager for all of the firm's WVDOT/DOH projects, he has extensive knowledge of state and federal building standards.

EDUCATION

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

CERTIFICATIONS

- Registered Professional Engineer (PE), State of West Virginia #13620*
- Registered Professional Engineer (PE), State of Pennsylvania #PE056012E*
- Registered Professional Engineer (PE), State of Ohio #64594*

REPRESENTATIVE PROJECT EXPERIENCE

Site Development Projects

- WV DEP Anglin's Run and Roaring Creek Projects*
- WV DEP Overfield CS&P and Squires Creek*
- WV DEP Lyons Landslide and Laurel Run #1*
- 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*

Airports

- Harrison Marion Regional Airport – Improvement Master Plan*
- Raleigh County Airport – Business Park and Master Plan*
- Grafton Hospital, Helipad Relocation*
- Parkersburg Airport – Industrial Park*
- Huntington Tri-State – Industrial & Business Park*

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 5th Street Bridge, Parkersburg*
- Rehabilitation of the 35th and 36th 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*

APRIL ROHRBAUGH
Project Manager



SUMMARY OF EXPERIENCE

Mrs. Rohrbaugh joined Thrasher Engineering in January of 2006 and serves as Staff Engineer in the site department at the Oakland Maryland Branch. Mrs. Rohrbaugh has experience in all aspects of site engineering, taking projects from survey to concept to construction. Specialties include: Design Surveying consisting of both field traversing and survey locations and aerial mapping, Conceptual Planning: planning for residential, commercial, and recreational developments, Site/Land Development Engineering: geometric layout of sites, subdivisions, and roads, grading, drainage, storm water management, erosion and sediment control, and various regulatory permitting requirements.

EDUCATION

- ❑ *B.S. Civil Engineering – West Virginia University, 2005*

REPRESENTATIVE PROJECT EXPERIENCE

- ❑ *ASHBY CREST ESTATES (Ashby, WV)- Responsible for design survey and topographic mapping and road design. Completed plat work for Mineral County Planning and Land Development approval. 54 Lot Subdivision*
- ❑ *ASPEN WOODS WEST (Garrett County, WV) - Re-designed lot layout to incorporate more common area to accommodate equestrian use. Complete plat work for the Garrett County Planning and Land Development. 28 Lot Subdivision*
- ❑ *CRYSTAL SPRINGS WALKING TRAIL - Completed a concept and design, as well as, overcame difficult site constraints which included wetlands, a stream crossing and slope compliance to meet ADA Standards.*
- ❑ *G&W LUMBER - The existing lumber yard was extended to add approximately 1 acre of storage area. The site was graded to removing an excess of 17,000 CY of soil from the property. Also, an underground stormwater detention system was designed to maximize the storage area.*
- ❑ *GINSENG HILL - On this design grass lined swales and stormwater structures were used to treat run-off. To drastically reduce the volume requirements of the stormwater structures, a clear water diversion swale along with a storm sewer system that carried the "clean water" to an existing outlet was utilized.*
- ❑ *HOWARD DON - Single residential property which is located within the 100 year flood plain. Federal Emergency Management Agency (FEMA) required the submission of a conditional letter of map revision for fill (CLOMR-F) to approve the plans for removing a portion of the property out of the flood plain by placing fill. This project also required a permit from the Maryland Department of the Environment (MDE) for construction in an existing flood plain as well as a sand mound design approval from the Garrett County Health Department. When the grading and house was in place an as-built of the property was completed in order to resubmit to FEMA (LOMR-F) to permanently remove the property from the flood plane.*
- ❑ *JOHN FRAM (Garrett County, MD) - Completed a sand mound design which was approved by the Garrett County Health Department.*

