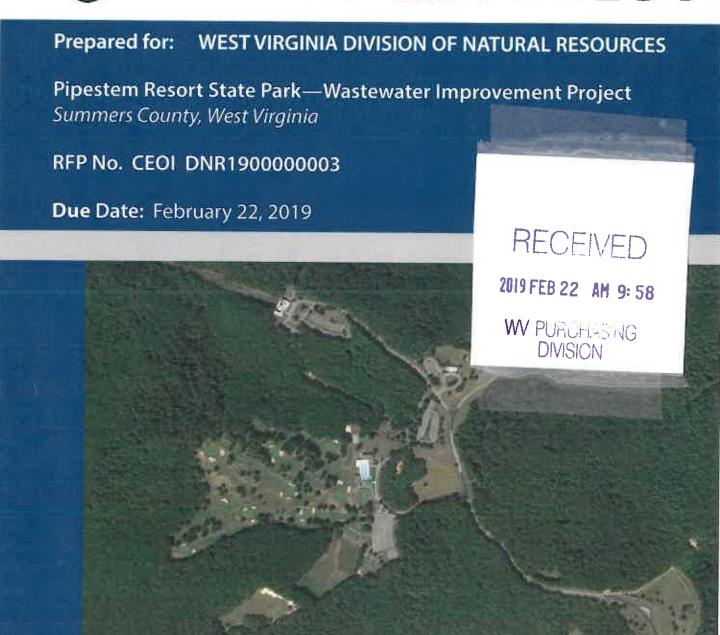


TRANSMITTAL MEMO

7012 MacCorkle Avenue, SE, Charleston, WV 25304 Phone: (304) 342-1400 Fax: (304) 343-9031

To:	Depa Divi	artment of Administration, Purchasing	Date:	February 19, 2019
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CHARLESTON

7012 MacCorkle Avenue, SE Charleston, WV 25304 (304) 342-1400

<u>MORGANTOWN</u>

125 Lakeview Drive Morgantown, WV 26508 (304) 225-2245

WINCHESTER

15 South Braddock Street Winchester, VA 22601 (540) 450-0180

Project Number: 0101-18-0355

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EXECUTIVE SUMMARY









Potesta & Associates, Inc. (POTESTA) is pleased with the opportunity to provide engineering and construction phase services to the West Virginia Division of Natural Resources (WVDNR) for repairs and renovations to certain wastewater treatment and collection systems at Pipestem Resort State Park. POTESTA understands that the services may include, but are not limited to design and specify for construction, as well as construction contract administration. The planned improvements may also include any other work necessary for, or related to, the facilities, as well as any other necessary ancillary work.

Many of the West Virginia state parks' wastewater systems are more than 30 years old and require repairs to maintain operation. POTESTA understands the Pipestem wastewater treatment plant (WWTP) is an extended-aeration system and is need of improvements and the gravity collection system is currently experiencing signification inflow and infiltration issues.

We also understand the owner anticipates several thousand feet of gravity sewer replaced with some form of collection system and the existing 40,000 GPD system requires review and improvements, if necessary.



For over two decades, POTESTA has designed engineering and environmental solutions to help clients navigate through the challenges associated with this type of project. POTESTA's team has extensive experience in design of wastewater systems, sewer lines, and major rehabilitation projects, additionally we have successfully reviewed developer plans. POTESTA has significant experience with inflow and infiltration studies for clients including Boone County PSD, CNX RCPC, and the City of Glenville. POTESTA's other municipality and PSD clients, including Huntington Sanitary Board, Sissonville PSD, and West Virginia American Water, have retained POTESTA to evaluate the condition of the collection system, as well as the operation and maintenance (O&M) practices for collection systems.

Services have included:

- Recommendations on potential areas for rehabilitation and improvement in O&M practices
- Perform Inflow and Infiltration Study
- Perform smoke testing
- Observe sanitary collection system pip via CCTV
- Design collection system
- Develop a preliminary estimate of construction cost for rehabilitation
- Prepare permit applications and submittals
- Perform construction observation and construction administration services

Another successful similar project included the design and permitting of a wastewater treatment plant in Jefferson County for Charles Town Race's & Slots race track and gaming resort. The facility was required due to the racetrack's planned expansion and the local PSD's lack of additional capacity. The post-treatment was with ultraviolent disinfection and aeration was also incorporated into the WWTP. POTESTA also completed construction assistance.

POTESTA has 14 professional engineers on staff who can be dedicated to providing quality wastewater engineering services to the WVDNR. POTESTA has assembled a project team that is highly qualified in providing the services necessary for this project. Mr. Terence C. Moran P.E., Senior Engineer/Project Manager, has served as project manager/project engineer for 60+ water/wastewater projects. POTESTA has the ability to complete every facet of the project from beginning to end, from the preliminary (i.e. planning) study through final design and construction observation/management.



CORPORATE PROFILE









HISTORY

POTESTA was founded in 1997 as a full service engineering and environmental consulting firm headquartered in Charleston, West Virginia. We have now expanded to a diverse staff of 79 experienced engineers, scientists, and support personnel with branch offices in Morgantown, West Virginia, and Winchester, Virginia. Our clients include local, state and federal agencies; mining, manufacturing and chemical companies; utility companies; waste management companies; K-12 schools/colleges/universities; land developers; attorneys; financial institutions; insurance companies; construction companies; and architects.



SERVICES

- Air Permitting
- Biological and Toxicological
- CADD/GIS
- Civil Engineering and Design
- Construction Monitoring
- Environmental Site Assessment
- Geotechnical Engineering
- Groundwater

- Hydrology and Hydraulics
- Landfills and Solid Waste
- Litigation Support
- Mining
- Occupational Safety and Health
- Oil and Natural Gas Consulting
- Permitting
- Remediation

- Roadway Engineering
- Sampling
- · Site Design
- Storage Tanks
- Surveying and Mapping
- · Water and Wastewater
- Water Quality
- Wetlands

LEADERSHIP

Our firm is managed by two principals driving POTESTA forward with their experience and emphasis on exceeding expectations. Ronald R. Potesta, President, has served as the Director and Deputy Director of West Virginia's Department of Natural Resources (WVDNR), during his tenure housed all of the environmental regulatory programs, had an annual budget of \$23 million and 700 full-time employees. The agency at that time encompassed state environmental regulatory programs, wildlife management and law enforcement. Dana L. Burns, P.E., Vice President of Engineering, has more than 39 years' experience with civil, geotechnical, mining and environmental engineering projects. Mr. Burns, P.S., P.E., has managed numerous multi-discipline wastewater and water projects, and understands the importance of client communication and the internal coordination of various disciplines on a project. The public service and experience of our principals has provided POTESTA with personal relationships with many of the regulatory staff members and in-depth program knowledge of West Virginia and surrounding states regulatory programs. POTESTA builds our contact base, stays informed on current issues, and strengthens relationships with the regulatory community by contributing and serving on various boards and commissions.

POTESTA's staff is committed to delivering innovative, cost-effective solutions to meet our client's complex requirements. The firm's environmental department consists of biologists, geologists, chemists, environmental scientists and environmental engineers, many with advanced degrees (Masters and Ph.D. level). POTESTA's engineering department includes civil, geological, geotechnical, environmental, mining and mechanical engineers. Our registered professional engineers have over 300 years of experience among them and are supported by a capable team of engineers, designers, and surveyors. Our survey crews have over 150 years of experience among them.



Ronald R. Potesta



Dana L. Burns, P.E., P.S.

