



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

Solicitation

NUMBER
DEP16030

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
FRANK WHITTAKER 304-558-2316

V E N D O R	RFQ COPY
	TYPE NAME/ADDRESS HERE
	Cardno MM&A
	200 George Street, Suite 6
	Beckley, WV 25801

S H I P T O	ENVIRONMENTAL PROTECTION
	DEPARTMENT OF
	OFFICE OF AML&R
	601 57TH STREET SE
	CHARLESTON, WV 25304 304-926-0499

DATE PRINTED
12/17/2012

BID OPENING DATE:

01/23/2013

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29		
MACARTHUR SUBSIDENCE PHASE 2 DESIGN						
EXPRESSION OF INTEREST						
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 MACARTHUR SUBSIDENCE PHASE 2 PROJECT IN RALEIGH COUNTY, WV, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.						
01/23/13 09:51:20 AM West Virginia Purchasing Division						
***** THIS IS THE END OF RFQ DEP16030 ***** TOTAL:						

SIGNATURE <i>Just D. Outley</i>	TELEPHONE 304-809-0597	DATE 1/22/2013
NAME Director of Engineering	FEIN 540989421	ADDRESS CHANGES TO BE NOTED ABOVE

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

EXPRESSION OF INTEREST MACARTHUR SUBSIDENCE PHASE 2 DEP16030

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SECTION ONE: GENERAL INFORMATION

1. **PURPOSE:** The Acquisition and Contract Administration Section of the Office of West Virginia State Purchasing Division (Purchasing Division) is soliciting Expression(s) of Interest (EOI) for the West Virginia Department of Environmental Protection, Office of Abandoned Mine Lands and Reclamation (WVDEP/AML), from qualified firms (Vendors) to provide architectural/engineering services as defined herein.
2. **PROJECT:** The mission or purpose of the project for which bids are being solicited is to provide design services for the following:

MACARTHUR SUBSIDENCE PHASE 2:

Develop a subsidence control/prevention plan.
Develop plans and specifications for construction project

3. SCHEDULE OF EVENTS:

Release of the EOI.....	12/21/2012
Addendum Issued	TBD
Expressions of Interest Opening Date.....	01/23/2013
Estimated Date for Interviews.....	TBD

**EXPRESSION OF INTEREST
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SECTION TWO: INSTRUCTIONS TO VENDORS SUBMITTING BIDS

Instructions begin on the next page.

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. **REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.
2. **MANDATORY TERMS:** The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.
3. **PREBID MEETING:** The item identified below shall apply to this Solicitation.

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

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

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

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing. Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required

information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

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

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

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

Question Submission Deadline:

Submit Questions to:

Frank Whittaker

2019 Washington Street, East

P.O. Box 50130

Charleston, WV 25305

Fax: 304-558-4115

Email: frank.m.whittaker@wv.gov

5. **VERBAL COMMUNICATION:** Any verbal communication between the Vendor and any State personnel is not binding, including that made at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.
6. **BID SUBMISSION:** All bids must be signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The bid delivery address is:

Department of Administration, Purchasing Division
2019 Washington Street East
P.O. Box 50130,
Charleston, WV 25305-0130

The bid should contain the information listed below on the face of the envelope or the bid may not be considered:

SEALED BID

BUYER: _____
 SOLICITATION NO.: _____
 BID OPENING DATE: _____
 BID OPENING TIME: _____
 FAX NUMBER: _____

In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus convenience copies of each to the Purchasing Division at the address shown above. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: ☐ Technical
 ☐ Cost

7. **BID OPENING:** Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when time stamped by the official Purchasing Division time clock.

Bid Opening Date and Time:

01/23/2013 at 1:30 PM

Bid Opening Location:

Department of Administration, Purchasing Division
 2019 Washington Street East
 P.O. Box 50130,
 Charleston, WV 25305-0130

8. **ADDENDUM ACKNOWLEDGEMENT:** Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.
9. **BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

EXPRESSION OF INTEREST MACARTHUR SUBSIDENCE PHASE 2 DEP16030

SECTION THREE: PROJECT SPECIFICATIONS

1. **Location:** Agency is located at 601 57th Street, SE, Charleston, WV 25304 and the Project is located in Raleigh County, WV.

Directions to Site: From Charleston, take I-64E to Exit 42, Robert C. Byrd Dr./Rt.16S; stay in middle lane; merge into left lane; turn left onto Oakhurst Street.

2. **Background:** Firms are to be licensed Architectural/Engineering Firms (A/E) and should be familiar with, and have a successful track record of design of similar projects. The anticipated contract will be for "full-service" A/E design. Aspects of the design are to include, but not be limited to, Civil, Structural, Geological and Hydrological.

*The successful A/E will be responsible for **Design** of the following:*

Develop a subsidence control/prevention plan.
Develop plans and specifications for construction project.

Preliminary design documents will be due 60 days from the issuance of the Purchase Order.

3. **Qualifications and Experience:** Vendors will provide information regarding its employees, such as staff qualifications and experience in completing similar projects; references; copies of any staff certifications or degrees applicable to this project; proposed staffing plan; descriptions of past projects completed entailing the location of the project, project manager name and contact information, type of project, and what the project goals and objectives where and how they were met.

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

EXPRESSION OF INTEREST MACARTHUR SUBSIDENCE PHASE 2 DEP16030

AML Consultant Qualification Questionnaire (CQQ) must be completed to be eligible (See Attachment "B").

AML and Related Project Experience Matrix (RPEM) must also be completed to be eligible (See Attachment "C").

Electronic copies of the above referenced documents Attachment "B" and Attachment "C" are available online for registered vendors at:
<http://www.state.wv.us/admin/purchase/newbul.htm>

4. Project and Goals: The project goals and objectives are:

Develop drawings and specifications to remediate an abandoned mine land problem area.

5. Oral Presentations (Agency Option): The Agency has the option of requiring oral presentations of all Vendors participating in the EOI process. If this option is exercised, it would be listed in the Schedule of Events (Section 1.3) of this EOI. During oral presentations, Vendors may not alter or add to their submitted proposal, but only clarify information. A description of the materials and information to be presented is provided below:

5.1. Materials and Information Required at Oral Presentation:

"Evaluation and Award Process" will be conducted with the three firms selected as the most qualified by the WVDEP Selection Committee. The Committee will schedule the interviews.

The format for the interviews will be a 15-30 minute PowerPoint presentation consisting, at a minimum, of the following:

- Corporate/personnel experience as it relates to the project or projects
- Proposed project management plan
- Key personnel available for the proposed work
- Proposed subcontractors (mapping, geotechnical, etc.)
- Product quality control
- Project cost control

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SECTION FOUR: VENDOR PROPOSAL, EVALUATION, & AWARD

1. **Economy of Preparation:** EOI's should be prepared simply and economically, providing a straightforward, concise description of firm's abilities to satisfy the requirements and goals and objectives of the EOI. Emphasis should be placed on completeness and clarity of content. The response sections should be labeled for ease of evaluation.

All responses should be submitted in a loose-leaf, three ring binder. Submit one original, one convenience copy and one copy on CD.

2. **BIDS MUST NOT CONTAIN PRICE QUOTATIONS:** The State shall select the best value solution according to §5G-1-3 of the West Virginia State Code. In accordance with the Code requirements, no "price" or "fee" information is requested or permitted in the bid response.
3. **Evaluation and Award Process:** Expressions of Interest for projects estimated to cost \$250,000 or more will be evaluated and awarded in accordance with West Virginia Code §5G-1-3. That Code section requires the following:
 - 3.1. **Required Elements of EOI Response:** The director of purchasing shall encourage such firms engaged in the lawful practice of the profession to submit an expression of interest, which shall include a statement of qualifications, and performance data and may include anticipated concepts and proposed methods of approach to the project.
 - 3.2. **Public Advertisement:** All EOI requests shall be announced by public notice published as a Class II legal advertisement in compliance with the provisions of West Virginia Code §59-3-1 et seq.
 - 3.3. **Selection Committee Evaluation & Negotiation:** A committee comprised of three to five representatives of the agency initiating the request shall:

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- 3.3.1. Evaluate the statements of qualifications and performance data and other material submitted by the interested firms and select three firms which in their opinion are the best qualified to perform the desired service.
- 3.3.2. Conduct interviews with each firm selected and the conduct discussions regarding anticipated concepts and the proposed methods of approach to the assignment.
- 3.3.3. Rank in order of preference no less than three professional firms deemed to be the most highly qualified to provide the services required, and shall commence scope of service and price negotiations with the highest qualified professional firm.
- 3.3.4. Should the agency be unable to negotiate a satisfactory contract with the professional firm considered to be the most qualified, at a fee determined to be fair and reasonable, price negotiations with the firm of second choice shall commence. Failing accord with the second most qualified professional firm, the committee shall undertake price negotiations with the third most qualified professional firm.
- 3.3.5. Should the agency be unable to negotiate a satisfactory contract with any of the selected professional firms, it shall select additional professional firms in order of their competence and qualifications and it shall continue negotiations in accordance with this section until an agreement is reached.

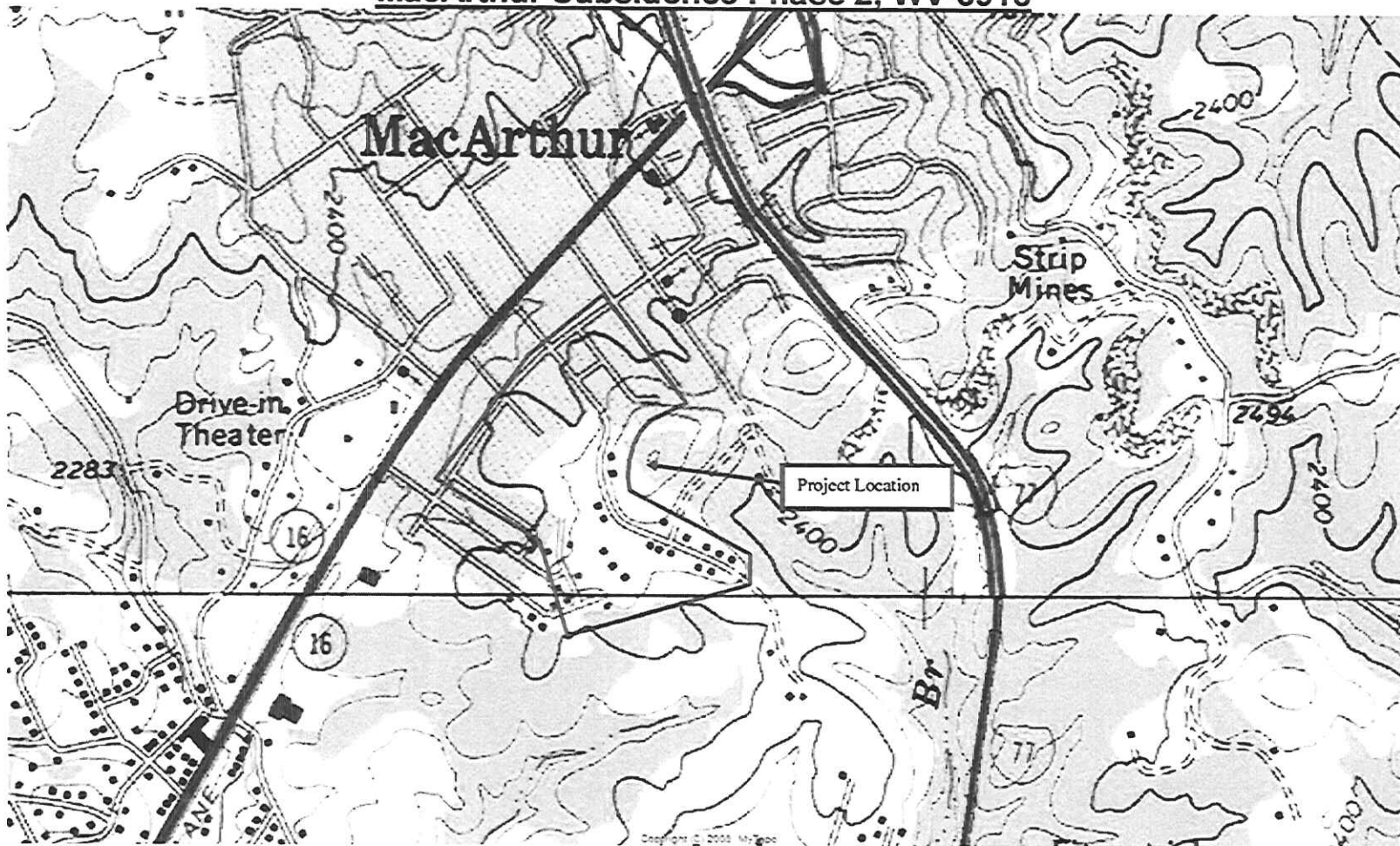
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- 3.4. **Vendor Ranking:** All evaluation criteria is defined in the Procurement Specifications section and based on a 100 point total score.