- ❑ **MAXING STEYER** - Completed the application to FEMA and plat of survey for a letter of map amendment (LOMA) proving that the existing Federal Insurance Rate Map (FIRM) included a portion of the property that was not within the 100 year flood plane, resulting in the removal of the property from the flood plane.
- ❑ **MCHENRY BUSINESS PARK (McHenry, MD)** - Provided infrastructure design for a 180 acre Business Park located in McHenry, Maryland. Design responsibilities included: Design survey and various platting requirements for land transfer and utility easements. Access road designs including horizontal and vertical alignments and an entrance off of a county road. The design of erosion and sediment controls for construction activities and swale and culvert conveyances to 5 basins to control stormwater run off from the proposed roadway infrastructure. Consulted with local utility companies to devise utility plans and sections for cable, electric and telephone extensions and provided a roadway lighting plan. Assisted in the design and layout of a potable water line extension including a site plan for a proposed 250,000 gal water tank. Assisted in the design and layout of sanitary sewer gravity and force main lines including site plans for 2 sewage lift stations. Participated in weekly construction progress meetings and provided updates/reports to owner/developer.
- ❑ **MOUNTAINSIDE LAKEVIEW ESTATES (Garrett County, MD)** - Mix-use design including commercial and residential lots as well as utilizing the cluster design option for Garrett County, MD. Responsible for the road design on steep slopes and planting plan for stormwater bioretention treatment sites.
- ❑ **NORTH GLADE MEADOWS** - 24 lot subdivision completed in two phases. The subdivision layout consisted of one main road designed to follow along with the natural slope of the land and two spur roads to create access to remote areas of the property. Grass lined swales were utilized to remove the need of multiple stormwater ponds.
- ❑ **SWAN MEADOWS (Pleasant Valley, MD)** - Responsible for the road design, low impact stormwater management and erosion and sediment controls for this 7 lot subdivision.
- ❑ **THE HOMESTEAD (Oakland, MD)** - Designed access road to minimize construction and utilized grass lined swales and infiltration swales with rock bleeders in lieu of a stormwater pond for this 8 lot subdivision.
- ❑ **THE RESERVE AT HOLY CROSS** - Completed a useable shoreline and water depth survey to provide the Maryland DNR with a revised dock configuration for the subdivisions common access slips.
- ❑ **THOUSAND ACRES DEVELOPMENT AT DEEP CREEK LAKE (McHenry, MD)** - Responsible for all design surveying and plat work for an 800 acre mix-use property located McHenry, MD. Also completed a comprehensive design of a 150 unit residential cluster subdivision surrounding a proposed golf course. Provided a redesign of an existing 3 acre irrigation pond to widen the dam to allow for a residential access road. Applied for a dam modification permit from the Maryland Department of Dam Safety and devised an Emergency Action Plan for a pond catastrophic event (breach).
- ❑ **TIMBERLINE FOUR SEASON RESORT** - Devised a concept and marketing plat for future expansion of the ski resort. The plan consisted of a mixed-use design including: residential subdivisions, commercial area, lodging, and proposed ski trails.
- ❑ **WALGREENS** - Completed civil construction plans including grading, storm sewer system & sanitary sewer system plans and profiles, micro-bioretion basin with planting and landscape plans. Provided submittal and RFI review. Prepared ADA sidewalk and Alta as-built plats.
- ❑ **WHITEWATER SPRINGS** - 23 lot subdivision on steep terrain with deep natural swales and required a bridge crossing over an existing stream. Responsibilities included private residential road design that maximized access to buildable lots and minimized grading requirements. A construction permit required from MDE to place a bridge over the existing stream to gain access to the subdivision. Stormwater management was achieved by the design of multiple micro-basins were located along the roadways to provide low impact treatment and not only lower construction costs (based on large basin design) but also lower the future maintenance cost.

MIKE NESTOR, P.E.
Project Engineer



EXPERIENCE

Mr. Nestor joined Thrasher Engineering in 2005 and serves as Project Manager and Engineer. Mr. Nestor has a wide range of experience in residential and commercial site development projects, utilizing all aspects of infrastructure design including street and lot layout, street profiles, extensions of public sewer and water systems, storm water drainage, storm water management, erosion and sediment control plans, and NPDES permitting.

