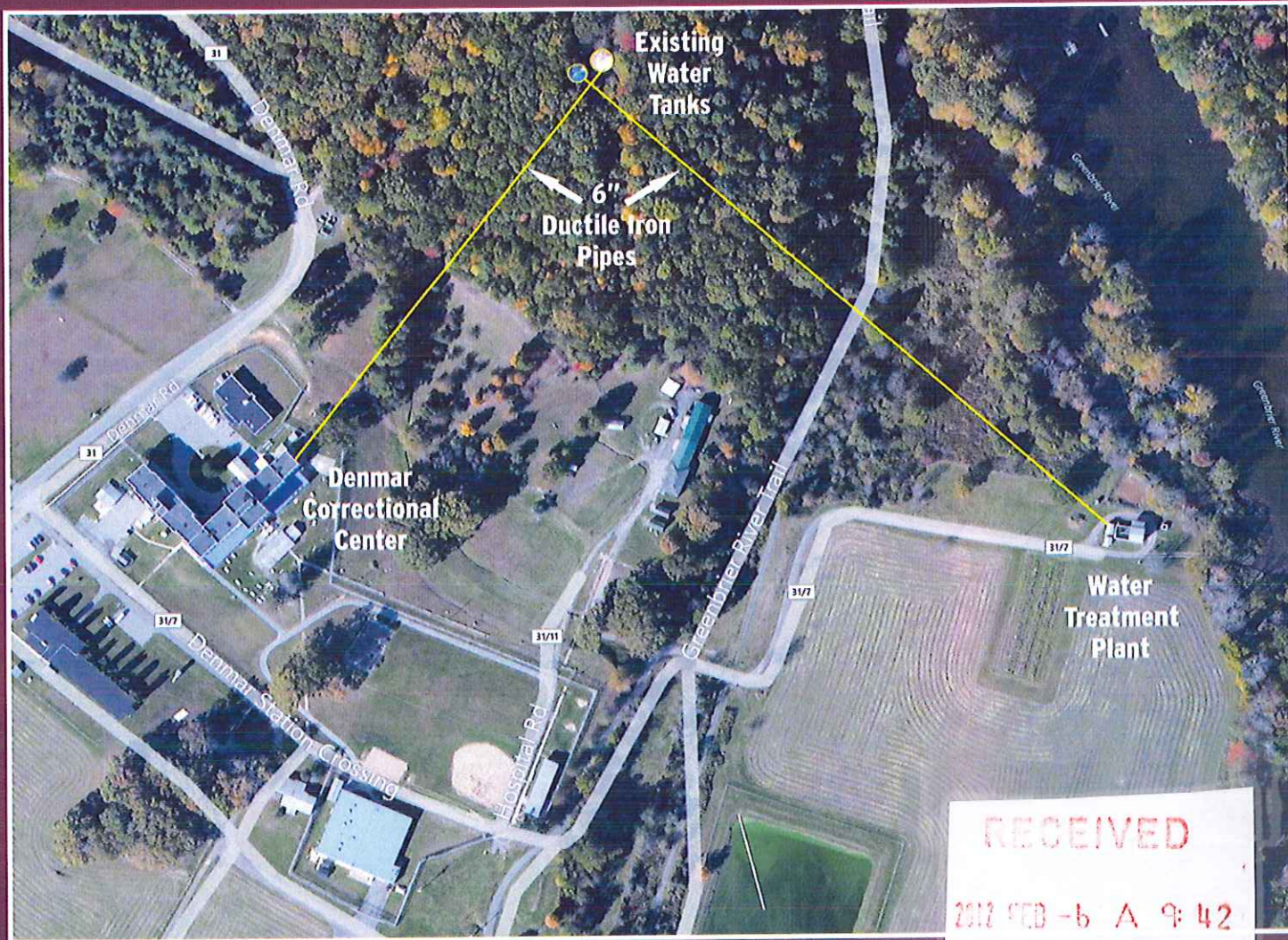


# West Virginia Division of Corrections Denmar Correctional Center Water Storage Tank Replacements RFQ Number: COR61489

February 7, 2012



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PURCHASING DIVISION  
STATE OF WV

Responsive People | Creative Solutions



William K. Hellmann  
Emeritus

February 7, 2012

David W. Wallace  
Stephen G. Zentz  
J. Michael Potter  
Thomas E. Mohler  
Michael W. Myers  
Mark M. Dumler

Department of Administration  
Purchasing Division  
2019 Washington Street, East  
PO Box 50130  
Charleston, WV 25305

James A. Zito

Re: Request for Expression of Interest  
WV Division of Corrections - Denmark Correctional Center  
Req No: COR61489

Joseph A. Romanowski, Jr.

Michael L. Krupsaw  
Lars E. Hill  
J. Tommy Peacock, Jr.  
Martin C. Rodgers  
Kenneth A. Goon  
Richard J. Adams, Jr.  
John A. d'Epagnier

In accordance with the West Virginia Purchasing Division, for the Agency, WV Division of Corrections, **Rummel, Klepper & Kahl, LLP (RK&K)** is pleased to submit a proposal to provide design and engineering services required for the replacement of two (2) existing water storage tanks located at Denmark Correctional Center. RK&K has extensive experience throughout West Virginia and the Mid-Atlantic region in designing water storage tanks and has completed several projects throughout the State which are very similar to the proposed project.

Barbara J. Hoage  
Christopher F. Wright  
Owen L. Peery  
Nancy R. Bergeron  
Stuart A. Montgomery  
David G. Vanscoy  
Henry J. Bankard, Jr.  
James F. Ridenour, Jr.  
Robert J. Andryszak  
Raymond M. Harbeson, Jr.

RK&K's staff of experienced engineers and technicians in Keyser and other offices have accumulated years of experience covering all aspects of public works projects including water; sewer; drainage; roads and streets; equipment evaluation and purchase; and recreational improvements. RK&K's team members committed to this project have a multitude of experience in design and construction of water tanks varying in size from 10,000 gallons to 3,000,000 gallons. Design experience includes precast concrete tanks, glass-coated bolted tanks, and welded steel painted tanks.

B. Keith Skinner  
Karen B. Kahl  
Sayed A. Saadat  
John C. Moore  
Eric M. Klein  
Todd E. Rousenberger  
Donald P. Lauzon  
Thomas M. Heil  
Robert D. Ostermiller  
Barry L. Brandt  
Malachi M. Mills, III  
James A. Burnett  
Brian L. Hepting  
Michael V. Gaffney  
Lee C. Yowell  
David A. Willoughby

**Rummel, Klepper & Kahl, LLP** is a 760-person multidisciplinary consulting engineering firm headquartered in Baltimore, Maryland. The firm has been providing services throughout the Mid-Atlantic and Southeastern states since 1923. RK&K's expertise encompasses water, environmental, sanitary, transportation, civil, structural, geotechnical, mechanical/electrical, natural gas/petroleum operations, and construction engineering inspection. Ranked #95 on the 2011 *Engineering News Record's* listing of Top 500 Design Firms, RK&K serves an array of Federal, State, and local clients from our headquarters and 14 branch offices in **Keyser, West Virginia**; Richmond, Virginia Beach, Newport News, Alexandria and Fairfax, Virginia; Raleigh and Charlotte, North Carolina; York, and Valley Forge, Pennsylvania; Dover, Delaware; Lakeland and Orlando, Florida; and Houston, Texas. The firm employs a well-diversified staff of engineers, planners, environmental specialists, surveyors, designers, draftsmen/CADD technicians, construction managers, inspectors, and support staff. RK&K's services involve feasibility studies, project planning, preliminary engineering, final design, and construction inspection/management.

#### WHY SELECT RK&K?

RK&K has developed an experienced engineering team to partner with the **West Virginia Division of Corrections** to provide services for a complete satisfactory project. The following items summarize the direct benefits of selecting RK&K for providing services to this project:


- Project team has extensive water system/storage tank design experience
- Project team has extensive experience in rehabilitating water tanks of a wide range of sizes.
- Technical expertise is unsurpassed, tailored to the specific needs of each client
- Proven project approach with a history of successful projects
- Full-service engineering firm capable of providing all required services
- Provides a high value of services with low overhead
- Able to start immediately to meet project timelines

While maintaining quality control as RK&K's top priority, Mr. Michael W. Myers, PE, Partner-in-Charge of RK&K's Keyser office has committed to making all necessary resources available to the project team for providing these services to the West Virginia Division of Corrections.

RK&K appreciates consideration of our qualifications and looks forward to working with the the West Virginia Division of Corrections on this project.

Very truly yours,

RUMMEL, KLEPPER & KAHL, LLP



David G. Vanscoy, P.E.  
Associate and Regional Manager

DGV:rlc

Enc.

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## FIRM HISTORY

### Origin

Rummel, Klepper & Kahl, LLP (RK&K) was founded in 1923 when two engineers named Richard Charles Sandlass and George Arnold Wieman, formed the consulting engineering firm of Sandlass, Wieman & Associates in Baltimore, Maryland. The firm prospered from steady growth and diversification of services. With the addition of Edward Rummel, Howard Klepper and William Kahl, the firm changed its name in 1951 to Rummel, Klepper & Kahl and has remained a partnership since that time.

### Ownership

RK&K became a limited liability partnership in 1998; current partners include:

- |  |   |
|--|---|
| <input type="checkbox"/> David W. Wallace, PE. | <input type="checkbox"/> Thomas E. Mohler, PE |
| <input type="checkbox"/> Stephen G. Zentz, CPA | <input type="checkbox"/> Michael W. Myers, PE |
| <input type="checkbox"/> J. Michael Potter, PE | <input type="checkbox"/> Mark M. Dumler, Esq. |

Working closely with the partners are Partner Emeritus William K. Hellmann, PE, former Maryland Department of Transportation Secretary, and Associates – key leaders who manage and coordinate projects and staff, serve as liaisons with clients and sub-consultants, and enhance projects with their vital technical expertise. RK&K currently has 34 associates located in eight (8) states. The Keyser, WV Office is managed by RK&K Associate, David G. Vanscoy, P.E.

### Professional Registrations

RK&K supports the professional growth of its employees. The firm offers paid leave as well as exam expenses for engineers seeking professional engineering licenses. Presently, RK&K has over 150 professional engineers registered in 16 states and the District of Columbia.

### Reputation and Philosophy

RK&K is one of the most respected engineering firms in the mid-Atlantic and Southeastern regions. RK&K is a partnership that promotes teamwork, while stressing quality and service, resulting in product driven responsiveness to clients' needs. RK&K is technically strong, diverse and aggressive, yet respectful. RK&K is large enough to compete with national firms, yet small enough to know employees faces and names. RK&K knows that its dedicated people are our greatest asset.

**OVERVIEW OF THE FIRM**

Rummel, Klepper & Kahl, LLP is a 760-person multi-disciplinary consulting engineering firm headquartered in Baltimore, Maryland. The firm has been providing services throughout the mid-Atlantic and Southeastern regions since 1923. RK&K's expertise is in sanitary, environmental, civil, transportation, structural, geotechnical, mechanical/electrical, natural gas/petroleum operations and construction engineering and inspection. Ranked #95 on the 2011 *Engineering News-Record's* listing of Top 500 Design Firms, RK&K services an array of Federal, State, and local clients from our headquarters and 14 branch offices in Keyser, West Virginia; Richmond, Virginia Beach, Newport News, Alexandria and Fairfax, Virginia; Raleigh and Charlotte, North Carolina; York, and Valley Forge, Pennsylvania; Dover, Delaware; Lakeland and Orlando, Florida; and Houston, Texas. The firm employs a well diversified staff of engineers, planners, environmental specialists, surveyors, designers, draftsmen/CADD technicians, construction managers, inspectors, and support staff.