Points shall be assigned based upon the Vendor's response to the evaluation criteria as follows:

- | | |
|--|-----------|
| A. WV Registered Professional Engineers (Civil or Mining)
In the Primary Office: | 20 points |
| B. Reclamation Engineering design experience of the Primary
Office's WVRPE as it relates to the specific project problem
Areas: | 25 points |
| 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 availability of other support
personnel a required by the particular project): | 20 points |
| D. The Oral Interview (See 5.1 under Section 3 of this EOI): | 35 points |

Project Location Map
MacArthur Subsidence Phase 2; WV-3918

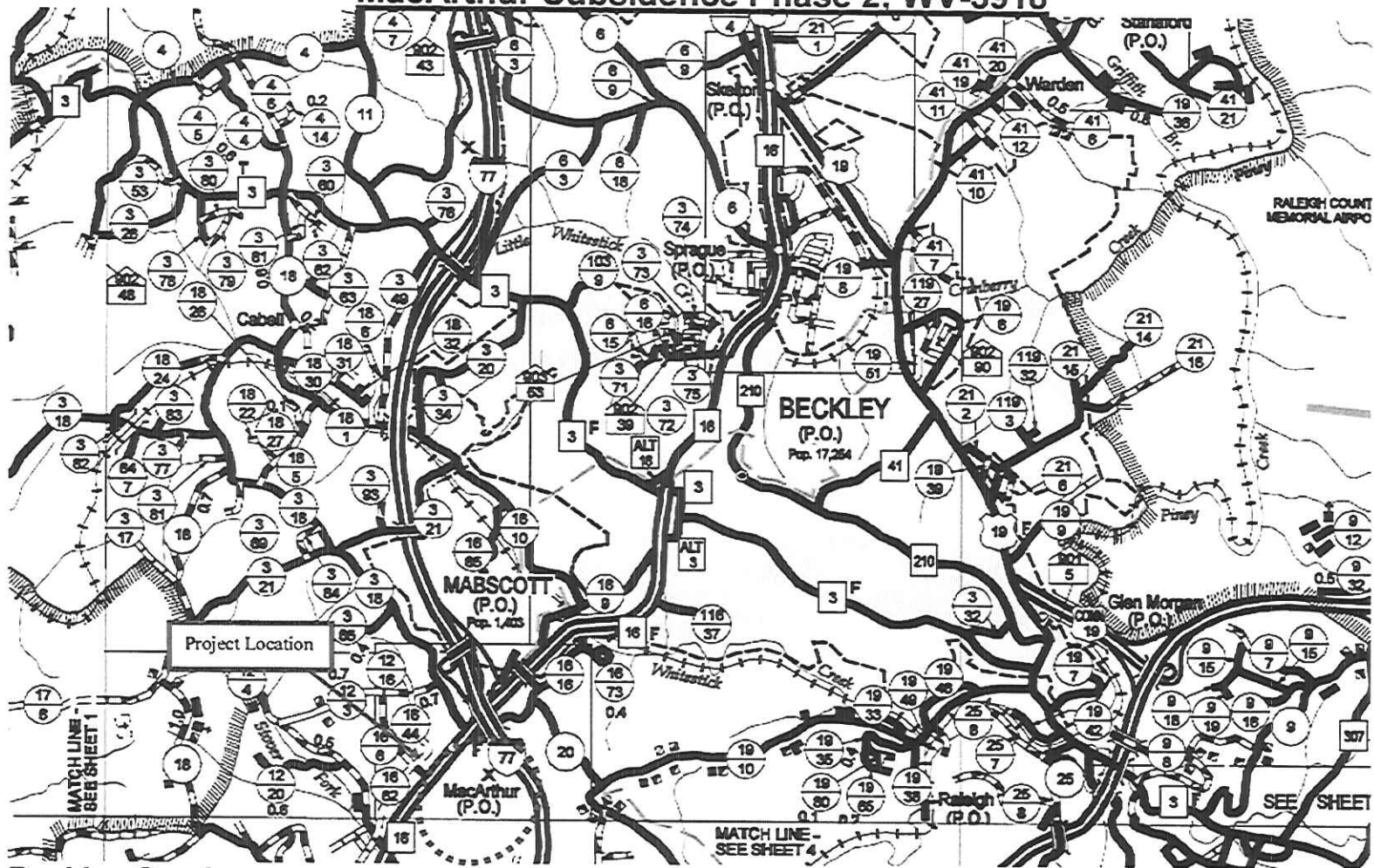


Beckley Quad
Latitude: 37° 45' 15"

Scale: 1 inch = 800 Feet

Raleigh County
Longitude: 81° 12' 58"

Highway Map **MacArthur Subsidence Phase 2: WV-3918**



Beckley Quad
 Latitude: $37^{\circ} 45' 15''$

Raleigh County
 Longitude: $81^{\circ} 12' 58''$

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

AML CONSULTANT QUALIFICATION QUESTIONNAIRE

Attachment "B"

PROJECT NAME		DATE (DAY, MONTH, YEAR)		FEIN																																					
1. FIRM NAME		2. HOME OFFICE BUSINESS ADDRESS		3. FORMER FIRM NAME																																					
4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YEAR)	6. TYPE OWNERSHIP Individual Corporation Partnership Joint-Venture		6a. WV REGISTERED DBE (Disadvantaged Business Enterprise) YES NO																																					
7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE																																									
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM			8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS																																						
9. PERSONNEL BY DISCIPLINE																																									
<table border="0"> <tr> <td>— ADMINISTRATIVE</td> <td>— ECOLOGISTS</td> <td>— LANDSCAPE ARCHITECTS</td> <td>— STRUCTURAL ENGINEERS</td> </tr> <tr> <td>— ARCHITECTS</td> <td>— ECONOMISTS</td> <td>— MECHANICAL ENGINEERS</td> <td>— SURVEYORS</td> </tr> <tr> <td>— BIOLOGIST</td> <td>— ELECTRICAL ENGINEERS</td> <td>— MINING ENGINEERS</td> <td>— TRAFFIC ENGINEERS</td> </tr> <tr> <td>— CADD OPERATORS</td> <td>— ENVIRONMENTALISTS</td> <td>— PHOTOGRAMMETRISTS</td> <td>— OTHER</td> </tr> <tr> <td>— CHEMICAL ENGINEERS</td> <td>— ESTIMATORS</td> <td>— PLANNERS: URBAN/REGIONAL</td> <td></td> </tr> <tr> <td>— CIVIL ENGINEERS</td> <td>— GEOLOGISTS</td> <td>— SANITARY ENGINEERS</td> <td></td> </tr> <tr> <td>— CONSTRUCTION INSPECTORS</td> <td>— HISTORIANS</td> <td>— SOILS ENGINEERS</td> <td></td> </tr> <tr> <td>— DESIGNERS</td> <td>— HYDROLOGISTS</td> <td>— SPECIFICATION WRITERS</td> <td>— TOTAL PERSONNEL</td> </tr> <tr> <td>— DRAFTSMEN</td> <td></td> <td></td> <td></td> </tr> </table>						— ADMINISTRATIVE	— ECOLOGISTS	— LANDSCAPE ARCHITECTS	— STRUCTURAL ENGINEERS	— ARCHITECTS	— ECONOMISTS	— MECHANICAL ENGINEERS	— SURVEYORS	— BIOLOGIST	— ELECTRICAL ENGINEERS	— MINING ENGINEERS	— TRAFFIC ENGINEERS	— CADD OPERATORS	— ENVIRONMENTALISTS	— PHOTOGRAMMETRISTS	— OTHER	— CHEMICAL ENGINEERS	— ESTIMATORS	— PLANNERS: URBAN/REGIONAL		— CIVIL ENGINEERS	— GEOLOGISTS	— SANITARY ENGINEERS		— CONSTRUCTION INSPECTORS	— HISTORIANS	— SOILS ENGINEERS		— DESIGNERS	— HYDROLOGISTS	— SPECIFICATION WRITERS	— TOTAL PERSONNEL	— DRAFTSMEN			
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— DESIGNERS	— HYDROLOGISTS	— SPECIFICATION WRITERS	— TOTAL PERSONNEL																																						
— DRAFTSMEN																																									
TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: _____ *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? <input type="checkbox"/> YES <input type="checkbox"/> NO																																									

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

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
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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's personnel experienced in Abandoned Mine Lands Remediation/Mine Reclamation Engineering?

YES Description and Number of Projects: _____

NO

B. Is your firm experienced in Soil Analysis?

YES Description and Number of Projects: _____

NO

C. Is your firm experienced in hydrology and hydraulics?

YES Description and Number of Projects: _____

NO

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

YES Description and Number of Projects: _____

NO

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

YES Description and Number of Projects: _____

NO

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

YES Description and Number of Projects: _____

NO

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Brief Explanation of Responsibilities			
EDUCATION (Degree, Year, Specialization)			
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		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Brief Explanation of Responsibilities			
EDUCATION (Degree, Year, Specialization)			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	

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

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

Brief Explanation of Responsibilities

EDUCATION (Degree, Year, Specialization)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)

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

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

Brief Explanation of Responsibilities

EDUCATION (Degree, Year, Specialization)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)

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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
TOTAL NUMBER OF PROJECTS:			TOTAL ESTIMATED CONSTRUCTION COSTS: \$	

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY

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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)

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

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

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

20. The foregoing is a statement of facts.

Signature: _____

Title: _____

Date: _____

Printed Name: _____

[illegible]

Use this area to provide specific sections or pages if needed for reference.

Attachment "C"

**EXPRESSION OF INTEREST
MACARTHUR SUBSIDENCE PHASE 2
DEP16030**

SECTION FIVE: TERMS AND CONDITIONS

Terms and conditions begin on the next page.

GENERAL TERMS AND CONDITIONS:

1. **CONTRACTUAL AGREEMENT:** Issuance of a Purchase Order signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.
2. **DEFINITIONS:** As used in this Solicitation / Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation / Contract.
 - 2.1 "Agency" or "Agencies" means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.
 - 2.2 "Contract" means the binding agreement that is entered into between the State and the Vendor to provide the goods and services requested in the Solicitation.
 - 2.3 "Director" means the Director of the West Virginia Department of Administration, Purchasing Division.
 - 2.4 "Purchasing Division" means the West Virginia Department of Administration, Purchasing Division.
 - 2.5 "Purchase Order" means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the successful bidder and Contract holder.
 - 2.6 "Solicitation" means the official solicitation published by the Purchasing Division and identified by number on the first page thereof.
 - 2.7 "State" means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.
 - 2.8 "Vendor" or "Vendors" means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

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

| | Term Contract

Initial Contract Term: This Contract becomes effective on

 and extends for a period of year(s).

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal must be submitted to the Purchasing Division Director thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Renewal of this Contract is limited to successive one (1) year periods. Automatic renewal of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases. Attorney General approval may be required for vendor terms and conditions.

Reasonable Time Extension: At the sole discretion of the Purchasing Division Director, and with approval from the Attorney General's office (Attorney General approval is as to form only), this Contract may be extended for a reasonable time after the initial Contract term or after any renewal term as may be necessary to obtain a new contract or renew this Contract. Any reasonable time extension shall not exceed twelve (12) months. Vendor may avoid a reasonable time extension by providing the Purchasing Division Director with written notice of Vendor's desire to terminate this Contract 30 days prior to the expiration of the then current term. During any reasonable time extension period, the Vendor may terminate this Contract for any reason upon giving the Purchasing Division Director 30 days written notice. Automatic extension of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases, but Attorney General approval may be required.

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

- | ✓ | One Time Purchase:** The term of this Contract shall run for one year from the date the Purchase Order is issued or from the date the Purchase Order is issued until all of the goods contracted for have been delivered, whichever is shorter.

- | | Other:** See attached.

4. **NOTICE TO PROCEED:** Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Purchase Order will be considered notice to proceed
5. **QUANTITIES:** The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.
 - | | **Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.
 - | | **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.
 - | ☒ | **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.
 - | | **One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.
6. **PRICING:** The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification.
7. **EMERGENCY PURCHASES:** The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.
8. **REQUIRED DOCUMENTS:** All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.
 - | | **BID BOND:** All Vendors shall furnish a bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

- ☐ **PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of . The performance bond must be issued and received by the Purchasing Division prior to Contract award. On construction contracts, the performance bond must be 100% of the Contract value.

- ☐ **LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be issued and delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable.

- ☐ **MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

- ☐ **WORKERS' COMPENSATION INSURANCE:** The apparent successful Vendor shall have appropriate workers' compensation insurance and shall provide proof thereof upon request.

- ☐ **INSURANCE:** The apparent successful Vendor shall furnish proof of the following insurance prior to Contract award:

☒ **Commercial General Liability Insurance:**
 \$ 1,000,000.00 or more.

☐ **Builders Risk Insurance:** builders risk – all risk insurance in an amount equal to 100% of the amount of the Contract.

☒ \$2,000,000.00 Aggregate

☒ \$1,000,000.00 Automobile Insurance

☒ \$1,000,000.00 Professional Liability Insurance

☐

☐

The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed above.

- LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section entitled Licensing, of the General Terms and Conditions, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

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

- 9. LITIGATION BOND:** The Director reserves the right to require any Vendor that files a protest of an award to submit a litigation bond in the amount equal to one percent of the lowest bid submitted or \$5,000, whichever is greater. The entire amount of the bond shall be forfeited if the hearing officer determines that the protest was filed for frivolous or improper purpose, including but not limited to, the purpose of harassing, causing unnecessary delay, or needless expense for the Agency. All litigation bonds shall be made payable to the Purchasing Division. In lieu of a bond, the protester may submit a cashier's check or certified check payable to the Purchasing Division. Cashier's or certified checks will be deposited with and held by the State Treasurer's office. If it is determined that the protest has not been filed for frivolous or improper purpose, the bond or deposit shall be returned in its entirety.
- 10. ALTERNATES:** Any model, brand, or specification listed herein establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

- 11. EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or

other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

12. LIQUIDATED DAMAGES: Vendor shall pay liquidated damages in the amount

	for	

This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy.

13. ACCEPTANCE/REJECTION: The State may accept or reject any bid in whole, or in part. Vendor's signature on its bid signifies acceptance of the terms and conditions contained in the Solicitation and Vendor agrees to be bound by the terms of the Contract, as reflected in the Purchase Order, upon receipt.

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

15. COMMUNICATION LIMITATIONS: In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

16. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

17. PAYMENT: Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears, to the Agency at the address on the face of the purchase order labeled "Invoice To."

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

19. DELIVERY: All quotations are considered freight on board destination ("F.O.B. destination") unless alternate shipping terms are clearly identified in the bid. Vendor's listing of shipping terms that contradict the shipping terms expressly required by this Solicitation may result in bid disqualification.

20. INTEREST: Interest attributable to late payment will only be permitted if authorized by the West Virginia Code. Presently, there is no provision in the law for interest on late payments.

21. PREFERENCE: Vendor Preference may only be granted upon written request and only in accordance with the West Virginia Code § 5A-3-37 and the West Virginia Code of State Rules. A Resident Vendor Certification form has been attached hereto to allow Vendor to apply for the preference. Vendor's

failure to submit the Resident Vendor Certification form with its bid will result in denial of Vendor Preference. Vendor Preference does not apply to construction projects.

