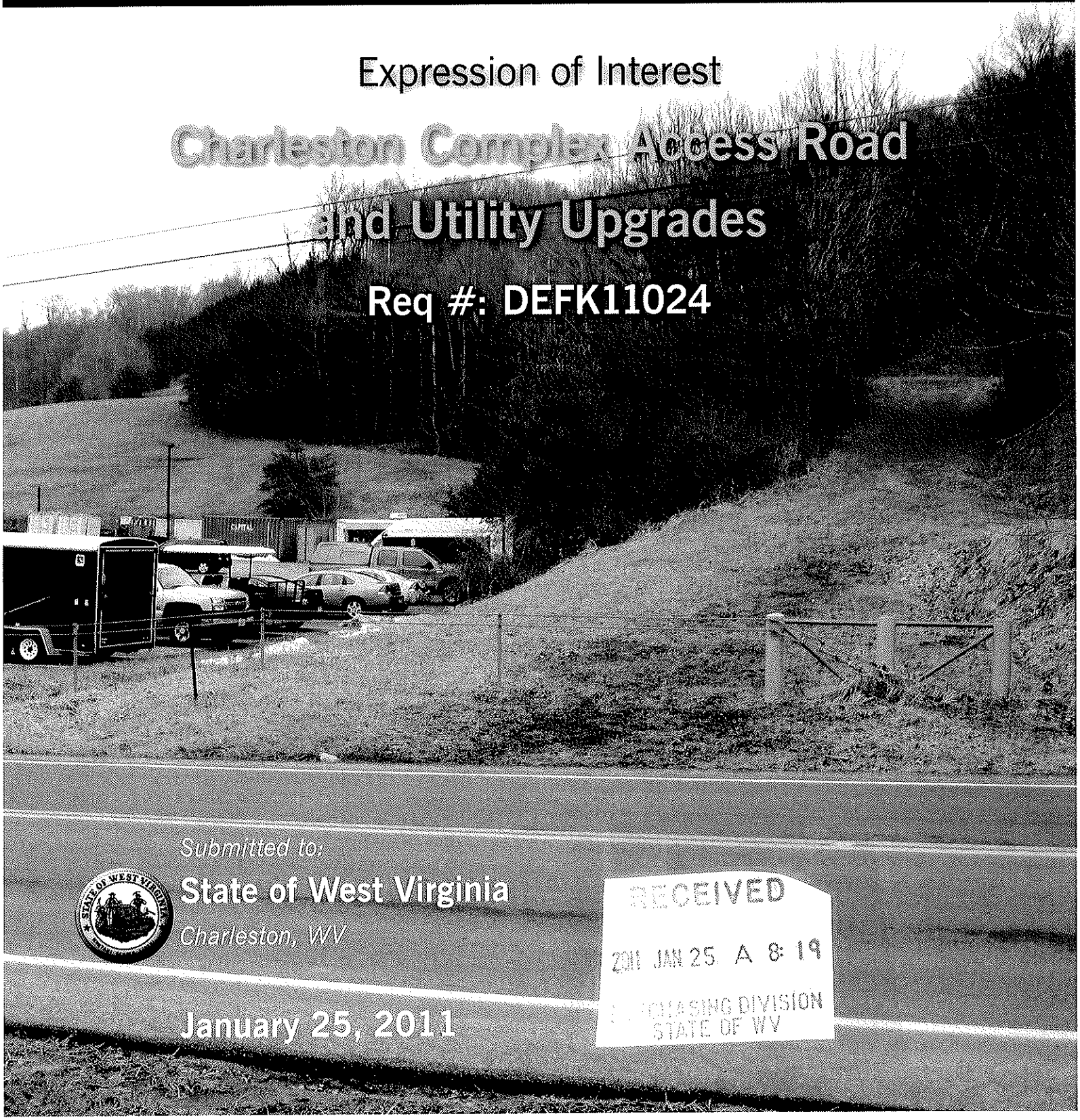
For Further Information Contact:
David E. Clevenger, P.E.
One Kenton Drive
Suite 200
Charleston, WV 25311-1256
Office Phone: 304.346.2599
Mobile Phone: 304.552.4153

Expression of Interest

Charleston Complex Access Road and Utility Upgrades

Req #: DEFK11024



Submitted to:

State of West Virginia
Charleston, WV

January 25, 2011

1 Kenton Drive
Suite 200
Charleston, WV 25311

304.346.2599 PHONE
304.346.2591 FAX

www.TRCsolutions.com

January 25, 2011

State of West Virginia
Purchasing Division
2019 Washington Street, East
P.O. Box 50130
Charleston, WV 25305-0130

Attn: Tara Lyle

Re: Expression of Interest to Provide
Engineering Design Services for
Charleston Complex Access Road and Utility Upgrades
Req#: DEFK11024

Dear Ms. Lyle,

TRC Engineers, Inc. (TRC) is pleased to submit this Expression of Interest to provide the professional services that are needed to design an access road, utility upgrades and rough grading to the Charleston Armory Complex regarding future building sites. As demonstrated herein, our previous and current work on similar projects will enable us to offer you the experience and expertise that is needed to successfully provide all of the engineering and related services that are necessary to complete this project.

Key points to consider when evaluating our credentials include the following:

★ **Demonstrated success with the design of roadway and bridge projects of varying scope and complexity**, including new roadway alignments, roadway improvements and replacement bridge structures over roadways, rail corridors and waterways. Includes the successful delivery of project assignments under previous DOH Statewide Master Agreements for Design as well as Construction Inspection.

★ **Availability of highly-experienced key personnel** who offer specialized expertise in the areas of roadway, grading and utility design. Such expertise is the result of their previous design assignment to numerous roadway projects while employed by the WVDOH as well as various private-sector consultants.

★ As evidence of our performance on previous projects, TRC has been awarded ***five (5) Engineering Excellence Awards*** for our work on completed projects for the West Virginia Department of Transportation, Division of Highways, the most recent one being for 2009 in the Small Roadway Category regarding our work on WV Route 10, Taplin to Midway Plaza Pavement Contract.

★ Management of all assigned projects from our **Charleston office** which has provided similar services for projects throughout the State. This office is **located in very close proximity to the State Agency's offices and the Charleston Armory project location**. At present, our Charleston office has 16 employees, of which 10 are licensed professional engineers in the state of West Virginia.

TRC appreciates the opportunity to submit this Statement of Qualifications and looks forward to providing the City of Charleston with quality services. If you have any questions or require additional information, please contact me at your earliest convenience.

Very truly yours,

TRC Engineers, Inc.

David Clevenger, P.E., P.S.
Principal

RFQ No. DEFK1024

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: TRC Engineers, Inc.

Authorized Signature: D. J. E. [signature] Date: 1/24/2011

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 24th day of January, 2011.

My Commission expires December 16, 2018.

AFFIX SEAL HERE

NOTARY PUBLIC Sandra Isner-Johnson

Official Seal
Notary Public, State of West Virginia
Sandra Isner-Johnson
101 Greenbrier Drive
Ripley, WV 25271
My Commission Expires December 16, 2018

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

Request for Quotation

RFQ NUMBER	PAGE
DEFK11024	1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
TARA LYLE
304-558-2544

VENDOR
*A13153908 304-772-0965
TRC ENGINEERS INC
1 KENTON DR #200

CHARLESTON WV 25311

SHIP TO
DIV ENGINEERING & FACILITIES
ARMORY BOARD SECTION

1707 COONSKIN DRIVE
CHARLESTON, WV
25311-1099 304-341-6368

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B	FREIGHT TERMS
01/11/2011				

BID OPENING DATE: 01/25/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT

ADDENDUM NO. 1

1. QUESTIONS AND ANSWERS ARE ATTACHED.
2. ADDENDUM ACKNOWLEDGEMENT IS ATTACHED. THIS DOCUMENT SHOULD BE SIGNED AND RETURNED WITHE YOUR BID. FAILURE TO SIGN AND RETURN MAY RESULT IN DISQUALIFICATION OF YOUR BID.

EXHIBIT 10

REQUISITION NO.: DEFK11024

ADDENDUM ACKNOWLEDGEMENT

I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.

ADDENDUM NO.'S:

NO. 1 ....X....

NO. 2 .....

NO. 3 .....

NO. 4 .....

NO. 5 .....

I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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

GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.

2. The State may accept or reject in part, or in whole, any bid.

3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required $125 fee.

4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.

5. Payment may only be made after the delivery and acceptance of goods or services.

6. Interest may be paid for late payment in accordance with the ***West Virginia Code***.

7. Vendor preference will be granted upon written request in accordance with the ***West Virginia Code***.

8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.

10. The laws of the State of West Virginia and the ***Legislative Rules*** of the Purchasing Division shall govern the purchasing process.

11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.

12. BANKRUPTCY: In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.

13. HIPAA BUSINESS ASSOCIATE ADDENDUM: The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at **www.state.wv.us/admin/purchase/vrc/hipaa.htm** and is hereby made part of the agreement. Provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.

14. CONFIDENTIALITY: The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. 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/noticeConfidentiality.pdf.

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

16. ANTITRUST: In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will 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 the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or Fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.

2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.

3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.

4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130

5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).

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

Request for Quotation

RFQ NUMBER	PAGE
DEFK11024	2

ADDRESS CORRESPONDENCE TO ATTENTION OF:
TARA LYLE
304-558-2544

VENDOR
*A13153908 304-772-0965
TRC ENGINEERS INC
1 KENTON DR #200

CHARLESTON WV 25311

SHIP TO
DIV ENGINEERING & FACILITIES
ARMORY BOARD SECTION

1707 COONSKIN DRIVE
CHARLESTON, WV
25311-1099 304-341-6368

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
01/11/2011				

BID OPENING DATE: 01/25/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT

VENDOR MUST CLEARLY 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.

Dwl E. Clay
SIGNATURE

TRC Engineers, Inc.
COMPANY

January 24, 2011
DATE

NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.

REV. 09/21/2009

END OF ADDENDUM NO. 2

0001 JB 906-00-00-001
1
ARCHITECT/ENGINEERING SERVICES, PROFESSIONAL

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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

State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
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Request for Quotation

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12/14/2010				

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LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-00-00-001		

ARCHITECT/ENGINEERING SERVICES, PROFESSIONAL

EXPRESSION OF INTEREST (EOI)

THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, DIVISION OF ENGINEERING & FACILITIES, WV ARMY NATIONAL GUARD, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ARCHITECTURAL ENGINEERING DESIGN SERVICES FOR AN ACCESS ROAD, UTILITY UPGRADES AND ROUGH SITE GRADING TO THE CHARLESTON ARMORY COMPLEX, PER THE FOLLOWING BID REQUIREMENTS ADN THE ATTACHED SPECIFICATIONS.

BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.

CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICES SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.

TECHNICAL QUESTIONS CONCERNING THIS SOLICIIATION MUST BE SUBMITTED IN WRITING TO TARA LYLE VIA MAIL AT THE ADDRESS SHOWN IN THE BODY OF THIS EOI, VIA FAX AT 304-558-4115, OR VIA EMAIL AT TARA.L.LYLE@WV.GOV.

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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State of West Virginia
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Request for Quotation

RFQ NUMBER	PAGE
DEFK11024	2

ADDRESS CORRESPONDENCE TO ATTENTION OF:
TARA LYLE
304-558-2544

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE
TRC Engineers, Inc.
1 Kenton Drive, Suite 200
Charleston, WV 25311

SHIP TO
DIV ENGINEERING & FACILITIES
ARMORY BOARD SECTION

1707 COONSKIN DRIVE
CHARLESTON, WV
25311-1099 304-341-6368

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
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LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT

DEADLINE FOR ALL TECHNICAL QUESTIONS IS 01/06/2011 AT THE CLOSE OF BUSINESS. ANY TECHNICAL QUESTIONS RECEIVED WILL BE ANSWERED BY FORMAL ADDENDUM ISSUED BY THE PURCHASING DIVISION AFTER THE DEADLINE HAS LAPSED.

NOTICE

A SIGNED BID MUST BE SUBMITTED TO:

DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
BUILDING 15
2019 WASHINGTON STREET, EAST
CHARLESTON, WV 25305-0130

THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:

SEALED BID

BUYER:----------TL/32----------

RFQ. NO.:----------DEFK11024----------

BID OPENING DATE:------01/25/2011----------

BID OPENING TIME:------1:30 PM----------

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE

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State of West Virginia
Department of Administration
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Request for Quotation

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LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT

PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:

(304) 346-2591

CONTACT PERSON (PLEASE PRINT CLEARLY):

David Clevenger, PE, PS

****** THIS IS THE END OF RFQ DEFK11024 ****** TOTAL:

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
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PROJECT APPROACH

David Clevenger, P.E., P.S. will be assigned as TRC's Project Manager for this project, while Rob Polcyn , P.E. will be assigned in the role of Lead Designer. Both individuals will be fully dedicated to this project.

TRC's approach to this project will be to first coordinate with the WV Army National Guard Project Manager to develop a clear understanding (scope of work) of the project. This early coordination with the National Guard Project Manager will be important as we develop the design criteria that will be required for this project. Of particular note during this stage will be the ADA compliancy issues that will need to be taken into consideration so that we incorporate the necessary design features into the project from the start.

Based on the scope, we will develop a project schedule that meets the needs of National Guard. We will gather existing information, such as available mapping, survey information, property maps and existing right-of-way plans, for our use in determining the project's preliminary layout. If needed, we will perform a field survey to acquire any further information, such as the existing utilities, profiles of the access road connection into Coonskin Drive, survey reference points, benchmarks and existing features as needed. To be cost efficient, we will utilize the services of locally-based Terracon Consultants, Inc. (formerly H.C. Nutting), to perform the necessary geotechnical analysis for this project, including any core drilling for additional geotechnical information with respect to the slope design for the access road and the site grading for the proposed new facility. We have utilized this firm for a number of past projects that we have completed successfully for our clients.

The site grading for the future facility will be the key to the overall design of the project. Since the future building site has been pre-determined, we will be taking into account the grading elevations of the site as we develop a vertical and horizontal alignment for the proposed access road. The alignment of the access road will be developed in such a way that the **earthwork excavation that is required for the project will be minimized**. As we are developing the alignment, we will also take into consideration the overall earthwork balancing of the project. Our goal will be to develop an alignment that meets the design criteria and needs of the National Guard, while at the same time being the most cost effective alternative for the overall project.

In coordination with the alignment development, we will also be designing the necessary drainage and erosion and sediment control plans for the project. Based on the mapping provided, it appears that there is an existing drainage swale above the future building site which is presently labeled as a potential storm water retention facility. Consequently, we will perform the necessary hydraulic analysis to determine how best to handle the drainage area above the site in order to lessen the impact to the proposed project and **limit any future liability to the National Guard property**.

With respect to the utilities that will be needed to service the proposed site, they currently run along Coonskin Drive and service the existing Annex and Family Readiness Center. The most prudent alternative may be to design the utilities so that they follow along the new proposed access road to the site. We will evaluate this alternative, along with other possible alternatives, to achieve a solution that meets the needs of the National Guard and at the same time is cost effective. We will also coordinate with the affected power and

telephone companies with regard to the required services that will be needed to the new facility.

We will evaluate the necessary permitting required for the project and prepare the applications for approval by the appropriate agencies. Based on the information provided within the RFQ, a NPDES permit from **WVDEP** and an entrance permit from the **WVDOH** will be required for this project. We have developed these permits for a number of our past projects and **have a very good working relationship with both agencies.** An additional permit that may be required would be a **Corps of Engineers permit** if we would encounter any jurisdictional streams or wetlands that would be impacted by the project. There is also a possibility that a **Health Department permit** for the waterline and sewer lines to the proposed facility would be needed, depending upon the design. If required, we have a good working relationship with the Health Department and have prepared these types of permits on our past projects.

During plan development, we will maintain close coordination with the National Guard Project Manager. We will make interim submissions to keep him abreast of our progress and to make sure that we are meeting the needs of the project. Since **our office is located in the nearby Northgate Business Park** which is just minutes away from the project site, we will be able to attend a meeting at a moment's notice if required.

To ensure the quality and completeness of our work, we will implement a quality control plan that will begin during the initial design of the project. This effort will be spearheaded on behalf of TRC by Timothy Shoemaker, P.E. in the role QA/QC Manager. As presented later in this Expression of Interest, we maintain a strict internal design quality control program that mandates a review of all plans and calculations by at least two people to minimize any errors or omissions. In addition, Mr. Shoemaker will also conduct a review of the plans before they are submitted to the WV Army National Guard. After review by the Guard, Mr. Shoemaker will also review the revised plans to ensure that all comments are addressed. Both the TRC design staff and our QA/QC Manager will ensure that the project goals and objectives are met through the entire design process. As each design phase is completed, constructability reviews will also be performed by Mr. Richard Boyd, P.E., P.S. of TRC as part of our QA/QC effort on this project. As a former 30 plus year employee of the West Virginia Division of Highways, holding various positions such as District Bridge Engineer, Maintenance Engineer, District Design Engineer and District Engineer, he is intimately familiar with the expectations from both a design and construction perspective.

We will develop the plans and specifications for the project and will assist the National Guard in the project letting if required. If needed, TRC can also provide construction inspection and material testing services for this project once it is let to contract.

FRIM OVERVIEW / EXPERIENCE

TRC Engineers, Inc. is a highly progressive engineering, design and consulting firm that offers a diversity of expertise in the areas of infrastructure, energy, and environmental consulting to both public and private-sector clients throughout the United States. Substantiating our strength in the industry, TRC was recently ranked No. 37 among the Top 500 Design Firms as determined by *Engineering News-Record* magazine. Nationally, our firm employs over 2,200 administrative, engineering and technical personnel in more than 70 offices.

Illustrating the significant credentials that we offer locally, we have operated a highly successful West Virginia **office in Charleston since 1996** that has been the **recipient of several WVDOH-sponsored Engineering Excellence Awards** in recognition of our work. Over the past 15 years we have successfully completed the designs for bridges and roadways of varying configuration, scope and complexity. In support of our professional design services, our company maintains an in-house soil-mechanics laboratory (AASHTO accredited), a full-compliment of drilling equipment (skid-, truck-, track- and ATV-mounted applications), Computer Assisted Design (CADD) workstations, a staff of geotechnical engineers and geologists, and certified construction inspectors.

TRC has established an excellent reputation for providing quality consulting and engineering services to our clients. TRC work products have met the requirements for quality set by our clients and have passed the vigorous scrutiny of federal, state, and local regulatory agencies. In most cases, TRC has been awarded subsequent contracts because of our outstanding performance on assigned projects. The **key Team members proposed for this project are Charleston-based** and have been providing engineering and consulting services in this area for numerous years. We are your neighbors, and are fully committed to serve the Charleston community.

REPRESENTATIVE PROJECTS

Projects that have been completed by our firm within the past 10 years and include the types of services that may be needed by the State on this project include the following:

- **RHL Boulevard Connector, Kanawha County, WV** – TRC was the prime consultant designer for this project with the West Virginia Department of Highways as our client. The project consisted of the study, design and development of contract plans for an additional ingress/egress point to the Trace Fork Shopping Center located along Corridor G (US 119). The existing Boulevard, which currently ends within the Shopping Center near the South Charleston Ice Skating Rink, will be extended approximately one-half mile to WV Route 601 (Jefferson Road). The purpose of the project is to relieve some of the congestion along the existing Boulevard and the various ingress/egress points from the Boulevard to US 119. Jefferson Road provides a system connection between US 119, I-64 and US 60. It is very heavily traveled, with an average daily traffic of nearly 30,000 vehicles.

In laying out the roadway alignment, TRC **studied several different alternatives** for the project in order to **minimize the excavation** that would be required for

construction and to **balance the overall earthwork** for the project, thus **creating a savings to the client.**

The extension of the Boulevard required a new crossing of Davis Creek and a local route named Kramer Road in order to connect to Jefferson Road. TRC designed a 3-span steel plate girder bridge that was 420' in length. The structure is proposed to be supported on one semi-integral and one fully integral abutment founded on steel bearing piles; thus eliminating the need for expansion devices. The integral abutment is wrapped with an MSE wall which is needed to keep the fill from encroaching on Kramer Road. The two, three-column piers are to be founded on drilled shafts extending below the estimated scour depth of Davis Creek. TRC also designed an additional retaining wall to facilitate the inclusion of turning lanes on Jefferson Road at the new intersection with RHL Boulevard, while maintaining traffic on Kramer Road below the bridge.