RK&K's services involve feasibility studies, project planning, preliminary engineering, final design, and construction inspection/management. RK&K has provided the full range of engineering and inspection services including:

- Sanitary Engineering:** water and wastewater pipeline, pumping and treatment facilities; industrial and solid waste disposal; wet-weather compliance; system modeling and operations
- Water Resources Engineering:** hydrology/hydraulic analysis, stream restoration, TMDL reduction strategies, flood control, floodplain studies, storm drainage structures, stormwater management, sediment/erosion control and soil bio-engineering
- Site Development:** educational, medical, commercial, industrial, recreational/sports and waterfront facilities; military installations
- Natural Gas, Petroleum and Pipeline Engineering and Consulting:** natural gas pipelines, transmission and distribution systems and facilities; petroleum pipelines, storage, distribution, training and related facilities; system modeling and analysis; and natural gas utility consulting services
- Environmental Engineering:** facility and site assessments; hazardous and toxic waste site characterization and remediation; spill plan development, spill containment system design; underground/aboveground storage tank system testing, design, installation and closure; and hazardous material handling
- Utility Alignment, Rehabilitation, and Relocation:** all public and private utilities
- Natural Environment:** wetland delineations/mitigations; stream classifications/stabilization; forest stand delineations; natural resource inventories; rare, threatened and endangered species surveys

and biological assessments; and completing supporting environmental technical reports, documentation and regulatory agency coordination

- ❑ **Transportation Engineering:** highways, interstates, roadways and streets, interchanges, collector-distributor roads, roundabouts, railroads and mass transit, toll facilities, and airport landslide facilities
- ❑ **Construction Management and Inspection:** bridges, highways, buildings, water and sewer, utilities and other public works facilities
- ❑ **Structural Engineering:** bridges and related transportation structures, tunnels, site-specific utility structures, culverts, retaining walls, noise barriers, foundations, piers, bulkheads, relieving platforms and fetties
- ❑ **Traffic Engineering:** traffic forecasting and analysis; highway signing, pavement marking and lighting; traffic signal design; traffic control; maintenance of traffic during construction; traffic impact studies; high accident location studies; travel time/delay studies; warrant, capacity, intersection/interchange, arterial, queuing and roundabout analyses; and trip generation/distribution
- ❑ **Geographic Information Systems (GIS):** GIS needs analysis, master plans, design/development and implementation management, conversion services, training and support, relational database administration, field collection and data verification (conventional and GPS), custom GIS programming and integration services, document scanning and image archive development
- ❑ **Geotechnical Engineering/Geology:** retaining walls, foundations, dams and impoundments, groundwater supply/management/quality investigations, slope stability and dredged material management
- ❑ **Permit Application and Acquisition:** Section 401/404, CERCLA, RCRA, NPDES, wetlands, natural resources, floodplains, stormwater management and sediment/erosion control

#### DETAILED STATEMENT OF FIRM'S CAPACITY TO PERFORM THE WORK

##### A. Introduction

RK&K has achieved great success in sanitary/water and environmental engineering since entering the field in 1946. During this time, RK&K has placed numerous water projects into successful operation. Our firm's environmental/sanitary engineering experience covers the full spectrum of services including evaluation, planning, design and construction management for water supply, treatment, pumping, storage, transmission and distribution systems. Our water projects have included new construction, rehabilitation, upgrading and expansion of water treatment plants, pumping stations, transmission/distribution mains and storage facilities including raw water storage reservoirs and finished water storage tanks. RK&K has also been involved in numerous studies to evaluate the adequacy of existing facilities and to develop and evaluate alternatives for new

facilities that best meet the current and future needs of our clients.

**B. Water System Studies**

RK&K has provided strategic planning services to a number of clients to assist them in providing services to their customers. The scope of these services has literally ranged from "source to tap" and has included evaluation of raw water supplies, evaluation of raw water intake and pumping facilities, evaluation of treatment processes, evaluation of finished water pumping alternatives, and evaluation of distribution system and storage requirements. These studies often have evaluated the condition and adequacy of existing facilities to meet clients' needs, both in the short term and the long term. RK&K uses various software packages such as Bentley WaterCAD (Haestad Methods Solution Center) by Bentley Systems to perform computer simulations and hydraulic modeling of water systems for both normal usage and fire demand conditions. Pilot testing and computer modeling have been used in a number of projects to best evaluate a variety of conditions. Additional services provided have included treatment system troubleshooting, water chemistry analysis and operator training.

**C. Water Storage Facilities**

RK&K's specialized experience with water storage facilities includes the design of elevated steel and ground-level storage facilities, the design of prestressed-precast concrete storage facilities, the rehabilitation design of reinforced concrete storage facilities, and the design of foundations required to support these facilities. The sizes have ranged from 0.1- to 29.0 MG. A number of these storage facilities have required that specific consideration be given to siting aesthetics because of their proximity to residential areas and special construction measures due to archeological and historical concerns.



Capacities of many of these facilities have been confirmed by computer modeling. RK&K has participated in several public relations/participation programs and assisted the client in public presentations by preparing informative and innovative visual aids.

The following table identifies recent/past projects involving storage tanks designed by members of the project team assigned to this project.

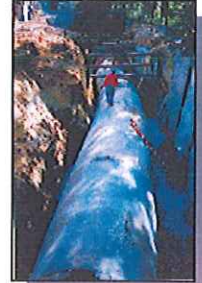


Client	Tank Size (Gallon)	Type
Frankfort Public Service District Wiley Ford Water System	300,000	Steel Painted
Board of County Commissioners Garrett County, Maryland Thayerville Water System	1,000,000 165,000	Precast Post-Tension Concrete
Town of Lonaconing	3,000,000 500,000	Precast Concrete Glass Lined Steel
Frankfort Public Service District Northern Mineral County Sewer System (Wastewater Storage Tanks)	161,000 (2) 643,000 (2) 161,000 (1)	Precast Concrete
New Creek Water Association	140,000 365,000 40,000 140,000 74,000	Glass Lined Steel Glass Lined Steel Steel Painted Glass Lined Steel Glass Lined Steel
Mineral County Development Authority Fort Ashby Industrial Park	242,000	Glass Lined Steel
Grant County Public Service District	297,000	Glass Lined Steel
Corporation of Harpers Ferry	240,000	Glass Lined Steel
Town of Carpendale	212,000	Glass Lined Steel
City of Keyser	60,000 75,000	Steel Painted Glass Lined Steel
Hampshire County Development Authority Capon Bridge Industrial Park	500,000	Steel Painted

**D. Water Transmission Mains**

RK&K's specialized experience in water distribution and transmission spans nearly a half-century during which time numerous projects have been planned, designed, and placed into successful operation. RK&K's specific experience relative to the study and design water transmission mains include:

- Provision of varied pipeline alignment studies and designs for small (<30" diameter) and large (>30" diameter) water transmission mains; complete municipal distribution systems (4-12" diameter); discrete high-pressure fire-fighting loops; and utility relocations performed in conjunction with major highway, rail, pier facility, and urban renewal projects.
- Study and/or design of water mains ranging to 108 inches, working pressures in the range of 50 to 250 psi, and lengths from 1,000 to 50,000 linear feet.
- Use of such construction materials as prestressed concrete cylinder pipe (PCCP), steel pipe, ductile iron pipe (DIP), reinforced concrete pipe (RCP), polyvinyl chloride (PVC) pipe and high-density polyethylene (HDPE) pipe.
- Familiarity with various pipeline environments including conventional trenches with pile, bent, cradle, or indigenous material foundations; subaqueous crossings; bridge suspensions; tunnels; construction within agency and railroad rights-of-way; and construction in contaminated areas.
- Familiarity with design of new and/or relocated water mains through both newly-developed and redeveloped areas in the mid-Atlantic region.
- Experienced in the application of hydraulic network analysis computer modeling including KYPIPE and CYBERNET. Ability to analyze and model dynamic mode and extended period simulation water distribution system hydraulics.
- Experienced in the design of pipe thrust restraint methods including pipe restrained joint systems, concrete buttress and blocking and combinations of these methods. Familiarity with issues of water main service continuity and problems with pressure pipe harnessing/buttrusses in areas of proximate active excavation.
- Use of corrosion control methods for water mains, force mains, and gas mains including adjustable impressed current and passive sacrificial anode cathodic protection systems as well as polyethylene wrap protection and multi-layered pipeline coating system.
- Successful performance of public relations and community outreach programs.
- Experience with construction phase engineering and resident inspection services during construction of water mains ranging up to 96-inches in diameter.



#### **E. Geotechnical Services**

RK&K has a fully-equipped and staffed geotechnical laboratory which allows performance of a broad scope of soil and groundwater tests. The RK&K geotechnical engineering department has been involved in the field investigations, laboratory testing, analyses, and geotechnical report preparation for various municipal engineering facilities in excess of 30 years. During this period, numerous treatment plants, pumping stations, solid waste disposal facilities, earth and rock fill dams, levees,



floodwalls, lagoons, water supply wells and water supply reservoir projects have been investigated and final designs prepared. In addition, remedial measures and upgrades of existing facilities have been analyzed and geotechnical input provided for final design. For essentially all of these projects, test borings and observation wells have established soil, rock, and groundwater conditions at the site which, when used in conjunction with laboratory test results where required, has resulted in the most practical foundation system or rehabilitation measures for the project.

**F. Environmental Assessments**

The RK&K Team includes individuals experienced in identifying jurisdictional waters of the U.S., including the vegetation, soils, and hydrology for wetland delineations. Several of our key and support staff are U.S. Army Corps of Engineers' (COE) certified wetland delineators and/or professional wetland scientists. RK&K has the ability to assess functions and values of affected wetlands using techniques such as the Hollands-Magee method, Soil Conservation Service Method, Hydrogeomorphic Classification method (HGM) Rapid Assessment Procedure (Magee-Hollands Method) or other accepted methods.

RK&K has conducted several hundred wetland delineations and numerous functional assessments throughout the Mid-Atlantic regions. Wetland delineations are performed in accordance with the 1987 COE Manual and have been approved by, and jurisdictional determinations have been obtained from, various COE districts, including Baltimore and Norfolk.

RK&K includes professionals skilled in delineating and documenting stream conditions (physical and biological), submerged aquatic vegetation habitat, and water quality conditions. RK&K has experience using a variety of methodologies for characterizing stream conditions including Rosgen Stream Classification, U.S.D.A.'s Stream Visual Assessment Protocol and EPA's Rapid Bioassessment Protocols. In addition, a member of our team developed a stream classification methodology for use by the Chesapeake Bay Local Assistance Department to classify perennial versus intermittent streams.

RK&K also has extensive experience in preparing ecological technical reports. These reports include biological assessments prepared in compliance with the Endangered Species Act. For the Woodrow Wilson Bridge Replacement project, we prepared biological assessments for the Hay's Spring Amphipod and assisted in field surveys for the Bald Eagle. Other technical reports routinely prepared include: environmental impact statements; environmental assessments; wetland delineations and identification reports; natural resource inventories; cultural resource inventories; Phase I & II hazardous material investigation; forest stand delineations' avoidance and minimization report; mitigation site selection report; hydrologic and hydraulic studies; and geotechnical investigations.

**G. Construction Inspection / Management Experience**

RK&K's construction department has been providing construction phase services for nearly 40 years involving hundreds of public works' projects with aggregate construction costs in the billions of dollars. Projects include roadways, bridges, transit tunnels, subways, hydroelectric plants, marine facilities, water and wastewater treatment plants, water and sewer infrastructure, pumping stations, stormwater management and flood control facilities plus a variety of building projects. Many of our projects involve a full range of construction management/administration and inspection services from design, preconstruction, construction and post-construction phase, including materials testing, tests and start-up, claims resolution, CPM scheduling, and contract close-out. RK&K's construction engineering and inspection services involve public works, capital improvements, transportation and/or development projects including: water and sewer infrastructure, pumping stations, intake lines, transmission mains, force mains, water/wastewater plant upgrades; and various building projects involving new structures, rehabilitation, mechanical/electrical modifications and upgrades, and other improvements.