- 22. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid on or after July 1, 2012, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to submission of its bid to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.
- 23. TAXES:** The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
- 24. CANCELLATION:** The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-7.16.2.
- 25. WAIVER OF MINOR IRREGULARITIES:** The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.
- 26. TIME:** Time is of the essence with regard to all matters of time and performance in this Contract.
- 27. APPLICABLE LAW:** This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.
- 28. COMPLIANCE:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendors acknowledge that they have reviewed, understand, and will comply with all applicable law.
- 29. PREVAILING WAGE:** On any contract for the construction of a public improvement, Vendor and any subcontractors utilized by Vendor shall pay a rate or rates of wages which shall not be less than the fair minimum rate or rates of wages (prevailing wage), as established by the West Virginia Division of Labor under West Virginia Code §§ 21-5A-1 et seq. and available at <http://www.sos.wv.gov/administrative-law/wagerates/Pages/default.aspx>. Vendor shall be responsible for ensuring compliance with prevailing wage requirements and determining when prevailing wage

requirements are applicable. The required contract provisions contained in West Virginia Code of State Rules § 42-7-3 are specifically incorporated herein by reference.

30. **ARBITRATION:** Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.
31. **MODIFICATIONS:** This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary, no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). **No Change shall be implemented by the Vendor until such time as the Vendor receives an approved written change order from the Purchasing Division.**
32. **WAIVER:** The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.
33. **SUBSEQUENT FORMS:** The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.
34. **ASSIGNMENT:** Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments. Notwithstanding the foregoing, Purchasing Division approval may or may not be required on certain agency delegated or exempt purchases.
35. **WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.
36. **STATE EMPLOYEES:** State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.
37. **BANKRUPTCY:** In the event the Vendor files for bankruptcy protection, the State of West Virginia may deem this Contract null and void, and terminate this Contract without notice.

- 38. HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at <http://www.state.wv.us/admin/purchase/vrc/hipaa.html> and is hereby made part of the agreement provided that the Agency meets the definition of a Covered entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the Vendor.
- 39. CONFIDENTIALITY:** The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/default.html>.
- 40. DISCLOSURE:** Vendor's response to the Solicitation and the resulting Contract are considered public documents and will be disclosed to the public in accordance with the laws, rules, and policies governing the West Virginia Purchasing Division. Those laws include, but are not limited to, the Freedom of Information Act found in West Virginia Code § 29B-1-1 et seq.

If a Vendor considers any part of its bid to be exempt from public disclosure, Vendor must so indicate by specifically identifying the exempt information, identifying the exemption that applies, providing a detailed justification for the exemption, segregating the exempt information from the general bid information, and submitting the exempt information as part of its bid but in a segregated and clearly identifiable format. Failure to comply with the foregoing requirements will result in public disclosure of the Vendor's bid without further notice. A Vendor's act of marking all or nearly all of its bid as exempt is not sufficient to avoid disclosure and WILL NOT BE HONORED. Vendor's act of marking a bid or any part thereof as "confidential" or "proprietary" is not sufficient to avoid disclosure and WILL NOT BE HONORED. In addition, a legend or other statement indicating that all or substantially all of the bid is exempt from disclosure is not sufficient to avoid disclosure and WILL NOT BE HONORED. Vendor will be required to defend any claimed exemption for nondisclosure in the event of an administrative or judicial challenge to the State's nondisclosure. Vendor must indemnify the State for any costs incurred related to any exemptions claimed by Vendor. Any questions regarding the applicability of the various public records laws should be addressed to your own legal counsel prior to bid submission.

- 41. LICENSING:** In accordance with West Virginia Code of State Rules §148-1-6.1.7, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

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

43. VENDOR CERTIFICATIONS: By signing its bid or entering into this Contract, Vendor certifies (1) that its bid was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid for the same material, supplies, equipment or services; (2) that its bid is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this RFQ in its entirety; understands the requirements, terms and conditions, and other information contained herein. Vendor's signature on its bid also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency.

The individual signing this bid on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

44. PURCHASING CARD ACCEPTANCE: The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract unless the box below is checked.

☐ Vendor is not required to accept the State of West Virginia's Purchasing Card as payment for all goods and services.

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

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

- 46. INDEMNIFICATION:** The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.
- 47. PURCHASING AFFIDAVIT:** In accordance with West Virginia Code § 5A-3-10a, all Vendors are required to sign, notarize, and submit the Purchasing Affidavit stating that neither the Vendor nor a related party owe a debt to the State in excess of \$1,000. The affidavit must be submitted prior to award, but should be submitted with the Vendor's bid. A copy of the Purchasing Affidavit is included herewith.
- 48. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE:** This Contract may be utilized by and extends to other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"). This Contract shall be extended to the aforementioned Other Government Entities on the same prices, terms, and conditions as those offered and agreed to in this Contract. If the Vendor does not wish to extend the prices, terms, and conditions of its bid and subsequent contract to the Other Government Entities, the Vendor must clearly indicate such refusal in its bid. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.
- 49. CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire any interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.
- 50. REPORTS:** Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:
- ☐ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

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

51. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision.

The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

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

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open hearth, basic oxygen, electric furnace, Bessemer or other steel making process.

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

- a. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total

contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or

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

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

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products.

This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

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

ADDITIONAL TERMS AND CONDITIONS (Architectural and Engineering Contracts Only)

1. **PLAN AND DRAWING DISTRIBUTION:** All plans and drawings must be completed and available for distribution at least five business days prior to a scheduled pre-bid meeting for the construction or other work related to the plans and drawings.
2. **PROJECT ADDENDA REQUIREMENTS:** The Architect/Engineer and/or Agency shall be required to abide by the following schedule in issuing construction project addenda:
 - a. The Architect/Engineer shall prepare any addendum materials for which it is responsible, and a list of all vendors that have obtained drawings and specifications for the project. The Architect/Engineer shall then send a copy of the addendum materials and the list of vendors to the State Agency for which the contract is issued to allow the Agency to make any necessary modifications. The addendum and list shall then be forwarded to the Purchasing Division buyer by the Agency. The Purchasing Division buyer shall send the addendum to all interested vendors and, if necessary, extend the bid opening date. Any addendum should be received by the Purchasing Division at least fourteen (14) days prior to the bid opening date.
3. **PRE-BID MEETING RESPONSIBILITIES:** The Architect/Engineer shall be available to attend any pre-bid meeting for the construction or other work resulting from the plans, drawings, or specifications prepared by the Architect/Engineer.
4. **AIA DOCUMENTS:** Contracts for architectural and engineering services will be governed by the AIA document B101-2007, as amended by the Supplementary Conditions for the State of West Virginia, in addition to the terms and conditions contained herein when procured under Chapter 5G of the West Virginia Code.
5. **GREEN BUILDINGS MINIMUM ENERGY STANDARDS:** In accordance with West Virginia Code § 22-29-4, all new building construction projects of public agencies that have not entered the schematic design phase prior to July 1, 2012, or any building construction project receiving state grant funds and appropriations, including public schools, that have not entered the schematic design phase prior to July 1, 2012, shall be designed and constructed complying with the ICC International Energy Conservation Code, adopted by the State Fire Commission, and the ANSI/ASHRAE/IESNA Standard 90.1-2007: *Provided*, That if any construction project has a commitment of federal funds to pay for a portion of such project, this provision shall only apply to the extent such standards are consistent with the federal standards.

CERTIFICATION AND SIGNATURE PAGE

By signing below, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Cardno MM&A

(Company)

(Authorized Signature)

Justin Douthat, Director of Engineering Services

(Representative Name, Title)

1-304-808-0597

(Phone Number)

1-859-475-0141

(Fax Number)

1-22-2013

(Date)

ADDENDUM ACKNOWLEDGEMENT FORM**SOLICITATION NO.:** DEP16030

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

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

Addendum Numbers Received:

(Check the box next to each addendum received)

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

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

 Company

 Authorized Signature

 Date

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

January 22, 2013

Mr. Frank Whittaker
State of West Virginia
Department of Environmental Protection
Office of AML&R
601 57th Street
Charleston, West Virginia 25304

Cardno MM&A

534 Industrial Park Road
Bluefield, VA 24605
USA

Phone +1 276 322 5467
Fax +1 276 322 5460
www.cardno.com

www.cardnomma.com

Subject: Solicitation Number DEP16030
McArthur Subsidence Phase 2

Dear Mr. Whittaker:

Cardno MM&A is a full service Civil, Environmental and Mining Engineering firm that is highly qualified to perform the tasks requested for the Abandoned Mine Land and Reclamation (AML&R) design project referenced above. Cardno MM&A has civil and mining engineers and supporting staff strategically located in Beckley and Charleston, West Virginia, Bluefield, Virginia and Lexington, Kentucky.

In July 2012, **Marshall Miller & Associates, Inc.** d/b/a Cardno MM&A merged with **Cardno Limited (Cardno)** an international Civil and Environmental Engineering design firm. As a result of this merger, Cardno MM&A has expanded its capabilities to perform the design work.

Cardno is a professional infrastructure and environmental services company, with specialist expertise in the development and improvement of physical and social infrastructure for communities around the world. Cardno's team includes leading professionals who plan, design, manage and deliver sustainable projects and community programs.

While Cardno MM&A has not been involved in any recent AML projects, there are several on-going or completed subsidence and reclamation-related projects. In addition, Cardno MM&A is very active in permitting for West Virginia coal mines.

In our primary office in Beckley, West Virginia, Cardno MM&A has both mining and civil engineers capable of performing the proposed work complete with a supporting staff of biologists, engineering technicians, draftsmen and clerical personnel. Curriculum Vitae of key staff are included in this submittal.

Cardno MM&A has the software to perform the analysis and design for the reclamation of the subsided areas.

Our staff from our Bluefield, Virginia, office will provide surveying, as needed, for the project. Cardno MM&A has both Total Stations and Global Positioning Systems (GPS) equipment to locate the features on the ground at the site.

We have staff in our Charleston, West Virginia office that can provide technical support.

Cardno MM&A has prepared subsidence prevention/control plans for underground coal mining in

West Virginia and other states. Cardno MM&A has also assessed damages to property as it relates to subsidence.

An example of a reclamation-related project includes a design of an excess spoil disposal plan to reclaim a forfeited preparation plant, refuse disposal area and a surface mining permit. Approximately 1.3 million cubic yards (*mcy*) of excess material was generated from a proposed surface mine. The operation was located in Greenbrier County, West Virginia, near the town of Anjean. Cardno MM&A designed associated drainage structures, slope stability, refuse removal, acid-mine drainage elimination and transportation plans to reclaim the forfeited site. The post-mining land use was designed to be a recreational area.

Cardno ATC, a sister company to Cardno MM&A, will provide geotechnical expertise related to the project. Cardno ATC has provided remedial design services for several Kentucky AML sites. See the attached sample of projects, Standard Forms 330 and a Curriculum Vitae for a Principle at Cardno ATC.

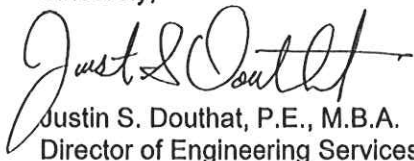
Cardno MM&A has been preparing permits for the coal mining industry since 2002. Included with the permitting process is mine reclamation design and subsidence prevention and control. Also permitting of coal mines includes stormwater management services including hydrologic analysis, flood studies, sediment and runoff retentions, pond design and storm drainage system design. Cardno MM&A has also processed National Pollution Discharge Elimination System (*NPDES*) permits and provided permitting support for wetland and stream delineation for the United States Corp of Engineer 401 permits.

The following brochures are attached for your review:

- > Cardno MM&A Statement of Qualifications
- > Civil Engineering
- > Mining Engineering

Cardno MM&A appreciates the opportunity to submit our qualifications to perform the services requested in the *Solicitation Number DEP16030*.

Sincerely,



Justin S. Douthat, P.E., M.B.A.
Director of Engineering Services
for Cardno MM&A

Direct Line +1 304 809 0597

Email: Justin.Douthat@cardno.com

Initials: JD/cfn

Enc: AML Consultant Qualification Questionnaire (CQQ)
AML and Related Projects Experience Matrix (RPEM)

cc: J. Almond

File: DEP16030 Final Cover Letter McArthur Subsidence 1-22-2012.docx
Project # PRP4540

WEST VIRGINIA DEPARTMENT ENVIRONMENTAL PROTECTION

AML CONSULTANT QUALIFICATION QUESTIONNAIRE

Attachment "B"

PROJECT NAME: McArthur Subsidence Phase 2		DATE (DAY, MONTH, YEAR): 22-01-2013		FEIN: 540989421																																					
1. FIRM NAME: Cardno MM&A		2. HOME OFFICE BUSINESS ADDRESS 534 Industrial Park Road, Bluefield, VA 24605		3. FORMER FIRM NAME: Marshall Miller & Associates, Inc.																																					
4. HOME OFFICE TELEPHONE: 276-322-5467	5. ESTABLISHED (YEAR): 1976	6. TYPE OWNERSHIP Individual Corporation X Partnership Joint-Venture		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 200 George Street, Suite 6, Beckley, WV 25801/304-255-8937/Jeffrey A. Almond/13																																									
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM: Scott Keim, President; Ron Mullenex, Sr. VP; Joe Vance, Sr. VP;			8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS: Peter Lawson, Executive Vice President, 304-255-8937; John Feddock, Sr. VP, 859-263-2855; Hans Naumann, Sr. VP, 859-263-2855																																						
9. PERSONNEL BY DISCIPLINE																																									
<table><tr><td>5 ADMINISTRATIVE</td><td>— ECOLOGISTS</td><td>— LANDSCAPE ARCHITECTS</td><td>1 STRUCTURAL ENGINEERS</td></tr><tr><td>— ARCHITECTS</td><td>— ECONOMISTS</td><td>— MECHANICAL ENGINEERS</td><td>6 SURVEYORS</td></tr><tr><td>3 BIOLOGISTS</td><td>— ELECTRICAL ENGINEERS</td><td>16 MINING ENGINEERS</td><td>— TRAFFIC ENGINEERS</td></tr><tr><td>11 CADD OPERATORS</td><td>— ENVIRONMENTALISTS</td><td>— PHOTOGRAMMETRISTS</td><td>— OTHER</td></tr><tr><td>— CHEMICAL ENGINEERS</td><td>— ESTIMATORS</td><td>— PLANNERS: URBAN/REGIONAL</td><td></td></tr><tr><td>7 CIVIL ENGINEERS</td><td>26 GEOLOGISTS</td><td>2 SANITARY ENGINEERS</td><td></td></tr><tr><td>— CONSTRUCTION INSPECTORS</td><td>— HISTORIANS</td><td>— SOILS ENGINEERS</td><td></td></tr><tr><td>— DESIGNERS</td><td>6 HYDROLOGISTS</td><td>— SPECIFICATION</td><td>— 168 TOTAL PERSONNEL</td></tr><tr><td>— DRAFTSMEN</td><td></td><td>WRITERS</td><td></td></tr></table>						5 ADMINISTRATIVE	— ECOLOGISTS	— LANDSCAPE ARCHITECTS	1 STRUCTURAL ENGINEERS	— ARCHITECTS	— ECONOMISTS	— MECHANICAL ENGINEERS	6 SURVEYORS	3 BIOLOGISTS	— ELECTRICAL ENGINEERS	16 MINING ENGINEERS	— TRAFFIC ENGINEERS	11 CADD OPERATORS	— ENVIRONMENTALISTS	— PHOTOGRAMMETRISTS	— OTHER	— CHEMICAL ENGINEERS	— ESTIMATORS	— PLANNERS: URBAN/REGIONAL		7 CIVIL ENGINEERS	26 GEOLOGISTS	2 SANITARY ENGINEERS		— CONSTRUCTION INSPECTORS	— HISTORIANS	— SOILS ENGINEERS		— DESIGNERS	6 HYDROLOGISTS	— SPECIFICATION	— 168 TOTAL PERSONNEL	— DRAFTSMEN		WRITERS	
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— DESIGNERS	6 HYDROLOGISTS	— SPECIFICATION	— 168 TOTAL PERSONNEL																																						
— DRAFTSMEN		WRITERS																																							
TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: <u>5</u>																																									
*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? x YES <input type="checkbox"/> NO																																									

11. ☐ SIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO ☐ USED. Attach "AML Consultant Qualification Questionnaire". Sub-Consultant is a sister company to ☐ Ordno MM&A, see attached Standard Form 330.