Upgrades to the alignment of Kramer Road were performed to maintain access to Hertz Rental, a heavy equipment rental company located on Kramer Road. TRC also performed all of the hydraulic analysis for the new bridge crossing; designed a new traffic signal for the intersection with Jefferson Road; designed the lighting for the intersection; developed the right-of-way plans for the entire project; designed all of the roadway drainage; and developed the sediment and erosion control plans for the project. We additionally prepared the NPDES and Corps permits for the project, verified all utility involvement and coordinated with the utility companies on all their relocations for the project, and designed the force main and gravity sewer relocations for the City of South Charleston.

➢ **WV Route 10, Man to Rita, Logan County, WV** – TRC was retained by the West Virginia Division of Highways (WVDOH) to perform design and plan development associated with this $80 million, 4.3-mile section of 4-lane, partially controlled access roadway through mountainous terrain. Basically the corridor of the project ran along a very steep mountain side following the Guyandotte River.

TRC developed the horizontal and vertical alignments for the project in order to **minimize the necessary excavation** for the project on the one side and avoid filling into the Guyandotte River on the other side. The tasks that TRC performed on this project included: roadway design; drainage design; geotechnical engineering design, study and analysis; design of seven (7) bridge structures; survey and mapping review and incorporation; signing and pavement marking; maintenance of traffic/construction phasing; coordination of utilities ; waterline relocation design; wetlands mitigation design; erosion and sediment control; stormwater management; **permit preparation** (Corps and NPDES); and construction cost estimates. In conjunction with the roadway and bridge design work, TRC also designed six (6) mechanically stabilized earth (MSE) retaining walls and four (4) pile and lagging walls to facilitate roadway construction. These walls ranged in height from 4 feet to 54 feet, with the retaining structures consisting of more than 1100 linear feet (over 23,000 square feet). The design project consisted of eight (8) construction contracts, six of which are complete and two of which are awaiting advertisement.

As part of the project, **three large steel bridges** were designed that consisted of the following structures:

- **Man Bridges** - twin, 2200' long curved, welded plate girder structures designed using high performance steel. The substructure includes 14 piers that were each founded on four, 5' diameter drilled shafts (56 total caissons).

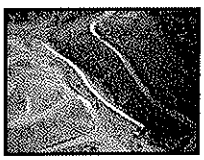
- **Rita Bridges** - twin, curved five-span steel plate girder structures approximately 1100' in length.

- **Earling Bridge** - 5-span steel plate girder structure that is 955' in length.

Several other smaller bridges on the project (Walker Bridge – 354' with Type IV modified concrete beams founded on piles; Boone Bridge – 110' with prestressed concrete beams founded on drilled shafts; Martin Bridge – 112' with prestressed concrete beams founded on drilled shafts; and Bradley Bridge – 100' with prestressed concrete beams founded on drilled shafts) were each designed in accordance with AASHTO LRFD Design Specifications.

TRC also performed **shop drawing review** services for the Boone, Martin, Bradley, Rita and Man Bridges. These reviews consisted of a review of the beams, erection procedures proposed by the contractor, overhangs, various MSE wall details, and other construction support throughout the project. ***This project has received two Engineering Excellence Awards from the WV Department of Transportation in the Large and Small Roadway Categories.***

➢ **WV Corridor H, Scherr to Forman, Grant County, WV** – This project consisted of TRC's design of a segment of the new $47 million Corridor "H" roadway that includes approximately 2.13 miles of new 4-lane roadway, as well as a 600 ft long, 4-span steel plate girder bridge (Knobly Road Bridge) crossing existing County Route 3. TRC also completed all of the geotechnical engineering work for the project.



As part of our services, TRC staff completed a value engineering study which eliminated the need for a 1675 ft long, 200 ft tall bridge over the Middle Fork of Patterson Creek which was being proposed by the WVDOH. Our study resulted in a **savings to the state of nearly $20 million** through the design of a 10' X 10' **box culvert** adjacent to the stream utilizing natural stream design techniques at the inlet and outlet ends of the box. The box was designed using material to recreate a natural stream bed within the box, thus creating a step-pool configuration, and helped meet the requirements of the Corps permit for the project. TRC also performed the natural stream design for a 1200 ft section of the Middle Fork of Patterson Creek upstream of the box culvert.

Additional tasks that were performed included preparation of the **NPDES permit**, utility verification and relocation coordination, drainage design, erosion and sediment control plans, development of the right-of-way plans for the entire project, and preparation of the deed descriptions for all parcels involved on the project.

Upon completion of the contract plans, TRC attended a pre-bid meeting on the project to assist the WVDOH with addressing questions and comments from contractors that were bidding on the project. The construction contract was awarded in July 2009 and is currently under construction with TRC performing the necessary construction and materials testing for the project.

During the construction of this project, the DOH requested that we study and develop the **site design for a 3-acre site** near the Knobly Road intersection to accommodate a future maintenance facility. TRC prepared the **site grading plans for the future facility and designed an access road** to the site off of the Knobly Road Connector. These plans were incorporated into the contract as a change order.

⚠ Evidencing the quality of our work, the ***project received a 2008 Engineering Excellence Award from the WV Department of Transportation in the Large Roadway Category.***

➢ **Laurel Mountain Wind Farm, Barbour and Randolph Counties, WV** - TRC performed the necessary engineering design and environmental field work for clearance of this project which consisted of 65 wind turbines along an 8-mile ridge line on Laurel Mountain.

As part of the project, TRC's Charleston (WV) design office **developed the plans for the haul roads and individual turbine accesses**, in addition to the **site grading plans** for the lay down areas at each turbine location. As part of the wind farm layout, TRC developed the **site grading plans for the maintenance facilities and the storage yard for the project.** The developer had TRC look at both the Clipper and GE turbine layouts for plan development. As part of the environmental approval, TRC was also required to develop traffic counts pre- and post development and evaluate the temporary impacts with respect to traffic during construction of the wind farm. TRC **coordinated the design of the proposed utilities** needed for the construction of the project and developed the **sediment and erosion control plans** for each turbine alternative. TRC coordinated with the WVDOH on the necessary permit requirements needed and assisted the developer through the agreement process with the WVDOH. As part of the agreement with the WVDOH, TRC also developed the required roadway improvements to the local roads that were needed for the implementation of the project. TRC **developed the Corps of Engineers and NPDES permits** for the project, and **coordinated with the WVDEP** on the permit approval.

➢ **New Creek Wind Farm, Grant County, WV** - TRC performed the necessary engineering design and environmental field work for this project. As a first task order, TRC's Charleston (WV) design office prepared a feasibility study for gaining access to the potential wind farm site on top of New Creek Mountain. The study consisted of **evaluating alternate accesses**, in additional to potential access from the proposed Corridor H project being developed by the WVDOH. Associated earthwork quantities and cost estimates were developed and submitted to the developer. Upon approval of the access alternative by the developer, TRC's Charleston (WV) design office **developed the plans for the haul roads and individual turbine accesses**, in addition to the **site grading plans** for the lay down areas at each turbine location. As part of the wind farm layout, TRC also developed the **site grading plans for the maintenance facilities and the storage yard for the project.** The developer had TRC look at both the Clipper and GE turbine layouts for plan development. TRC coordinated the design of the proposed utilities needed for the construction of the wind farm and developed the sediment and erosion control plans for each turbine alternative. TRC **coordinated with the WVDOH on the necessary permit requirements** and assisted the developer through the agreement process for the project with the WVDOH. As part of the agreement with the WVDOH, TRC developed the required roadway improvements to the local roads as necessary for the implementation of the project. TRC

developed the Corps of Engineers and NPDES permits for the project. TRC **coordinated with the WVDEP** on the permit approval for the project.

➢ **Schultz Natural Gas Extraction Plant Site Development, Pleasants County, WV** - TRC was retained by EXTERRAN to develop the **site grading contract plans** for a proposed natural gas extraction plant near Schultz, WV. Our tasks included the **site grading plans** for the various facilities on the proposed site, design of **access improvements into the site**, box culvert design, development of **erosion and sediment control plans**, development of contract specifications for the project, drainage design, demolition plans, contour grading for spill prevention, and the development of a storm water permit application for the project. TRC coordinated with the WVDEP through the approval process of the permit and also developed the air quality permit for the project. The contract is currently underway, with TRC also performing the necessary construction inspection for the project.

Client	Contact	Project
WVDOH Capitol Complex Building 5, 3rd Floor 1900 Kanawha Blvd., East Charleston, WV 25305 (304) 558-9722	Greg Bailey Director, Engineering Division Greg.L.Bailey@wv.gov	Corridor H WV Route 10
WVDOH Capitol Complex Building 5, 3rd Floor 1900 Kanawha Blvd., East Charleston, WV 25305 (304) 558-9221	Tim Priddy, P.E. Project Manager Timothy.R.Priddy@wv.gov	RHL Boulevard Connector
Exterran 16666 Northchase Drive Houston, TX 77060 (281) 836-7454 (direct)	Ms. Brigitte Burchfield, PE Senior Project Engineer brigitte.burchfield@exterran.com	Schultz Natural Gas Extraction Plant
AES 86 Baltimore Street Suite 300 Cumberland, MD 21502 (301) 777-9754	Tony Colman Development Manager tony.colman@aes.com	New Creek Wind Farm
AES 86 Baltimore Street Suite 300 Cumberland, MD 21502 (301) 777-9754	Barry Sweitzer Development Manager barry.sweitzer@aes.com	Laurel Mountain Wind Farm

STAFF OVERVIEW / EXPERIENCE

An overview of the core group of professionals that will comprise our staff is presented below and on the following pages. Detailed resumes are enclosed herein at the end of this section.

David E. Clevenger, P.E., P.S. – Project Manager (P.E. / WV; P.S./WV; B.S.C.E., 1985; Years With Firm: 6.5): A registered professional engineer and surveyor in the state of West Virginia, Mr. Clevenger holds the position of Principal within TRC and thus has the senior management level authority within our organization to make responsive, expedient decisions on behalf of our company. As a **former employee of the WVDOH**, he held the position of Head of Consultant Review Section in the Engineering Division for approximately 9 years. That experience allowed him to accumulate a solid track record in the areas of transportation studies, drainage design, and roadway and bridge design, including extensive coordination and design team management responsibilities.