PROFESSIONAL DISCIPLINES











WASTEWATER DESIGN SERVICES

POTESTA has 14 professional engineers on staff who can be dedicated to providing quality wastewater engineering services for WVDNR for this project. POTESTA's wastewater design engineering services and related services include, but are not limited to:

- Feasibility Studies
- Conceptual Design
- Final Design
- Bidding and Construction
- Construction Monitoring
- Engineer's Cost Estimates
- Construction Monitoring
- Wastewater Audits
- Wastewater Minimization Studies
- Combined Sewer Overflow
- Industrial Wastewater Treatment

- Sewer Line Extensions
- Surveying/GPS/Mapping
- Permitting and Regulatory Liaison
- Management, Sampling, and Modeling
- Hydraulic Conveyance Structure Design
- Hydrologic and Hydraulic Analysis
- Small Flows Design
- Sewage Collection and Treatment
- Wastewater Treatment Plant



CIVIL ENGINEERING

Civil engineering is an area of particular expertise and experience at POTESTA. Our engineering staff has a broad background related to the vast field of civil engineering. Civil engineering disciplines such as development of grading plans, storm water management, water/wastewater treatment, utility/infrastructure design and dam/impoundment design are all areas of particular expertise at POTESTA. Our diverse staff of engineers, geologists, and scientists are routinely involved in these types of projects and work to support the project teams assigned to these projects on a daily basis to achieve a completed project that meets the client's expectation.

Once a project has been determined feasible through the preliminary planning stages, POTESTA's design professionals work to complete preliminary and final design plans. Frequent communication is made with the client and other design professionals to review the completed activities and obtain input for the design process.

The following design services are routinely completed for clients at POTESTA:

- Site Development Grading and Drainage Plans
- Storm water Management Plans
- Erosion and Sediment Control Plans
- Hydraulic Structure Design
- Earth Retaining Structures
- Stream Restoration
- Earthwork Optimization (Balance Cut/Fill While Optimizing Developable Property)
- Dam/Impoundment design, Inspection and Recommendations
- Utility Relocation
- Site Reclamation

During the construction process, POTESTA routinely provides professional services throughout the construction of our client's projects. These services often include survey layout, construction management, construction monitoring, record drawings preparation and bid evaluation assistance.

PROFESSIONAL DISCIPLINES











SURVEYING

POTESTA proposes to utilize our own survey crews on this project. POTESTA will perform all of the surveying required for this contract using in-house personnel. POTESTA has three licensed professional surveyors with over 50 years of combined surveying experience. Our surveyors are experienced in all aspects of surveying such as topographic mapping, boundary and property surveys, and construction surveys for layout of work, record drawings, and quantity measurements. We have three survey crews and the capability to add a fourth crew if necessary.

Our surveyors are experienced in many aspects of surveying such as topographic mapping, boundary surveys (rural/farms, city lots, and subdivisions), ALTA surveys, control surveys, flood certificate surveys, well location surveys, construction surveys for layout of work, record drawings, and quantity measurements. Related areas include courthouse research, preparation of right-of-way plans, and verification of property owners. POTESTA has ticensed professional surveyors registered in West Virginia, North Carolina, South Carolina, Ohio, Virginia, and Pennsylvania. Surveys completed by POTESTA are performed by or under the direction of a professional licensed surveyor. Surveys and mapping are completed to the standards outlined by the National Map Standards, as well as other applicable quality standards.

POTESTA is equipped with modern surveying instruments, allowing efficient data processing and accurate gathering of field information. Total station instruments equipped with data collectors are utilized for complete field-to-office automation allowing for high levels of productivity in the field. The latest versions of software are then used to process survey data and create drawings or required end products. These products can be supplied to our clients in AutoCAD and/or Microstation format. POTESTA's surveyors use state-of-the-art equipment such as Topcon total stations, Trimble R-8 GNSS, and SMI data collectors with SMI software. Autodesk Civil 3D reduction and design software is used.

POTESTA can provide the necessary surveying required for establishing ground control for aerial mapping. As a quality control measure, aerial mapping is field checked for accuracy by surveying cross sections or random points.

Our staff is experienced in global positioning surveys (GPS), GPS equipment, Trimble R-8 GNSS, and existing base stations are among POTESTA's surveying tools. Based upon the site location and ultimate use of the survey information, a recommendation is made to the client as to whether or not traditional survey or GPS is most applicable to their project.



PROFESSIONAL DISCIPLINES











GEOTECHNICAL ENGINEERING

POTESTA's engineers and geologists have extensive experience related to the geotechnical engineering disciplines. POTESTA and its staff have been involved with hundreds of geotechnical projects. Many of these have included a subsurface evaluation, laboratory testing, stability analysis, design of remedial measures, foundation analysis and design, and general site construction consideration.

SUBSURFACE EXPLORATION

POTESTA's geotechnical engineering group is experienced in many different facets of subsurface explorations. Typically, we work with the client to understand the nature of the project followed by a site reconnaissance survey to determine the location and number of test pits or subsurface borings required for the project. Specific attention is paid to site access, environmental issues, and rock outcrops. Additional information gathered in the field may include signs of soft ground or unstable slopes, as well as access to a water source if rock coring is required. POTESTA field engineers and geologists are familiar with the latest technologies to assist in the collection and analysis of soil and Our knowledge of the proper procedures and rock samples. familiarity with local conditions allow office and field personnel to adjust the investigation if any unanticipated field conditions are encountered.



Our staff is familiar with the following items, which can be associated with subsurface exploration:

- Drilling and Rock Coring Techniques (augers, rotary bits, Geoprobe[™], etc.)
- Sample Collection Methods (split spoons, Shelby tubes, Geoprobe™ sleeves, etc.)
- Classification and Logging of Soil and Rock Samples
- Monitoring Well and Piezometer Installation

SLOPE STABILITY

Slope stability is often a major concern during the design and construction phases of many projects, especially those located in the Appalachian terrain. POTESTA's engineers are familiar with the various methods utilized to predict slope stability and are capable of performing the related analyses. Slope stability is critical for many projects such as analysis of existing or proposed soil embankments, rock fills, dam analysis and design, landfill design and operation, assessing the causation of slope failure, and designing remedial measures. Analyses can involve circular or sliding block methods, interface friction angles, and estimation of the strength parameters of the soil or rock. Slope stability analyses are performed on one of the most technologically advanced computer programs available and can be modified using site specific data.

POTESTA's engineers can also develop preventive measures during initial project design or recommendations to repair slope failures. Based upon the project circumstances, our engineers will consider various remedial measures such as regrading the site to obtain more suitable conditions, management of groundwater, and design of retaining structures. Our staff is familiar with a wide variety of retaining structures, including gabion baskets, soldier beam and lagging walls, sheet piles, reinforced concrete and reinforced earth slopes.

PROFESSIONAL DISCIPLINES









GEOTECHNICAL ENGINEERING (CONT.)

FOUNDATION DESIGN AND RECOMMENDATIONS

POTESTA's staff has experience with various types of foundations and will recommend the appropriate type of foundation given the anticipated application and site conditions. The different types of foundations with which our staff is familiar are spread and strip footings, steel piles, auger-cast concrete piles, drilled piers, and reinforced mats.

Preliminary foundation design recommendations and cost analyses are commonly performed during the initial phases of a project to assist in determining project feasibility. As project planning progresses, the preliminary alternatives will be revised into a final recommendation which can then be incorporated into the project's construction documents or developed as an independent package for presentation to the contractor.

The final recommendation can include construction drawings, technical specifications, recommendations for allowable bearing capacity, engineer's construction cost estimate, and contractor's bid sheet.



PROFESSIONAL DISCIPLINES











CONSTRUCTION MONITORING

POTESTA provides construction monitoring and construction management services to assist clients in achieving regulatory and contractual compliance, to document that contractor activities are in compliance with design requirements, and to serve as an extension of clients' staff. POTESTA can provide full-time or part-time field services utilizing one or more engineers or technicians.