[illegible]

3. Are your firm's personnel experienced in Soil Analysis?

YES x Description and Number of Projects: More than 100 Mine Permitting, landslide investigations, slope stability analysis, soil compaction, soil permeability, soil consolidation, soil classification

NO

C. Are your firm's personnel experienced in hydrology and hydraulics?

YES x Description and Number of Projects: More than 100 Mine permitting, pond sizing, culvert design, pipe sizing, stormwater routing,

NO

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

YES Description and Number of Projects:

NO x

E. Are your firm's personnel experienced in domestic waterline design? (Include any experience in evaluation of aquifer degradation as a result of mining.)

YES Description and Number of Projects: More than 20 Evaluate groundwater wells for degradation due to mining

NO

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

NAME & TITLE (Last, First, Middle Int.) Winters, Mary B.	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE: 0	YEARS OF AML RELATED DESIGN EXPERIENCE: 0	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Brief Explanation of Responsibilities Coordinate mine design for surface and underground mineral properties, reclamation evaluation and costing and other mining engineering activities.			
EDUCATION (Degree, Year, Specialization) Bachelor of Science, 2001, Mining Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS Women's Mining Coalition West Virginia Coal Association		REGISTRATION (Type, Year, State) Professional Engineer, 2011, Virginia	

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.) McCombs, Paul E.	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE: 0	YEARS OF AML RELATED DESIGN EXPERIENCE: 0	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Brief Explanation of Responsibilities Coordinated and performed consulting engineering services including all aspects of environmental permitting, reclamation projects, hydrology studies, subsidence reviews, refuse impoundments and special projects. Insured that all required permits for both surface and underground mines were obtained from state and federal agencies. Designed, planned and coordinated installation and maintenance of surface structures including refuse disposal areas, roads, water and sewage system, and material handling system.			
EDUCATION (Degree, Year, Specialization) Master of Science, 1988, Engineering Management Bachelor of Science, 1976, Civil Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) Professional Engineer, 1980 , West Virginia	

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Brief Explanation of Responsibilities			
EDUCATION (Degree, Year, Specialization)			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Brief Explanation of Responsibilities			
EDUCATION (Degree, Year, Specialization)			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	

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

AutoCAD - Drafting

Carlson Mining (formerly SurvCADD) - Civil and Mining Design Software

SedCad - Hydrology Analysis

REAME - Slope Stability Analysis

SDPS - Surface Deformation Prediction System

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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
AmericanMountaineer Energy Mine and Refuse Complex	AmericanMountaineer Energy, Inc 46226 National Rd St. Clairsville, OH 43950	Cardno MMA provided design, engineering and permitting services to help obtain the required permits. Our team of mining engineers, biologists, geologists and support staff managed the project from the gathering of baseline environmental data through to final issuance of the permits.	\$400 million	85%

Leer Mine Complex	ACI Tygart Valley 2708 Cranberry Square Morgantown, WV 26508	ACI Tygart Valley planned to develop a longwall mining operation in an environmentally- sensitive area both adjacent to a state park and with potential hydrologic sensitivity. Cardno MMA integrated a variety of services to help our client develop the mine including a thorough investigation of geological and hydrogeological conditions, and design, engineering and permitting services to obtain all state and federal environmental permits. We developed mitigative approaches to prevent or minimize hydrologic impacts and provided technical and expert witness support throughout appeals actions, through to final approval. We managed the permitting from gathering environmental and baseline water data through final issuance of permits. Cardno MMA also prepared construction bid documents and drawings for the project	\$350 Million	95% completed.
Joes Creek Surface Mine	Coyote Coal Company, LLC, 500 Lee Street, Suite 900, Charleston, WV 25301	Cardno MMA provided design, engineering and permitting services to obtain Article 3 permit from the WVDEP for a surface dragline mining facility.	\$30 million	100% complete.

Moccasin North Surface Mine	Catenary Coal Company, LLC, 100 Toms Fork Road, Eskdale, WV 25075	Cardno MMA designed and obtained Article 3 and Article 11 NPDES permits from the WVDEP for a surface area mine adjacent to an existing impoundment.	\$5 million	100% complete.
Toney Fork West Surface Mine	Cliffs Logan County Coal, LLC, 100 Market Street, Suite A, Man, WV 25635	Cardno MMA designed and obtained Article 3 and Article 11 NPDES permits from the WVDEP for a surface area mine.	\$10 million	100% complete.
14 Mile Airshaft	Rockspring Development, Inc., P.O. Box 390, Right Fork of Camp Creek, East Lynn, WV 25512	Cardno MM&A designed and permitted a ventilation/portal shaft, mine bathhouse, and parking area for an existing underground mine.	\$50 million	100% complete.
TOTAL NUMBER OF PROJECTS: 6			TOTAL ESTIMATED CONSTRUCTION COSTS: \$845 million	

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS

[illegible]

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

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

19. Use this space to provide any additional information or description of resources supporting your firm's qualifications to perform work for the West Virginia Abandoned Mine Lands Program.
Please See attached Statement of Qualifications for Cardno MM&A.

20. The foregoing is a statement of facts.

Signature:  Title: Director of Engineering

Printed Name: Justin S. Douhat

Date: January 22, 2013



Where Experience Matters

Energy

Environmental

Engineering

Virginia

West Virginia

Kentucky

Tennessee

Kansas

Louisiana

North Carolina



Where Experience Matters

Cardno MM&A, an international consulting firm headquartered in Bluefield, Virginia, U.S.A., offers services in the energy, environmental and engineering sectors worldwide, as well as to financial, insurance, government and various private and public sector companies. Over a 36-year history, Cardno MM&A has evolved into a leader in the mineral resource, environmental, and carbon management industries. The company's success is based on an understanding of client needs and a commitment to applying and developing advanced engineering and scientific solutions through our talented and experienced staff of geologists; hydrologists; earth scientists; and mining, petroleum, environmental, and civil engineers and other professionals.

As a leading consulting firm in the United States working in the coal and oil & gas industries, our energy-related client base consists of over 250 companies. Cardno MM&A provides advisory and technical services on project feasibility, acquisition due diligence, mineral reserve and resource reporting, and operations assessment, among other services. In the early 1990s Cardno MM&A added environmental services to provide diversification and to insulate the company from the cyclic nature of the energy business. Professional services include environmental risk assessment, remediation, environmental site assessments, environmental impact studies, hazardous waste evaluation, compliance monitoring and reporting, permitting and emergency response. Cardno MM&A offers these services to the energy and transportation industries, federal and state government agencies, financial and insurance companies, and local industrial markets proximal to our regional office locations. Our environmental client base consists of over 500 companies.

In 2005 we combined the experience and technical expertise of our energy and environmental staff to focus on emerging carbon capture and storage projects. Cardno MM&A is an active participant in multiple projects including the injection of 20,000 tons of CO₂ into an unconventional gas reservoir and various carbon footprint evaluations. Our staff is knowledgeable of the mandatory reporting rules (MRR) related to greenhouse gases (GHG) as proposed by the US Environmental Protection Agency. Cardno MM&A engineering, geological, and environmental professionals are leaders in this newly developing field which represents a natural extension of Cardno MM&A services to business sectors where we have an excellent reputation and strong client relationships.

Cardno MM&A is well positioned to continue our growth in the challenging global economic climate of 2012, and beyond. The strength and diversification of the Cardno MM&A staff gives us a solid base from which to capitalize on changing market conditions and to provide technical services to a wide variety of industries. We thank our clients for their trust and confidence in our services, and for helping us to achieve our success. Client satisfaction remains our number one goal.

Effective July 2, 2012, Marshall Miller & Associates, Inc. merged with Cardno, a global professional infrastructure and environmental services company with expertise in the development and improvement of physical and social infrastructure for communities around the world. Cardno has over 200 offices with over 4,500 professionals in the Americas. This additional access to experts enables Cardno MM&A to continue to deliver the consistent, high quality services you have come to expect, while providing broader capabilities to meet your needs.

K. Scott Keim
President



Summary of Services

Geology

- > Mineral Resource and Reserve Estimation and Public Reporting including SEC Industry Guide 7; Canadian NI 43-101; and Australasian JORC standards and requirements
- > Wireline Geophysical Logging Services
- > Field Exploration Project Design; Management; Core Description; Geotechnical Logging; Database management

Mining Engineering

- > Open Pit and Underground Mine Design
- > Permitting (SMCRA; NPDES; CWA; CAA)
- > Valuation Services including Mineral Reserves, Property, Plant and Equipment, and Enterprise Value
- > Mine Costing and Cash Flow Analysis; Mine Operations Assessment
- > Mine Feasibility Studies; Due Diligence Services; Independent Engineer; and Advisory Services
- > Geotechnical and Ventilation Engineering including Subsidence Prediction; Pillar Design; Ground Control and Roof Support; Mine Ventilation; and Mine Seals
- > Impoundment and Embankment Design, Permitting, Inspection, Operations & Monitoring Capabilities

Oil and Gas

- > Resource Assessment - shale gas and coalbed methane
- > Reserve Reporting
- > Economic Analysis
- > Due Diligence Support
- > Expert Witness

Hydrogeology

- > Surface and Groundwater Monitoring and Data Management
- > Water Supply Development
- > Mine Inflow and Control
- > Monitoring of Mine, Quarry or Construction Impact
- > Mitigation of Hydrogeologic Impact
- > Acid or Metal-Rich Drainage Prevention
- > Mine Stream and Wetland Mitigation/Restoration

Environmental

- > Environmental Site Assessments and Impact Studies
- > Environmental Compliance Monitoring and Reporting; Third Party Audits
- > Voluntary Remediation/Brownfield Redevelopment
- > Property Acquisition Due Diligence
- > Emergency Response; SPCC and Environmental Management Plans

- > Asbestos, Lead, Radon & Mold Investigations
- > Environmental Remediation and Hazardous Waste Management
- > Mine Closure and Reclamation Liability Determination in accordance with GAAP; Management of Idle Mine Properties
- > Permitting (SMCRA; NPDES; CWA; CAA)
- > Carbon Capture & Storage; Carbon Footprint; Mandatory Reporting Rules

Civil Engineering

- > Highway - Bridge Design
- > Structural Engineering
- > Site Development
- > Mitigation Plans and Stream Restoration
- > Geotechnical
- > Infrastructure Design
- > Railway-Heavy Transportation

For more details, visit us on the web at www.cardnomma.com or call to discuss your project needs and timing.



Your Satisfaction is Our Focus and Goal!

Contact any of the individuals below to discuss your project requirements

- > **Scott Keim, C.P.G.**, President and Principal Geologist [Ph. 276.322.5467]
- > **Peter Lawson, M.B.A.**, Executive Vice President and Director - Energy Services [Ph. 304.255.8937]
- > **Joe Vance, C.P.G.**, Senior Vice President and Director - Environmental Services [Ph. 804.798.6525]
- > **Ron Mullenex, C.P.G.**, Senior Vice President and Principal Hydrogeologist [Ph. 276.322.5467]
- > **John E. Feddock, P.E.**, Senior Vice President and Principal Engineer; Lexington, KY Branch Manager [Ph. 859.263.2855]
- > **Hans Naumann, P.E.**, Senior Vice President [Ph. 859.263.2855]
- > **William (Bill) Dickey, P.E.**, Vice President and Principal Civil Engineer [Ph. 304.255.8937]
- > **George Oberlick, P.E.**, Vice President; Charleston, WV Branch Manager [Ph. 304.344.3970]
- > **Matt Conrad, P.G.**, Senior Vice President and Principal Petroleum Geologist; Kingsport, TN Branch Manager [Ph. 423.279.9775]
- > **Mike Miller, P.E.**, Senior Vice President and Principal Petroleum Engineer [Ph. 423.279.9775]
- > **Vince Alaimo**, Vice President; Ashland, VA Branch Manager [Ph. 804.798.6525]
- > **Larry George, P.G.**, Raleigh, NC Branch Manager [Ph. 919.786.1414]
- > **Suzanne Bailey, P.G.**, Lexana, KS Branch Manager [Ph. 913.648.4424]
- > **Brent Scott**, Bluefield, VA Environmental Branch Manager [Ph. 276.322.5467]
- > **Jeff Almond**, Senior Permitting Consultant, Beckley, WV Branch Manager [Ph. 304.255.8937]



Representative Project and Staff Experience



To learn more about our
Cardno partners, visit
www.cardno.com
www.cardnomma.com

Civil Engineering

Over the last 35 years Cardno MM&A professionals have provided quality civil engineering services to transportation, industrial, mining, energy and environmental clients.