Additional Key Staff

Timothy Shoemaker, P.E. – QA / QC Manager (P.E. / WV; B.S.C.E., 1993; Years With Firm: 9.5): Mr. Shoemaker offers over 17 years of experience in the area of roadway design and drainage design, including state and local roadway improvements, interchange design and interstate highway improvements. Such experience has been gained in the capacity of Project Manager, Project Engineer and Design Engineer, and includes his interaction with city design agencies to help them successfully accomplish their capital improvement objectives. Since joining TRC, Mr. Shoemaker has participated in a number of significant roadway design projects including Elkins Bypass in Randolph County, a Section of Corridor H in Grant County, WV Route 10 in Logan County, I-64 in Putnam County, and the US Route 35 Design Study in Mason and Putnam Counties.

Robert Polcyn, P.E. – Lead Designer (P.E. / W.V.; B.S.C.E., 1994; Years With Firm: 3.5): Mr. Polcyn nearly 16 years of civil engineering experience focused on the development of solutions to a variety of complex transportation-related challenges. He has been involved in a variety of projects in over 15 states with state DOT's, other state agencies, federal agencies, local municipalities, and private clients. Since joining TRC, Mr. Polcyn has participated in a number of significant roadway design projects including Corridor H (Scherr to Forman), US Route 35 Design Study (Mason and Putnam Counties), and the Kanawha Falls Design Study. Additional experience with TRC includes site access roads for a number of wind generation facilities in WV and PA including Laurel Mountain, New Creek Mountain, and Armenia Mountain. He prepared the storm water plans, in addition to the NPDES permitting for each project.

Patrick Park, P.E. – Project Designer (P.E. / WV; B.S.C.E., 1998; Years With Firm: 12.5): Mr. Park brings over 12 years of civil engineering, transportation and structural-related experience to this project, one year and eight months of which were gained while working as an inspector in the WVDOT's Governor's Engineering Co-op Program and as a Research Assistant in the Maintenance Division of the WVDOT. Pertinent to his role on this project, Mr. Park has completed the NPDES certification training provided by the WVDOH and was recently charged with assembling the environmental permit packages (which included the 404/401 permit drawings and the

NPDES permit package) for the $80 million WV Route 10 project. Since joining TRC, Mr. Park has participated as a Project/Design Engineer on such projects as Corridor H (Scherr to Forman), West Virginia Route 10 (Man to Rita), the I-64 Widening Design Study, and the U.S. Route 35 Feasibility Study in Putnam and Mason Counties.

Richard Boyd, P.E., P.S. – QC / QC Support (P.E. / WV; P.S. / WV; B.S.C.E., 1971; Years With Firm: 6): Mr. Boyd is a seasoned executive with 34 years of professional engineering and management experience. While employed for more than **30 years with WVDOH District 10** in Princeton, he fulfilled such capacities (among others) as **District Flood Coordinator** (5 years), **District Engineer** (3 years) and **Asst. Maintenance Engineer** (7 years).

Kamal Shaar (Terracon) - Geotechnical Task Manager (B.S., Geology, 1965): After retiring from the West Virginia Division of Highways with 38 years of service, Kamal Shaar joined H.C. Nutting Company as a Senior Geotechnical Consultant. For the last 30 years, Mr. Shaar has worked as the West Virginia Department of Transportation's principal geotechnical project manager for the western part of West Virginia. He has unparalleled experience in the planning, design, and construction supervising of consultants. He has extensive involvement with the geotechnical engineering of almost every major roadway and bridge structure built in the last 30 years in the western part of WV. His work experience includes geotechnical design and construction of such major projects as the I-64 Tunnel/Cut, completed in 1987, the largest single earthwork project in WVDOH history. He was also involved with all of the bridge and approach structures constructed over the Ohio and Kanawha rivers since 1974. In addition, he has been the geotechnical project manager for Corridor 'G', the upgrading of US Route 52, and the ongoing design and construction of Corridor 'D', WV Route 10, King Coal Highway, WV State Route 2, and US Route 35.

TRC

DAVID E. CLEVENGER, PE, PS — Project Manager

EDUCATION
B.S., Civil Engineering, West Virginia Institute of Technology, 1985

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
Professional Engineer, West Virginia (#10944, expires 6/30/2011), 1990
Professional Surveyor, West Virginia (#1555, expires 6/30/2011), 1995
Professional Engineer, Kentucky (#24362, expires 6/30/2012), 2005
Professional Engineer, Virginia (#0402 042978, expires 11/30/2012), 2006
Professional Engineer, Illinois (#062.059601, expires 11/30/2011), 2007
Professional Engineer, Pennsylvania (#075211, expires 9/30/2011), 2008
Professional Engineer, South Carolina (#27161, expires 6/30/2012), 2009

REPRESENTATIVE EXPERIENCE
Mr. Clevenger's current role for the firm is the practice leader for transportation design for the eastern and central regions of TRC. He is responsible for overseeing the design operations for four design offices within the firm. His responsibilities include overseeing project budgets, staffing, QA/QC reviewer of design plans, project scope development, project fee negotiations, project management and marketing. Mr. Clevenger has 25 years of engineering design experience, 19 of which was acquired while an employee of the WVDOT. He held various positions while employed by the Department, the last nine years of which involved his supervision of the Consultant Review Section of the Engineering Division. He has also supervised the design of numerous drainage, roadway and bridge projects ranging from new bridge structures spanning navigable waterways and railroads, bridge replacements, bridge repairs and renovations, retaining walls, new four-lane highway facilities, interchanges, urban roadway improvements, urban storm drainage design, rural highway design, commercial development projects, utility relocations, environmental studies and various roadway and bridge design studies. His work has required him to maintain close coordination with a variety of Divisions within the Department, among which have been Construction, Right-of-Way, Utilities, Materials, Planning and Traffic, along with such state and federal agencies such as the Corp of Engineers, Federal Highway Administration, State Historic Preservation Office, Department of Environmental Protection, Department of Natural Resources and US Fish and Wildlife. Representative examples of Mr. Clevenger's experience include the following assignments:

RHL Boulevard Extension – Kanawha County, WV (Principal-in-Charge)
This project consists of the study, design and development of contract plans for an additional ingress/egress point to the Trace Fork Shopping Center located along Corridor G (US 119) in Kanawha County, WV. The existing Boulevard, which currently ends within the Shopping Center near the South Charleston Ice Skating Rink, is being extended approximately one-half mile to WV Route 601 (Jefferson Road). A 3-span steel plate girder bridge, approximately 450' long is required for the crossing of Davis Creek. The intersection with Jefferson Road will be lighted and signalized. Left and right turn lanes from Jefferson Road will be provided at the intersection. Jefferson Road is a two-lane facility with approximately 30,000 ADT. The purpose of the project is to relieve some of the congestion along the existing Boulevard and the various ingress/egress points from the Boulevard to US 119. Coordination with the City of South Charleston was required with respect to the design of the relocation of their forced main and gravity sewer lines. Mr. Clevenger was the Principal-in-Charge and also was the overall design project manager for the project.

WV Route 10 – Logan County, WV (Principal-in-Charge)
Project consisted of the upgrade of a 4.3-mile section to a four-lane partially-controlled facility in mountainous terrain. Nine separate construction contracts were developed on the project.

The total construction costs was nearly $80 million. The design included the delineation of drainage areas, area calculations and the drainage design for each contract. Mr. Clevenger was the Principal-in-Charge on seven of the construction contracts. He provided the QA/QC review of the plans, in addition to his involvement in the development of the right of way plans and necessary permitting for the contracts.

Corridor H (Forman to Scherr) – Grant County, WV (Principal-in-Charge)
Project consisted of the upgrade of a 2.13-mile, $47 million section to a four-lane partially-controlled facility in mountainous terrain. Mr. Clevenger was the Principal-in-Charge of the project. He provided the QA/QC review of the plans, was responsible for the coordination of the design of the Knobly Road Bridge, a 4-span steel plate girder and a 1,427 foot-long concrete box culvert along the Middle Fork of Patterson Creek with the roadway sections. He headed up a value engineering study that produced an approximate $20 million savings on the project. He participated in the right of way plan development, drainage design and preparation of the NPDES permitting on the project. He also coordinated with the WVDOH and the USACOE on the Corps permitting for the project.

Laurel Mountain Wind Farm - Randolph and Barbour Counties, WV (Principal-in-Charge)
Mr. Clevenger provided the needed coordination with the WVDOH regarding the permit requirements that were needed for the new entrances from the state and county routes for the project. Assisted the developer in the agreement process with the WVDOH for the new entrances.

New Creek Mountain Wind Farm - Grant County, WV (Principal-in-Charge)
Mr. Clevenger participated in the preliminary layout of the feasible access alternatives for the potential haul roads on the project. Coordinated with the WVDOH regarding the permit requirements that were needed for the new entrance from the state and county routes for the project. Assisted the developer in the agreement process with the WVDOH for the new entrance.

Kanawha Falls Bridge Replacement Study – Fayette County, WV (Principal-in-Charge)
This project involved the study of various build alternatives for the existing Kanawha Falls Bridge which carries Fayette County Route 13 over the Kanawha River, County Route 13/2, CSX Railroad and the Norfolk Southern Railroad. Both replacement and rehabilitation alternatives were studied for this project. The project area was very sensitvie environmentally, with respect to the bridge being historic, endangered mussels located in the project area of the River, project being within a historic district and high potential for archeological issues. Constructibility of the different alternatives was a key component in the study. A detour was studied for the alternatives that required existing bridge closures. Load rating analysis was included in the rehabilitation studies. The study report was submitted in preparation of holding a public meeting for the different alternatives studied. Mr. Clevenger was the Principal-in-Charge and also was the overall design project manager for the project.

Linmont Bridge Replacement – Cabell County, WV (Principal-in-Charge)
This project involved the study, design, and preparation of construction contract plans and related documents for replacement of the Linmont Bridge, which carries County Route 160/4 (Linville Drive) over Mud River in Cabell County and is located off US 60. The new bridge was located on a new alignment upstream of its existing location utilizing the existing bridge for maintaining traffic. During the design of the project, a slip occurred in the project area requiring the redesign of the bridge to a 3-span steel plate girder. Mr. Clevenger was the Principal-in-Charge and also was the overall design project manager for the project.

US 35 Feasibility Study – Putnam and Mason Counties, WV (Project Manager)
The study consisted of evaluating four diffferent alignments for a 21-mile section of US 35. The alternatives included evaluating different typical sections and developing costs for each. Mr. Clevenger was the lead project manager for the feasibility study. His responsibilities included developing the horizontal and vertical alignments and preliminary drainage design, in addition to developing construction costs for each alternative. He was also responsible for presenting the study to the public officials for Putnam and Mason Counties.