Regulatory compliance is often best documented by providing full-time construction monitoring services for a construction project. POTESTA can assist clients in observation of construction activities and documenting compliance. Our typical involvement in such projects includes:



- Conducting a pre-construction review of design and contract documents to identify potential problem areas, and consultation with the owner or client to develop strategies or procedures to avoid anticipated problems.
- Assistance in contractor selection. POTESTA can recommend construction contractors who specialize in
 the type of work associated with the project and can assist in bid evaluation by reviewing proposed
 quantities, unit costs, lump sum costs, and any proposed exceptions or qualifiers for the project.
 POTESTA can conduct pre-bid conferences to help contractors understand project requirements. We can
 also conduct pre-construction conferences prior to the start of the project to help establish lines of
 communication, review detailed plans, discuss testing requirements and establish proper reporting
 procedures.
- POTESTA can provide surveying for construction layout, measurement for payment quantities, and documentation of as-built conditions. Survey results are downloaded to form computer-aided drafting (CAD) drawings allowing the efficient preparation of record drawings and any subsequent evaluations required.
- Construction monitoring can include field testing to document compliance such as field density tests, concrete testing, sampling of materials for laboratory analysis, and documentation of site conditions and work performed on a daily basis or as required.
- Preparation of summary of construction reports, including photographs, videotape documentation, test
 results, daily construction logs, industrial hygiene monitoring, and other documentation as may be
 required by the client.
- Preparation of certifications as may be required.

SIMILAR EXPERIENCE





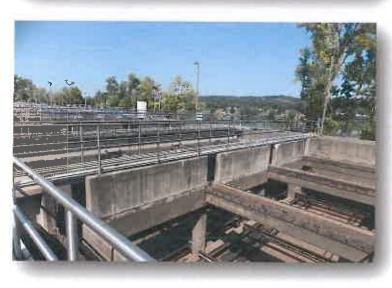






SISSONVILLE PSD Sissonville, WV WWTP

 Proposed improvements: replace existing clarifier equipment, drain/clean and epoxy coat clarifier, install new chlorine feed/storage building, replace existing generator, replace transfer switch, replace roof on control building, install vortex grit removal system, modifications to the headworks, oxidation ditch improvements, replace metal grating, replace screen building, miscellaneous painting



HUNTINGTON SANITARY BOARD

Huntington, WV WWTP

- Proposed improvements: replacement of primary clarifier, headwork replacement, new scrubber for chlorine room, replacement of aerator blow system, new office/lab building, new anaerobic digestion system
- Combined sewer replacement
- 54-Inch HDPE force main flow meter and bypass
- New regional septage receiving and vacuum truck disposal, pump station, septage receiver, and roadway
- · Design of bioretention basin
- Evaluation of mixing zone



BOONE COUNTY PSDDanville, WV WWTP

- · Replace mechanical bar screen
- · Replace grit pump at grit removal site
- Repair grit removal unit drain line
- Upgrade orbal aeration unit
- Add third clarifier
- · Replace UV unit
- Replace belt filter press with rotary fan press
- Replace hydropneumatics tank for non-potable wash water

SIMILAR EXPERIENCE









Our project management staff has managed hundreds of projects and understands what it takes to bring ideas to fruition through cost-effective and often innovative designs. We take pride in our ability to work with our clients from the conceptual idea through the construction process, which is the most critical part of the project. POTESTA often assists in determining the best options for funding which will provide the best outcome with the least financial impact possible to the client's users.

ENGINEERING DESIGN EXPERIENCE

Quality is extremely important to POTESTA. We have won six "Gold Award in the American Council of Engineering Companies – West Virginia Section" engineering excellence awards competition and approximately 80 percent of our work is from repeat clients; we believe this attests to our commitment for a quality project.

POTESTA takes prides in our ability to provide our clients with innovative and concise engineering design packages that will allow more of the client's money to be spent on actual construction rather than engineering design fees. POTESTA has the ability to complete every facet of the project from beginning to end, from the preliminary study through final design and construction observation/management. Frequent communication will be made with the WVDNR and other design professionals to review the completed activities and obtain input for the design process.

FEDERAL AND STATE FUNDING PROGRAM EXPERIENCE

Funding water and sewer projects in West Virginia can sometimes be complex and grueling, especially for entities unfamiliar with the process. Approval from the West Virginia Infrastructure and Jobs Development Council (Infrastructure Council), considered the clearing house for water and sewer project funding, is required for all state funded projects. Most federally funded sewer and water projects also tend to require the Infrastructure Council approval either due to their project funding partnering with state funding or because of informal agreements with the Infrastructure Council so that there is consistency between all funding agencies.

POTESTA's staff has unique and important experience with funding in West Virginia. POTESTA's staff is highly experienced with federal, state and local funding programs and their requirements. We have worked on water supply, sewer, highway, and other projects funded by state and federal agencies. Our staff is particularly experienced in projects funded by United States Department of Housing and Urban Development (HUD, i.e., Small Cities Block Grants), United States Department of Agriculture, Rural Utility Services (RUS), United States Office of Surface Mining (OSM), administered by the West Virginia Department of Environmental Protection Abandoned Mine Lands (AML), congressional offices, West Virginia Infrastructure and Jobs Development Council (WVIJDC), Drinking Water Treatment Revolving Fund (DWTRF), ARC, West Virginia Development Office, and the United States Department of Commerce - Economic Development Administration. POTESTA understands funding agency requirements and has developed relationships with administrators of funding agencies that allow for projects to proceed smoothly while agency criteria are met.

PERMITTING EXPERIENCE

POTESTA was formed by Ronald Potesta, who headed the West Virginia Department of Natural Resources which, at one point, included the Department of Environmental Protection and Water Resources. Environmental permitting is POTESTA's forte. POTESTA can assist in all phases of the permitting process and funding, including application preparation, negotiations, modifications, compliance, and renewal. Our personnel are familiar with both state and federal permitting strategies and can provide capable guidance for appropriate and applicable permits for a project. Our personnel are experienced in permit writing and will

SIMILAR EXPERIENCE









work closely with agency staff to ensure that the permit meets both regulatory requirements and the needs of the WVDNR.

BIDDING/CONSTRUCTION ADMINISTRATION EXPERIENCE

POTESTA takes pride in our ability to provide clients with innovative and concise engineering design packages that will allow more of your money to be spent on actual construction rather than engineering design fees.

POTESTA maintains a database with bidding results from recent construction projects. This information allows our designers to develop accurate estimates of probable construction costs based on recent bids from local contractors. We pride ourselves on the accuracy of our cost estimates to be within an acceptable range of actual bid results obtained for projects. POTESTA also has an excellent working relationship with many manufacturers and suppliers that will assist with design specifications and cost estimates.

During construction, POTESTA can provide staff that is familiar with and have had experience working on similar projects. We routinely provide resident project representatives (RPRs) during construction to serve as the "eyes and ears" on behalf of the Owner to document the progress of the Contractor, observe and document the construction activities, and prepare record drawings. Copies of the Daily Field Reports as well as both hard copy and digital copies of the record drawings will be provided to the Owner once construction is completed. POTESTA will also assist the WVDNR with the bidding of the project, review of the bids, review of pay applications, and requests by the Contractor such as change order requests and requests to substitute equivalent products.