EDUCATION

- B.S. Civil Engineering Technology – Fairmont State University, 2003*

CERTIFICATIONS

- Registered Professional Engineer (PE), State of West Virginia #18467*

AFFILIATIONS

- American Society of Civil Engineers*
- Eastern Panhandle Home Builders Association*

REPRESENTATIVE PROJECT EXPERIENCE

- WV DEP AML PORTAL AND DRAINAGE DESIGN- Design for access roads, drainage control channels, re-grading and wet-seal of deep mine portals for Anglin's Run and Roaring Creek sites in Barbour County.*
- MILLARDSVILLE VILLAGE – 26 townhouse lots on approximately 3.15 acres. Completed sketch plat, storm water management design, and street profiles.*
- FAIRFAX FARM Section 2 – 15 single family residential lots on approximately 36.73 acres. Completed development of drainage areas, grading plan, erosion and sediment control plan, layout of lots, and Preliminary Plat design.*
- PIKESIDE MEADOWS Section E – 63 townhouse lots on approximately 17.51 acres. Prepared drawings for Public Service Districts.*
- LITTLE GEORGETOWN ESTATES Sections 1 and 2 – 64 single family residential lots on approximately 127 acres. Completed lot layout, septic layout, design of sediment basin, turning lane, erosion and sediment control, and Preliminary Plat.*
- WEBBER SPRINGS Section 3 – 119 single family residential lots on approximately 32.81 acres. Completed design of turning lane on WV Route 51.*
- BROOKSIDE ESTATES Section 1 – 60 single family residential lots on approximately 101.86 acres. Completed Sketch Plat design along with septic reserve layout and initial grading and profiles.*
- CREEKSIDE MEADOWS – 95 single family residential lots on approximately 101.86 acres. Completed lot layout, Sketch Plat design, water and sewer extensions, and design of storm water management facilities.*
- MULLBERRY KNOLL – 10 townhouse lots on approximately 1.5 acres. Completed Sketch Plat design, water and sewer extension, grading plan, erosion and sediment control plan, and design of storm water management facilities.*
- SHENANDOAH OFFICE PARK – Two commercial buildings totaling 50,000 sf. Sketch Plat design.*
- SPRING HILL Section 6 – 15 single family residential lots on approximately 10 acres. Completed design of storm water management, grading plan, and preparation of drawings for Preliminary Plat submittal.*

- ❑ **MAIDSTONE ON THE POTOMAC** – 108 single family residential lots on approximately 40.5 acres. Completed Sketch Plat design, water and sewer extensions, grading plan, erosion and sediment control plan, drainage plan, design of storm water management facilities, and Preliminary Plat design.
- ❑ **NATIONAL PROPANE** – Bulk Propane Storage Facility and office space on approximately 5.5 acres. Completed Sketch Plat, water and sewer extensions, grading plan, erosion and sediment control plan, drainage plan, design of storm water management facility, and Preliminary Plat design.
- ❑ **BACK CREEK ACRES** – 3 single family residential lots on approximately 6 acres. Completed Preliminary Plat, grading plan, and erosion and sediment control plan.
- ❑ **MARTINSBURG INTERNAL MEDICINE** – Completed Site Plan for city approval of 800 sf office addition.
- ❑ **CHESTNUT HILL ESTATES** – 29 single family residential lots on approximately 66 acres. Completed Sketch Plat design, lot and street layout, grading plan, and profiles.
- ❑ **MVB BANK ADDITION** – Completed Site Plan for approval of 900 sf bank addition.
- ❑ **SPRING HILL Section 7** – 7 single family residential lots on approximately 7 acres. Completed lot layout, water and sewer extensions, grading plan, erosion and sediment control plan, profiles, grading plan, drainage plan, storm water management, and Preliminary Plat design.
- ❑ **WILLIAMSPORT PARK ROAD EXTENSION** – 650 foot road extension in Williamsport, MD. Completed design of road, including grading, drainage, storm water management, profiles, permitting, and specifications.
- ❑ **INWOOD AND BAKER HEIGHTS WASTE WATER TREATMENT PLANTS** – Completed Site Plans for county approval of facility upgrades.
- ❑ **LEISURE LIVING ESTATES Section 4** – 10 single family residential lots on approximately 7 acres. Completed Sketch Plat design, water and sewer extensions, grading plan, profiles, erosion and sediment control plan, drainage plan, storm water management, and Preliminary Plat design.
- ❑ **CHUCK'S PIZZA** – Completed Site Plan for 1,200 sf pizza shop on approximately 1.67 acres. Design included site layout, grading plan, erosion and sediment control plan, drainage and storm water management.
- ❑ **FEDEX SMARTPOST** – Upgrades to existing FedEx SmartPost location, including the addition of a guard shack and extension of gravity sewer system. Proposed work was granted approval with county building permit.
- ❑ **OAK HILL, WV DRAINAGE PROJECT** – Design of storm sewer upgrades for the town of Oak Hill. Project included the addition of a 2' x 6' box culvert under Trump Avenue, construction drawings, and specifications.
- ❑ **TBA OFFICE SITE** – Construction of two new office buildings totaling 6,200 sf on approximately 1.6 acres. Completed Sketch Plat, grading plan, and erosion and sediment control plan.