West Virginia Department of Transportation - Division of Highways, Fairmont Gateway Connector, Marion County, WV (Project Manager)
Mr. Clevenger supervised the study and design of a new proposed access from Interstate 79 into downtown Fairmont. The project involved a new interchange to I-79 and the acquisition of nearly 250 residences and businesses. The project consisted of extensive drainage design and permitting for the proposed storm water system. The design also incorporated various aesthetic features committed to in the environmental document for the project. The estimated construction cost for the project is nearly $100 million.

Shinnston Bridge Replacement - Harrison County, WV (Principal-in-Charge)
This project involved the study, design, and preparation of construction contract plans and related documents for replacement of the Shinnston Bridge, which carries US Route 19 over the West Fork River in Harrison County. The new bridge was located on a new alignment downstream of its existing location utilizing the existing bridge for maintaining traffic. The project was in an urban area with intersections at each end of the bridge. Turning lanes and sidewalks were incorporated into the roadway approach work. Extensive storm water design was required on the project. Right of way on the project involved the taking of five residences and two businesses. Lighting was designed across the bridge to each intersection. Utility impacts involved water and sewer line relocations. Permitting for the project included preparation of the NPDES and Corps of Engineers permits. Mr. Clevenger was the Principal-in-Charge and also was the overall design project manager for the project.

US 17 Improvements – Beaufort and Colleton Counties, SC (Project Manager)
This project involved the design of 22 miles of widening through an environmentally-sensitive ACE Basin in the South Carolina low country. Mr. Clevenger participated in the drainage design for an 11-mile section of the project. This consisted of ditch drainage and cross drainage design.

Armenia Mountain Wind Farm - Tioga and Bradford Counties, PA (Project Manager)
Mr. Clevenger coordinated the design with the environmental staff on the project. Involved in the development of the NPDES permit for the project. Senior reviewer on the design of the layout of the access roads and turbine lay down areas.

West Virginia Department of Transportation - Division of Highways, Martinsburg Bypass (WV Route 9 to I-81), Berkeley County, WV (Project Manager)
Mr. Clevenger supervised the design study for a new four lane, partially controlled highway to relieve traffic congestion around the City of Martinsburg. The project study consisted of various interchanges and at-grade intersections. Mr. Clevenger attended numerous public meetings as part of the environmental process for this project.

TRC

TIMOTHY C. SHOEMAKER, PE — QA / QC Manager

EDUCATION
B.S., Civil Engineering, West Virginia Institute of Technology, 1993

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
Professional Engineer, West Virginia (#13636, expires 6/30/2011), 1998
Professional Engineer, Pennsylvania (#PE-62841, expires 9/30/2011), 2003
Professional Engineer, Kentucky (#21698, expires 6/30/2012), 2001
Professional Engineer, Ohio (#65222, expires 12/31/2011), 2000

AREAS OF EXPERTISE
Mr. Timothy C. Shoemaker, PE has project management and technical experience in the following general areas:

- Highway Design
- Drainage Design
- Feasibility Studies
- Project Management

REPRESENTATIVE EXPERIENCE
Mr. Shoemaker offers over 17 years of civil engineering experience that is focused on the development of solutions to a variety of transportation-related challenges. Projects to which he has been assigned have ranged from small rehabilitation and reconstruction projects, to complex interchanges and interstate improvement work. Representative examples of Mr. Shoemaker's assignments include:

West Virginia Department of Transportation - Division of Highways, RHL Boulevard Extension - Kanawha County, WV (Design Engineer)
Mr. Shoemaker was the roadway design engineer responsible for a 0.42 mile long project with a new 422' bridge. This project added new access to a congested shopping area and added left hand turning lanes and a new traffic signal to the intersecting roadway, Jefferson Road. Responsibilities included urban roadway design to widen Jefferson Road from two to four lanes, urban roadway design along a new alignment, urban stormwater drainage design, sediment and erosion control, temporary traffic control, lighting design, signing and marking plans, and right-of-way plans.

West Virginia Department of Transportation - Division of Highways, Corridor "H", Scherr to Foreman - Grant County, WV (Project Manager/Roadway Engineer)
Mr. Shoemaker was the roadway design engineer responsible for a 2.13-mile section of divided arterial that included two large structures. Responsibilities included the drainage design including culverts, storm sewers, erosion and sediment control, and ditch design. He also assisted with the performance of a Value Engineering Analysis regarding the elimination of a large bridge and replacing it with a box culvert and large fill over a native trout stream. The VE was approved by the client and resulted in a large cost savings.

West Virginia Department of Transportation - Division of Highways, WV Route 10, Man to Rita - Logan County, WV (Project Team Member)
Mr. Shoemaker was involved in the design of a 4.2-mile section of divided arterial that included two large structures. Responsibilities included the drainage design including culverts, storm sewers, erosion and sediment control, and ditch design.

West Virginia Department of Transportation - Division of Highways, I-64 Widening Project - Putnam County, WV (Project Manager/Roadway Engineer)
Mr. Shoemaker was the the roadway design engineer responsible for the design study for widening Interstate 64 from four to six lanes included the study of two (2) interchanges and several structures including a Kanawha River crossing. The study included traffic impacts, stormwater management, environmental overview, construction cost estimates, and right-of-way estimates.

West Virginia Department of Transportation - Division of Highways, Linmont Bridge Replacement - Cabell County, WV (Design Engineer)
Mr. Shoemaker was the roadway design engineer responsible for a 0.31 mile long project with a 282' bridge replacement. This project replaced an existing bridge on a new alignment and added left hand turning lanes to US 60. This project involved the taking of one residence. Responsibilities included urban roadway design to widen US 60 to three lanes, drainage design, temporary traffic control, lighting design, signing and marking plans, and right-of-way plans.

West Virginia Department of Transportation - Division of Highways, Raiders Run Bridge Replacement - Greenbrier County, WV (Design Engineer)
Mr. Shoemaker was the roadway design engineer responsible for the relocation and replacement of a small bridge in Greenbrier County. This included the geometric design of a replacement bridge and approach roadways, drainage design, right-of-way design, maintenance of traffic design, quantity and construction cost estimates, and development of construction plans and right-of-way plans.

West Virginia Department of Transportation - Division of Highways, Dunloup Creek Bridge Replacements - Greenbrier County, WV (Design Engineer)
Mr. Shoemaker was the roadway design engineer responsible for the relocation and replacement of three small bridges in Fayette County. Two of the bridges were located within the New River Gorge National Park boundaries. This included the geometric design of a replacement bridge and approach roadways, drainage design, right-of-way design, maintenance of traffic design, quantity and construction cost estimates, and development of construction plans and right-of-way plans. Mr. Shoemaker also was involved in meeting the concerns of the National Park Service about historic preservation and restoring vegetation using native seed mixtures.

Competitive Power Ventures, Spring Creek Wind Farm - Henry County, IL
Mr. Shoemaker led the design effort associated with developing the horizontal and vertical alignments for the potential haul roads needed to deliver construction materials to the project, as well as individual accesses to each turbine location. This project consists of the proposed construction of 140 wind turbines. Mr. Shoemaker assisted in evaluating the existing highway system with respect to haul routes utilizing the design criteria for the GE 1.5 MW turbine model. He also evaluated the sight distance from each turbine to the new entrances to state or county routes. Mr. Shoemaker led the effort in developing the plans for the necessary county approvals.

Competitive Power Ventures, Midland Wind Farm - Henry County, IL
Mr. Shoemaker led the design effort associated with developing the horizontal and vertical alignments for the potential haul roads needed to deliver construction materials to the project, as well as individual accesses to each turbine location. This project consists of the proposed construction of 70 wind turbines. Mr. Shoemaker assisted in evaluating the existing highway system with respect to haul routes utilizing the design criteria for the GE 1.5 MW turbine model. He also evaluated the sight distance from each turbine to the new entrances to state or

county routes. Mr. Shoemaker led the effort in developing the plans for the necessary county approvals.

West Virginia Department of Transportation - Division of Highways, Shinnston Truss Bridge - Harrison County, WV (Design Engineer)
Mr. Shoemaker was the roadway design engineer responsible for a 0.27 mile project with a 571' bridge replacement. This project involved the placing of a new bridge next to the existing structure on a new roadway alignment in an urban setting and adding turning lanes, storm drainage systems and side walks. This project included the taking of five residences and two businesses. Responsibilities included urban roadway design, sidewalk design, drainage design, temporary traffic control, lighting design, signing and marking plans, and right-of-way plans.

Kentucky Transportation Cabinet, US 23/KY 3 Interchange and KY 3 Relocation - Lawrence County, KY (Project Engineer)
Mr. Shoemaker was assigned during the Phase I preliminary line and grade evaluations for a new interchange and the relocation of KY 3 at a high-accident intersection near Louisa, Kentucky. Commercial development in two quadrants of the intersection required non-conventional designs for interchange and bridge overpass configurations, including partial clover leafs and bi-directional roadways, four (4) alternative interchange configurations were developed including relocation alternatives for an approximate 1.55km relocation of KY 3.

West Virginia Department of Transportation - Division of Highways, Elkins Bypass, Sullivan Junction to US 219 - Randolph County, WV (Design Engineer)
Mr. Shoemaker was assigned during the preliminary and final design of approximately 1.6 miles of four-lane corridor and interchange including construction plans for two grading contracts, a paving contract and right-of-way plans.

Kentucky Transportation Cabinet, KY 32 Improvements at I-64 - Rowan County, KY (Design Team Member)
Mr. Shoemaker was responsible for the preparation of final construction plans for widening of KY 32 at I-64 interchange near Morehead, KY. Congestion relief, and avoidance of right-of-way required analysis of alternatives including through and turn lane configurations at three signalized intersections at the diamond interchange, clear zone analysis, capacity analysis, geometric design and drainage design.

Industrial Park Access Road - Desoto, TX (Roadway Engineer)
Mr. Shoemaker was assigned to the design of industrial park roadways, storm sewers, and signing. He was also responsible for plan production including utilities designed by others.