RELATED PROJECTS









Project	Project Manager/Contact Information	Type of Project	Project Goals and Objectives
Huntington Sanitary Board Cabell County, WV	Pat Taylor, P.E. pataylor@potesta.com	Long-term improvement plan for sanitary board	 General agreement to perform services related to their long-term improvement plan Redesign of conversion of four ejector stations to submersible pump stations Design, bidding, and construction management of combined sewer replacement involving 3,000 LF of 24"-36" pipe Preparation of system asset management plan and cost study for \$63 million in capital improvements within WWTP and collection system Design, bidding, and construction management of 54-inch HDPE force main replacement, new septage receiving station and a new HDPE effluent line, diffuser, and air chamber Evaluation of the mixing zone for the wastewater treatment plant discharge
Boone County Public Service District Boone County, WV	Terence Moran, P.E. tcmoran@potesta.com	Evaluation of Sewer Service Extension	 Preliminary engineering report included evaluating existing situation, package WWTP, historical flow, and capacity for various components. Inventoried permits and certificates and prepared detailed preliminary estimate of contraction cost including 21,500 feet of gravity collection system, 4,200 feet of force main, 600-foot bore and jack crossing, and five pump stations
Sissonville Public Service District Kanawha County, WV	Mark A. Sankoff, PE, PSmasankoff@potesta.co m	Upgrade of Wastewater System	 Upgrade of pump stations, wastewater treatment plant facility, and construction of an extension of the wastewater collection system along certain areas of WV Route 21
Town of Handley Kanawha County, WV	Pat Taylor, P.E.pataylor@potesta.com	Design and construction of sewer system	 Provide design and construction phase services for rehabilitation of their 1980's sewer system, including upgrade 3 pump stations
Boone County Public Service District Boone County, WV	Terence Moran, P.E.tcmoran@potesta.com	Design of WWTP upgrades	 Design, permitting, bidding, and construction phase services for upgrade of the Danville Wastewater Treatment Plant
West Virginia Division of Highways Wood County, WV	Terence Moran, P.E.tcmoran@potesta.com	Evaluation of WWTP	 Evaluation of replacing the Mineral Wells Rest Area Wastewater Treatment Plant, including evaluating multiple options including using a lift station/force main to direct sewage to the Mineral Wells PSD
Boone County Public Service District Boone County, WV	Terence Moran, P.E.tcmoran@potesta.com	Rehabilitation of sanitary collection sewer line	 Provide design, permitting, bidding, and construction phase services for 3,700 feet of gravity sewer line replacement, and rehabilitation of two pump stations
North American River Runners Fayette County, WV	Terence Moran, P.E.tcmoran@potesta.com	Rehabilitation of WWTP	 Design and permitting services for upgrade to package WWTP
American Electric Power (AEP) Kanawha County, WV	Pat Taylor, P.E.pataylor@potesta.com	Design and permitting of WWTP	 Evaluation of existing WWTP and design and permitting of a new peat moss WWTP facility for the London Locks Hydroelectric Plant

RELATED PROJECTS









Project	Project Manager/ Contact Information	Type of Project	Project Goals and Objectives
ECOLAB Berkeley County, WV	Terence Moran, P.E. tcmoran@potesta.com	Evaluation of pre-treatment WWTP	 Evaluation and recommendations for the pretreatment of ECOLAB's effluent prior to discharge to the Berkeley County Public Service Sewer District's (BCPSSD) industrial wastewater treatment plant The evaluation focused on bringing the effluent into compliance with permit limitations
Berkeley Springs Development Morgan County, WV	Mark Kiser, P.E. dmkiser@potesta.com	Design and permitting of WWTP	 Design and permitting of a 440,000-gallon per day membrane bioreactor type WWTP for a large residential development in Berkeley County, West Virginia Design included over 18,000 feet of gravity sewer line with sizes ranging from 8-inch to 15-inch and 5,800 feet of 8-inch force main and 85 feet of 2-inch force main
West Virginia American Water Fayette County, WV	Terence Moran, P.E. tcmoran@potesta.com	Rehabilitation of WWTP	 Evaluation of existing sanitary wastewater system and providing recommendations for areas of rehabilitation and improvement in O&M practices for the City of Oak Hill, West Virginia WWTP
CNX RCPC, LLC Monongalia County, West Virginia	Dave Sharp, P.E. dsharp@potesta.com	Evaluation of WWTP	Evaluation of Hunting Hills Residential Development Sanitary Sewer System
Salt Rock Sewer Public Service District Cabell County, WV	Terence Moran, P.E. tcmoran@potesta.com	Engineering for sewage systems	Conceptual engineering for on-site sewage systems for residents of Holiday Park Treatment plant was failing and complaints had been filed with the West Virginia Public Service Commission
West Virginia American Water Greenbrier County, WV	Terence Moran, P.E. tcmoran@potesta.com	Evaluation of WWTP	Evaluation of sanitary wastewater system and providing recommendations for areas of rehabilitation and improvement in O&M practices for the Town of White Sulphur Springs WWTP
Old Standard Development Jefferson County, WV	Dana Burns, P.E. dlburns@potesta.com	Design and permitting of WWTP	 Design and permitting of a 50,000-gallon per day Membrane Bioreactor (MBR) type WWTP (expandable to 250,000 gpd) for a large residential development Design included nearly 10,000 linear feet of force main and gravity sanitary sewer collection line and two pump stations
Tucker County Development Authority Tucker County, WV	Dave Sharp, P.E. dsharp@potesta.com	New sewer line	Design, permitting, and construction administration/ observation of approximately 8,000 linear feet of water line and 8,000 linear feet of sewer line to extend service from the Town of Davis to the new Tucker County Industrial Park
Pocahontas County Public Service District/ Wastewater Management, Inc. Pocahontas County, WV	Dave Sharp, P.E. dsharp@potesta.com	Evaluation of sanitary sewer system	 Evaluation of Hawthorn Loop Sanitary Sewer System, including observing pipe via CCTV, review previous engineering studies, identifying defects, and developing preliminary estimate of construction costs for rehabilitation
Town of Ceredo Wayne County, WV	Terence Moran, P.E. tcmoran@potesta.com	Upgrade to sanitary sewer system	 Design, permitting, and construction phase services for an upgrade to the sanitary sewer system Design phase included identifying the need to upgrade piping sizes and pumping rates