Site Engineering

- > Stormwater management services including hydrologic analysis, flood studies, sediment and runoff retention pond design, and storm drainage system design
- > Stormwater NPDES permitting
- > U.S. Army Corps of Engineers 404 permitting support including wetland and stream delineation
- > Industrial and municipal water supply studies and design
- > Design of dams, embankments, and other hydraulic structures
- > Stream restoration planning, permitting, design, and construction oversight
- > Grading and drainage plans for mine, power plant, commercial and residential, and general industrial sites

Environmental Engineering

- > Design of stormwater collection facilities, runoff prevention designs, and industrial wash pads

- > Stormwater treatment facilities including oil/water separators, dissolved aeration filters, skimmers, polymer treatment, flocculation, and clarification
- > Groundwater systems including well design and installation, collection piping, and water treatment
- > Design of municipal and industrial wastewater collection and treatment systems

Geotechnical Engineering

- > Static and seismic stability and deformation analysis
- > Earthen dam design and permitting
- > Slope stability analysis
- > Mine subsidence prediction analysis
- > Ash disposal facility design and permitting
- > Fatal flaw assessments and peer review
- > Geologic/hydrogeologic conditions assessments
- > Dam break analysis

Transportation Engineering

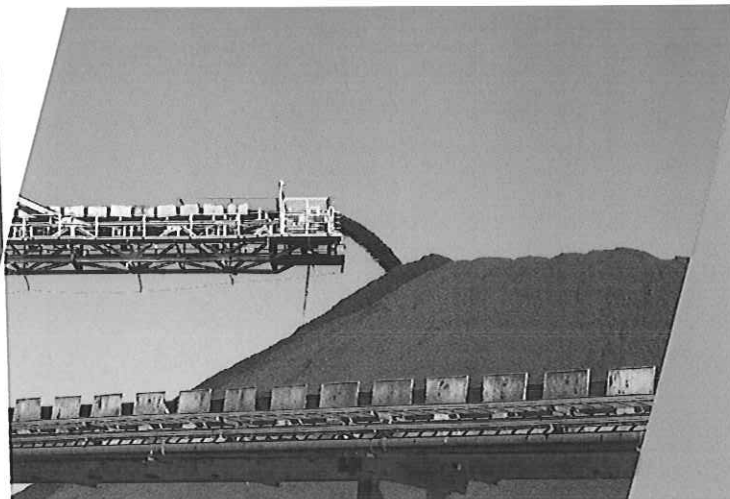
- > Rail yard infrastructure including fueling platforms
- > Design of highways and roads, including state and interstate highways
- > Parking and access road designs to support land development and site engineering projects
- > Bridge design including steel, concrete, pre-stressed/precast and composite steel/concrete types

Facility and Structural Engineering

- > Design of bulk material handling systems for coal and aggregate industries
- > Structural steel design
- > Foundation design
- > Design of industrial structures and plant infrastructure

Mining Engineering

Our mission is to maintain and develop the most experienced, educated, and committed engineering staff; and provide the highest level of customer service in our field.



Cardno MM&A provides geological and engineering services to both surface and deep mining operations throughout the world. Geologists and engineers have extensive mining backgrounds in a variety of mining scenarios. In addition, surveying, drafting, computer, rock testing, and geophysical logging personnel are available to meet your needs. Cardno MM&A offers the following services.

Reserve Evaluation

- > Exploration Program Development and Implementation
- > Field Mapping
- > Supervision
- > Geological Assessment
- > Detailed Core Logging
- > Sampling
- > Geophysical Logging
- > Supervise Analytical Testing
- > Database Compilation
- > Computer-Aided Geologic Modeling
- > Reserve Computation

- > Hazard Mapping
- > Lineament Mapping
- > Geotechnical Analysis
- > Roof and Floor Conditions
- > Pillar Stability
- > Subsidence Studies
- > Horizontal Stress

Property and Asset Valuation

- > Comparable Sales, Royalty Income and Operational Case Flow
- > Fair Market and Orderly Liquidation Values
- > Sale or Acquisition Valuations
- > SEC and Canadian NI 43-101 Reporting
- > Sales Offering Brochures

Mine Planning and Feasibility Studies

- > Mining Methods
- > Equipment Selection and Recommendation
- > Productivity Estimates
- > Labor Requirements and Scheduling
- > Life-of-Mine Plans for Proposed and Existing Mines

- > Mine and Facilities Layout and Planning
- > Transportation
- > Environmental Site Assessment
- > Capital Requirements
- > Labor, Supplies, etc.
- > Operating Costs
- > Ventilation, Permitting and Drainage Control

Economic Analysis

- > Efficiency Studies of Equipment and Operations
- > Review and Analysis of Costs (Labor, Supplies, and Fixed Costs)
- > Capital Budget Assessments
- > Evaluation of Depreciation, Depletion and Taxes
- > Royalty Assessments
- > Discounted Cash Flow
- > Rate of Return
- > Capital Justification

Paul I. McCombs

Current Position
Senior Engineer

Profession
Civil Engineering

Years' Experience
36

Joined Cardno
2010

Education
MS - Engineering
Management, West
Virginia College of
Graduate Studies,
Institute, WV

BS - Civil Engineering,
West Virginia University,
Morgantown, WV

**Professional
Registrations**
PE - KY, WV

Summary of Experience

Mr. McCombs provides chief- and senior-level mining engineering management services.

Specifically, he has:

- > Directed and coordinated all activities to accomplish corporate objectives including safety and training programs, production plans, staffing, and personnel development plans
- > Developed and recommended marketing and sales plans, and developed and monitored capital expenditures for five-year budgets
- > Maintained staffing at operations to meet budget objectives, and represented company in relationships with customers, suppliers, and government agencies
- > Coordinated and performed consulting engineering services, including all aspects of
 - environmental permitting
 - reclamation projects
 - hydrology studies
 - subsidence reviews
 - refuse impoundments
 - special projects
- > Ensured that all required permits for both surface and underground mining were obtained from state and federal agencies
- > Designed and supervised the implementation of underground projections, ventilation, and roof control plans
- > Designed, planned, and coordinated installation and maintenance of surface structures that included refuse disposal areas, roads, water and sewage systems, and material handling systems
- > Prepared and evaluated coal property acquisitions and leases
- > Ensured that sediment control structures met quarterly certifications
- > Ensured that refuse impoundments met quarterly and annual certifications
- > Coordinated refuse stage construction and installation of various decant pipes, ditches, and monitoring devices
- > Managed construction project that included belt lines, access and haul roads, mine face-up work areas, and water and sewage systems for new portals
- > Performed internal environmental audits for compliance with Environmental Protection Agency (EPA) consent agreement
- > Represented employer during site inspections by regulatory agencies



Marybeth Porter Eckley Winters

Current Position
Senior Permit Manager

Profession
Mining Engineering

Years' Experience
12

Joined Cardno
2002

Education
MBA – West Virginia
University,
Morgantown, WV

BS – Mining
Engineering, Virginia
Polytechnic Institute
and State University,
Blacksburg, VA

**Professional
Registrations**
PE – WV

MSHA 8-Hr. Contractor
Refresher

48-Hr. REAME Slope
Stability Course

Affiliations
Woman's Mining
Coalition

WV Coal Association

Summary of Experience

Ms. Winters prepares and manages permitting projects for surface and deep mines to meet state and federal regulations.

Significant Experience

- > Secured permits including: Article 3, Article 11 National Pollutant Discharge Elimination System (NPDES), Section 401 Certification, Section 404 nationwide and individual permits, and air quality permits in West Virginia.
- > Coordinated mine design for surface and underground mineral properties, reclamation evaluation and costing, and other mining engineering activities.
- > Generated new business and strengthened relationships with existing clients for mining equipment company; visited prospective new mine sites to determine economic potential.
- > Created and reviewed AutoCAD drawings for highway and mine projects.

Significant Projects

- > **Kanawha Eagle Coal:** Prepared and submitted permitting documents for \$35 million underground mining complex to WV Department of Environmental Protection and US Army Corps of Engineers, Huntington District, that included Article 3, Article 11 NPDES, Section 401 Certification, and Section 404 individual permit.
- > **Greenbrier Smokeless Coal Mining:** Prepared and submitted permitting documents for \$75 million mining complex that included underground mine, surface mine, coal preparation plant facility, refuse disposal facility, and coal load-out facility to WV Department of Environmental Protection and US Army Corps of Engineers, Huntington District, that included multiple Article 3, Article 11 NPDES, Section 401 Certification, and Section 404 individual permits.
- > **Kingston Resources:** Prepared and submitted permitting documents for \$30 million surface mine complex to WV Department of Environmental Protection and US Army Corps of Engineer, Huntington District, that included Article 3, Article 11 NPDES, Section 401 Certification, and Section 404 individual permit.
- > **ICG Tygart Valley:** Coordinated with state and federal regulatory agencies on preliminary environmental data gathering, delineation of jurisdictional waters of the US, design of longwall underground mine with associated surface facilities that included preparation plant, load-out facility, refuse facility, temporary fills, and all associated drainage control. Prepared, submitted, and obtained permits from the WV Department of Environmental Protection, US Army Corp of Engineer, Pittsburgh District, and Public Lands Corporation.
- > **Pounding Mill Quarry:** Coordinated with company to obtain Article 4 permit modifications, Article 11 NPDES permits and modifications, and air quality permits from the WV Department of Environmental Protections for limestone quarry and railway load-out facilities.



Geotechnical Engineering Landslide Investigations

Project Facts

**Kinzer Drilling Slide
Landslide Remediation
Kentucky Division of Abandoned Lands
Knott County, Kentucky**

ATC was awarded the AML reclamation project to determine the subsurface conditions at, develop a remedial plan for the reclamation of an old hollow fill slide. The slide area was approximately 1,400 feet long covered over 450 feet in elevation change. The site was explored by drilling nine soil test borings into rock, installing 5 piezometers and excavating over 13 test pits. Additional analyses included triaxial shear strength testing, computer aided stability analyses, and developing remedial measures to enhance the stability of the failed hollow fill. The remedial measures consisted of combinations of extensive regrading (285,000 cubic yards), subsurface drains and rock shear keys and new gabion lined surface channels.

**Toms Creek Reclamation Project - Phases I and II
Kentucky Division of Abandoned Lands
(Subconsultant to WMB Engineers, Inc.)
Johnson County, Kentucky**

ATC (formally ATEC Associates) performed a geotechnical engineering study for 21 landslides along Lindy Branch. The work included test borings through mine spoil and into the underlying bedrock, extensive laboratory testing, computer-aided stability analyses and developing remedial measures. The remedial measures consisted of combinations of regrading, subsurface drains and rock keys, surface channels, gabion retaining walls and a TENSAR reinforced slope.

**Ary Landslide Reclamation Project
Kentucky Division of Abandoned Lands
Perry County, Kentucky**

Subsurface investigation, laboratory testing and engineering design services for a landslide (about 2 acres in size) which resulted from casting mine spoil from a contour mining operation onto the outslope. The study included soil and rock borings, triaxial shear and soil classification tests and computer-aided stability analysis for the design of surface restoration and stabilization of the slope. Complete construction plans and specifications were prepared.

**Spencer Landslide Reclamation Project
Perry County, Kentucky
Kentucky Division of Abandoned Lands**

The project involved reclamation of a landslide on an abandoned mine land site that had been impacted by three separate mining operations on different seams. The site was affected by spoil on the outslope from strip mining operations near the top of the slope and by extensive drainage from an old deep mine near mid-slope. The work also included

regrading, subsurface drainage, closure of 23 mine portals,revet mattress lined surface ditches and revegetation. Revegetation included seedbed preparation and selection of soil additives and seed mixtures. Mulch, bituminous tack and netting were used on most of the area to be seeded, most of which was steep sloping.

Lawson Landslide
Whitley County, Kentucky
WMB Engineers, Inc.

Subsurface investigation, laboratory testing and engineering design services for landslide (up to 2 acres) that resulted near the edge of a reclaimed surface mine spoil area. Study included soil borings, triaxial shear, soil classification tests and computer-aided stability analysis for the design of surface restoration and stabilization of the slope.

Corn Creek Landslide
Whitley County, Kentucky
WMB Engineers, Inc.

Surface investigation of hillside mine spoil pile landslide area and recommendations for landslide stabilization and restoration methods. The analysis includes standard soil density, strength, triaxial shear, spoil compaction tests, computer-aided slope stability, geometries for remedial landslide (up to 1 acre in size) treatment and recommendations for construction.

Hurricane Creek Slide
Pike County, Kentucky
WMB Engineers, Inc.

Subsurface investigation of landslide on steep natural slope contiguous with abandoned mine spoil and adjacent to State Highway 1384 near Owsley, Kentucky. Study included standpipe piezometers and observations wells, laboratory tests (classification, triaxial and direct shear of remolded samples), computer-aided stability analysis of existing slope and recommendations for remedial measures including slope grading and protective vegetation. Since slide area transects several water bearing coal seams, additional recommendations included monitoring program and installation of inclinometers.

Skyline Coal Research and Demonstration Project
Kentucky Division of Abandoned Lands
Knott County, Kentucky

ATC (formally ATEC Associates) designed remedial measures for a 4 acre, 150,000 cubic yard landslide that occurred in a hollow fill near Hindman, Kentucky. The sliding took place in February 1986, causing the evacuation of three homes located near the toe of the slide. Alternative corrective measures were developed utilizing rock keys, retaining walls, slope reduction and extensive internal drainage systems with factors of safety, economics and applicability of remedial measures to other similar failures throughout Appalachia dictating the measures employed. Excess spoil material was disposed of through the construction of a new hollow fill in the same hollow. An abandoned gas well was plugged during remediation. ATC performed construction inspection services and is currently evaluating the fill's post-construction condition. A final research report is currently being prepared after two years of post-construction monitoring.

Buckhorn Reclamation Project (Sites 7, 8 and 9)**Kentucky Division of Abandoned Lands****Leslie County, Kentucky**

Sites 7, 8 and 9 of the Buckhorn Reclamation Project consist of one large contour mining site (8A), two large mountaintop removal sites (9C and 9D) and several smaller contour mining sites (7, 8B, 9A and 9B). All sites contain unstable slopes that have resulted from the placement of minespoil onto the outcrops. The project, because of its size, was broken down into three design phases with plans and specifications developed for each phase. Remedial measures were developed for twenty-five landslides (two of which terminated in major stream channels and a third on a state highway), eleven large mine portals, channel restoration, elimination of acidic mine ponds, clean-up of mining debris and revegetation of barren waste areas. Six valley fills were designed for storage of excavated mine spoil.