Kentucky Transportation Cabinet, US 460/I-75 Interchange - Scott County, KY (Design Team Member)
Mr. Shoemaker was assigned for the Phase I and Phase II design of the reconstruction and widening of approximately 1km of U.S. 460 through the existing I-75 Interchange including associated I-75 entrance and exit ramp improvements. This included the widening of 2- and 3-lane roadway sections to a 6-lane section with a new 6-lane bridge overpass of I-75. Drainage system improvements included culvert extensions, urban storm sewer system design in curb and gutter sections, channel/ditch design in rural sections, and erosion control plans.

TRC

ROBERT T. POLCYN, II, PE — Lead Designer

EDUCATION
B.S., Civil Engineering, Ohio State University, 1994

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
Professional Engineer, West Virginia (#014178, expires 6/30/2011), 1999
Professional Engineer, Ohio (#65810, expires 12/31/2011), 2001
Professional Engineer, Kentucky (#21875, expires 6/30/2011), 2001

RELATED AREAS OF EXPERTISE
Mr. Robert T. Polcyn, PE has technical experience in the following areas:

- NPDES Storm Water Permitting
- Storm Water Design and Evaluation
- Storm Water Pollution and Prevention Plans
- Regulatory Support & Permitting
- Value Engineering & Construction Oversight

REPRESENTATIVE EXPERIENCE
Mr. Polcyn offers seventeen (17) years of civil engineering experience that covers a broad range of project types. Related experience includes evaluating and managing storm water impacts. This has involved delineating watershed area boundaries, calculating pre & post storm discharge, developing erosion and sediment control plans, configure and size storm water systems to convey runoff through the site, evaluate and design detention facilities to control peak discharge, and coordinate with various regulatory agencies for permitting compliance. Projects to which he has been assigned have ranged from small civil/site projects, to complex highway work. Representative examples of his experience include the following assignments:

AES Armenia Mountain Wind, LLC, Armenia Mountain Wind Farm - Tioga and Bradford Counties, PA (Lead Designer)
The project consisted of 124 proposed wind turbines by AES. Mr. Polcyn was one of the lead designers in developing the main haul roads for the project. Mr. Polcyn also designed the storm water facilities required to convey runoff through the site and BMP's associated with erosion & sediment control. The project also required that over 33 miles of access roads be designed. Mr. Polcyn led the effort in developing and acquiring the NPDES permit for the project and the individual county storm water permits that were required for the project.

AES Laurel Mountain, LLC, Laurel Mountain Wind Farm - Barbour and Randolph Counties, WV (Project Manager)
The project (currently under construction) consists of approximately 65 proposed wind turbines along an 8-mile ridge line on Laurel Mountain. Mr. Polcyn was the project manager for this assignment which involved design of all site related roadways, storm water management system and erosion & sediment control measures. Mr. Polcyn led the effort in developing and acquiring the NPDES permit for the project

AES New Creek Mountain, LLC, New Creek Mountain Wind Farm - Grant County, WV (Lead Designer)
The project consists of approximately 63 proposed wind turbines along a 6-mile ridge line on New Creek Mountain. Mr. Polcyn was the project manager for this assignment which involved design of all site related roadways, storm water management system and erosion & sediment control measures. Mr. Polcyn led the effort in developing and acquiring the NPDES permit for the project

West Virginia Department of Transportation – Division of Highways - Corridor H, Forman to Moorefield - Grant County, WV
Mr. Polcyn was assigned as the Project Manager / Sr. Engineer responsible for the design and preparation of construction and right-of-way plans for 2 miles of rural, divided four-lane highway on a new alignment in the mountains of WV. Related tasked included storm water system design, NPDES permitting and erosion & sediment control plan. The estimated cost for this project is $28 million.

West Virginia Department of Transportation – Division of Highways - WV 2, Kent to Franklin - Marshall County, WV
Mr. Polcyn was assigned as the Project Manager / Sr. Engineer responsible for the design and preparation of construction and right-of-way plans for upgrading 2 miles of an existing two-lane to four-lane roadway. Related tasked included storm water system design, evaluation of existing storm water facilities, NPDES permitting and erosion & sediment control plan. The estimated cost for this project is $28 million. The estimated construction cost for this project is $10 million.

West Virginia Department of Transportation – Division of Highways - Corridor H, Forman to Moorefield - Hardy County, WV
Mr. Polcyn was assigned as the Project Manager / Sr. Engineer responsible for the design and preparation of construction and right-of-way plans for 5 miles of rural, divided four-lane highway on new alignment in the mountains of WV. Related tasked included storm water system design, NPDES permitting and erosion & sediment control plan. The estimated cost for this project is $56 million.

West Virginia Department of Transportation – Division of Highways - West Virginia US 52 (Marrowbone Creek Interchange) - Wayne County, WV
Mr. Polcyn was involved with the engineering design associated with 1.5 miles of four-lane divided highway with limited access, including an interchange. He performed the geometric design of horizontal and vertical alignments for the mainline, ramps and side roads in accordance with AASHTO standards. Also developed the drainage design, quantity and construction cost estimates, and completed the development of construction & R/W drawings.

West Virginia Department of Transportation – Division of Highways - West Virginia Corridor L - Nicholas County, WV
Mr. Polcyn was involved with the engineering design that was needed to upgrade 4.5 miles (7 km) of US Route 19 from a two-lane highway to a four-lane divided highway with truck climbing lanes. Included property/right-of-way surveys, drainage surveys, geometric design, drainage design, quantity and construction cost estimates and the complete development of construction drawings on a fast-track schedule.

West Virginia Department of Transportation – Division of Highways - West Virginia Route 2 - Mason County, WV
Mr. Polcyn was involved with the engineering design for a realignment of 2.5 miles of WV Route 2 from a two-lane highway to a four-lane divided highway. Included property/right-of-way surveys, drainage surveys, geometric design, drainage design, quantity and construction cost estimates, and complete development of construction drawings.

TRC

PATRICK C. PARK, II, PE

Project Designer

EDUCATION

B.S., Civil Engineering, West Virginia Institute of Technology, 1998
M.S., Civil Engineering, Marshall University, 2008

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

Professional Engineer, West Virginia (#15632, expires 6/30/2011), 2003
Professional Engineer, Virginia (#42731, expires 9/30/2012), 2006
NHI Certified Bridge Safety Inspector
PennDOT Certified Bridge Safety Inspector
Natural Stream Mitigation - Levels I through IV
WVU Level I Intro to Stream Functions
WVU Level II Methods for Stream Channel Assessment and Analysis
WVU Level III Intro to Natural Channel Design
WVU Level IV Advance Stream Design
WVDOH – 401-404 Permit Package Training
WVDOH – NPDES Permit Package Training
NHI Course # 135041 – HEC/RAS River Analysis System
NHI Course # 130078 - Fracture Critical Inspection Techniques for Steel Bridges

AREAS OF EXPERTISE

Mr. Patrick C. Park, II, PE has technical experience in the following general areas:

- Natural Steam Design
- Highway Design
- Structural Safety Inspections
- Drainage Design
- Sediment Transport Modeling
- Flood Plane Modeling
- Signal Design
- Environmental Permiting
- HEC-RAS Modeling
- Feasibility Studies
- Project Management
- Right of Way Accuisation

REPRESENTATIVE EXPERIENCE

Mr. Park brings 13 years of civil engineering, transportation, hydraulic and structural related experience to this project, one year and eight months of which were gained while working as an inspector in the WVDOT's Governor's Engineering Co-op Program and as a Research Assistant in the Maintenance Division of the WVDOT. As an inspector, Mr. Park was in direct supervision of the contractor and various other construction related tasks. Typical assignments included calculations of pay quantities, Inspector Daily Reports, and the complete knowledge of building plans and specifications used in the project. As a Research Assistant, Mr. Park was in charge of inventory and the location of possible landslides within the state roadway system. In this position, Mr. Park's primary duties included field inspections, analysis, and recommendations for corrective procedures of the landslide.

As a design engineer and NBIS certified bridge inspector, Mr. Park has gained tremendous knowledge in project plans, bridge inspection procedures, hydraulic calculations, Right of Way plans and environmental permiting process for the West Virginia Division of Highways, Virginia Department of Transportation, Louisiana Department of Transportation and Development, Virginia Department of Transportation, and the Pennsylvania Department of Transportation. Mr. Park has worked on many projects throughout his more than eleven (11) years with TRC.

Representative examples of Mr. Park's experience as a design engineer include the following:

West Virginia Department of Transportation - Division of Highways, WV Corridor "H" – Scherr to Forman - Grant County, WV (Project Design Engineer)
Mr. Park is one of the leading design engineers on this 2.13-mile environmentally sensitive project. He has assisted in the initial layout of both the horizontal and vertical preliminary layouts for Corridor "H", as well as assisted the West Virginia Department of Transportation – Division of Highways with two different value-engineering studies that should save a combined $12.1 million in construction costs. Mr. Park has also prepared and executed a subsurface exploration contract that had over 7,800 lf of cores along with four ground water monitoring wells. Mr. Park was addditionally responsible for preparing, submitting, and gaining approval from the WVDOT-WVDOH for the cut and fill slope designs for the entire project. He has worked closely with adjacent consulting firms to ensure a smooth transition between the construction and right-of-way plans that each firm is preparing.

West Virginia Department of Transportation - Division of Highways, WV Route 10 - Logan County, WV (Project Engineer)
Mr. Park assisted in the initial layout of the preliminary alignment for new WV Route 10 along a total length of 4.19 miles. This project contained six different construction projects, five separate bridges (the longest being 2,226 feet), and ten retaining structures. Mr. Park managed the designs through WVDOT-WVDOH approval of all 10 retaining structures, which were made up of Solider Pile Walls, MSE Walls, and Reinforced Soil Slopes. He worked closely with the design firm of the adjacent project to ensure a smooth transition between the two construction projects, and performed the preliminary engineering on a railroad crossing that had space and elevation requirements that could not be changed. He also performed the final drainage calculations for the project and also assembled the environmental permit packages which included the 404/401 permit drawings and the NPDES permit package.

West Virginia Department of Transportation - Division of Highways, Shinnston Truss Bridge - Harrison County, WV (Design Engineer)
Mr. Park is one of the leading design engineers on this 571' bridge replacement project. He was responsible for writing the Bridge Hydraulics and performing a bridge scour analysis on the proposed structure. This report was submitted with the TS&L plans. Mr. Park also performed storm sewer calculations in the urban typesetting which proposed many obstacles such as flat terrain, and numerous buried utilities. He is also responsible of the preparation and submittal of the 404/401 permit as well as the NPDES permit both of which were submitted with final field review plans.