RELATED PROJECTS









Project	Project Manager/ Contact Information	Type of Project	Project Goals and Objectives
Salt Rock Sewer Public Service District Cabell County, WV	Terence Moran, P.E. tcmoran@potesta.com	Odor control study	Odor control study mandated by the West Virginia Public Service Commission Complaints arose after a proposed lift station site was modified to include a "headworks" facility
Tackley Mill Development Jefferson County, WV	Dana Burns, P.E. dlburns@potesta.com	Design and permitting of WWTP	 Design and permitting of a 25,000-gallon per day Membrane Bioreactor (MBR) type WWTP (expandable to 1,000,000 gpd) for a residential development Design included approximately 17,000 linear feet of force main effluent discharge line and a pump station
Thorn Hill Development Jefferson County, WV	Dana Burns, P.E. dlburns@potesta.com	Design and permitting of WWTP	 Design and permitting of a 50,000-gallon per day Membrane Bioreactor (MBR) type WWTP (expandable to 225,000 gpd) for a residential development Design included approximately 5,180 linear feet of force main and gravity sanitary sewer collection line and a pump station
Crosiers Sanitary Service Fayette County, WV	Terence Moran, P.E. tcmoran@potesta.com	Design of new WWTP package	Permitting and design phase services for modular moving bed bioreactor/membrane filtration WWTP
Steptoe & Johnson PLLC/ Berkeley County PSD Berkeley County, WV	Terence Moran, P.E. tcmoran@potesta.com	Disinfection System Improvements at WWTP	 Provided an evaluation and subsequent affidavit regarding disinfection at Berkeley County Public Sewer Service District's Marlowe Town Center package wastewater treatment plant
Town of Ceredo Wayne County, WV	Terence Moran, P.E. tcmoran@potesta.com	Asset management plan	Preparation of an Asset Management Plan that was required as part of a sanitary sewer system upgrade funded by the Clean Water State Revolving Fund
Carmeuse Lime & Stone Frederick County, VA	Joe Knechtel, P.E. kjknechtel@potesta.com	WWTP	 Permitting, design, and construction oversight services for a wastewater treatment plant and a water treatment plant in Winchester, Virginia.
ZMM, Inc. McDowell County, WV	Mark Kiser, P.E. dmkiser@potesta.com	Collection system	 Design, permitting, bidding, and certain construction phase services associated with a collection system associated with two new schools of the same site, and the associated upgrade of the Town of Bradshaw's existing vacuum collection system.
Boy Scouts of America Pocahontas County, WV	Chris Grose cagrose@potesta.com	Replacement collection system/WWTP	Design of replacement sanitary sewer collection system and design of new sewage stabilization lagoon at Dilley's Mill Boy Scout Camp
Private Individual Greenbrier County, WV	Dana Burns, P.E. dlburns@potesta.com	Replacement study for treatment plant	Design and preparation of drawings and cost estimate for replacement study for 25,000 gpd package treatment plant in Lewisburg, West Virginia
Charles Town Racing and Slots Jefferson County, WV	Dana Burns, P.E.dlburns@potesta.co m	Design and permitting of WWTP	 Design and permitting of an initial capacity 250,000- gallon per day Sequence Batch Reactor (SBR) type WWTP (expandable to 375,000 gpd) for a gaming resort facility

RELATED PROJECTS









Project	Project Manager/ Contact Information	Type of Project	Project Goals and Objectives
Cloverleaf Environmental Consulting Clarke County, VA	Joe Knechtel, P.E. kjknechtel@potesta.com	Repair of failed AOSS system	Design and permitting of 450 gpd multi-flow treatment and drip irrigation system (AOSS) for a repair of a failed residential conventional system in a rural, residential areas in Bluemont, Virginia
Summit at Cheat Lake Monongalia County, WV	Pat Taylor, P.E. pataylor@potesta.com	Design of sanitary sewer collection system	Design of a sanitary sewer collection system, incorporating 13,500 linear feet of 8-inch gravity sewer line, as well as 2,500 linear feet of 1.5-inch and 2-inch force main line from three pump stations and package aeration treatment plant
US Customs & Border Protection Agency Jefferson County, WV	Joe Knechtel, P.E. kjknechtel@potesta.com	Design of WWTP	 Feasibility study of "living tree" treatment plant, designed 50,000 gpd wastewater treatment plant with UV/aeration post treatment, and Designed gray water system, and prepared permit applications
Union Carbide Corporation Kanawha County, WV	Doug Bowe, P.E. dwbowe@potesta.com	Sewer line	 Evaluated 300,000 linear feet of combined process/ storm sewer water Designed a new system using a gravity and force main combination system for Union Carbide's South Charleston and Institute plants and their Technical Center, Charleston, West Virginia
Cloverleaf Environmental Consulting Loudoun and Clarke Counties, VA	Joe Knechtel, P.E. kjknechtel@potesta.com	Repair of failed AOSS system	 Design and permitting of 600 gpd multi-flow treatment and drip irrigation system (AOSS) for a repair of a failed residential conventional system in a rural, residential areas in Purcellville, Leesburg, and Berryville, Virginia
Timberwolf Development Corporation Kanawha County, WV	Mark Kiser, P.E. dmkiser@potesta.com	Design and construction of sanitary sewer systems	Design and construction observation of water supply and sanitary sewer systems for Yorketown Subdivision, Charleston, West Virginia

PROPOSED STAFFING PLAN











PRINCIPAL-IN-CHARGE Dana Burns, P.E., P.S.

DDO IECT MANACED

PROJECT MANAGER Terence Moran, P.E.

DESIGN STAFF

Mark Sankoff, P.E., P.S.
D. Mark Kiser, P.E., L.R.S.
Robert Ammirato, P.E.
Jarrett Smith, P.E.
Jordan Beard
Angela Pugh, P.E.
Patrick Taylor, P.E.
Chad Griffith, P.E.
Everett Mulkeen, P.E.

SOILS/GEOTECHNICAL

Christopher Grose, L.R.S.
Peter Potesta
David Sharp, P.E.
Dennis Litwinowicz
Jeremi Stawovy, E.I.T.

SURVEYING

Victor Dawson, P.S. E. Brad Starkey Greg Hodges Rusty Hunter Charles Shaffer Ryan Bennett Tyler Aboytes

CONSTRUCTION MONITORING

Robert Lamm
Michael Whitman
Bill Cox
Russ Harper
Carl Hickman
Paul Kinzer
Chuck Bird

Services will be performed at POTESTA's Charleston, West Virginia office. We stand ready to commit the personnel and resources required to complete this project in a timely, technically sound, and cost-efficient manner. POTESTA's large staff size will allow us to work on this project on an accelerated schedule if necessary.





STAFF QUALIFICATIONS









POTESTA can provide all of the services required for this project in-house using existing staff. Our large, experienced staff allows us to respond quickly, provide flexibility, and will provide opportunity for high level input from our in-house experts on a project of this size and nature. **Appendix B** includes resumes of proposed key personnel.

Mr. Dana L. Burns, P.E., Vice President, will serve as principal-in-charge for this project. As such, he will direct POTESTA's staff, answer questions, address problems encountered and review the project budget. Mr. Burns has over 38 years of experience with civil and environmental engineering projects. This experience includes serving as a project manager for various water supply system extensions, sanitary sewer projects, industrial waste water projects, water extension feasibility studies, and most recently five West Virginia American Water Company projects totaling over 240,000 linear feet of line extensions. In addition to providing technical guidance throughout the project, Mr. Burns will be responsible for maintaining the schedule and budget for the project.

Mr. Terence C. Moran, P.E., Senior Engineer, will serve as Project Manager and has over 31 years of experience on civil engineering projects, with particular emphasis on water/wastewater projects. Mr. Moran has served as the project manager/project engineer for 100+ water supply projects, including preliminary engineering, environmental assessments, funding applications, hydraulic analysis, booster and storage tank design, line sizing, design of treatment systems, drawings, specifications, cost estimates, bid documents, shop drawing review, construction management and construction observation. Mr. Moran has designed or served as the project manager for evaluation of water treatment plants and water systems to identify deficiencies; design of water line extensions; design of booster stations; evaluation of replacement of controls for water storage tanks including installation of telemetry; and construction of replacement (upgraded) water lines. He has served as project manager for water supply projects in more than 20 counties in West Virginia.

Mr. Mark A. Sankoff, P.E., Chief Engineer, has over 36 years of experience on civil engineering projects, with particular emphasis on water projects. As the past Director of Engineering at West Virginia American Water, he served as project manager for numerous water projects, including the Kanawha County 2000 Water Project, installing over 100 miles of water main, six tanks and six boosters serving over 1,700 families. He has served as project manager for the EPA Initial Distribution System Evaluation (IDSE) computer modeling to study water age for the two largest systems in West Virginia with over 2,000 miles of distribution piping. Mr. Sankoff has designed or served as the project manager for the evaluation of water systems to identify deficiencies including evaluating and implementing the most cost-effective solution and has designed multiple water line replacement projects and water line extensions. He brings nine years experience in the operation and maintenance of the largest distribution system in West Virginia which has well over 100 different pressure gradients. Mr. Sankoff has extensive experience on multiple water projects, including preliminary engineering, comprehensive planning studies, funding applications, hydraulic analysis, booster station and storage tank design and rehabilitation, telemetry, line sizing, drawings, specifications, cost estimates, bid documents, shop drawings review, construction management and construction observations.