RICHARD HOVATTER, P.E.
Project Engineer



EXPERIENCE

Richard Hovatter Jr. joined Thrasher Engineering, Inc. in 2011 and serves as Project Manager from TEI's Clarksburg Office. As a graduate of Fairmont State University and previous experience Mr. Hovatter has extensive knowledge of abandoned mine land and emergency situations such as landslides and mine subsidence of abandoned mine land. Mr. Hovatter is responsible for the designs, scheduling, collection and reporting of mine surface, sediment erosion control plans and waterline feasibility studies.

EDUCATION

- ❑ *B.S. Civil Engineering Technology – Fairmont State University, 2002*

CERTIFICATIONS

- ❑ *Registered Professional Engineer (PE), State of West Virginia #018460*
- ❑ *Registered Professional Engineer (PE), State of Pennsylvania #077844*

REPRESENTATIVE PROJECT EXPERIENCE

- ❑ *WVDEP Thomas NE Phase I, II, III- developed group stabilization plan for multiple structures in the Town of Thomas to protect them from mine subsidence damage. Designed grout injection hole layout for structures based on existing utility locations to provide protection. Completed construction drawings, bid quantities, specifications and bid package.*
- ❑ *Ohio DNR Merkel Landslide- Designed emergency reclamation for a landslide that developed from an abandoned surface mine pit. Reclaimed the slip area.*
- ❑ *Ohio DNR Schnegg Landslide- Designed emergency reclamation plan for a landslide that developed from AMD discharge seep. Reclaimed slip area.*
- ❑ *Ohio DNR Riddles Run Landslide- Designed emergency reclamation for a landslide that developed down slope from abandoned deep mine entry. Reclaimed slip area.*
- ❑ *Ohio DNR Chaney Highwall- Designed a reclamation plan for an abandoned surface mine highwall and pit area. Designed a borrow site and reclaimed pit and highwall area.*
- ❑ *DRURY INN- Developed a grout stabilization plan for Drury Inn (St. Louis, MO) to protect proposed structure from possible mine subsidence damage. Designed grout injection hole layout.*
- ❑ *Maryland Bureau of Mines Permit 436 Haulroad Landslide- Designed emergency reclamation plan for a landslide that developed down slope from active surface mine haulroad. Reclaimed slip area.*
- ❑ *Ohio DNR General Clay IM-0455- Site design and reclamation plan for abandoned clay surface mine. Consisted of several highwall and regrade areas. Provided positive surface runoff drainage to two storm water control ponds.*
- ❑ *Ohio DNR General Clay IM-0021- Site design and reclamation plan for abandoned clay surface mine. Consisted of several highwall and regrade areas. Provided positive surface runoff drainage.*
- ❑ *Ohio DNR McCourt Landslide- Designed reclamation plan for a landslide that developed in a previously reclaimed surface mine. Reclaimed slip area. Designed a rock toe key and finger drains to collect subsurface drainage and help stabilize the slip area.*
- ❑ *Ohio DNR Jones Trucking- Site design and reclamation plan for abandoned gravel pit. Regrading required to a safe and stable slope. Provided positive surface runoff drainage to a storm water control pond.*

AARON DENHAM

Partner / Construction Management and Materials

Testing



SUMMARY OF EXPERIENCE

Mr. Denham joined TEI 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.