RK&K has over 149 construction engineering/inspection personnel of varying levels of expertise. RK&K's employees are knowledgeable about traditional as well as state-of-the art construction inspection practices and procedures, materials testing techniques, and are proficient in the use of computers. Many of RK&K's staff are NICET-certified, Troxler nuclear gauge trained, hold state erosion and sediment control certifications, are certified or approved by client's materials laboratories, and have solid backgrounds and expertise in field surveying and construction layout.

**H. Cost Estimations**

RK&K's cost control plan focuses on both our internal cost and assignment schedule and the construction cost of the facilities being designed. In this atmosphere of budgetary constraints, nobody likes surprises! Therefore, RK&K maintains a monthly routine of monitoring and updating project costs. Our management information system provides timely reports so that project/task managers know where they are from a budget standpoint on a real-time basis. As a quality management technique, RK&K prepares construction cost estimates by hand in addition to using an automated cost estimating system. The owner is notified immediately when a condition/circumstance exists that affects the budget of the project. This approach has proven very effective with construction bids consistently within 5% of the cost estimate for contracts for \$1,000,000 or less and within 3% for contracts greater than \$5,000,000. Construction change orders have been consistently within 2% of construction cost, a good example of this is the Wiley Ford Sewer Project. The \$2.57 million line project has less than 0.4% in change orders other than line additions completed due to available funds.

The following table illustrates a history of RK&K project design, preliminary, and actual costing record.

PROJECT NAME	STUDY ESTIMATE	CONSTRUCTION ESTIMATE	LOW BID
Grant County PSD Water Main Relocation and Pump Station Upgrade	N/A	\$231,000	\$229,500
Grant County PSD Maysville Storage Tank	N/A	\$383,000	\$428,880
Capon Bridge Technology and Industrial Park	N/A	\$1,400,000	\$1,486,000
New Creek Water Association	N/A	\$1,900,000	\$2,043,000
Wiley Ford Sewer	\$4,200,000	\$4,100,000	\$2,944,000
Town of Lonaconing-Waterline Replacement	\$600,000	\$620,000	\$634,000
Keyser Sewer Improvements	N/A	\$2,500,000	\$2,499,870
Witchduct Point Water and Sewer Improvements	N/A	\$1,522,000	\$1,787,000
Kempsville Road 42" Water Main	\$1,400,000	\$1,368,000	\$1,325,000
Ocean Pines Treatment Plant	\$5,200,000	\$5,746,000	\$4,973,000
Fullerton Water Transmission Main	\$9,500,000	\$9,614,950	\$10,359,41
Monrovia Wastewater Treatment Plant	\$1,900,000	\$2,100,000	\$1,600,000

**I. Timeliness, Quality and Constructability of Previous Projects**

As a partnership in providing professional engineering services since 1923 and celebrating our 85th anniversary in 2008, RK&K places a high priority on quality management, personal service and being responsive to the needs of clients. This priority is reflected in the firm's culture and based on RK&K's policies and procedures. It is our belief that this is the primary reason why RK&K receives over 90% of engineering assignments from current and past clients. RK&K has historically developed long-term relationships with numerous clients and has consistently met or exceeded all established project milestones for our civil/sanitary engineering projects. Numerous municipal clients throughout the mid-Atlantic region have continuously looked to RK&K for the planning, analysis, and design of their water systems and appurtenances. These long-term relationships were established by providing high-quality, consistent and responsive professional services. The best evidence of the quality and timeliness of engineering services on RK&K's past projects is provided by those served. Therefore, you are encouraged to contact any or all of the following references to confirm the quality and timeliness of RK&K's services.

CLIENT	CONTACT	TELEPHONE NUMBER
Grant County Public Service District	Lori Kimble	304.257.2377
New Creek Water Association	Rob Riggleman	304.788.5886
Frankfort Public Service District	Mike Bland	304.788.5921
Town of Lonaconing	John Coburn, Jr.	301.463.6233
Greater Marion Public Service District	Carol Brooks	304-287-2244
Charles Town Utility Board	Jane Arnett	304.725.2316
City of Keyser	Sonny Gank	304.813.4448
Town of Ridgeley	Richard Lechliter	240.291.8431
Allegany County Department of Public Works	Mark Yoder	301.777.5951
Board of County Commissioners Garrett County, MD Department of Public Utilities	Patrick Hudnall	301-334-7465

**REPRESENTATIVE PROJECTS**

Project profile sheets are provided in Section 4 which demonstrate the RK&K Project Team’s experience in providing preliminary and final engineering design services, plan preparation, and contract document preparation, as well as construction inspection services for projects such as this water tank replacement project for Dunmar Correctional Center. These projects demonstrate RK&K’s ability to accept and complete this project to the complete satisfaction of West Virginia Division of Corrections.

## STAFF

**Capacity to Perform the Work**

The most important element to the success of an engineering project is having the staff available to complete the assignment on time and within budget. RK&K is a firm recognized for responding quickly and efficiently to client requests. RK&K's Keyser, WV office includes a staff of 25 engineers, technicians and inspectors, all of whom are available immediately for this project. In addition to a full-service engineering staff in Keyser, RK&K employs over 760 experienced engineers, planners, scientists and technicians throughout the Mid Atlantic Region. The RK&K Team will have the ability to draw on a multitude of experience and resources from any of RK&K's 15 offices.

**Project Team**

**Michael W. Myers, PE, Partner-in-Charge** will assume the overall responsibility for the team, sighting quality assurance and quality control as the top priority. Formerly a Captain stationed in Denver, Colorado, with the U.S. Army's Environmental Hygiene Agency, Mr. Myers has been involved in many technically diverse planning, study and design projects throughout the mid-Atlantic region.

The project will be managed out of RK&K's Keyser, West Virginia office with **David G. Vanscoy, P.E.** as project manager. Dave provides technical leadership and management of projects in RK&K's Keyser Office. Dave has over 39 years of experience in civil and structural engineering, with an emphasis on municipal public works projects. Dave earned his bachelor's degree from the West Virginia Institute of Technology and his master's degree from West Virginia University in Morgantown. He is a registered professional engineer in West Virginia and Maryland, a registered land surveyor in West Virginia and an active member of the American Society of Civil Engineers and West Virginia Rural Water Association.

**John W. Cole, PE** will serve as Design Engineer, responsible for the overall design of the water storage tanks, and will act as liaison between RK&K and the WV Division of Corrections. Mr. Cole has over 10 years of design experience with public works projects. He is a registered professional engineer in West Virginia and Maryland. John will work closely with key team members with the overall design of the project.

**Larry W. McDowell, PE, PS** will serve as **Construction Engineer**, responsible for construction management and inspection on the project. Mr. McDowell has over 38 years of diverse engineering experience associated with all aspects of projects such as this project for the WV Division of Corrections. Since joining RK&K in 1999, Larry has managed the construction of many projects, most recently the Town of Lonaconing Water Improvement Project.

**Christopher S. Darber** will serve as **Inspector** on the construction of the project. Mr. Darber joined RK&K in 1999 and since then has been lead inspector on many projects similar in scope to this one for

the WV Division of Corrections. He is very detailed in his work, understands project requirements, and is well versed in filling out inspectors' daily reports and computing quantities of work in place necessary for approving contractor's payment requests.

**RK&K's Team Members** –highly qualified individuals with vast knowledge and experience in their particular fields - will assist the key leaders listed above on this project. Members have been chosen for their ability and experience on past relevant projects, as well as availability to perform the work. This team has provided a multitude of planning, design and construction phase services for water system improvement projects throughout the mid-Atlantic region, many of which involved water storage tanks.

On Page 2-4 of this section, a **team organization chart** depicting the team members and the management flow is provided. **Resumes** of each key team member are also included.

#### **RESOURCES AVAILABLE FOR ASSURING ACCURACY OF DRAWINGS AND COMPATIBILITY OF MATERIALS**

##### **Quality Assurance**

RK&K recognizes the importance of developing the highest quality designs and contract documents. RK&K has developed a Quality Assurance/Quality Control Manual to fulfill this commitment. This manual is distributed to every employee at RK&K and is reviewed periodically thus enabling RK&K to continuously update/improve our Quality Assurance/Quality Control Program.

To provide well-conceived approaches and technically accurate plans, specifications, and construction cost estimates, prepared on schedule and within established budgets, RK&K employs a Total Quality Management (TQM) approach. Implementation of this approach is embodied in seven components, which are followed from project inception through construction start-up.

These seven components include:

1. Initial development of investigative approaches and design concepts by a select team composed of the project manager, project engineer and task leaders, with proven capabilities in the disciplines required by the project.
2. Development of an in-house work plan by the partner-in-charge/project manager, which establishes a well-defined workflow process. The plan will address (a) the needs of the Client, (b) standards to be applied, (c) permits required, (d) critical or potential problem areas, (e) identification of long lead items, (f) coordination with subconsultants and other RK&K departments, (g) man-hours and budgets, and (h) schedule.
3. Conducting an in-house project initiation conference with key department and inter-department staff. The importance of communication among all project team members and the necessity of meeting the requirements of "internal" as well as "external" clients are stressed.



4. The Quality Control (QC) Group, made up of senior technical personnel who are not directly involved in the day-to-day efforts, will be convened at the initiation of the project and will continue through the contract documents phase.
5. The project manager and project engineer will have direct project involvement and will monitor conformance to the requirements established by the work plan. Project monitoring will include adherence to continuous checking procedures, documentation requirements, and progress reporting as well as overall quality control.
6. Final quality control checks by the partner-in-charge, project manager, project engineer and QC Group will be provided prior to each submission.
7. Prior to submission of each plan submittal, RK&K's construction management professionals will conduct a constructability review to identify potential problems which could lead to preventable construction related difficulties, concurrent with the QC reviews. Larry W. McDowell, PE, an RK&K project engineer with over 38 years of construction, surveying and engineering experience, will be responsible for the constructability reviews. He has served as project engineer on various projects during his 12 years with RK&K including storage tank, water, sewer, and treatment plant projects.