Mr. Patrick A. Taylor, P.E., Senior Engineer, will serve as the planning and funding liaison for the project, as needed. Mr. Taylor has substantial experience with state regulatory and funding programs, as well as technical capabilities.

Some of this experience includes:

 West Virginia Bureau for Public Health (WVBPH) Permitting Program: Directed review and issuance of public water and wastewater, public swimming pool, agricultural waste construction permits and water vending machine permits.

STAFF QUALIFICATIONS









- WVBPH Capacity Development Program: Directed, assessed, reported on, and provided assistance on the technical, financial and management capabilities of public waters systems. Responsible for the oversight of program adherence to capacity development strategy, Governor's report, and annual reports to the EPA.
- WVBPH Drinking Water Treatment Revolving Fund and State Tribal Assistance Grant Programs: Directed overseeing loan and grant administration including technical and financial review; project selection; coordination with appropriate federal and state agencies (environmental and funding) and public water systems; coordination of bid advertising, loan closing, construction administration (processing of invoices, change orders, etc.); and water system adherence to loan conditions. Program responsible for preparation of program grant applications and reporting to EPA including: annual reports, disadvantaged business enterprise reports, and intended use plans. Program responsible for oversight of 2 percent technical assistance grant with the West Virginia Rural Water Association which provides continuing education to water treatment plant operators and oversight of the 4 percent administrative set-aside to Water Development Authority in financial management of the Drinking Water Treatment Revolving Fund.
- West Virginia Infrastructure and Jobs Development Council: Former sitting member on the Infrastructure
 Council. Oversight of water technical review committee for infrastructure water projects and member of
 sewer committee, and sitting member of the funding committee. Oversight of technical assistance/review
 for infrastructure water projects and wastewater preliminary applications; representing Bureau for Public
 Health in committee and council meetings.
- Private Practice Consulting: Management and design of multiple water line projects including clients such
 as the Webster County Commission, Town of Glenville, Lincoln County PSD, Logan County PSD, City of
 Kenova, Birch River PSD, and Town of Kermit. Water line projects included varied line sizes, tanks,
 pump stations, and pressure-reducing valves.

POTESTA's staff of 79 will allow us to assemble an experienced project team and complete this project in a timely and efficient manner.

Staff Certifications are included in *Appendix C*.

MANAGEMENT PLAN











PROCEDURE FOR COMMUNICATION WITH OWNER

Mr. Dana Burns, P.E., as POTESTA's principal-in-charge he will be responsible for contract management (administration) and shall coordinate and direct all aspects of the project. Day-to-day project activities for this project will be performed under the direction of our project manager, Terence C. Moran, P.E., Mr. Moran, P.E., will be the point of contact to allow clear communication with the WVDNR. A written proposal, including a detailed scope of services and an associated manhour and cost estimate, will then be prepared and submitted to WVDNR for review. The project manager will review the proposal with the WVDNR, including a task-by-task discussion of work items and the related costs. Upon the WVDNR's approval of the proposal, the project manager will arrange for the start of project activities. The principal-in-charge will provide the project manager the required staff necessary to complete the project activities, will review the project budget and schedule during performance of the project, and will provide a final QA/QC review of the documents prior to submittal to the WVDNR. The project manager will develop a detailed step-by-step project work plan so that the project activities are completed in a correct manner, within budget, and on time. POTESTA will be available to conduct weekly status reports which may include weekly meetings, memos, or telephone calls with the WVDNR's project manager as required.

REQUIRED DOCUMENTS

Appendix D contains Interested Party Disclosure, DNR190000003 Solicitation Form, Certification and Signature Page, Purchasing Affidavit, Addendum Acknowledgement Form, and Certificate of Insurance.

PROJECT BUDGET CONTROL

The project manager will be responsible for monitoring the project budget and keeping the principal-in-charge informed of its status. The project manager will develop a work plan based on hourly rates and tasks to complete the project. POTESTA's staff enters time into POTESTA's InFocus accounting system on a daily and/or weekly basis. POTESTA's project manager can access InFocus at any time, thus allowing a real-time control of project costs.

PROJECT SCHEDULE CONTROL

Direct responsibility for schedule control lies with the project manager. Initially, the project manager will review schedule requirements to see how they can be achieved given the anticipated scope of work and develop a work plan. As the project progresses, the project manager will monitor progress and compare it with the established schedule on a weekly basis keeping the principal-in-charge aware of the schedule's status. In this manner, the principal-in-charge can make staff adjustments to allow the project manager to maintain the project schedule. If circumstances develop that could impact the project schedule, the project manager will contact the WVDNR's project manager to develop a mutually acceptable adjustment to the schedule and/or work plan.



REFERENCES









BOONE COUNTY PUBLIC SERVICE DISTRICT

Mr. Toby Waller 109 Town Square Danville, West Virginia 25053 Phone: (304) 369-2622

Fax: (304) 369-6276

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mr. Nick Estes 601 57th Street, SE Charleston, West Virginia 25304 Phone: (304) 926-0499

Fax: (304) 926-0458

HUNTINGTON SANITARY BOARD

Mr. Wesley Leek 555 7th Avenue Huntington, West Virginia 25701

Phone: (304) 781-1912 Fax: (304) 696-5596

LOCATION OF MAIN INTERCEPTOR SEWER COLLECTION

Huntington Sanitary Board Huntington, West Virginia

Potesta & Associates, Inc. (POTESTA) currently has a general agreement with the Huntington Sanitary Board (HSB) to perform services related to the Board's implementation of their Long Term Control Plan, Water Treatment Plant Modernization Plan, and Storm Water Management Utility Establishment/Operation. This agreement has been comprised of multiple work orders for improvement of Huntington's combined sewer system.

POTESTA worked with the Huntington Sanitary Board staff to identify the location of the City of Huntington's main combined sewer interceptor line to locate manholes for access to clean out the interceptor. This interceptor was installed in the late 1950s and collects flow from approximately 90 percent of the system. Most of the interceptor line is located in excess of 20 feet below the surface and many of the manholes have been buried under material deposit by the Ohio river over the years and have never been located by the HSB. Some tops of manholes were buried over 10 feet in depth.

POTESTA and the HSB initially performed field work to locate manholes visually; however, with the overgrowth of brush and the amount of river sediment deposited, it became apparent that the line and manholes could not be located by conventional methods. Because of access problems, the use of HSB's camera truck was not possible.

POTESTA and the HSB used the SB Leica DidgiCat System and construction "as-built" record drawings, with excavation equipment, to locate the interceptor and manholes.







MIXING ZONE STUDY AND CLEAN WATER ACT PERMITS

City of Huntington
Cabell County, West Virginia



Potesta & Associates, Inc. (POTESTA) was retained by the City of Huntington for the development of a mixing zone study and the associated Clean Water Act permitting. The City of Huntington operates and maintains an existing combined sewer wastewater collection system and an existing 17.0 million gallons per day wastewater treatment plant. These facilities are to serve a population equivalent of approximately 90,000 persons within the City of Huntington, City of Kenova, Town of Ceredo, Northern Wayne County

Public Service District, Spring Valley Public Service District, and the Ohio River service area of the Pea Ridge Public Service District. The wastewater treatment plant discharges treated wastewater through Outlet No. 001 to the Ohio River at Mile Point 313.2.