EDUCATION

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

CERTIFICATIONS

- Fairmont State University Level V Certification – Transportation Engineering Technologist – Engineering Specialization*
- 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*

REPRESENTATIVE PROJECT EXPERIENCE

- Army Corp of Engineers, Tygart Dam*
- Jackson County Airport*
- 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*
- Wheeling Route 2 Bypass*
- Lake Floyd Dam*
- Baker Dam Site 10*
- City of Bridgeport 279 By-Pass*
- Mon-Fayette Expressway*
- WVDOH Meadowbrook Road*
- Fetterman Bridge*

REPRESENTATIVE EXPERIENCE

TEI 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 **Orgas Keith Portals** design project.

ABANDONED MINE LAND PROJECTS

WV DEP ABANDONED MINE LANDS – ANGLIN’S RUN #1 AND ROARING CREEK STREAM RESTORATION PROJECTS

Client: WV DEP
Office of Abandoned Mine Lands and Reclamation
304-926-0485

Anglin’s Run #1 Barbour County

This area includes a total of eight (8) collapsed mine portals with at least 5 of them having discharges ranging from 1 to 10 gpm. Total flows were estimated to be between 25 and 30 gpm. Thrasher Engineering’s preferred scope and preliminary plans for this project include construction of an access road into the site, excavation and wet seal of at least eight (8) deep mine portals and the re-grade and fill of subsidence sinkholes. To carry water safely off site, drainage control channels, conveyance pipe and under drain will be constructed. All areas disturbed by construction will be soil covered, conditioned and re-vegetated.

Roaring Creek Stream Randolph County

This project involves the elimination of subsidence depressions, the closure of open portals and the treatment of AMD. The Roaring Creek Watershed was heavily deep mined and surfaced mined prior to 1977. The project area consists of 3 open and 3 closed portals discharging AMD, AMD seeps along the unnamed tributary and an area of subsidence, which drains surface water into the mine workings. AMD flow from the deep mine portals ranges from 10 gpm to 100 gpm with PH ranging from 3.1 to 5.0. The seeps along the UNT showed an average PH of 3.3. Construct and rehabilitate access roads to the sites. Install wet seals at the portal locations (4 Portals total). Thrasher Engineering’s preliminary plans include re-grading the subsidence area to prevent surface water from entering the mine workings, and installing an emergency spillway on the existing pond which will be designed to handle the additional flow.



**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. .

WV DEP ABANDONED MINE LANDS – RAGLAND (MINGO COUNTY) WATER LINE EXTENSION PROJECT

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***

SITE DEVELOPMENT PROJECTS – SEDIMENT AND EROSION MEASURES

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

TEI 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

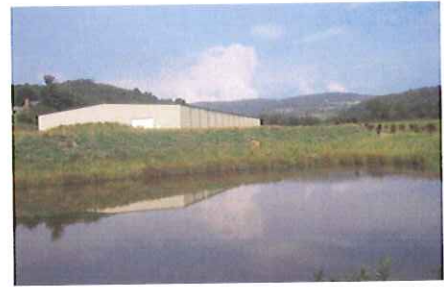
Client: Barbour County
Office for Economic Development
304-456-1225

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

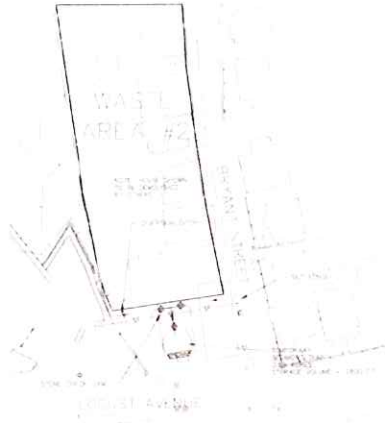
Client: U.S. Department of Veterans Affairs
Peter Fernandez, National Cemetery
Administration
Carter VanDyke Associates
215-345-5053



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 of 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.

PROJECT APPROACH

In order to develop an understanding of the WV DEP's needs for this project, TEI studied the information provided in the RFQ. Based upon our findings, we have developed the following project approach 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.