Dingus Mines Reclamation Project**Kentucky Division of Abandoned Lands****Leslie County, Kentucky**

The Dingus Mines Reclamation Project consists of several mountaintop removal sites mined by as many as twelve different operators. The primary reclamation problems include extensive slope stability problems (including twenty-five landslides), unvegetated spoil areas, two burning refuse piles, a burning coal outcrop, abandoned impoundments and clean-up of miscellaneous mining debris. Two sets of construction plans were prepared.

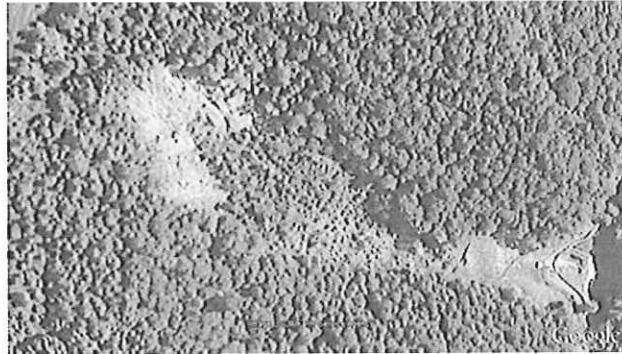
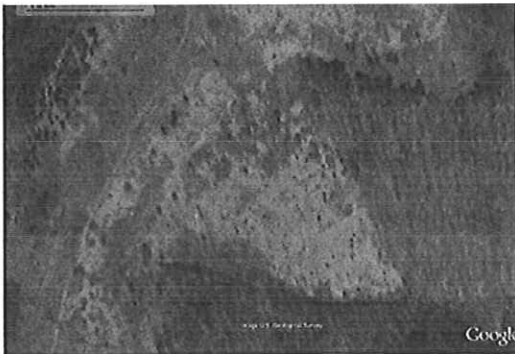
Damron Branch, Powell Creek, Buffalo Horn,**Richie Branch, Chestnut Creek,****Toms Creek Phases IA and II****Subconsultant for Various Consultants****Work Performed For Kentucky Division of Abandoned Lands****Pike, Perry, Knott, Floyd, Martin, Lawrence and****Johnson Counties, Kentucky**

ATC (formally ATEC Associates) has provided services for selected consultants in these landslide areas. These services included drilling, testing (both for physical and chemical properties of soil materials) and developing corrective measures for over fifty landslides (including rock keys subsurface drainage, retaining walls and other remedial measures).

Project Name: **Kinzer Drilling Landslide Remediation**
Location: **Decoy, Knott County, Kentucky**
Client: **KY Division of Abandoned Mine Lands**
Completion Date: **2011**
ATC Fee: **\$127,900**

Description of Services:

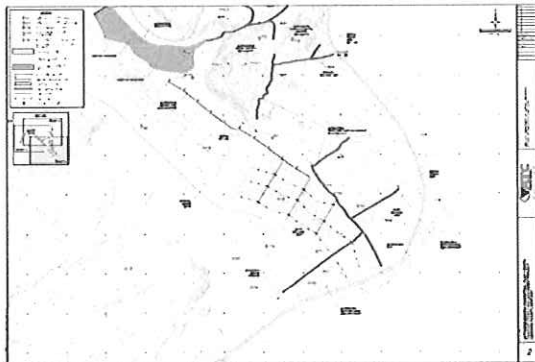
ATC was awarded the AML reclamation project to determine the subsurface conditions and develop a remedial plan for the reclamation of an old hollow fill landslide. The slide area was approximately 1,400 feet long and covered over 450 feet in elevation change. The site was explored by drilling nine soil test borings into rock, installing 5 piezometers and excavating over 13 test pits. Additional analyses included triaxial shear strength testing, computer aided stability analyses, and developing remedial measures to enhance the stability of the failed hollow fill. The remedial measures consisted of combinations of extensive regrading (285,000 cubic yards), subsurface drains and rock shear keys and new gabion lined surface channels.



Project Name: **Hancock County Acid Mine Drainage (AMD) Abatement Project**
Location: **Hancock County, Kentucky**
Client: **KY Division of Abandoned Mine Lands**
Completion Date: **2012**
ATC Fee: **\$110,000**

Description of Services:

ATC performed an evaluation of a large tract of previously mined land in Hancock County, Kentucky. Two watersheds, Little Yellow Creek and Butcher's Branch, drain this tract. For both tracts an initial site reconnaissance and 6 water quality sampling events were performed over a 12 month time period along the main drainage ways within each watershed for a total of 26 sample points. Following the site characterization study the Butchers Branch watershed was selected for a conceptual design of an AMD remediation system. ATC performed a thorough site reconnaissance and subsurface exploration program to evaluate a series of AMD remediation options. The exploration consisted of eight hand augered borings, 13 backhoe excavated test pits and water depth sounding in 8 ponds. Due to limited funds for construction a series of 11 separate options for AMD abatement systems were conceptually designed and separate cost estimates for each option were calculated. A conceptual design report was prepared describing each option and its estimated cost, as well as our recommendation for which options should be selected for final design and construction.



Appendix A3
ATC Associates Inc
AMD Projects

Laurel County Acid Mine Drainage (AMD) Abatement Project
Kentucky Natural Resources and Environmental Protection Cabinet
Division of Abandoned Mine Lands
2521 Lawrenceburg Road, Frankfort, Kentucky

Two abandoned mine lands sites in Laurel County, Kentucky were evaluated to assess water quality in order to prepare passive acid mine drainage treatment systems. The sites are located on **Powder Mill Creek** and **Little Raccoon Creek**. Field measurements, sampling and analytical testing was performed over a 12 month period in order to determine stream flow rates, stream pH and chemistry, parameters necessary for design of passive AMD treatment systems. Upon completion of the field sampling, preliminary treatment systems design was performed. Aerial mapping of the sites was performed and a conceptual design report for passive AMD treatment systems was prepared. The project was halted due to lack of design funds.

Hancock County Acid Mine Drainage (AMD) Abatement Project
Kentucky Natural Resources and Environmental Protection Cabinet
Division of Abandoned Mine Lands
2521 Lawrenceburg Road, Frankfort, Kentucky

ATC has started evaluation of a large tract situated in Hancock County, Kentucky. Two watersheds, **Little Yellow Creek** and **Butcher's Branch**, drain this tract. At this writing, an initial site reconnaissance and one water quality sampling event have been completed along the main drainage ways within each watershed. Surface water sampling and site characterization will be conducted over a twelve month period ending in November or December of 2010. Through the site characterization, areas requiring abatement will be identified, and conceptual designs will be prepared that will address watershed specific chemistry and AMD character. Aerial survey data has been collected at this point, which will be utilized to prepare topographic mapping of abatement system sites. Abatement systems will be designed generally as passive wetlands systems utilizing sequential buffering and acid mine water unloading cells.

Carbondale II Reclamation Project - Athens County, Ohio
Ohio Department of Natural Resources
Division of Mineral Resources Management
34 Portsmouth Street, Jackson, Ohio 45640

Final design plans and technical specifications were developed for the reclamation of the site and the installation of a water-powered doser and mixing zone. The mixing zone was designed to maximize reagent dissolution by incorporating a concrete-lined, V-notch channel configuration and a series of nine (9) elevation drops. In addition, adjacent drainage channels were routed into the mixing zone to increase turbulence and sediment transport during periods of increased flow. This was the first application of a water-powered doser on an abandoned mine site in the State of Ohio. The investigation for this project included extensive interaction with the AML staff in Maryland where water-powered dosers have been utilized extensively within their AML Program. Subsequent studies performed by the Ohio AML Staff have documented that the use of the doser has been successful in significantly improving water quality and aquatic habitat in Hewett Fork. Construction of the project was completed in 2003 at a cost of approximately \$410,000.

**Appendix A3
ATC Associates Inc
AMD Projects**

Lyons AMD Reclamation Project - Tuscarawas County, Ohio
Crossroads Resource Conservation and Development Council, Inc.
c/o Ohio Department of Natural Resources
Division of Mineral Resources Management
3601 Newgarden Road, Salem, Ohio 44460

An investigation was conducted of the Lyons site in Mineral City, Ohio to identify potential reclamation plans for treating the acid mine drainage (AMD) that has degraded the surface water quality of Huff Run. Past surface water quality data, along with related studies and other general information, were obtained from the Division of Mineral Resources Management. In addition, surface water samples were collected from the site in the fall of 2002 to further characterize the quality of surface water.

Reclamation alternatives that were considered for this site included regrading and vegetation of barren spoil, open limestone channels, anoxic limestone drains, successive alkaline producing systems, alkaline recharge ponds, and the construction of a steel slag leach bed. Final design plans and technical specifications were developed for the reclamation of about 21 acres, open limestone channels, a steel slag leach bed, and alkaline recharge ponds.

Construction of the project was completed in 2005 at a cost of approximately \$675,000. ATC received the 2006 AML Reclamation Award from the Ohio Department of Natural Resources – Division of Mineral Resources Management.

Essex Doser Project -Hocking County, Ohio
Ohio Department of Natural Resources
Division of Mineral Resources Management
34 Portsmouth Street, Jackson, Ohio 45640

ATC conducted a feasibility study of the Essex AMD project site in 2000 which considered the use of a variety of treatments system to deal with the discharge of AMD at rates ranging from 150 to 200 gpm from the Essex Underground Mine. Treatment alternatives which were evaluated included: fluidized diversion wells, sealing of subsidence features, open limestone channels in conjunction with large sediment ponds; alkaline addition with either limestone or steel slag leach beds and in-stream water-powered dosers.

Final design plans and technical specifications were developed in 2005 for the construction of an in-stream water powered doser. A short mixing zone was included to maximize reagent dissolution by incorporating a concrete-lined, V-notch channel configuration and a series of elevation drops. Construction of the project was completed in 2006 at a cost of approximately \$307,000.

Appendix A3
ATC Associates Inc
AMD Projects

Jobs Hollow Doser Project - Perry County, Ohio

Ohio Department of Natural Resources

Division of Mineral Resources Management

34 Portsmouth Street, Jackson, Ohio 45640

An investigation of the Jobs Hollow watershed was conducted to identify cost-effective measures of treating the acid mine drainage (AMD) that has degraded downstream surface water quality of Monday Creek. Recent and past surface water quality data, along with other general information, was obtained from the Division of Mineral Resources Management to assist in the production of this report. Evaluation of the data indicates that the Jobs Hollow watershed discharges an average acid load of approximately 573 lbs/day or 105 tons/year into Monday Creek.

The data reviewed during the investigation indicated that the Jobs Hollow discharge could be treated by installing a water-driven lime dosing unit along an upstream tributary. It was recommended that the dosing unit be installed in-line on a major tributary to the mainstem to provide a relatively constant source of water while accommodating the access requirements of a bulk reagent transport vehicle. Final design drawings and technical specifications were developed for the installation of a doser and the construction of a concrete flow control structure and an access road. Construction of the project was completed in 2005 at a cost of approximately \$310,000.

East Branch Raccoon Creek AMD Reclamation Project (Phase 1) - Hocking County, Ohio

Ohio Department of Natural Resources

Division of Mineral Resources Management

34 Portsmouth Street, Jackson, Ohio 45640

ATC evaluated water quality data and site conditions to develop over forty (40) potential reclamation/treatment alternatives to mitigate acid mine drainage in the headwaters of the East Branch of Raccoon Creek. Reclamation/treatment techniques that were analyzed included limestone leach beds, sediment ponds, open limestone channels, reclamation, j-trenches, rock check dams, limestone cross berms, vertical flow wetlands, drainage improvements, steel slag leach beds, and wetland enhancement.

Final design plans and technical specifications were developed for eight (8) project sites and included the construction of eight (8) steel slag leach beds, limestone cross-berms for wetland enhancement, rock check dams, j-trenches, over 2,000 feet of open limestone channels, about 5 acres of reclamation, and the elimination of an acidic pit. The final design scope of work also included hydrologic and hydraulic calculations for all work areas, the preparation of a Storm Water Pollution Prevention Plan (SWP3), an Environmental Assessment, and permit coordination with the U.S. Army Corps of Engineers. Construction of the project was completed in 2007 at a cost of approximately \$1,100,000.

Appendix A3 ATC Associates Inc AMD Projects

Pierce Run Acid Mine Drainage Feasibility Study - Vinton County, Ohio

Ohio Department of Natural Resources

Division of Mineral Resources Management

Acid Mine Drainage Program

280 East State Street, Athens, OH 45701

ATC is currently conducting a preliminary design of a reclamation program to mitigate the impacts from two acid mine drainage sources in the Pierce Run sub-watershed in Vinton County, Ohio. The Oreton Seep discharges from a drift entry and flows through a large, iron-stained wetland prior to entering Pierce Run. The Highwall Seep emanates from a coal seam crop into an unnamed tributary to Pierce Run. Reclamation techniques that are currently under evaluation include:

- Steel slag leach beds
- Aerobic and anaerobic treatment wetlands
- Anoxic limestone drains
- Successive alkaline producing systems (SAPS) or vertical flow systems
- Open limestone channels

The feasibility and design of some of these passive treatment systems will be evaluated, in part, by utilizing the AMDesign© model developed by Dr. Paul Ziemkiewicz of the National Mine Land Reclamation Center. The conceptual design of abatement options for the AMD will be developed in addition to preliminary construction and operation/maintenance costs. The conceptual designs for the viable alternatives will include appropriate comments on sizing requirements, service life, estimated treatment effects, assumptions used in developing the preliminary design and cost estimate, and the available technical design data/calculations. It is anticipated that this phase of the project will be completed by summer 2008.

Blackfoot Acid Mine Drainage Abatement - Augusta, Indiana

Indiana Department of Natural Resources

Division of Reclamation

RR #2, Box 129, Jasonville, IN 47438

ATC investigated a 13 square mile area to identify the location and sources of acid mine drainage in one tributary to the Patoka River and two tributaries to the South Fork of the Patoka River. The study area had been extensively mined with both surface and underground operations, many of which were not reclaimed. ATC collected surface water samples from over 200 locations during three sampling events over a period of nine months. The results of the data were compiled and utilized to determine net acid loading and metal loadings in all of the impacted sub-watersheds.