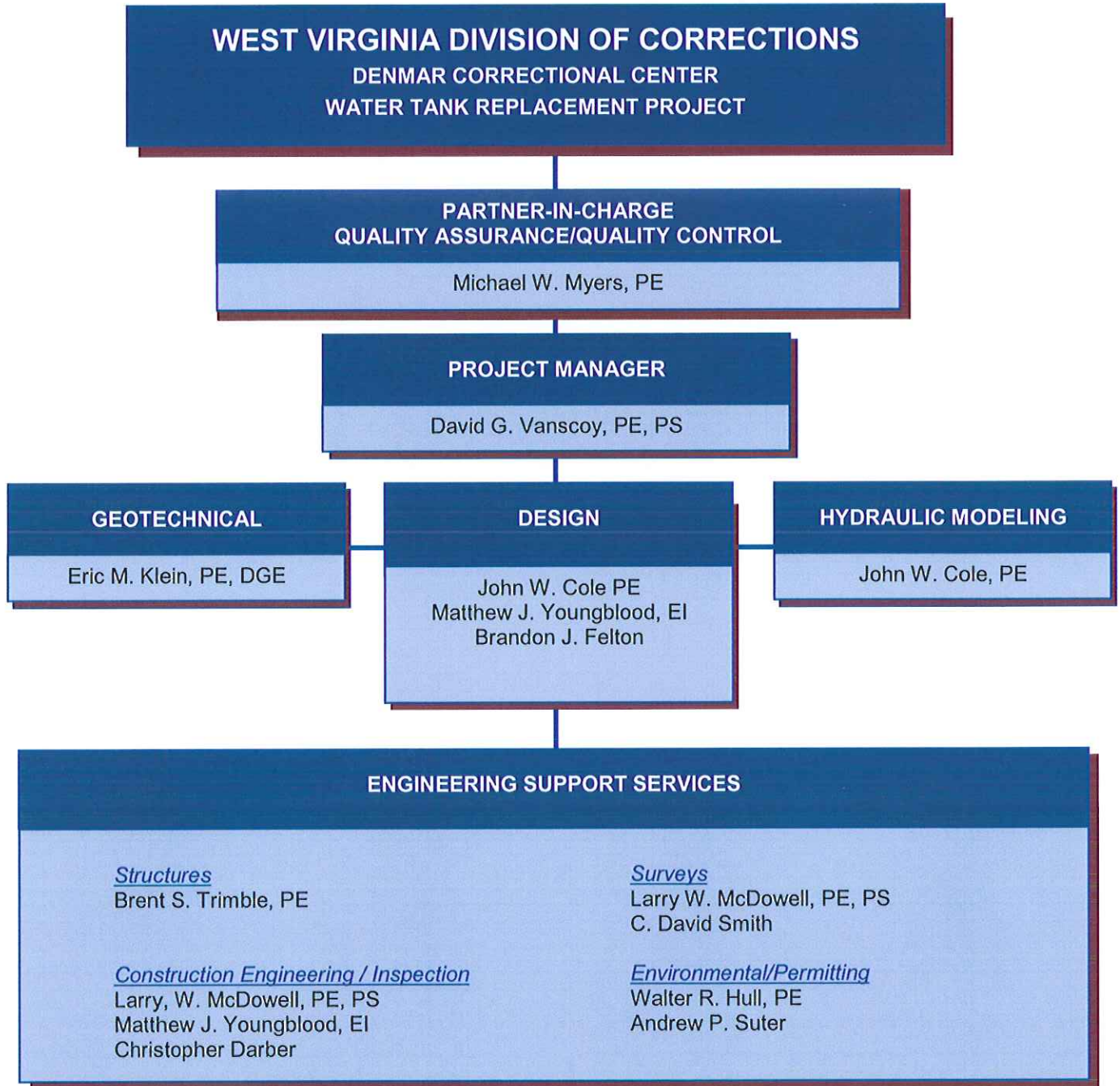
#### Quality Control Group Review

As noted above, a Quality Control Group will review the project design at its initiation, at key points during design – schematic design, design development and construction documents phases - prior to submission to WV Division of Corrections. The quality control group will include senior engineers with extensive experience in this type of project. The Quality Control Group will provide an advanced "fresh look" in an effort to identify key issues and will review technical work as it progresses. By doing so, work is reviewed throughout the project and an effort is made to identify and eliminate the "element of surprise".

#### Cost Control

Budgets will be carefully monitored on a weekly basis by the project manager and the project engineer. RK&K's MIS system allows the management team to monitor progress versus budget, to identify problem areas early, and to take the appropriate action to see that tasks are completed within budget. RK&K's automated MIS system provides our managers with a report that includes a breakdown of man-hours and payroll by individual tasks for "budget", "actual payroll used", "available to complete" and the budgeted and actual hourly payroll rates. RK&K's MIS system also provides our project management team with a list of the employees who worked on each project task and the hours each employee charged during the weekly report period. This report, which is available "on-line" approximately three days after the end of the weekly report period, permits managers to monitor a project's status quickly and efficiently from the manager's own workstation.

RK&K PROJECT ORGANIZATION CHART



**MICHAEL W. MYERS, PE**

Partner

**Assignment:** Partner-in-Charge / Technical Review**Years Experience:** Total: 25 / With RK&K: 20**Education:** BS/Civil Engineering/1985

MA/Management/1989

**Registration:** PE/1992/Civil Engineering/ Registered in MD, PA, VA, DC, DE, TX**Specialized Experience**

Mr. Myers has more than 25 years of experience in all aspects of sanitary/environmental engineering including design, construction, start-up, operator training, operation and maintenance and troubleshooting for large capacity wastewater treatment plants and pumping stations. Since joining RK&K, Mr. Myers has served as partner-in-charge, project engineer/manager or design engineer on the following similar projects:

**Braddock Heights Water Storage Tank, Frederick County, Maryland.** Geotechnical investigation and site engineering for new 400,000-gallon water storage tank.

**Country Walk Tank, Booster Station and Water Transmission Mains, Harford County, Maryland.** Associate in charge of construction phase services for 2,000 feet of 24-inch water transmission main.

**D.C. Children's Center Water Storage Tank and Booster Station, Anne Arundel County, Maryland.** Responsible for layout, design and siting of a 200,000-gallon water storage tank and pumping station for fire protection. Project also included installation of a 6-inch backflow preventer and concrete access vault.

**On-Call Engineering Services, Walkersville, Maryland.** Associate-in-charge of the three-year on-call contract to provide water treatment design and operations support, development review, utility design, geotechnical analysis and investigations, roadway repairs and other miscellaneous tasks requested by the Town.

**Meadows Water System Improvements, Frederick County, Maryland.** Design and construction phase services for new PRV, booster pumping station and water storage facilities.

**New Market Water System Extensions, Frederick County, Maryland.** Associate-in-charge for project currently nearing completion of design phase involving the design and construction of 7,150 linear feet of 12-inch water main, and 900 linear feet of 8-inch water main and over 100 water services connections. Project included surveys and geotechnical investigations.

**Phase 2 Comprehensive Plan for Water Facilities, Baltimore, Maryland.** Responsible for hydraulic modeling using WaterCAD to update the City's Master Water Plan referred to as the Central System/Geyer Wolff Report. Tasks included updating population and system demand projections, development of the City's water distribution system model, a source tracking analysis to identify cost allocation percentages for future capital improvements and an evaluation of system deficiencies and recommended improvement projects thru 2025.

**DAVID G. VANSCOY, PE**

Associate

**Assignment:** Project Manager  
**Years Experience:** Total: 39 / With RK&K: 12  
**Education:** MS/Structural Engineering/1972  
BS/Civil Engineering/1970  
**Registration:** PE/1974/Civil Engineering/ Registered in WV, MD

**Specialized Experience**

Mr. Vanscoy has over 39 years of experience in public works projects. His career started as a summer interim for the West Virginia Department of Highways in 1966, being first employed there for 7 years after obtaining a masters degree in structural engineering from West Virginia University at Morgantown. In 1987, Mr. Vanscoy started his own firm in Keyser, West Virginia, and served as City Engineer on a consultant basis. Mr. Vanscoy has diverse experience in design of water and wastewater treatment plants and facilities as well as construction management. In June 1999, Mr. Vanscoy joined RK&K as the regional manager in charge of the Keyser, West Virginia office and was later promoted to an associate. Relevant experience includes:

**Grant County Public Service District, Petersburg, WV:** project manager on construction of 297,000 gal. Maysville water storage tank, Points pump station upgrade, relocation of 5,700 LF of water main line on U.S. Route 220 South. Project commenced in April of 2008, with substantial completion achieved on schedule in September 2008. Additional radio telemetry completed with available contingency funds due to completion of work within budget .

**New Creek Water Association, New Creek, WV:** project manager for evaluation of existing system. Project manager for design and construction of 140,000 gallon storage tank; 350,000 gallon storage tank; 30,000 gallon storage tank; new booster station; upgrade booster pumping stations; addition of fire hydrants to system; drilling of well.

**Frankfort Public Service District Wiley Ford Water, Mineral County, WV:** project manager for design, contract plans and construction of water system consisting of over 55,000 feet of water line including construction of a new 297,000 gallon water storage tank. .

**Thayerville Water System, Garrett County, MD:** project manager responsible for the design of a 600 gpm water treatment facility, a 1 MG & a 165,000 gallon water storage tanks, a 110 gpm & a 50 gpm remote booster stations, and distribution system consisting of various lengths of 2" through 12" dia. pipe.

**Charles Town Utility Board, Charles Town, WV:** project manager responsible for overseeing design and construction of various water and sewer on-call projects. Projects range from the design of new sewage lift stations, modifications to an existing sewage lift station, design of over 20,000 LF of sewage force mains, to overseeing painting of two elevated water storage tanks and water treatment plant.

**Town of Lonaconing, Maryland, New Water Distribution System:** project manager for the design and construction of over 40,000 LF of water line replacement, touch read and radio read water meters to existing system through multiple projects in various phases. Three projects serving approximately 80 customers utilized Abandon Mine Lands funding.

**Wiley Ford Water System, Mineral County WV:** project manager for replacement of approximately 55,400 LF of water main to improve the service and quality of water. The project will also include a new 300,000 water tank and booster station to provide improved water pressure and supply. The second phase of this project will be locating a suitable well(s) source to supplement the existing water connection.

**JOHN W. COLE, PE**

Project Engineer

**Assignment:** Design/Hydraulic Modeling  
**Years Experience:** Total: 10 / With RK&K: 10  
**Education:** BS/Civil Engineering/2001  
**Registration:** PE/2008/Civil Engineering/ Registered in WV, MD

**Specialized Experience**

Mr. Cole is an engineer in the Keyser Office with over 10 years of design experience in public and private works projects. His career started as a summer interim for the West Virginia Department of Highways in 2000. Since joining RK&K in 2001, Mr. Cole has developed a diverse experience in design of water and wastewater treatment plants, distribution and collection systems, residential subdivision development as well as construction management. Relevant experience includes:

**Thayerville Water System, Garrett County, MD:** project engineer responsible for the design of a 600 gpm water treatment facility, a 1 MG & a 165,000 gallon water storage tanks, a 110 gpm & a 50 gpm remote booster stations, and distribution system consisting of various lengths of 2" through 12" dia. pipe.

**New Creek Water Association – Construction Contract 3, New Creek, WV:** project supervisor responsible for overseeing contractor during the cleaning, rehabilitation, and painting of a 100,000 gallon and 50,000 gallon water storage tanks.

**LaVale Sanitary Commission, LaVale, MD:** assisted in the design and construction of replacement of distribution mainline and services.

**Wiley Ford Water System, Mineral County WV:** developed the hydraulic model on the replacement of the approximately 55,400 LF of water mains to improve the service and quality of water. Assisted in the permitting applications and construction funding. The project will also include a new 300,000 water tank and booster station to provide improved water pressure and supply. The second phase of this project will be locating a suitable well(s) source to supplement the existing water connection.

**New Creek Water Association – Construction Contract 1 & 2, New Creek, WV:** assisted in the design and construction of approximately 5-miles of water line extension and the addition of fire hydrants to existing system.

**Town of Lonaconing, Maryland, New Water Distribution System:** assisted in the design and construction of over 20,000 LF of water line replacement on existing system. Mill Run Project is being funded by AML.

**Greater Marion Public Service District, Marion County, WV:** engineer with Inflow and Infiltration study; preparation of Conceptual Design to replace the failing vacuum collection system with gravity and force main collection; overseeing design efforts for the sewer replacement which will consist of 25,200 LF of gravity sewer, 9,500 LF of pressure sewer, 7,400 LF of force main, 2 sewage pump station, 1 major river crossing; currently assisting in obtaining construction funding.

**Charles Town Utility Board, Charles Town, WV:** project engineer responsible for overseeing design and construction of various water and sewer on-call projects. Projects range from the design of new sewage lift stations, modifications to an existing sewage lift station, design of over 20,000 LF of sewage force mains, to overseeing painting of two elevated water storage tanks and water treatment plant.

**ERIC M. KLEIN, PE, DGE**

Associate

**Assignment:** Geotechnical**Years Experience:** Total: 32 / With RK&K: 13**Education:** BS/Civil Engineering/1983  
MS/Civil Engineering/1998**Registration:** PE/1990/Civil Engineering/ Registered in MD; VA; PA; FL; DE; Washington, DC**Specialized Experience**

Mr. Klein, the Associate that manages RK&K's Geotechnical Division, is experienced in the management and development of subsurface exploration programs, geotechnical recommendations, preparation of construction documents, cost estimates, and construction phase services. Mr. Klein is involved in a variety of projects including buildings, bridges, subways, roadways, airports, excavation support systems, retaining walls, underpinning, SWM, reinforced soil slopes, MSE's, slope stability analysis, tie-backs, and failure studies. He has experience using standard soil and rock boring and testing techniques as well as oriented rock cores, and has worked in restricted areas such as inside buildings in secure areas of airports and in interstate highway rights of way. He is also experienced in using in situ testing such as the pressuremeter, dilatometer, cone penetrometer, double-ring infiltrometer, and geophysics such as seismic refraction and EM conductivity. He serves the professional community by chairing the NCEES Geotechnical Committee and writing professional papers for publication. He was inducted into the Geo- Academy as a Diplomate in Geotechnical Engineering in 2009.