West Virginia Department of Transportation - Division of Highways, Thomas Buford Pugh Memorial Bridge Replacement – Fayette and Raleigh Counties, WV (Project Engineer)
Mr. Park co-authored a paper on a "Proposal for Sediment Analysis of Thomas Buford Pugh Bridge." The creation of this paper was to answer questions that the resource agencies in West Virginia had concerning the bridge replacement construction and the aggregation or degradation of sediment in areas of found mussel beds. Mr. Park proposed the use of field testing to secure samples of the sediment in the area that can then be entered into HEC-RAS to create a sediment analysis model for the area near the bridge replacement.

AES – Arnenia Mountain Windmill Project - Sullivan Township, Tioga County and Armenia Township, Bradford County, PA (Project Engineer)
The AES Armenia Mountain Project is an approximately 150 MW wind energy facility to be located on Armenia Mountain in north central Pennsylvania in Sullivan Township, Tioga County and Armenia Township, Bradford County. Mr. Park performed the pre and post hydraulic calculations to be placed in the Environmental Permit Package. In total there were twenty-five different areas where calculations were performed.

West Virginia Department of Transportation - Division of Highways, Category Six Bridge Replacement Project - Fayette and Greenbrier Counties, WV (Project Engineer)
Mr. Park set up and checked HEC-RAS model calculations on four bridge replacement projects. Three bridges that were replaced were on Duloup Creek while the fourth bridge replacement was on Rader's Run. Mr. Park set up the initial HEC-RAS model that would be used on all four bridges and then oversaw the final runs of the models. The model was then used to check for flood plain encroachment and hydraulic openings of each of the new structures. This project was fast tracked by the WVDOH and final plans had to be submitted within three months of the notice to proceed.

West Virginia Department of Transportation - Division of Highways, Feasibility Study of US-35 from Buffalo Bridge to Coast Guard Station near Henderson - Putnam and Mason Counties, WV (Project Engineer)
TRC was retained by WVDOH to provide engineering services to evaluate the feasibility of four alternatives proposed for the relocation of US 35 which is a major North/South route between North West and South East regions of the US. Mr. Park performed field work to verify locations of utilities, structures, historical properties, and major drainage items prior to performing any work on the alternatives. Mr. Park then laid out the horizontal and vertical alignments with parameters set forth by the WVDOH to make construction and environmental factors as feasible as practical. Upon receiving the WVDOH's approval on alignments to be studied Mr. Park then performed earthwork calculations on two different types of road typical. Once earthwork was completed, cost were then were associated with each major item in a construction project and a cost per mile was generated for each alternative. Project deliverables included a report and presentation to Commissioner on Highways along with Delegates from each of the counties involved.

West Virginia Department of Transportation - Division of Highways, I-64 Widening Design Study - Crooked Creek to Nitro (40th Street) - Putnam County, WV (Project Engineer)
Mr. Park is serving as a project engineer for this 3.48 mile long design study of a major interstate which consists of widening the current interstate from four lanes of traveled way to six lanes of traveled way. Also included in the project will be the upgrading of eight structures, the longest being the 1,450 ft. steel truss Donald Legg Memorial Bridge. The preliminary construction cost estimate for this project is around $33 million, but will not be finalized until an alternate is chosen. Mr. Park assisted in the layout of downstream horizontal and vertical alignments for the entire length of the project and is also working on upgrades to the projects extensive drainage system for the project's entire length. Upgrades to the drainage will include six reinforced concrete box culverts that range in size from 5 ft by 4 ft to 10 ft by 10 ft, two 42" reinforced concrete pipes, and a 36" corrugated metal pipe.

West Virginia Department of Transportation - Division of Highways, Milton Covered Bridge Restoration - Cabell County, WV (Project Engineer)
Mr. Park designed this 109.18-meter long project from initial survey to the final tracings. Plans included right-of-way and rehabilitation plans of a 34.85-meter historic timber truss. This was a difficult project due to space restrictions and the short turn-around time for final plans due to funding restrictions. This project was designed in metric format that consisted of moving the historic Milton Covered Bridge from its present storage location to the West Virginia Pumpkin Festival grounds and then designing a handicap accessible walking path around the bridge and pond. Plans included footings, abutments and grading around the pond. The construction plans also included corrective measures to restore the deteriorated timber trusses.

TRC

RICHARD W. BOYD, PE, PS — Constructibility Review

EDUCATION
B.S., Civil Engineering, West Virginia Institute of Technology, 1971

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
Professional Engineer, West Virginia (#8130, expires 6/30/2011), 1979
Professional Engineer, Kentucky (#24391, expires 6/30/2011), 2005
Professional Engineer, South Carolina (#24638, expires 6/30/2012), 2006
Professional Engineer, Pennsylvania (#073095, expires 9/30/2011), 2006
Professional Engineer, Virginia (#0402042736, expires 10/31/2012), 2006
Professional Engineer, Maryland (#33413, expires 8/18/2012), 2006
Professional Surveyor, West Virginia (#1917, expires 6/30/2011), 1997
NHI Certified Bridge Safety Inspector
ACI Certified, Grade 1 – Concrete Field Testing (#01172112, expires 7/23/2014)
WVDOH, Portland Cement Concrete Inspector
WVDOH, Portland Cement Concrete Technician
WVDOH, Compaction Inspector
WVDOH, Aggregate Sampling Inspector
PCI – Quality Control Personnel Certification, Level I (#11562; expires 11/9/2015)

REPRESENTATIVE EXPERIENCE
Mr. Boyd is a seasoned executive with 34 years of professional engineering and management experience. Over the course of his career, he has become recognized for his people management skills, along with his ability to recruit and motivate a staff of technical professionals and skilled workers to achieve superior results. He has established a proven track record in managing entire projects from conception through construction to completion. Offering more than 30 years of experience with the West Virginia Division of Highways, he is intimately familiar with the policies, procedures and expectations of the DOH from both a design and construction perspective. An overview of his career consists of the following:

TRC Engineers, Inc. - Charleston, WV (Sr. Director, Construction Engineering and Inspection: 2005 - Present)
Mr. Boyd is the Sr. Director of Construction Engineering and Inspection for TRC's Charleston, WV office which charges him with oversight responsibilities for all highway-related construction inspection projects that are being staffed by the firm in the State of West Virginia. In this role, he provides general contract oversight, conducts periodic site visits to monitor the performance of TRC field staff, monitors the accuracy of invoicing, provides technical guidance as needed in the field and resolves any contractual issues that may arise over the course of a contract. Evidencing his versatility, he has managed project-specific assignments for which TRC was the Prime, coordinated the assignment of inspection personnel in support of a Prime consultant, and managed on-call contracts that required the assignment of Inspectors to multiple concurrent projects.

District 10, West Virginia Department of Highway - Princeton, WV (District Bridge Engineer: 1980 - 1997)
Employed for 17 years in the capacity of District Bridge Engineer whereby he was responsible for the inspection, repair and construction of approximately 650 bridges in District 10. These bridges were all inspected in accordance with NBIS standards and inspection frequency. Mr. Boyd oversaw 35 employees, including 4 engineers and technicians, 2-3 man NBIS certified inspections teams, and 3 construction crews. He was also responsible for the performance of QA/QC reviews on completed bridge inspection reports prior to their submission to the DOH

Central Office. Additionally prioritized the maintenance, repair, rehabilitation and replacement of all 650 bridges in the District, as well as reviewed and approved all repair, construction and ROW plans for bridge projects.

District 10, West Virginia Department of Highways - Princeton, WV (District Flood Coordinator (FEMA/FHWA)/Design Engineer: 2001 - 2005)
Mr. Boyd was employed for approximately 3 years in the capacity of District Flood Coordinator (FEMA/FHWA)/Design Engineer. Responsible for directing the cleanup and repair of six major floods for a four-county district over the last three years; the design, pre-bid, award, and administering of more than 100 emergency flood projects; review all resurfacing projects for District 10; and investigating and determining the correction for slips and slides throughout the District. Position afforded him an in-depth knowledge of FEMA and FHWA specifications and requirements.

District 10, West Virginia Department of Highways - Princeton, WV (District Engineer: 1998 - 2001)
Mr. Boyd was employed for four years as the District Engineer. In this capacity he was responsible for all administrative and engineering work for the four-county District, including personnel, accounting, right-of-way, bridges, maintenance, signing, materials, and construction. Provided cross-functional management, directed 10 department managers, provided general oversight for 700 employees, and oversaw the budgets in excess of $10 million for all departments.

District 10, West Virginia Department of Highways - Princeton, WV (Assistant Maintenance Engineer: 1972 - 1979)
Mr. Boyd was employed as the Assistant Maintenance Engineer for a period of 8 years. He is responsible for the design of resurfacing contracts, and investigating and resolving various maintenance problems throughout four-county area of District 10. He developed valuable skills in dealing with concerned citizens regarding a variety of roadway maintenance issues.

TRC

DEREK S. SPURLOCK

Staff Designer

EDUCATION

M.S., Civil Engineering, Virginia Polytechnic Institute and State University, December, 2008
B.S., Civil Engineering, West Virginia Institute of Technology, 2005
(Suma Cum Laude)

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

WVDOH, Aggregate Sampling Technician (issued 1/20/2010)
WVDOH, Compaction Inspector (issued 3/12/2010)
WVDOH, Portland Cement Concrete Inspector (issued 4/12/2010)

AREAS OF EXPERTISE

Mr. Derek S. Spurlock has technical experience in the following general areas:

- Hydrology & Hydraulics
- 1 and 2 Dimensional Open Channel Flow Modeling
- Highway Design

REPRESENTATIVE EXPERIENCE

TRC Engineers, Charleston, WV (Design Engineer: 5/08 - Present)
Mr. Spurlock assumed the role of design engineer, which involves performing drainage analysis and design and setting right of way limits for various projects, including Corridor H. Mr. Spurlock also performs hydraulic backwater analysis and scour analysis for bridges.

West Virginia University Institute of Technology, Montgomery, WV (Visiting Lecturer of Civil Engineering: 8/07 - 5/08)
Mr. Spurlock fulfilled the role of a Visiting Lecturer for the University whereby he taught courses in the fields of hydraulics and sanitary engineering. He also set up a new fluid mechanics laboratory.