The findings of the water quality investigation were used to prepare conceptual plans to reduce and/or treat the discharge of the acid mine drainage. The conceptual designs included the use of open limestone channels, limestone leach beds, anoxic limestone drains, successive alkaline producing systems, alkaline dosers and steel slag leach beds. The final report was utilized to prioritize the reclamation projects and establish preliminary construction budgets.

The investigation was completed in 2003. The Division of Reclamation has proceeded to implement selected portions of the proposed reclamation program through its own design staff.

Additional KY AML Projects

Chestnut Lick Reclamation Project

Kentucky Division of Abandoned Lands

Floyd County, Kentucky

Design Period: 12 months

ATC completed reclamation design for approximately 4 square miles of mountaintop removal and contour mining benches. Included in the project was the remediation of 30 landslides (approximately 210 acres), construction of numerous rock keys and a gabion retaining wall for the protection of critical slopes, construction of 12 valley fills, revegetation of 280 acres of unvegetated acidic mine spoil, closure of two mine portals, stream channel restoration work, road reconstruction and other miscellaneous work. Many of the landslides included debris from two or three levels of mining as the lower seams had been contour mined prior to the mountaintop removal operations. Remediation included over 2.4 million cubic yards of earthwork; 49,000 ft of subsurface drains and 67,000 ft of surface ditches. Surveying, drilling, testing of physical and chemical properties of materials and an ecological assessment for endangered species were all performed prior to the development of two sets of plans, specifications and cost estimates.

KY 1780 Slide Reclamation Project

Kentucky Division of Abandoned Lands

Leslie County, Kentucky

Design Period: 4 months

ATC conducted a geotechnical engineering investigation including drilling test borings, performing materials testing and stability analyses and developing recommendations and construction details for the remediation of two landslides and construction of a hollow fill to hold the material excavated.

The main slide area is a 5-acre landslide located upslope of KY1780, which is adjacent to the Middle Fork of the Kentucky River. The slide area is very steep and truncates and access road that runs through its center. The slide has impacted approximately 320 feet of vertical relief, is 800 feet wide and debris has blocked traffic along KY1780 on multiple occasions. The slide also threatens blockage of the adjacent river. Slide debris have been removed from the toe in order to keep the highway open. This practice has further lessened the factor of safety against sliding.

The second slide area is a two-acre slide located along the truncated access

road, approximately 1,000 ft south of the main slide. This slide threatens a residence located at its toe, blockage of a tributary to the Right Fork of loss of access for local residents.



A hollow fill was designed, subsurface drainage requirements were defined and final factors of safety were determined in order to dispose of slide debris excavated during remedial measures.

Langley-Lackey Mines Reclamation Project
Commonwealth of Kentucky, Division of Abandoned Lands
Floyd County, Kentucky

ATEC performed the engineering design for the correction of eight landslides totaling more than 25 acres in area in southwestern Floyd County. The stud included geologic assessment, soil and rock test borings, installation of observation wells, investigations into the mining history of the area, extensive field work to determine the slide limits, laboratory testing for classification and shear strength determinations, computer-aided stability analyses, the development of remedial measures and the preparation of complete construction plans and specifications. Remedial measures that were designed include regrading, the installation of surface ditches and subsurface drains, the relocation of a gas line and revegetation. In addition to the landslides, this project included the closure of 117 open mine portals, regrading 3 refuse disposal facilities (two of which were smoldering), breaching of 3 silt ponds, the demolition of several tipples and fan houses and other miscellaneous reclamation work.

Reclamation of Burning Refuse Pile - Kenvir Site
Kentucky Division of Abandoned Lands
(Subconsultant to WMB Engineers)
Harlan County, Kentucky

The project site consisted of a large refuse pile (approximately 4 acres in size and up to 100 ft thick) that had been burning for many years. The investigation identified the locations burned and unburned refuse and existing "hot spots". Various field safety and monitoring procedures were used while drilling test borings and collecting samples. The remediation consisted of quenching the burning material, regrading the site to safe slopes and covering the site with clay to support vegetations and reduce the potential for future combustion of the remaining unburned refuse. The geotechnical engineering investigation included drilling test borings, laboratory testing of samples taken from the test borings, slope stability analyses and evaluation of borrow areas for the clay cover.


ARCHITECT – ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (If any)		
PART II – GENERAL QUALIFICATIONS <i>(If a firm has branch offices, complete for each specific branch office seeking work.)</i>						
2a. FIRM (OR BRANCH OFFICE) NAME  Cardno ATC Group Services Inc. dba Cardno ATC				3. YEAR ESTABLISHED 1996		
2b. STREET 11001 Bluegrass Parkway, Suite 250				4. DUNS NUMBER 13-168-4842		
2c. CITY Louisville		2d. STATE KY		2e. ZIP CODE 40299		
6a. POINT OF CONTACT NAME AND TITLE Mark Edmonson, P.E., Branch Manager				5. OWNERSHIP a. TYPE Corporation		
6b. TELEPHONE NUMBER 502-722-1401				b. SMALL BUSINESS STATUS NA		
6c. E-MAIL ADDRESS mark.edmonson@cardno.com				7. NAME OF FIRM (If block 2a is a branch office) ATC Group Services Inc. dba Cardno ATC		
8a. FORMER FIRM NAME(S) (If any) NA				8b. YR. ESTABLISHED NA		
				8c. DUNS NUMBER NA		
9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS		
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) FIRM	(2) BRANCH			
06	Architects	8	0	A04	Air Pollution Control	1
07	Biologists	28	0	C15	Construction Management	1
08	CADD Technicians	37	0	E09	Env. Impact Studies, Assessments / Statements	1
10	Chemical Engineers	13	0	E11	Environmental Planning	1
12	Civil Engineers	74	3	E12	Environmental Remediation	1
15	Construction Inspectors	74	4	E13	Environmental Testing & Analysis	2
16	Construction Managers	12	0	M06	Mining & Mineralogy	1
23	Environmental Engineers	36	0	S01	Safety Eng.; Accident Studies; OSHA Studies	1
24	Environmental Scientists	306	1	S05	Soils & Geologic Studies; Foundations	4
27	Foundation / Geotech. Eng.	17	2	S07	Solid Wastes; Incineration; Landfill	1
30	Geologists	144	2	W02	Water Resources; Hydrology; Groundwater	1
34	Hydrogeologists	5	0		Asbestos Consulting	1
36	Industrial Hygienists	97	0		Indoor Air Quality Investigation	1
42	Mechanical Engineers	4	0		Microbial / Mold Consulting	1
57	Structural Engineers	2	0		Property Condition Assessments	1
58	Technicians / Analysts	309	4			
	Laboratory Personnel	61	0			
	Materials Testing Technicians	162	1			
	Roofing Specialists	6	0			
	Training Personnel	10	0			
	Other Employees	241	1			
Total		1646	18			
11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS <i>(Insert revenue index number shown at right)</i>		PROFESSIONAL SERVICES REVENUE INDEX NUMBER				
a. Federal Work	0	1. Less than \$100,000		6. \$2 million to less than \$5 million		
b. Non-Federal Work	5	2. \$100,000 to less than \$250,000		7. \$5 million to less than \$10 million		
c. Total Work	5	3. \$250,000 to less than \$500,000		8. \$10 million to less than \$25 million		
		4. \$500,000 to less than \$1 million		9. \$25 million to less than \$50 million		
		5. \$1 million to less than \$2 million		10. \$50 million or greater		
12. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.						
a. SIGNATURE 				b. DATE 10 December 2012		
c. NAME AND TITLE Mark Edmonson, P.E., Branch Manager						

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (If any)

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME  Cardno ATC Group Services Inc. dba Cardno ATC			3. YEAR ESTABLISHED 1979	4. DUNS NUMBER 60-762-1265
2b. STREET 7988 Centerpoint Drive, Suite 100			5. OWNERSHIP	
2c. CITY Indianapolis	2d. STATE IN	2e. ZIP CODE 46256	a. TYPE Corporation	
6a. POINT OF CONTACT NAME AND TITLE Randy Morton, Branch Manager			b. SMALL BUSINESS STATUS NA	
6b. TELEPHONE NUMBER 317-849-4990		6c. E-MAIL ADDRESS randy.morton@cardno.com		7. NAME OF FIRM (If block 2a is a branch office) ATC Group Services Inc. dba Cardno ATC
8a. FORMER FIRM NAME(S) (If any) NA			8b. YR. ESTABLISHED NA	8c. DUNS NUMBER NA

9. EMPLOYEES BY DISCIPLINE

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) FIRM	(2) BRANCH			
06	Architects	8	0	A04	Air Pollution Control	1
07	Biologists	28	0	C15	Construction Management	1
08	CADD Technicians	37	5	E09	Env. Impact Studies, Assessments / Statements	4
10	Chemical Engineers	13	0	E11	Environmental Planning	6
12	Civil Engineers	74	8	E12	Environmental Remediation	4
15	Construction Inspectors	74	0	E13	Environmental Testing & Analysis	6
16	Construction Managers	12	0	M06	Mining & Mineralogy	2
23	Environmental Engineers	36	2	R12	Roof Management	1
24	Environmental Scientists	306	7	S01	Safety Eng.; Accident Studies; OSHA Studies	1
27	Foundation / Geotech. Eng.	17	1	S05	Soils & Geologic Studies; Foundations	6
30	Geologists	144	20	S07	Solid Wastes; Incineration; Landfills	4
34	Hydrogeologists	5	0	W02	Water Resources; Hydrology; Groundwater	4
36	Industrial Hygienists	97	6	W03	Water Supply; Treatment & Distribution	1
42	Mechanical Engineers	4	0	Z01	Zoning; Land Use Studies	1
57	Structural Engineers	2	0		Asbestos Consulting	3
58	Technicians / Analysts	309	17		Environmental Training	1
	Laboratory Personnel	61	0		Indoor Air Quality Investigation	1
	Materials Testing Technicians	162	20		Lead-based Paint Consulting / Management	1
	Roofing Specialists	6	1		Microbial / Mold Consulting	1
	Training Personnel	10	0		Property Condition Assessments	1
	Other Employees	241	10			
Total		1646	97			

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

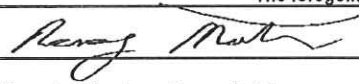
a. Federal Work	1
b. Non-Federal Work	8
c. Total Work	8



PROFESSIONAL SERVICES REVENUE INDEX NUMBER

- | | |
|---|---|
| 1. Less than \$100,000 | 6. \$2 million to less than \$5 million |
| 2. \$100,000 to less than \$250,000 | 7. \$5 million to less than \$10 million |
| 3. \$250,000 to less than \$500,000 | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million | 9. \$25 million to less than \$50 million |
| 5. \$1 million to less than \$2 million | 10. \$50 million or greater |

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE 	b. DATE 10 December 2012
c. NAME AND TITLE Randy Morton, Branch Manager	

ARCHITECT – ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (if any)		
PART II – GENERAL QUALIFICATIONS <i>(If a firm has branch offices, complete for each specific branch office seeking work.)</i>						
2a. FIRM (OR BRANCH OFFICE) NAME  Cardno ATC Group Services Inc. dba Cardno ATC				3. YEAR ESTABLISHED 1987	4. DUNS NUMBER 79-476-3636	
2b. STREET 221 Rue de Jean, Suite 200				5. OWNERSHIP		
2c. CITY Lafayette		2d. STATE LA	2e. ZIP CODE 70508	a. TYPE Corporation		
6a. POINT OF CONTACT NAME AND TITLE Bobby Toups, Chief Executive Officer				b. SMALL BUSINESS STATUS NA		
6b. TELEPHONE NUMBER 337-234-8777		6c. E-MAIL ADDRESS bobby.toups@cardno.com		7. NAME OF FIRM (If block 2a is a branch office)		
8a. FORMER FIRM NAME(S) (if any) NA				8b. YR. ESTABLISHED NA	8c. DUNS NUMBER NA	
9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS		
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) FIRM	(2) BRANCH			
06	Architects	8		A04	Air Pollution Control	4
07	Biologists	28		C15	Construction Management	7
08	CADD Technicians	37		E09	Env. Impact Studies, Assessments / Statements	8
10	Chemical Engineers	13		E11	Environmental Planning	8
12	Civil Engineers	74		E12	Environmental Remediation	9
15	Construction Inspectors	74		E13	Environmental Testing & Analysis	8
16	Construction Managers	12		M06	Mining & Mineralogy	2
23	Environmental Engineers	36		P01	Petroleum Exploration; Refining	3
24	Environmental Scientists	306		R12	Roof Management	3
27	Foundation / Geotech. Engs.	17		S01	Safety Eng.; Accident Studies; OSHA Studies	6
30	Geologists	144		S05	Soils & Geologic Studies; Foundations	9
34	Hydrogeologists	5		S07	Solid Wastes; Incineration; Landfills	4
36	Industrial Hygienists	97		W02	Water Resources; Hydrology; Groundwater	7
42	Mechanical Engineers	4		W03	Water Supply; Treatment & Distribution	2
57	Structural Engineers	2		Z01	Zoning; Land Use Studies	2
58	Technicians / Analysts	309			Asbestos Consulting	9
	Laboratory Personnel	61			Environmental Training	6
	Materials Testing Technicians	162			Indoor Air Quality Investigation	5
	Roofing Specialists	6			Lead-based Paint Consulting / Management	6
	Training Personnel	10			Microbial / Mold Consulting	6
	Other Employees	241			Property Condition Assessments	4
Total		1646				
11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS <i>(Insert revenue index number shown at right)</i>		PROFESSIONAL SERVICES REVENUE INDEX NUMBER				
a. Federal Work	7	1. Less than \$100,000		6. \$2 million to less than \$5 million		
b. Non-Federal Work	10	2. \$100,000 to less than \$250,000		7. \$5 million to less than \$10 million		
c. Total Work	10	3. \$250,000 to less than \$500,000		8. \$10 million to less than \$25 million		
		4. \$500,000 to less than \$1 million		9. \$25 million to less than \$50 million		
		5. \$1 million to less than \$2 million		10. \$50 million or greater		
12. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.						
a. SIGNATURE 				b. DATE 10 December 2012		
c. NAME AND TITLE Bobby Toups, Chief Executive Officer						

Mark J. Schuhmann, P.E.