**Relocation of 48-inch Waterline Under Baltimore Harbor, Baltimore Maryland.** MPA. Reviewed existing geotechnical data and provided evaluations concerning alignment options for relocating 48-inch water line to construct Masonville Dredged Material Containment Facility. Developed geotechnical portion of plans for cofferdam and pile bents to support new pipe.

**Goldsboro Road Water Main Replacement, Montgomery County, Maryland, Washington Suburban Sanitary Commission.** Project Manager. Prepared Geotechnical Engineering Report for the proposed replacement of a 1.1-mile long, 10-inch water main along Goldsboro Road in Bethesda, Maryland. Subsurface exploration consisted of twelve-standard penetration borings and pavement cores along the proposed alignment and MOT.

**Town of Somerset Water Main Replacement, Montgomery County, Maryland, Washington Suburban Sanitary Commission.** Project Manager. Prepared Geotechnical Engineering Report for the proposed replacement of a 1-mile long, 8-inch water main along Warwick Place, Dorset Avenue, and Essex Avenue, in Somerset, Maryland. Subsurface exploration consisted of twelve-standard penetration borings and pavement cores along the proposed alignment and MOT.

**Bladensburg Water Main Replacement, Prince George's County, Maryland, Washington Suburban Sanitary Commission.** Geotechnical Engineer. Project Manager. Prepared Geotechnical Engineering Report for the proposed replacement of a 3,500-ft long, 8 and 12-inch water main along Edmonston Avenue and Baltimore Avenue (US Rte 1) in Bladensburg, Maryland. Subsurface exploration consisted of eight-standard penetration borings and pavement cores along the proposed alignment and MOT

**BRENT S. TRIMBLE, PE**

Project Manager

**Assignment:** Structures  
**Years Experience:** Total: 13 / With RK&K: 13  
**Education:** BS/Civil Engineering/1997  
MS/Civil Engineering/1999  
**Registration:** PE/2004/Civil Engineering/ Registered in MD

Mr. Trimble joined the structural engineering department at RK&K where he has been involved in a variety of structural engineering endeavors. His experience includes structural design, structural analysis, structural investigations, condition assessment, and the rehabilitation of existing structures. His project experience includes:

**Montebello Water Treatment Plant, Baltimore, Maryland** - Structural project engineer responsible for design and development of contract plans and specifications for improvements to the Montebello water treatment plant for increased capacity to 360 mgd. The structures designed include: 6' x 8' access tunnel, 5' x 5' flood drain box, two drain junction chambers (11'-6" x 21' x 39'), 14' x 5'-6" water conduit, 7'-6" x 3' water conduit and a washwater conduit apron end wall modification to lower the washwater lake elevation. All structures were designed of reinforced concrete.

**Talbot County Wastewater Treatment Plant, St. Michaels, Maryland** - Structural project engineer responsible for the design and development of contract plans and specifications for a 0.66 mgd wastewater treatment facility. Designed structures include: oxidation ditch, methanol storage, clarifier distribution box, headworks facility, grit unit support system and various treatment chambers throughout the plant. The facility has been operating for over a year and is meeting its nitrogen limits.

**53 Small Structure Inspection, Maryland State Highway Administration.** Team member for the inspection, report preparation, plan preparation with remedial repairs, specification preparation and cost estimating for 53 highway culverts. Structures included structural plate pipe arches, corrugated metal pipes and reinforced concrete culverts. Remedial repairs included paving of structure inverts with cast-in-place concrete, placement of scour countermeasures, cast-in-place concrete repairs and other miscellaneous items.

**Wastewater Pumping Station Upgrades, Baltimore County, MD:** Structural project manager in charge of the study, design and construction phase services for improvements to the County's sewage pumping stations. To date, RK&K has been tasked with designing process and structural improvements to more than thirty five pump station facilities.

**Tall Ground and Retaining Wall Mounted Noise Barrier Standards, Maryland State Highway Administration** - structural engineer responsible for the design and development of noise barrier standards for noise barriers between 24 ft and 40 ft in height. Development of the standards consisted of steel post design, precast concrete panel design, drilled shaft foundation design and development of all details required for construction.

**LARRY W. MCDOWELL, PE, PLS**

Project Engineer

**Assignment:** Construction Engineering/Inspection/Surveys**Years Experience:** Total: 39 / With RK&K: 11**Education:** BS/Civil Engineering/1985  
MA/Management/1989**Registration:** PE/1992/Civil Engineering/ Registered in MD, PA, VA, DC, DE, TX**Specialized Experience**

Mr. McDowell has over 39 years of diverse engineering experience associated with public works projects. His career began as a summer interim for the West Virginia Department of Highways in 1968, being thereafter employed for 6 months in the Design Division upon graduation from West Virginia University. Beginning in 1972, Mr. McDowell was employed by Stone and Webster Engineering Corporation as a senior field engineer on construction of a fossil fuel power plant for 3 years and then entered the mining industry, working for 4 years as mining engineer at Laurel Run Mining Company, an underground mining facility. In 1979, Mr. McDowell accepted employment with Allegheny Mining Corporation, a West Virginia and Maryland-based surface mining company, as chief engineer. Beginning in 1987, Mr. McDowell operated a consulting engineering and surveying business in Mt. Storm, West Virginia until accepting employment with RK&K in December of 1999. Mr. McDowell is a native and life-long West Virginian. Relevant experience includes:

**Grant County Public Service District, Petersburg, WV:** project engineer on construction of 297,000 gal. Maysville water storage tank, Points pump station upgrade, relocation of 5,700 LF of water main line on U.S. Route 220 South. Project commenced in April of 2008, with substantial completion achieved on schedule in September 2008. Additional radio telemetry completed with available contingency funds due to completion of work within budget .

**Town of Lonaconing, MD, New Water Distribution System:** project engineer on construction of over 40,000 LF of water line replacement and extension on existing system. Two of these projects were AML funded. Duties included interpretation of contract drawings and specifications; conducting meetings; assuring that contractor complies with contract requirements; supervising field representatives; reviewing payment applications and preparing change orders.

**New Creek Water Association, New Creek, WV:** project engineer for evaluation of existing system. Project engineer for design and construction of 140,000 gallon storage tank; 350,000 gallon storage tank; 30,000 gallon storage tank; new booster station; upgrade booster pumping stations; addition of fire hydrants to system, drilling of well.

**Wiley Ford Water System, Mineral County WV:** construction engineer for replacement of approximately 55,400 LF of water main to improve the service and quality of water. The project also includes a new 300,000 water tank and booster station to provide improved water pressure and supply. The second phase of this project will be locating a suitable well(s) source to supplement the existing water connection.

**Capon Bridge Industrial Park, Capon Bridge, WV:** project engineer for the development of the park including surveying, sewage treatment plant, sewage collection system, water distribution system, and water storage tank.

**Corporation of Harpers Ferry, Water Storage Tank Replacement Project, Harpers Ferry, WV:** Project engineer responsible for construction of 241,000 gallon water storage tank including demolition of existing tank. Duties included interpretation of contract drawings and specifications; conducting meetings; assuring that contractor complies with contract requirements; supervising field representatives; reviewing payment applications and preparing change orders.



**CHRISTOPHER S. DARBER**

Resident Project Representative

**Assignment:** Construction Inspection  
**Years Experience:** Total: 18 / With RK&K: 12  
**Education:** Sheppard AFB  
Tech School/1993  
High School Diploma/1992  
**Certification:** Utilities System Specialist  
Nuke Gauge Certified

**Specialized Experience**

Mr. Darber has 18 years experience in the construction industry, primarily associated with sewer and water systems. Mr. Darber's career began as a Utilities System Specialist where he maintained the water and sewer system on Andrews AFB, plus maintained various water and sewer plants surrounding the base. He is very detailed in his work, and he is proficient with computers.

**Lonaconing Water System, Allegany County, MD** - Construction Inspector: Responsible for inspecting water line installation as well as the replacement of several old storm sewer inlets as part of Phase IV.

**Wiley Ford Water System, Mineral County WV:** Construction Inspector responsible for inspection of replacement of approximately 55,400 LF of water main and a new 300,000 water tank and booster station. Duties include responsibility of daily logs, adherence to specifications, measurement of quantities, addressing citizen complaints, and supervision of other inspectors.

**New Creek Water Association, New Creek, WV:** project engineer for evaluation of existing system. Project engineer for design and construction of 140,000 gallon storage tank; 350,000 gallon storage tank; 30,000 gallon storage tank; new booster station; upgrade booster pumping stations; addition of fire hydrants to system, drilling of well.

**LaVale Sanitary Commission, U.S. Route 40 (National Highway) Water Distribution System Improvement Project, LaVale, MD** – Chief inspector responsible for compliance with specifications, daily report of activities, and measurement of quantities installed. Project included approximately 22,000 LF of water distribution line, 38 fire hydrants, 280 meter assemblies, and 24 connections to existing water line.

**Northern Mineral County Regional Sewer System – Phase 1, Mineral County, WV:** Chief Inspector responsible for daily logs, adherence to specifications, measurement of quantities, addressing citizen complaints, and supervising other inspectors. Project consists of construction of 1.20 mgd SBR WWTP and 10.3 miles of sewage collection system.

**Frankfort Public Service District Wiley Ford Sewer Project, Mineral County, WV:** Chief Inspector on construction of new gravity collection and force main sewage system to replace individual septic systems and old collection system. Duties include responsibility of daily logs, adherence to specifications, measurement of quantities, addressing citizen complaints, and supervision of other inspectors.

**Ridgeley Sewer Improvement** – Chief Inspector responsible for daily logs, adherence to specifications, measurement of quantities, addressing citizen complaints, and supervising other inspectors. The project included installation of 18,400 Lf of main line sanitary sewer, 91 manholes, 327 single house connections, 1,800 LF of storm drain, and 17 storm drain inlets throughout the Town of Ridgeley.

**MATTHEW J. YOUNGBLOOD**

Engineer

**Assignment:** Design/Construction Engineering**Years Experience: Total:** 5/ **With RK&K:** 5**Education:** BS/Civil Engineering/2006**Specialized Experience**

Mr. Youngblood is a West Virginia University Civil Engineering Graduate with over 3 years of experience in public and private works projects. His career started as a summer intern for the West Virginia Department of Highways in 2001. Since joining RK&K in 2006, Mr. Youngblood has developed experience in the design of water and sewer infrastructure. Relevant experience includes:

**Grant County Public Service District, Petersburg, WV:** Assisted project engineer on construction of 297,000 gal. Maysville water storage tank, Points pump station upgrade, relocation of 5,700 LF of water main line on U.S. Route 220 South. Project commenced in April of 2008, with substantial completion achieved on schedule in September 2008. Additional radio telemetry completed with available contingency funds due to completion of work within budget .

**Town of Lonaconing, MD, New Water Distribution System:** Assisted project engineer on construction of over 40,000 LF of water line replacement and extension on existing system. Two of these projects were AML funded. Duties included assisting with interpretation of contract drawings and specifications; conducting meetings; assuring that contractor complies with contract requirements; supervising field representatives; reviewing payment applications and preparing change orders.

**Deep Creek Lake State Park, Garrett County MD:** designer on the replacement of water line and two chlorination feed stations. Designed an RV dump station to expand the traffic volume for the camp ground.