Concerned over the ability of the WWTP to comply with its National Pollutant Discharge Elimination System (NPDES) permit, the City of Huntington retained POTESTA to provide modeling, as well as environmental and engineering services associated with development of a site-specific mixing zone in order to obtain increased permit limitations.

Modeling of the effluent line and diffuser was completed for Outlet 001 using the Cornell Mixing Zone Expert System Version 8.0GTD (CORMIX) mixing zone software. Once the mixing zone study was completed, a report was submitted to the West Virginia Department of Environmental Protection (WVDEP) to support the modification of the City of Huntington's NPDES permit and allow use of a multiport diffuser.

In addition to the NPDES modification, construction of the effluent line and diffuser required United States Corps of Engineers (USACE) Section 404 and Section 10 authorization (dual application), State 401 Water Quality Certification from the WVDEP and West Virginia Public Lands Corporation (PLC) permit from the West Virginia Division of Natural Resources (WVDNR). Authorization of the federal permits required consultation with the United States Fish and Wildlife Service (USFWS) to determine the potential presence of federally listed species and the State Historic Preservation Office (SHPO) to fulfill Section 106 requirements.



HUNTINGTON SANITARY BOARD COMBINED SEWER AND FORCE MAINS

Huntington Sanitary Board Huntington, West Virginia

POTESTA currently has a general agreement with the Huntington Sanitary Board (HSB) to perform services related to the Board's implementation of their Long-Term Control Plan, Water Treatment Plant Modernization Plan, and Storm Water Management Utility Establishment/Operation.—This agreement has been comprised of multiple work orders for improvement of Huntington's combined sewer system.

Currently, POTESTA has concluded or is in the process of the following work:

- Specifications, bidding, and construction management of the cleaning, sludge removal and disposal, and camera work of HSB's 18,500 feet of 48-inch concrete interceptor.
- Design, bidding, and construction management of combined sewer replacement project on 13th Street West and 19th Street, which includes a combination of full trench replacement and trench-less technology pipe lining (cured-in-place pipe) for approximately 3,000 feet of 24 through 36-inch pipe.
- Design and construction of 54-inch HDPE force main flow meter and bypass to replace the existing 54-inch PCCP force main that transports the entire HSB's flow and had failed due to a buildup of hydrogen sulfide gas at the top of the pipe at the force main's crossing of the Huntington flood levee prior to the pipes entrance to the WWTP.







HUNTINGTON SANITARY BOARD WASTE WATER TREATMENT PLANTS AND ASSISTANCE WITH VARIOUS SERVICES

Huntington Sanitary Board Huntington, West Virginia



POTESTA currently has a general agreement with the Huntington Sanitary Board (HSB) to perform services related to the Board's implementation of their Long-Term Control Plan, Water Treatment Plant Modernization Plan. and Storm Water Management Utility Establishment/Operation. This agreement has been comprised of multiple work orders for improvement of Huntington's combined sewer system.

Currently, POTESTA has concluded or is in the process of the following work:

- Design and construction services for new regional septage receiving and a vacuum truck disposal, pump station, septage receiver ("the beast") and roadway.
- Management of preparation of wastewater treatment plant sludge incinerator failure analysis and preparation of cost study to replace incinerator including measures to meet new Clean Air Act standards for sludge incinerators.
- Environmental remediation of fly ash lagoon through West Virginia Voluntary Remediation Program and design of Bioretention Basin at WWTP for treatment of stormwater fitting "green" project criteria.
- Evaluation of the mixing zone for the wastewater treatment plant discharge into the Ohio River through computer



analysis. Based on the analysis, it was determined that the effluent line required a diffuser to allow for adequate mixing at the discharge.

HUNTINGTON SANITARY BOARD WASTE WATER TREATMENT PLANTS AND ASSISTANCE WITH VARIOUS SERVICES PAGE 2

- Design and construction services of a new HDPE effluent line, diffuser, and air chamber located in the Ohio River to replace 50-year-old existing effluent line which failed due to excessive weight of fill placed on its corrugated metal pipe.
- Design of chlorine room relocation to centralized location within waste water treatment plant to provide a more direct chlorine feed route to contact tank and a more secure area to address chlorine leakage.
- Preparation of preliminary engineering of \$75 million capital projects including waste water treatment plant work to support HSB rate increase. Analysis included cost estimate and schedule for the following:
 - New office/laboratory building.
 - Headwork replacement (including screening and grit removal system).
 - o New anaerobic digestion system.
 - o New scrubber/chlorine removal systems of chlorine room.
 - o Primary and secondary scrubber, cover and drive replacement work.
 - Replacement of primary clarifier sludge removal system.
 - o Replacement of aerator blow system including moving blowers from centralized building to each active sludge basin.
- Assistance to the HSB regarding the CSO long-term control plan's implementation schedule.
- Preparation of Asset Management Plan including system wide Conditions Assessment Protocol (CAP).



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HUNTINGTON SANITARY BOARD PUMP STATIONS

Huntington Sanitary Board Huntington, West Virginia

POTESTA currently has a general agreement with the Huntington Sanitary Board (HSB) to perform services related to the Board's implementation of their Long-Term Control Plan, Water Treatment Plant Modernization Plan, and Storm Water Management Utility Establishment/Operation. This agreement has been comprised of multiple work orders for improvement of Huntington's combined sewer system.

Currently, POTESTA has concluded the following work:

- Redesign, bidding and construction management of conversion of four ejector stations to submersible pump stations to include altering design from a cast-in-place concrete cap to allow building to remain. Design included new hatches and hoisting, ventilation equipment, heating, bypass features, and oversight of electrical design.
- Flow monitoring and preliminary and final design for a new sewage lift station (approximately 31,000 gpm) to replace an existing antiquated station which pumps the majority of Huntington's wastewater to the treatment plant.
- Design, bidding, and construction management of a pump around bypass system at the 13th Street West pump. Replacement of two 24-inch discharge line/air relief valves in pump station and capping two discharge lines.
- Management of study and preparation of Preliminary Engineer Report for replacement of Huntington's 13th Street West Pump Station (primary pump station facility), including geotechnical evaluation.









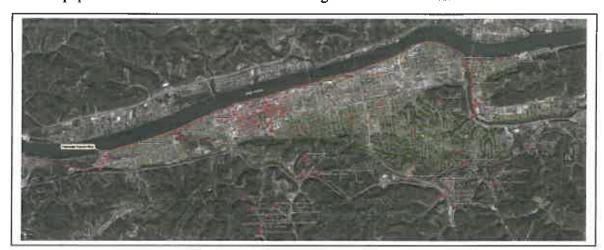
ASSET MANAGEMENT PLAN

Huntington Sanitary Board Cabell County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by the Huntington Sanitary Board (HSB) to prepare an Asset Management Plan (AMP) which would serve three purposes: (1) fulfill the West Virginia Department of Environmental Protection (WVDEP) Clean Water State Revolving Fund requirement for systems which have received loans; (2) assist the HSB to estimate the funds required to maintain operation of the system critical assets such as lines, pump stations, and wastewater treatment plant (WWTP); and (3) provide the HSB a process to prioritize their system's annual operational needs.

The HSB provided POTESTA with:

- Geographic Information System (GIS) files containing 10,000 + lines.
- Work orders from lines, 42 pump stations and 420 grinder pumps, and WWTP collected over the past 15 years.
- Equipment list for HSB's 17 MGD WWTP organized into 20 zones.



Since the HSB serves an extensive geographical area, POTESTA delineated the system's critical assets into the following three categories.