Virginia Polytechnic and State University, Blacksburg, VA (Research Assistant: 6/06 - 8/07)
Mr. Spurlock assumed the role of a Research Assistant which charged him with the completion of various researches related to hydraulics. Included his performance of various in-situ soil tests related to river bank stability analysis, as well as one and two-dimensional flow modeling.

Virginia Polytechnic and State University, Blacksburg, VA (Teaching Assistant: 1/06 - 12/06)
Mr. Spurlock assumed the role of Teaching Assistant for a hydraulics lab which included his grading of lab reports and homework assignments.

West Virginia Division of Highways, Charleston, WV (Engineering Intern: Summer 2005)
Mr. Spurlock was employed as a Summer Intern with the WVDOH which charged him with the review of WVDOH applications for USACE 404 Permits. He also assisted WVDOH Hydraulic Engineers with the review of hydraulic and hydrologic reports, performance of calculations related to design and construction projects, performance of research and assistance regarding the development of a new WVDOH manual, and assistance with the performance of hydraulic-related field work, including minor surveying.

West Virginia Division of Highways, Huntington, WV (Project Inspector: Summer 2004)
Mr. Spurlock was employed as Project Inspector with the WVDOH which charged him with the writing of daily field reports and inspecting the installation of stream mitigation items and drainage pipe.

SPECIALIZED SKILLS
ESRl ArcGIS; EMS-I SMS; FESWMS FST2DH; TUFLOW; HEC-RAS; AutoCAD; MathCAD; Microsoft Office; Windows 98, XP, and Vista

Kamal R. Shaar
Senior Geotechnical Consultant

B.S., Geology, Marshall University, 1965

After retiring from the West Virginia Division of Highways with 38 years of service, Kamal Shaar joined H.C. Nutting Company as a Senior Geotechnical Consultant. For the last 30 years, Mr. Shaar has worked as the West Virginia Department of Transportation's principal geotechnical project manager for the western part of West Virginia. He has unparalleled experience in the planning, design, and construction supervising of consultants. He has extensive involvement with the geotechnical engineering of almost every major roadway and bridge structure built in the last 30 years in the western part of WV. His work experience includes geotechnical design and construction of such major projects as the I-64 Tunnel/Cut, completed in 1987, the largest single earthwork project in WVDOH history. He was involved with all of the bridge and approach structures constructed over the Ohio and Kanawha rivers since 1974. In addition, he has been the geotechnical project manager for Corridor 'G', the upgrading of US route 52, and the ongoing design and construction of Corridor 'D', WV Route 10, King Coal Highway, WV State Route 2, and US Route 35.

Mr. Shaar has had the opportunity to work with some of West Virginia's most experienced engineers in the development and upgrading of the major and secondary roads in the state. In addition to the design of roadway cut slopes and embankment construction, he has been involved with the implementation of new construction methods and technology that have been developed not only to improve the roadway system, but also provide significant cost savings and still maintain the safety and integrity of the roadways. The functional use of MSE wall systems, Reinforced Soil Slopes, Geogrid stabilization, Soil Nailing, Lightweight Backfill, Dynamic compaction, wick drains, rock fall systems, geophysical instrumentation, and mine void grouting are some of the methodology in which Mr. Shaar has had experience.

Yogesh S. Rege, P.E.
Geotechnical Services Manager, Appalachian Region

M.S., Geotechnical Engineering, University of Cincinnati, 1997
B.S., Civil Engineering / Geotechnical Major, University of Bombay, 1994

Registered Professional Engineer – Ohio

As an experienced project geotechnical engineer, Mr. Rege performs work that includes: Soil test boring work, description and laboratory testing of soil and rock samples, correlation, development and analysis of geotechnical engineering data in accordance with established professional standards; preparation of detailed reports based on geotechnical engineering principles and laboratory test results incorporating one or more of these principles into the design and analysis of shallow and deep foundations; slope stability and settlement analysis; landslide evaluation and correction measures; design of temporary and permanent earth retention wall systems and design of flexible and rigid pavement systems; performance of finite element modeling of long-term behavior of culvert-soil system considering soil-structure interaction; analysis of groundwater and seepage related problems; geotechnical applications with geosynthetics; and design of landfills and wastewater lagoons using clay and synthetic liners.

Also performs coordination and management of both geotechnical subsurface investigation projects and construction testing and inspection projects.

Notable Experience

Representative projects on which Mr. Rege has performed geotechnical subsurface investigation include the following:

- Responsible for analysis, design and geotechnical report preparation of several projects for the West Virginia Department of Highways (WVDOH) including over 3 miles of realigned WV Route 10 in Logan County, WV and multiple bridges, retaining walls and drainage structures.
- Responsible for the analysis of the deep foundation (auger cast piles) for the OSU Stadium renovations exterior buildout project.
- Provided deep foundation analyses, recommendations and reports for several Ohio Department of Transportation (ODOT) projects including single and multi-span bridges.
- Responsible for foundation analysis, design and geotechnical report preparation of several above ground storage tanks at refinery in Canton, Ohio.
- Responsible for foundation analysis, design and geotechnical report preparation of several waste water treatment plants and sanitary sewer lines in the state of Ohio.
- Responsible for foundation analysis, design and geotechnical report preparation of several new schools for the Ohio School Facility Commission.

John R. Barclay Jr.
Project Geologist

B.S., Geology, Marshall University, 1999

Mr. Barclay serves as a Project Geologist for the H. C. Nutting Company's Charleston, WV office. His current duties include serving as project manager for the current WVDOH geotechnical projects, as well as supervision and training of boring inspectors, geotechnical report preparation, field investigation, geologic field mapping, and assisting with the evaluation of lab test data and quality assurance/quality control specification. He has been involved in every facet of geotechnical engineering investigations for WVDOT roadway and bridge design projects. In addition to his management duties, he is responsible for design of roadway cut slopes and embankment construction, as well as cut slope and embankment slope stability evaluations.

Mr. Barclay plans, coordinates and prepares WVDOT boring contract documents for all roadway and bridge projects. He has a firm relationship with many WVDOH Project Managers and a majority of geotechnical drilling firms.

Mr. Barclay has experience with the mapping of geologic structures including faults, anticlines, synclines, and other related structures. He is also experienced in the preparation of sub-surface cross-sections of models derived from surface data.

Mr. Barclay has experience in various other inspection duties such as; performing concrete, grout testing, footing inspection, gauging, and sampling monitoring wells, and determining ground water flow direction. He is also experienced in logging Rock Core and preparing samples in accordance with U. S. Army Corps of Engineers specifications.

Notable Experience

WVDOH Roadway Projects
Corridor H, Bismarck to Forman–Section 1
Corridor H, Bismarck to Forman–Section 8
Corridor H, Bismarck to Forman–Section 9
Corridor H, Forman to Moorefield–Section 6
Corridor H, Elkins Bypass - Elkins, WV
Corridor D, Section 3- Parkersburg, WV
Corridor D, Section 4- Parkersburg, WV
Corridor D, Section 6- Parkersburg, WV
U.S. 35 / I-64 Interchange, Putnam Co., WV
U.S. 35 / WV 34 Interchange, Putnam Co., WV
WV Route 10, Rita to Dabney – Logan Co., WV
WV Route 10, Dabney to Stollings – Logan Co., WV
Coalfields Expressway - Sophia, WV
Scott Miller Hill Bypass – Roane Co., WV

WVDOH Bridge Projects
Blennerhassett Bridge - Wood Co., WV & Washington Co., OH
James Rumsey Bridge Replacement – Jefferson Co., WV
Star City Bridge – Monongalia Co., WV
Corridor H Over South Branch Potomac River, Hardy Co., WV
Corridor H Over Dumpling Run, Hardy Co., WV
Pleasant Valley Road Overpass Bridge, Marion Co., WV
Armstrong Street Bridge, Mineral Co., WV
U.S. 460 / I-77 Interchange Bridge, Mercer Co., WV
Littleton Tunnel Bridge, Wetzel Co., WV

QUALITY CONTROL / QUALITY ASSURANCE

The ability to consistently deliver services that meet applicable project requirements is fundamental to TRC's success and is at the core of TRC's quality management (QM) policy. Based on the substantive elements of ISO 9001 (i.e., the international quality management system standard), TRC's QM program promotes the achievement of quality and performance objectives by planning and documenting the quality requirements for materials, components, services, and processes applicable to specific projects. At TRC, quality and quality improvement is not just lip service. It is a commitment that is demonstrated by the designation of a Corporate Quality Management Director; a staff position that organizationally reports to the company President.

Our company-wide commitment to quality enables TRC to provide a diverse array of services with consistent quality. The goal of the QMP is to assist TRC's managers and other personnel in fulfilling their responsibilities by identifying quality requirements and providing procedural guidance for achieving quality objectives. Our Quality Management Policy requires that each TRC Practice Area establish a QMP that includes procedures to ensure that all requirements associated with a project are understood and addressed, independent peer reviews are implemented as a quality control check on each aspect of a project from initiation to final report, and continual improvement is a priority. These documents describe minimum quality-related expectations, specific guidelines for project management, staff goals, and project deliverables. TRC's QMP is communicated to all staff through an internal website that also includes approved guidelines, policies and Standard Operating Procedures (SOPs). TRC staff members are required to read and understand the QMP as documented in the Quality Management Policy and in Practice Area QMPs.

Based on the objectives of our Corporate QMP, we will implement a project-specific quality control plan for this project which is driven by a core group of professionals. This project-specific quality control plan will implement a review process that will be conducted prior to the finalization of any key components/deliverables for each Task on the project. While it is rather large for inclusion in this Qualifications document, we would be pleased to provide you with a copy of our Corporate Quality Management Plan which would represent the foundation of our project-specific QC/QA Plan.

Strict adherence to a Quality Management Policy has resulted in several Engineering Excellence Awards for our WV projects.

Emphasizing our commitment in this regard, we will assign **Mr. Timothy Shoemaker, P.E.** to lead the QC/QA effort for this project on behalf of our Team. Mr. Shoemaker has 17 years of civil engineering experience on projects for the states of West Virginia and Kentucky which has included numerous projects and experience in roadway design, utility upgrades and grading. Moreover, he **fulfills the role of TRC's Quality Coordinator on a corporate level for the firm's Transportation Design Practice.** Leveraging such knowledge and stature within our organization, he will ensure the delivery of a quality product for the State of West Virginia.