**Wiley Ford Water System, Mineral County WV:** assisting construction engineer on replacement of approximately 55,400 LF of water main to improve the service and quality of water. The project also includes a new 300,000 water tank and booster station to provide improved water pressure and supply. Duties include assisting with interpretation of contract drawings and specifications; conducting meetings; assuring that contractor complies with contract requirements; supervising field representatives; reviewing payment applications and preparing change orders.

**Greater Marion Public Service District, Marion County, WV:** assisted with Inflow and Infiltration study with sewer camera inspections. Designer on vacuum sewer line relocation to improve the efficiency of the sewer collection system in the Town of Idamay. Assisting with design to replace the vacuum system with gravity and force main sewer system.

**Tuscan Ridge – Town of Davis Subdivision, Tucker County, WV:** assisted with design of roadway layout, which included sizing culverts for drainage in the subdivision. Also assisted with the design and layout of the water and sewer utilities.

**Grant County Public Service District, Petersburg, WV:** project engineer on construction of 297,000 gal. Maysville water storage tank, Points pump station upgrade, relocation of 5,700 LF of water main line on U.S. Route 220 South. Project commenced in April of 2008, with substantial completion achieved on schedule in September 2008. Additional radio telemetry completed with available contingency funds due to completion of work within budget .

**BRANDON J. FELTON**

Engineer

**Assignment:** Design  
**Years Experience:** Total: 5/ With RK&K: 5  
**Education:** BS/Mechanical Engineering/2006

**Specialized Experience**

Mr. Felton is a West Virginia University Mechanical Engineering Graduate with over 5 years of experience in public and private works projects. His career started in the water and waste water industry as a maintenance worker for the Frankfort Public Service District in 2003. Since joining RK&K in 2006, Mr. Felton has developed experience in design of equipment pertaining to water and wastewater treatment systems. Relevant experience includes:

**Grant County Public Service District Water System Improvements– Points Pump Station.** Worked on the design of upgrading the existing Point's potable water pump station with new 280 GPM vertical multi-stage pumps and all related plumbing, controls, metering, and telemetry.

**Frankfort Public Service District – Wiley Ford Water Line Replacement Project.** Assisted in the design of a new water treatment facility including a new well and corresponding 90 GPM pump, 297,000 gallon water storage tank, and a chemical injection/control building. Also assisted in the right-of-way acquisition for the corresponding water distribution system.

**Town of Lonaconing Water Improvement Project – Charlestown Road Water Line Extension** Assisted with design of a new 90 GPM vertical multi-stage water pump station with remote below-ground water storage tank and corresponding distribution system.

**Garrett County Department of Public Utilities – Thayerville Water Distribution System Project.** Assisted in the design of both a new 100 GPM vertical multi-stage water pump station and a new 300 GPM water treatment plant utilizing vertical turbine pumps.

**Frankfort Public Service District - Northern Mineral County Regional Sewer System, Phase 1 & 2.** Assisted in the design of a new 0.6 MGD SBR waste water treatment plant with capabilities of future expansion to 1.2 MGD. Design work included various mechanical elements of the plant including plumbing, pumps, blowers, screen/grit removal, and belt press. Also assisted in the design and right-of-way acquisition for the corresponding 9-mile collection system feeding the new WWTP.

**Greater Marion Public Service District Sanitary Sewer Improvements – Carolina & Idamay Sewage Pump Stations.** Assisted in the design of the 250 GPM Carolina submersible sewer pump station and the 130 GPM Idamay vacuum-prime sewer pump station consisting of two pumps in series to meet high head requirements.

**Charles Town Utility Board Water & Sewer Improvements– Huntfield Pump Station & Transfer Pump Station.** Assisted in the design of upgrading the existing Huntfield sewer pump station with new 600 GPM submersible sewer pumps and related plumbing and controls. Also assisted in the design of a new 375 GPM submersible sewer pump station used to transfer sewer flow between two separate waste water treatment plants within the Utility Board's system.

**WV Department of Transportation, Keyser McCoolle Bridge – McCoolle Water & Sewer Pump Station.** Assisted on the design of a replacement water & sewer pump station consisting of 438 GPM vertical multi-stage water pumps and 250 GPM submersible sewer pumps.

**ANDREW P. SUTER**

Engineer

Assignment: Environmental/Permitting

Years Experience: Total: 5 / With RK&amp;K: 5

Education: BS/Civil Engineering/2007

**Specialized Experience**

Mr. Suter is a West Virginia University Civil Engineering Graduate with over 5 years of experience in public and private works projects. His career started as a summer interim for the West Virginia Department of Highways in 2004. In 2006, he joined RK&K as an intern during the summer and in the summer of 2007, began working full time. Relevant experience includes:

**Town of Lonaconing Water Improvement Project – Water Meter Replacement** Responsible for field locating existing meters, as well as coordinating with local PSD to verify which meters were full replacements and partial replacements.

**Frankfort Public Service District - Northern Mineral County Regional Sewer System, Phase 1.** Assisted in the design and layout of treatment plant. Assisted in several building design layouts and yard piping line work throughout the plant.

**Frankfort Public Service District – Northern Mineral County Regional Sewer System, Phase 2.** Assisted with sewer line layout through northern end of Mineral County. Assisted in replacing several subdivision sewer package plants.

**Charles Town Utility Board Water & Sewer Improvements– Huntfield Pump Station & Transfer Pump Station.** Assisted with inspection for painting inside water tank.

**WV Department of Transportation, Keyser McCoolle Bridge – McCoolle Water & Sewer Pump Station.** Assisted with design of building and site layout and development. Assisted in the water and sewer line layout, crossing under the Potomac River.

**Tuscan Ridge, Town of Davis Subdivision, Phase 3-4, WV:** one of the project designers responsible for roadway layout and design, as well as lots and right-of-way design. Assisted in E & S Design of Phase 3, as well as water tank site design on phase 4.

**Dan's Mountain Access Road and Storage Facility, MD:** Assisted in design of access road, and erosion and settlement control plan. Also assisted in design of storage facility, as well as site layout and development.

**Potomac Plaza, Greyhound Properties, L.L.C., Mineral County, WV:** assisted in the design of foundations for building 601 and 701 shopping centers.

**PROJECT UNDERSTANDING**

RK&K understands that the West Virginia Division of Corrections proposes to replace two (2) water storage tanks at Denmark Correctional Center located in Pocahontas County.

RK&K has extensive experience in providing preliminary and final design, construction management and inspection services for new and replacement water storage tanks constructed with a variety of material. Two recent projects which demonstrates RK&K's ability to complete projects, such as the one advertised for the West Virginia Division of Corrections, includes the New Creek Water Association Water Line Extension Project and the Frankfort Public Service District's Wiley Ford Water Project. The New Creek Water Association recently completed an eight (8) mile extension project which included the construction of two (2) new water storage tanks and the repairs to two (2) existing water storage tanks of similar size to the Denmark tanks. RK&K is currently assisting the New Creek Water Association with plans to add a new 400,000 gallon water storage tank. The Frankfort Public Service District's Wiley Ford Water Project, which is current under construction, includes the construction of a 300,000 gallon welded steel painted water storage tank. Additional information for these two projects as well as other RK&K's water system experience can be found in Section 4 of this proposal.

In addition to new tanks that have been designed and shepherded through construction, RK&K has also been involved in the rehabilitation of several water storage tanks for clients including development of plans to inspect, clean, repair and repaint several tanks of various sizes including:

- Town of Westernport –replacement of deteriorated steel plates and repainting of entire 600,000 gal. tank.
- City of Keyser – repairing and repainting of 1,000,000 gal. steel tank.
- City of Charles Town – Inspection, repairing, and repainting of two 500,000 gal. elevated tanks
- New Creek Water Association – inspection, cleaning, repairing, and repainting of 100,000 gal. and 50,000 gal. tanks

To define RK&K's approach to this project, RK&K will present a typical project approach for completing a project such as the proposed project for the West Virginia Division of Corrections. This approach will be modified, where required, to match specific goals and requirements of the project.

**SYSTEM STUDY**

RK&K will begin by gathering all available information on the water system and storage tanks such as reviewing relevant existing plans. RK&K will follow the review by meeting with system operators.

The RFP specifies that West Virginia Division of Corrections desires to have two new 151,000 gallon water storage tanks installed for the Denmark Correctional Center. The RFP states that the Denmark Correctional Center is interested in the best value for least maintenance costs for 30 to 40 years. Steel

tanks – either welded painted steel or glass coated bolted tanks are the primary type of tanks used in West Virginia. Another tank type providing low maintenance costs is a precast post-tensioned concrete tank. While the initial construction costs may be higher for these tanks, the capital higher costs could be offset by lower maintenance costs in the future.

RK&K is prepared to immediately begin design as requested in the RFP. RK&K would begin by evaluating site, selecting location for tanks, either new or existing sites, field slope geographic survey, conduct necessary geotechnical investigation and complete preliminary meeting the West Virginia Division of Corrections expectation and requirements. RK&K will meet the West Virginia Division of Corrections schedule for this project.

RK&K is prepared to discuss other options that may be available to the West Virginia Division of Corrections, depending if alternatives to constructing two individual tanks have not already been considered during the preliminary engineering process leading to this RFP. Without having specific knowledge of the facility, possible scenarios to consider would be evaluating the condition of existing tanks with the possibility of rehabilitating the newest tank or constructing a single 300,000 gallon tank at a considerable cost savings instead of constructing two smaller tanks. These are only two alternatives that RK&K would like to explore with West Virginia Division of Corrections.

#### **CONSTRUCTION PLANS AND SPECIFICATIONS**

After the study of the system has been completed, RK&K will proceed with the development of construction plans and specifications. The construction plans and specifications will be prepared to support the various phases of the project. The plans will provide a detailed description of the work to be completed by the contractor. The plans will be supplemented by detailed specifications defining the method of completing the work and the material specifications.

During the development of the contract plans and specifications, RK&K will meet frequently with the West Virginia Division of Corrections to review progress and receive input. Normally, plans for owner and regulatory agency review and comment are submitted at 50%, 90%, and 100% completion status. Development of complete detailed plans and specifications assure completion of an effective project with minimal construction problems and change orders which often result in additional costs.

#### **MONITORING AND INSPECTION OF CONSTRUCTION ACTIVITIES TO ENSURE COMPLIANCE WITH PLANS AND SPECIFICATIONS**

RK&K's Construction Department has been providing construction phase services for nearly 50 years involving hundreds of public works' projects with aggregate construction costs in the billions of dollars. Projects include water and sewer infrastructure, pumping stations, stormwater management and flood control facilities, roadways, bridges, transit tunnels, subways, hydroelectric plants, marine facilities, plus a variety of building projects. Many of RK&K's projects involve a full range of construction management/administration and inspection services from design, preconstruction, construction and

post-construction phase, including materials testing, equipment testing and start-up, claims resolution, CPM scheduling, and contract close-out.

One of the key duties of the engineer during the construction phase will be to review shop drawings and submittals for compliance with plans and specifications. The engineer, in general, serves as the communication link between the Owner and Contractor. The project engineer will visit the site as often as necessary, but at least bi-weekly as the project proceeds. RK&K will conduct monthly progress meetings with the contractor and the West Virginia Division of Corrections to review progress and to resolve any problems that may arise. RK&K will also review the contractor's pay requests to verify quantities and recommend payment for work completed. At the completion of the project, RK&K will conduct a walk-through inspection with the District and Contractor, prepare a punch list of items needing completed, and conduct a final inspection after work is completed. RK&K will also provide technical assistance during the one-year warranty period to resolve any problems that may occur. Near the end of the warranty period, RK&K will conduct a final inspection of the facility with the West Virginia Division of Corrections. Any problems or defects noted will be sent to the contractor for correction.