Current Position
Principal Engineer

Profession
Civil/Geotechnical Engineer

Years' Experience
34

Joined Cardno
December 2006

Education
M.S., Civil Engineering,
University of Louisville,
Louisville, Kentucky, 1978

B.S., Applied Science,
University of Louisville,
Louisville, Kentucky, 1978

Professional Registrations
Professional Engineer

KY #12500, 1981;

IN #8704705, 1987;

AK #1472, 2010

Affiliations
ASDSO: Association of State
Dam Safety Officials

ASCE: American Society of
Civil Engineers

ABC: Associated Builders and
Contractors

KGEG: Kentucky
Geotechnical Engineers
Group, Past President

Downtown Rotary Club of

Summary of Experience

Mr Schuhmann is a Principal Engineer for Cardno ATC's Kentucky operations. His 34 years of civil and geotechnical engineering experience ranges from project management to detailed technical field activities for very large projects with extensive staffing. He is responsible for planning, scheduling, staffing, and performing geotechnical projects, as well as technical direction and quality assurance. Clients served by Mr Schuhmann include various industrial facilities, city and state agencies, design engineering firms, developers, design-build contractors and the U.S. Department of Defense. Typical projects have included riverbank stabilization, dam safety inspections, highway landslide corrections, abandoned mine land reclamation, acid mine drainage reclamation, power plants, industrial facilities, bridges, embankments, industrial parks, wharves, transportation facilities, warehouse facilities, military firing ranges and tank trails.

As an expert in complex geotechnical studies and design, Mr Schuhmann's duties have included planning, coordinating, managing, and reporting field and laboratory investigations to determine the static and dynamic properties of both soil and rock. Mr Schuhmann's experience includes liquefaction potential studies, landslide remediation of large highway projects, evaluation and remediation of sites with Karst terrain, solid waste landfill explorations, geologic studies, site-specific dynamic response, blast monitoring, attenuation studies, and equipment and structure vibration isolation. He has also directed failure investigations and provided design services for earth and rock embankments, tied back retaining walls, modular retaining walls, pavement rehabilitation, and new highway projects.

Mr Schuhmann's primary areas of expertise include:

- > Geotechnical Analyses and Design
- > Geotechnical Reports, Field Observations, and Evaluations
- > Quality Control and Quality Assurance
- > Dam Design and Remediation
- > Dam Safety-Related Activities
- > Karst Terrain Remediation and Construction
- > Geophysical Studies
- > Soil and Rock Drilling
- > Laboratory Testing

His experience and expertise in the following areas is described below:

Geotechnical Analysis: Mr Schuhmann has considerable experience with large footings and mat foundations and with site improvement techniques such as impact densification (dynamic compaction), the use of soil-cement and soil reinforcement using geogrids and geotextiles, and has designed wharf and river structures, dams, reinforced slopes, and landslide stabilization projects using rock anchors and a reinforced concrete wall.

Deep foundation expertise includes extensive driven and auger-cast friction and end-bearing pile projects, stone columns, and rock-and soil-supported drilled piers.

Solid Waste and Landfills: Mr Schuhmann has performed siting studies, borrow pit explorations, quality control testing during construction of numerous municipal and special waste landfill sites. These studies have included soil borings, monitor well installations, background water quality testing, evaluation of liner and cap materials, and analysis of the slope stability of special manufactured wastes such as flue gas desulfurization sludge.

Piles and Piers: Mr Schuhmann has extensive experience with both friction and end bearing piers and piles, both in limestone residual soils in river alluvium, windblown loess, glacial outwash, and marine clays. Pile types have included timber, auger-cast, and steel pipe and H-piles. Analyses performed have included skin friction, lateral load, uplift and negative skin friction. He has also conducted numerous pile load tests to evaluate the predicted pile capacity. Mr Schuhmann served as the geotechnical principal on a forensic evaluation of the failure of timber and concrete piles driven through marine clays in Kuantan, Malaysia.

Excavation / Shoring: Embankment Stability: Mr Schuhmann has served as project engineer on numerous existing dam slope stability studies. He has also designed earth slopes for dam structures and construction cut slopes. These slopes have been constructed in a variety of materials ranging from compacted engineered fill, alluvial deposits and loess deposits to shot rock placed on mountain sides in Eastern Kentucky. Many of the slopes incorporated reinforcing materials such as geogrids or geotextiles. He has also analyzed and recommended rock cut slopes for highways and other developments and landfill fill slopes for man-made flue gas desulfurization sludges. He has determined excavation bracing loads for braced construction excavations and for tieback walls.

Geotextile / Geogrid Applications: Mr Schuhmann has utilized geotextiles and geogrids for many various applications. He has designed reinforcing for earth and rock fill slopes using both geogrids and geotextiles. He has also utilized geogrids as a tieback or anchor system for steel sheet pile walls along the Ohio River. He has also designed flexible pavement systems using both geotextiles and geogrids as reinforcement and has designed drainage systems utilizing geotextiles.

Environmental Site Assessments: Mr Schuhmann has conducted and served as Principal Reviewer on numerous Phase I and Phase II Environmental Site Assessments. The sites have included greenfield sites, to turn-of-the-century manufacturing facilities. The Phase I assessments have often progressed into Phase II evaluations which include borings, well installations, and analytical laboratory testing. Project sizes have ranged from less than one acre to over 500 acres, both in rural and urban settings.

Significant Projects

- > **Civil/Geotechnical Design:** Served as project manager, geotechnical and civil engineer for an Abandoned Mine Land slope failure reclamation project in Kentucky. The Kinzer Drilling Slide required a geotechnical exploration with borings, piezometers and test pits to evaluate the subsurface conditions for remedial action. A conceptual design report was prepared for the Division of Abandoned Mine Lands and the preferred option selected. ATC prepared design drawings and specifications for the 300,000 cubic yard remedial reclamation project.
- > Served as project manager, geotechnical and civil engineer for Abandoned Mine Land, Acid Mine Drainage (AMD) reclamation project in Hancock

County, Kentucky. The Butchers Branch AMD project required the site AMD to be characterized through a water quality sampling over a one year time period. A conceptual design plan was then formulated with 13 options for remediation of the AMD at the site. Included in the options were extensive regrading plans, treatment wetlands and other commonly used AMD treatment options.

- > Landfill Cap Remedial Design: Served as geotechnical engineer and project QA reviewer for design of new entrance road and landfill cap repair on inactive landfill in Shelby County. ATC prepared design drawings and specifications for a new entrance roadway across a ravine, refuse cell slope failure correction, and landfill cap regrading. Project required over 25,000 cy of earthwork. ATC served as construction manager for the Shelby County Landfill Commission.
- > Landfill Closure and Geotechnical Evaluation / Lexington, KY. Principal Engineer responsible for Old Frankfort Pike landfill closure, geotechnical evaluation of landfill embankment slope for closure.
- > Geotechnical Exploration and Seepage Evaluation: Served as Principal Geotechnical Engineer and Project Manager for geotechnical exploration and seepage evaluation of 20 foot high earth dam impounding 9 acres of water. For this exploration 4 borings were drilled, 3 piezometers were installed and electrical resistivity profiling were performed to evaluate seepage through the dam in Karst features and to assist in the profiling of the top of rock under the dam and at the toe. The dam crest was over 1,800 feet long and was located on the banks of the Kentucky River in Kentucky. Exploration and analysis was performed for a confidential client.
- > Landslide Remediation Study / Kentucky Department of Highways / Near Covington, KY. Project Manager for large landslide remediation study along Kentucky Highway 9 near Covington, Kentucky. Developed soil boring and laboratory testing plan for an existing roadway constructed on an unstable hillside slope area over 3,000 feet long. Recommendations for stabilization included the use of over one mile of tieback walls, counterweight stabilization berms, and granular shear keys. Assisted in the preparation of bid drawings and specifications, and assisted the Transportation Cabinet with the bidding process. Also retained as the geotechnical consultant during the construction of the project during 1998-99. Also developed an instrumentation plan for the completed roadway including 159 survey monuments, nine piezometers, 25 observation wells, 59 slope inclinometers, and nine load cells for tieback anchors.
- > Geotechnical and Geological Investigation / Gallatin County, KY. Principal Engineer responsible for U.S. 42 geotechnical and geological investigation of ½-mile long landslide for the KYTC,
- > Construction Supervision, Tied back Retaining Wall / KY Dept. of Highways / US 68 Mason County, Served as project manager for inspection and testing of tied back retaining wall construction. Prepared QA/QC plan for anchor and wall installation and performed testing and inspection services for KYTC.
- > Geotechnical Exploration Ash Pond Dam: Served as Principal Geotechnical Engineer and Project Manager for geotechnical exploration and stability analysis of 40 foot high earth dam impounding 80 acres of water. For this exploration 19 borings were drilled, 13 piezometers were installed and stability analyses were performed at eight cross sections. The dam crest was over 8,000 feet long and was located on the banks of the Ohio River in Kentucky. Analysis included steady state stability analysis as well as seismic loading and rapid drawdown on both the interior and exterior slopes due to flooding from the Ohio River. Exploration and analysis was performed for a confidential

client.

- > Geotechnical Consulting Earth Dam Demolition: Served as geotechnical consultant for confidential client in western KY. Client owned a small dam on the banks of the Green River that was visually assessed by ATC and found to have multiple deficiencies. Provided client with construction cost estimates to repair and to demolish dam, dam was eventually demolished..
- > Geotechnical Consulting, Owensboro Waterfront Park, Owensboro, KY Served as Principal Engineer and Project Manager on geotechnical design project for new waterfront park for the City of Owensboro, KY. Development of conceptual schemes for design of a riverfront expansion 40 feet out into the Ohio River. Project involved subsurface explorations, including drilling from a barge, laboratory testing and preparation of conceptual design reports and evaluations of several design options.
- > Coal Combustion Residuals (CCR) Storage Siting Study for E.ON-US at the Trimble County Generation Station. Provided Project Management and Principal review of siting study for both flyash and gypsum storage. The study evaluated over 19 options for transport and storage of CCP at new sites and at existing site at coal fired power plant and projected the construction and operating costs for each option.
- > Simple Cycle Power Plants. Principal Engineer at over 40 sites in United States. Provided geotechnical exploration and analysis for new power plant sites for Duke / Fluor Daniel.
- > Spooky Hollow Lake Dam Evaluation / Nelson County, KY. Principal Engineer responsible for geotechnical, hydrologic and hydraulic evaluation of existing dam. Stability analyses and remedial design of dam structure and spillway.
- > Stability Analyses and Remedial Design / Hurricane Hill Lake and Dam / Nelson County, KY. Principal Engineer responsible for stability analyses and remedial design of dam structure and spillway.
- > Dam Design / Jefferson County, KY. Principal Engineer responsible for numerous dam designs for subdivision lakes and dams.
- > Instrumentation Program / Livingston and Marshall Counties, KY. Principal Engineer responsible for Kentucky Lock Addition Instrumentation Program.
- > Geotechnical / Louisville and Jefferson County Riverport Authority / Kentucky. Project Engineer on many geotechnical related projects in the industrial park. These projects have included several warehouse distribution centers, industrial manufacturing facilities, railroad lines and associated bridges, coal unloading facilities, and several roads and streets throughout the industrial park. These projects varied in scope and complexity ranging from spread footing foundations, to mat foundations and deep foundations.
- > Wall Failure Repair / Barren River Plaza. Project Manager for exploration design and construction management of keystone-geogrid wall failure repair. Design repair consisted of new concrete wall supported by high capacity rock anchors. Oversaw stability analysis of existing wall system, developed design earth pressures for new wall design, preparation of site, utility relocation, and structural drawings. Served as Construction Manager during installation of repair work.
- > Rail Relocation / CSX. Principal Engineer for a rail relocation project which involved field exploration, laboratory testing, consolidation and triaxial shear testing, driven pile static capacity analysis, WAVE equation analysis for the driven piles and stability analysis of the proposed fill slopes adjacent to the creek abutments.

- > New Tank Trails and Firing Range Projects. Principal Engineer involved in field exploration with borings and test pits, laboratory testing involving classification, consolidation, and triaxial testing. Recommending cut slopes in rock and colluvium, pavement thickness design for tank trails, slope stability for bridge abutments, driven pile recommendations for bridge and general site preparation recommendations.
- > Wharf Expansion Project / City of Louisville, KY. Principal Engineer for the City of Louisville. Responsible for wharf expansion in Louisville, which involved review of previous site data, field exploration with borings, laboratory testing, design of steel H piling using Wave Equation analysis to select driving criteria. Pile Driving Analyzer testing was performed by City's sub consultant to verify the pile driving criteria. The sub consultant also designed a steel sheetpile bulkhead wall using Tensar geogrid as a tieback anchoring device. Design drawing and specifications were prepared and the sub consultant provided inspections during construction.
- > Geotechnical / U.S. Army, Fort Knox. Principal Engineer responsible for geotechnical services for tank trails. Supervised activities for preliminary geotechnical exploration, field operations and site reconnaissance to observe and document surface conditions at the site. Activities included review of aerial photographs of the Fort to document filling activities within the proposed footprint, exploration of subsurface conditions using 10 soil test borings, and visual examination and tests of the field samples.
- > Geotechnical Exploration and Environmental Concerns / Inland Steel Company / No. 6 CCL Service Center / East Chicago, IN. Principal Engineer responsible for preliminary geotechnical exploration and environmental concerns. Supervised activities for preliminary geotechnical exploration, field operations and site reconnaissance to observe and document surface conditions at the site. Activities included review of aerial photographs of the plant to document filling activities within the proposed footprint, exploration of subsurface conditions using 10 soil test borings, and visual examination and tests of the field samples.
- > Geotechnical Exploration / Procter & Gamble Glycerin Building Overhead Structure / Cincinnati, OH. Project QC Reviewer responsible for geotechnical exploration to determine subsurface conditions and foundation recommendations for supporting new process equipment at their Ivorydale manufacturing plant. Structural design called for utilizing the existing 100+ year old reinforced concrete framing and determining if the existing foundations would provide the required support. The geotechnical exploration program involved performing soil test borings in a low overhead space of less than 8 feet and hand excavating around the existing columns to determine the type and extent of the existing foundations. Recommendations included the use of 10-inch diameter auger cast in-place piles to depths up to 50 feet to support the structure. Also performed a pile load test to determine the load-settlement response of the proposed foundation system.
- > Dam Safety Risk Analysis Best Practices, US Bureau of Reclamation, 2010
- > ASDSO Conference, 2009
- > AASHTO LRFD Geotechnical Foundation, and Earth Retaining Structures, 2009
- > Flexibility in Highway Design