RK&K has the resources, manpower, expertise, and professional commitment necessary to meet client's needs relative to schedules and scope of services. RK&K is currently averaging over \$60 million a year in billings and has nearly 150 construction engineering/inspection personnel of varying levels of expertise. RK&K maintains a satisfied client base in eight (8) states plus the District of Columbia. RK&K employees are knowledgeable about traditional as well as state-of-the-art-construction inspection practices and procedures, materials testing techniques, and are proficient in the use of computers. Many of the staff are NICET-certified, Troxler nuclear gauge trained, hold erosion and sediment control certifications, are certified or approved by materials laboratories, and have solid backgrounds and expertise in field surveying and construction layout. RK&K has a proven track record for attracting qualified and competent personnel. This dedication to quality and cost-efficient services has resulted in approximately 90 percent of RK&K's workload being derived from repeat and long-term client relationships.

## Grant County Public Service District

Grant County, West Virginia

**Client:** Grant County Public Service District

Lori Kimble 304.257.2377

**Cost:** \$0.9 Million

**Date:** 2008



### **Introduction**

Grant County, West Virginia, nestled in the Potomac Highlands, is one of the fastest growing counties in West Virginia. It has achieved this status for several reasons, one of which has been its progressive position towards providing safe, potable water to its citizens, farmers and commercial entrepreneurs. The Grant County PSD provides public water to the developed South Branch River valley areas and lower lying ridges. The District has aggressively pursued and obtained funding to construct over 174 miles of water mains, 14 storage tanks, and 15 pump stations. They now provide water to approximately 5,600 persons; about 49% of Grant County's population.

### **Design Services**

RK&K was selected in 2006 by Grant County Public Service District for two projects planned to improve service and reliability. The first project consisted of the installation of 5,600' of hydraulically parallel 8" water line to an existing 3" and 4" dia. line. A pump station serving this line was upgraded to improve the service and reliability to the area south of the City of Petersburg. The second project was design of a new water storage tank at Maysville, WV.

### **Scada System**

The initial project utilized a radio-based telemetry system between the tank and the pump station to control the pump on-off status based on water elevation. RK&K was able to work with the PSD and the Telemetry System Integrator utilizing contingency funding to add additional telemetry controls on other pumps/tanks in the system. RK&K was also able to combine these into a system allowing the General Manager to have the pump station/tank level information readily available on a monitor in his office.

### **Construction Services**

Two contracts totaling \$658,407 were recently awarded for these projects. Construction has started and is expected to be completed before the end of the year. The bids for the projects were opened February, 2008 and were under the Engineer's estimate.

The second project was for the installation of a new 300,000 gallon water storage tank to replace a 100,000-gallon concrete stave tank. A sister to this tank had failed previously. New radio telemetry systems are being installed to control the pumps based on the tank water level. RK&K prepared the Preliminary Engineering Report and Environmental Report. RUS approved these reports and funded \$794,100 of the \$900.00 project cost.



## Corporation of Harpers Ferry Water Storage Tank Replacement

Jefferson County, West Virginia

**Client:** Corporation of Harpers Ferry

Mayor, 304.535.2206

**Cost:** \$375,000

**Date:** 2008

The Corporation of Harpers Ferry is located in the eastern most part of Jefferson County, WV at the mouth of the Shenandoah River and the Potomac River. The Corporation operates the Harpers Ferry Water Works to supply water to Harpers Ferry and Bolivar. The Water Works serves a total of 826 customers comprised of 723 residential, 65 commercial and 38 industrial customers.

### *Design Services*

Rummel, Klepper & Kahl, LLP, (RK&K) was retained to design a water storage tank replacement project. The existing 190,000 gallon capacity riveted steel water storage tank was replaced with a 240,000 gallon capacity water storage tank. The design also required installation of telemetry system to control the high service pumps. This project is located adjacent to the historical and environmentally sensitive Harpers Ferry Civil War Battlefields. Due care was required to address critical issues related to the area during the design and construction.

RK&K prepared a Preliminary Engineering Report and Environmental Report meeting the RUS requirements. This \$375,000 project was funded by RUS.

### *Construction Services*

A Notice to Proceed was issued for start of construction on March 11, 2008. The project was substantially complete on August 27, 2008.



## Wiley Ford Water Line Replacement

Wiley Ford, West Virginia

**Client:** Frankfort Public Service District  
Michael Bland 304.788.5921

**Cost:** \$5.1 Million

**Date:** Ongoing



### Introduction

Wiley Ford, a community of 1,078 residents, is located on the West Virginia side of the Potomac River opposite Cumberland, Maryland. Evolving from early 18<sup>th</sup> century development, the community's growth accelerated in 1913 when the Homestead Development Corporation laid out 596 lots as the Wiley Ford Addition to the City of Cumberland. Further growth resulted from construction of the Potomac Highlands Regional Airport contiguous to the Wiley Ford community.

The existing system contains mostly small lines – 2" galvanized or less. 80% of the lines are 2". As a result, there are pressure and volume problems within the system, particularly at the higher elevations. It is suspected that the lines have significant buildup and corrosion resulting in lost capacity. The system does not provide much fire protection. Only one fire hydrant is available on the system.

The project when completed will include the replacement and expansion of the entire water distribution system to serve the additional area along the John Chaney/Seymore Bottom Road area. In addition to the development of wells, the system will be connected to the Frankfort system.

Major construction is complete on this project with cleanup scheduled for spring. A \$400,000 project extension to Potomac Highland Regional Airport and the Community of Swan Pond is being constructed with cost under-run funds. :

- Contract 1 consists of water line replacement and expansion including 14,195 LF of 8" water mains; 28,870 LF of 6" water mains; 12,255 LF of 2" water mains; 9,975 LF of ¾" water services; 54 fire hydrants; and 400 meter assemblies.
- **Contract 2 consists of the addition of a 300,000 gallon water storage tank, and a telemetry system with the existing Frankfort PSD Points Pump Station.**
- Contract 3 consisted of the development of water wells and package treatment system to augment the water provided by the existing Frankfort PSD system.
- Contract 4 consisted of the purchase of radio read water meters.

### Funding

The water for this system is supplied by the City of Cumberland which has no regulatory review of their rates. New rates can and have been implemented by the City Council within a 6-week period. The proposed project intends to connect this system to the existing Frankfort Public Service District system and utilizing the Cumberland connection as a back-up water source. This will reduce the purchase cost of water significantly.

## Lonaconing Water System

Georges Creek Valley, Allegany County, Maryland

**Client:** Town of Lonaconing

John W. Coburn, Jr., Mayor 301.463.6233

**Cost:** \$10.4 Million

**Date:** Ongoing



**Introduction** - RK&K was responsible for the planning, design and construction management for three package water treatment plants to serve three small communities in Allegany County.

**Engineering Services** - The project included identification of suitable locations for the proposed water treatment plants, determination of the capacity of each of the proposed ground water storage tanks for installation on the site of each water treatment facility and evaluation of system hydraulics. Each of the four 100-gpm package water treatment plants included a finished groundwater storage tank and backwash waste holding tank. The Midland-Gilmore plant has a 500,000-gallon tank, Koontz Run has a 300,000-gallon tank and Charlestown has a 200,000-gallon tank. Storage tanks supply potable water to the Lonaconing water distribution system which provides water for filter backwash and for the plant water system. The backwash waste holding tanks are used to remove and concentrate the waste solids using sedimentation. In conjunction with the water treatment plant project, 10,000 linear feet of 10" raw water main was rehabilitated and/or replaced and 14,000 linear feet of 8" finished water main was installed.

**Additional Projects Completed** - Since the completion of the water plants and storage tank, RK&K has provided services including design engineering, permitting, cost estimating, construction engineering and project representative inspection on the following additional projects:

**Phase I, II, III, and IV and Warnick Road** - These projects replaced nearly 40,000 LF of water main in Lonaconing, Maryland area and included a booster pump station and 10,000 gallon water storage tank. The projects were completed in 2009.

**Buskirk Hollow and Miller Road** - Contract was awarded in May 2008 for \$930,800 to provide potable water or replace existing old lines to 47 customers. The project was completed \$81,000 under budget in December 2008 with 8,800 LF of main line and 9 fire hydrants installed involving 3 stream crossings.

**Mill Run Water Line Extension** - In 2007, Town of Lonaconing enlisted RK&K to design a water distribution system to service the Mill Run Community located south of Barton, Maryland. Design was completed and contract awarded in July 2008 for \$1.297 million to provide potable water to 54 customers. The project included over 15,000 LF of water line, a railroad bore, 9 stream crossings, and 8 fire hydrants. The project was completed in August 2009 at \$80,000 under budget.

**Town of Midland** - A project to replace old remaining water lines, valves, meters, and hydrants in Town of Midland was awarded in October 2008 for \$1.226 million funded by USDA Rural Utility Services and Maryland Department of Environment. Construction commenced in November 2008 with estimated project completion to be in November 2009 at estimated cost of \$1.100 million - \$126,000 under budget. Items installed include 7,600 LF of mainline, 99 radio-read meters, and 14 fire hydrants, with 3 stream crossings.

**Town of Barton** - In November 2009, Town of Lonaconing will advertise replacement of approximately 14,000 LF of water main as well as associated meters, valves, and hydrants in Town of Barton, Maryland. Estimated project cost is \$2.5 million with proposed funding by USDA - Rural Utility Services and Maryland Department of Environment.

RK&K is currently preparing plans for **two new water storage tanks** for the water system. One will be a **3,000,000 gallon pre-stressed water storage tank** to replace an open reservoir. The second tank will be a **500,000 gallon glass-coated bolted steel tank** to supplement the storage in the Midland area of the water system.

## New Creek Water Association

New Creek, West Virginia

**Client:** New Creek Water Association  
Rob Riggleman 304.788.5886

**Cost:** \$6.0 Million

**Date:** 2005



### *Introduction*

Vanscoy Engineering and Surveying (now RK&K) has been working for New Creek Water Association since 1991. New Creek Water Association was formed in 1972 to provide a water system for the New Creek Valley south of Keyser. When the system was placed in operation in 1973, they had less than 300 customers that were primarily residential. Since that time, they have grown to over 1,200 customers including several commercial customers consisting of restaurants, Wal-Mart, Keyser High School and others. In 1991, Vanscoy Engineering was hired to evaluate their existing system and make recommendations for needed improvements to allow them to continue providing the needed service.

### *Engineering Services*

RK&K's evaluation indicated the need for additional storage capacity, improvements to existing booster pumps, addition of fire protection for the system and finally some additional expansion to serve developing areas. All of the recommendations have been implemented including:

- 140,000 Gallon Storage Tank
- 350,000 Gallon Storage Tank
- 74,000 Gallon Storage Tank
- 30,000 Gallon Storage Tank
- Upgraded Booster Pumps
- Addition of Fire Hydrants to System

In September 2004 New Creek Water Association opened bids on a \$2.5 million water line extension project designed to serve over 100 new customers plus the upgrade of one existing system by adding fire hydrants and some looping to provide redundant line to minimize the effect of line shutdowns. This is the final project originally recommended in the 1991 study. The project included the installation of over 8 miles of new lines, two water storage tanks, an upgraded pump station and a new pump station. This project was funded as a combination loan and grant from the West Virginia Infrastructure and Jobs Development Council. This project was completed and operational in the fall of 2005.

We have assisted New Creek Water Association in obtaining funding for the projects completed to date. They have completed all of the projects without a rate increase to their customers. Funds were obtained from:

- Rural Utility Service Loan
- Three Governors Partnership Grants
- Wal-Mart Grant
- Mineral County Board of Education Grant

## Thayerville Water System

Garrett County, Maryland

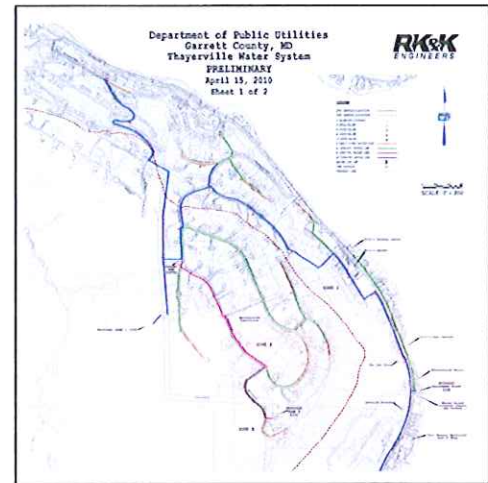
**Client:** Garrett County Dept. of Public Utilities  
Patrick Hudnall 301.334.7465

**Cost:** \$225,500 (Design Fee)

**Date:** 2010

### *Introduction*

In 2010, the Garrett County Department of Public Utilities retained RK&K's design services to design a water system to serve the residents and commercial development along the U.S. 219 and Glendale Road Corridors within Thayerville, including residents within the Mountainside Development. Water to the existing customer base is provided by individual and small system wells, most of which suffer from poor water quality and quantity. The proposed project will consist of constructing a water treatment facility, distribution system, two (2) water booster stations and two (2) water storage tanks. This project is of high priority for the County and as such, the engineering contract has limited the total design time to 160-days to provide the County with the necessary documents to advertise the project for construction, less regulatory agencies permit approval.



### *Treatment Plant*

As part of the project, a 600 gpm water treatment facility will be constructed adjacent to two (2) 300 gpm wells that the Garrett County Department of Public Utilities previously drilled. When constructed, the treatment facility will consist of two (2) parallel 300 gpm chlorine contact chambers flowing into a high service clear well. Limited space for the treatment facility has resulted in a two level structure. The lower level, below grade, will house the  $Cl_2$  contact chamber and high service pumps while the upper level, above grade, will house controls, a small lab, a  $Cl_2$  room, and a restroom. Location of the treatment facility also dictated aesthetically pleasing façade on the exterior of the structure that will blend in with the surrounding buildings.

### *Booster Stations and Water Storage*

Due to the topographic layout of the area and to minimize excessive system pressures, while minimizing the number of pressure reducing valves (PRV's), the system will consist of three (3) pressure zones. The lowest zone (Zone 1) will served the customers below an elevation of 2710' while the second zone (Zone 2) will serve customers between elevations 2710' and 2918'. The upper most zone (Zone 3) will serve the customers above the 2918' elevation. Water storage for Zone 1 will consist of a 1 MG precast post-tensioned circular water storage tank while water storage for Zones 2 and 3 will consist of a 165,000 gallon precast post-tensioned circular water storage tank. Even though water from Zone 3 will be supplied from a water storage tank, system pressures will be dependent upon a booster pump.

### *Distribution System*

The distribution system will consist of 2" through 12" diameter pipe. Customers within Zones 1 and 2 will have fire protection while the customers within Zone 3 will have to rely on the proximity of Zone 2 for fire protection. The system is being designed for future expansion around the lake.

## Potomac River Raw Water Intake and Pumping Station

Berkeley County, West Virginia

**Client:** Berkeley County Public Service Water District

304.267.4600

**Cost:** \$6.95 Million

**Date:** 2008

### *Introduction*

As part of a large capital project program, the Berkeley County Public Water Service District expanded the capacity of its facilities with a number of projects. RK&K was responsible for the study, design, surveying, geotechnical services, permitting, funding assistance and construction administration and inspection for a new pumping station and raw water intake located on the Potomac River near Falling Waters, West Virginia.

### *Scope of Services*

For this project, a new pumping station and submerged raw water intake replaced an existing intake and pumping station. The pumping station has an initial capacity of 4 mgd, but is expandable to provide a future capacity of 12 mgd. By extending the submerged intake to location further from shore and into deeper water, the pumping facility will operate more reliably during cold weather periods. A submerged intake conveys water to the pumping station where 150-HP vertical turbine pumps will pump the water to the treatment facility via an existing raw water transmission main. The dual 30-inch intake pipes were installed in the Potomac River using microtunneling methods. The new pumping station incorporates facilities for future pretreatment chemical addition as well as allowances for zebra mussel control. The current pumping station was demolished as part of the project. Construction was completed in the fall of 2008.

Permits/approvals were required from the West Virginia Department of Health and Human Resources, the West Virginia Department of Environmental Protection, Berkeley County, Maryland Department of the Environment and the U.S. Army Corps of Engineers.

As part of the Preliminary Design Report, RK&K performed a hydraulic evaluation of the existing 20-inch transmission main to determine the optimum configuration and capacity of pumps, as well as provisions for transient surge relief and pump control.

This project received the 2009 Silver Award for WV Engineering Excellence from the American Council of Engineering Companies (ACEC) of West Virginia.



## Capon Bridge Technology and Industrial Park

Capon Bridge, West Virginia

**Client:** Hampshire County Development Authority

304.822.4320

**Cost:** \$2 Million

**Date:** 2001

**Introduction** - The Capon Bridge Technology and Industrial Park project is being developed by the Hampshire County Development Authority as a high technology business Park for Hampshire County. The \$2 million project is being funded by Appalachian Regional Commission, West Virginia Industrial Park Fund (legislative digest) and the Local Development Authority. The HCDA is anticipating additional development work at the park being funded by the Economic Development Administration and the Division of Highways. RK&K has been involved in the project from the beginning, including project definition, site selection, grant application, conceptual designs and contract documents. The project was completed in the fall of 2003.

RK&K civil/site design activities encompassed all aspects of site design including, master planning of site, lot/parcel layout, access roads, wastewater treatment plant, water treatment plant, water storage tank, site grading, stormwater control, water distribution main from water treatment plant to water storage tank, utility (water, sewer, electric, communication) infrastructure within the park. Coordination with the West Virginia Division of Highways for the Reconstruction and Realignment of Smokey Hollow Road and the Allegheny Power Company for providing 3 phase electrical services to the site.

**Site Development** - The site chosen was a 90 acre tract of land located on Smokey Hollow Road (CO Rt. 6) approximately 0.5 miles from the intersection of U.S. Route 50, CO Rt. 6 and 1 mile east of Capon Bridge, West Virginia, and 1.5 miles west of Virginia state line. The site has good highway access and the availability of utilities - water, sewer, electric and telephone located at the site. The site development will include the Reconstruction of Smokey Hollow Road by the West Virginia Department of Highways, construction of a 25,000 gallon water storage tank, 2,700' of access roads, water treatment plant, 250,000 gallon water storage tank, 2,700' of access roads, water distribution system and sewage collection systems, conduit pipes for electrical and telecommunications, and access roads for the water treatment plant and storage tank.

**Approvals and Permitting** - One of our duties on this project was to obtain all approvals and permits for this project. Approvals were obtained from the West Virginia Division of Highways, and the West Virginia Infrastructure and Jobs Development Council. Permits were required for sediment and erosion control, water and sewer construction, sewage treatment plant, and the highway entrances.



250,000 Gallon Water Tank



25,000 GPD Sewer Plant

## City of Keyser Raw Water Intake and Distribution System

Keyser, West Virginia

Client: City of Keyser

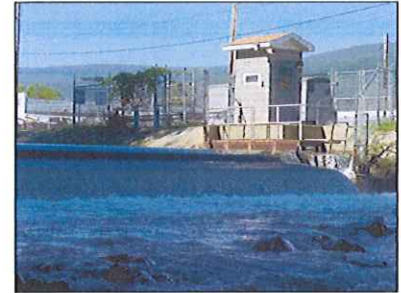
Sonny Gank 304.813.4448

Cost: \$4.9 Million

Date: 1999

**Introduction** - The City of Keyser has a 3-mgd water treatment plant located on New Creek. This plant currently operates at a 2-mgd rate and produces over one million gallon of water each day providing water to Keyser, New Creek Valley and McCoole, Maryland.

The City of Keyser withdraws water from New Creek to supply its water treatment plant. The intake originally consisted of a single screened opening constructed on the bank of New Creek. The water entered the screen and flowed by gravity to the well from which it was pumped to the sedimentation tank. The intake was originally constructed in the mid-1920's. A concrete weir was constructed to form a pool of water to better enable it to enter the intake.



**Engineering Services** - In 1998-99, the City of Keyser undertook a system-wide water improvement project designed to upgrade the entire system. The project was designed by RK&K and consisted of a new raw water intake, the replacement of 40,000 feet of water main, nearly 800 water services, cleaning and painting of a water tank and general improvements to the water treatment plant. RK&K was involved with this project from its inception including defining the scope of the project; preparing preliminary engineering reports; funding applications including a Small Cities Block Grant, permit approvals, final contract plans and specifications; and construction engineering and inspection. One component was to rebuild the weir and intake screens to quadruple the available intake area. This was done to minimize debris clogging the screens which created hydraulic capacity limitations. The weir had deteriorated to the point that there was concern for its stability. The concrete apron had eroded away and exposed the weir's foundation to erosion. The weir was encased in concrete and the foundation of the apron extended to bedrock. The entire screened intake structure was rebuilt and new removable screen panels added to increase the capture area. Additional improvements were made to the water plant, including the addition of one raw water pump, refurbishment of the other two pumps, improvements to the 70 year old building including replacement windows and doors, and a new roof. The chlorine handling system was also upgraded to allow safe handling of 1 ton cylinders.



Over 40,000 feet of new 12-, 10-, 8-, 6- and 2-inch water main was replaced throughout the Town. Much of the replaced main was nearly 100 years old. New touch read water meters were installed for all customers along the new mains - a total of 800 meters were replaced. The City has reported that the new mains have resulted in a water savings of over 200,000 gallon per day.

The project also included the inspection, cleaning, repair, and painting of the 1,000,000 gallon Keyser Industrial Park Tank.



## Town of Carpendale – Water System Improvements

Carpendale, West Virginia

**Client:** Town of Carpendale

Butch Armentrout 304.738.1612

**Cost:** \$1.5 Million

**Date:** 1994

### *Introduction*

The Town of Carpendale was incorporated in 1991 from three separate subdivisions. At that time, each subdivision operated its own water system including wells, storage and distribution systems. All of the systems were in disrepair and needed to be replaced.

### *Engineering Services*

The Town of Carpendale hired Vanscoy Engineering and Surveying (now RK&K) for their water project. A preliminary engineering report was prepared for the project which called for development of a new well, construction of a water treatment facility (chlorination), construction of a 200,000 gallon storage tank and construction of over 30,000 LF of distribution mains to provide water and fire protection for the 400 residents of the new Town.



Potential well sites were evaluated within the project area. Consideration in the site selection was given to the location and protection of the source water from external contamination.

The 8-inch well was drilled over 800 feet into the limestone and sandstone bedrock. The well produces over 80 gpm using a 25 HP submersible pump. The water is pumped through the treatment facility where chlorine is injected for disinfection into the storage tank ready for distribution to the Town's residents.

The \$1.5-million project was funded with a \$750,000 Small Cities Block Grant and a \$750,000 loan from the Water Development Authority. We were involved in all phases of this project from its inception to preliminary plans, assisting with the funding applications, permitting, contract plans and specifications, bidding and contract award and finally, providing construction engineering and inspection of the contractors during construction.

STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

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

**DEFINITIONS:**

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

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

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

Under penalty of law for false swearing (*West Virginia Code* §81-5-3), 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: Rummel, Klepper & Kahl, LLP Engineers

Authorized Signature: *[Signature]* Date: January 10, 2012

State of Maryland Mark M. Dumler, Esq.

County of Baltimore, to-wit:

Taken, subscribed, and sworn to before me this 10<sup>th</sup> day of January, 2012.

My Commission expires 10/17/2013, 20  .

AFFIX SEAL HERE

NOTARY PUBLIC

*[Signature: Julia Brooke Webster]*



EXHIBIT 10

REQUISITION NO.: ..... COR61489


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. 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.

.....  
 SIGNATURE David G. Vanscoy, PE  
 Associate and Regional Manager  
 Rummel, Klepper & Kahl, LLP  
 COMPANY

..... February 3, 2012  
 DATE

*Rummel, Klepper & Kahl, LLP  
Office Locations*



RUMMEL KLEPPER & KAHL, LLP  
Consulting Engineers