1. Critical Pipe Lines

- Defined trunk lines, interceptors, force mains, lines installed on or before 1920, and problematic lines identified by HSB.
- Utilized GIS to visualize lines throughout the entire system by reviewing the content of the work orders, notating if work performed was due to a sewer line related failure (i.e., sinkholes) or routine activities (i.e., repair laterals, adding service connections). If there were three or more pertinent work orders associated to a line, it was added to the critical asset list.
- Developed a replacement/rehabilitation cost per linear foot of line based on similar bid tabs, engineering judgement and construction industry publications from 6-inch diameter pipe up to 54-inch diameter pipe.

ASSET MANAGEMENT PLAN PAGE 2

2. Pump Stations

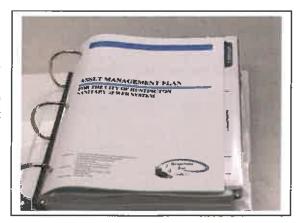
- Worked with HSB's pump station supervisor to evaluate each pump station's condition and estimate the expected useful life.
- Devised a rehabilitation cost per pump station based on the cost to rebuild the pump, valve replacement/rehabilitation, electrical work, communication equipment and variable frequency drive (VFD) costs when applicable.
- Utilized costs derived from work orders on the HSB system, bid tabulations, engineering judgement, and construction industry publications.

3. Wastewater Treatment Plant

- Worked with the WWTP supervisor to assign replacement/rehabilitation costs to WWTP equipment.
- Obtained budgetary estimates from vendors and construction industry publications when historical costs were not available.

POTESTA developed a Conditions Assessment Protocol (CAP) to provide uniform and consistent information currently available on the condition of the critical assets. Critical asset data was input into the Check Up Program for Small Systems (CUPSS) software, provided by the United States Environmental Protection Agency (USEPA). The basis for critical asset evaluation was summarized as follows:

- Condition
- Installation Date
- Original Cost
- Replacement or Renewal Cost: The HSB will look forward and predict whether reparation, rehabilitation or replacement will provide the desired level of sewer collection at the best appropriate cost.
- Maintenance Cost
- Redundancy: The ability for a secondary system to replace the primary system if the primary system fails.
- Probability of Failure
- Consequence of Failure
- Expected Effective Life



Once the critical asset information was compiled into the CUPSS asset import template, the program generated a comprehensive report detailing when each asset was expected to be replaced/rehabilitated and how critical the piece of equipment is to the system. Additionally, POTESTA worked with HSB's accountant to include pertinent financial information in order to run the CUPSS financial projections. POTESTA combined the inventory and financial outputs into a concise one page Preliminary Priority Asset Summary spreadsheet summarizing anticipated replacement/rehabilitation costs over the next four years. POTESTA was cognizant of the tasks outlined on HSB's Long Term Control Plan (LTCP) and highlighted priority assets that were due for rehabilitation/replacement that met requirements of the LTCP.

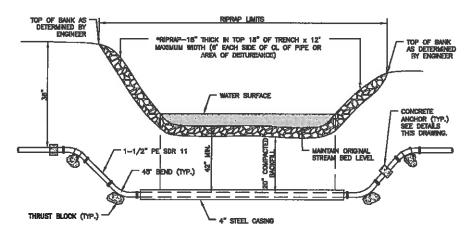


ENGINEERING DESIGN OF TIC TOC TIRE SANITARY SEWER EXTENSION

Boone County Public Service District Danville, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Boone County Public Service District (BCPSD) to design a sanitary sewer line extension and grinder pump station to serve a strip mall and a tire facility in Danville, West Virginia. POTESTA's effort included:

- Obtained and reviewed background data on the existing sanitary sewer collection system, including old construction drawings and BCPSD supplied information to finalize a concept for a proposed tie-in.
- Contacted Miss Utility and performed field reconnaissance to locate the utilities and pathways.
- Completed topographic and boundary surveys.
- Developed design flow based on water usage records, and an estimate of the infiltration/inflow as described in the appropriate West Virginia Department of Health and Human Resources (WVDHHR) regulations.
- Prepared construction drawings that included the grinder pump station, force main site plans/profile and details.
- Prepared technical specifications.
- Prepared permit applications to United States Army Corps of Engineers, West Virginia Bureau of Public Health/West Virginia Department of Environmental Protection, West Virginia Division of Highways, and Public Lands Corporation.



FORCE MAIN RIVER/ STREAM CROSSING DETAIL



CONSTRUCTION OBSERVATION OF RELOCATED SEWER LINE

Boone County Public Service District Boone County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Boone County Public Service District (BCPSD) to provide construction observation services during relocation of a sewer line adjacent to Boone Memorial Hospital (BMH). The relocation was required due to a BMH expansion.

The following items summarize our effort:

- Provided nearly full time construction technician to observe the relocation of the sewer line.
- Confirmed and documented that: (1) repairs to damaged joints were made when necessary, (2) the pipeline was installed using a laser to insure proper grade, and (3) crossings of water lines were properly cased with the correct casing length and number/spacing of spacers.
- Verified adequate compaction of backfill.
- Documented deviations from plans and notable events. For example, POTESTA documented when the contractor determined that it was desirable to move a manhole 284 feet to accommodate the pipe being out of alignment; these changes were recorded.
- Submitted daily field activity logs to BCPSD.



Sanitary Sewer Line Encasement at Water Line Crossing



PRELIMINARY ENGINEERING REPORT FOSTER AREA SANITARY SEWER COLLECTION SYSTEM EXTENSION – PHASE 1

Boone County Public Service District West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Boone County Public Service District (BCPSD) to provide a preliminary engineering report evaluating an extension of sewer service along State Route 3 to approximately Phase 1 only potential customers.

Included in this project was:

 Evaluating existing situation for BCPSD comprised of current customer usage, distribution and collection systems, and need for sewer service extension.



Existing Package WWTP to be Abandoned

- 2. Identified three package wastewater treatment plants (WWTP) that could be abandoned.
- 3. Collected and evaluated historical flow data at the WWTP.
- 4. Reviewed capacity for various components of the WWTP, relative to the proposed extension.
- 5. Prepared estimates for future population growth by considering full buildout in project area (up to 580 potential customers).
- 6. Inventoried permits and certificates required to complete project.

Prepared detailed preliminary estimate of construction cost including 21,500 feet of gravity collection system, 4,200 feet of force main, 600-foot bore and jack crossing of Corridor G, and five pump stations.



DESIGN AND CONSTRUCTION OF SEWER REHABILITATION

Town of Handley Handley, Kanawha County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by the Town of Handley (Handley) to provide design and construction phase services for rehabilitation of their 1980s sewer system. Handley had constant problems with their pump stations over the years, as well as one station being intermittently flooded which caused electrical and pump failure. POTESTA's services included:

- Assisted in obtaining funds for field work and preliminary engineering report.
- Assisted the Town of Handley and the Regional Development Council in obtaining a Small Cities Block Grant (SCBG).
- Worked continuously to keep system operating by bidding smaller projects for servicing while waiting for funding.
- Designed total rehabilitation to the three pump stations (including permanent and mobile generators).
- Designed pipe and valve replacement.
- Assisted in obtaining an SCBG construction grant.
- Able to obtain other necessary equipment with excess money from grant funding.



Before: Upper Drive Lift Station



After: Upper Drive Lift Station



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MINERAL WELLS REST AREA WASTEWATER TREATMENT PLANT

West Virginia Division of Highways Wood County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by the West Virginia Division of Highways (WVDOH) to evaluate sewage disposal options for their rest area along Interstate 77 near Mineral Wells in Wood County, West Virginia. The rest area was being served by a 30-year old package wastewater treatment plant (WWTP); discharge was not consistently meeting National Pollutant Discharge Elimination System effluent limitations and the WWTP was difficult to maintain due to its age and lack of readily available spare parts.

The objective of the evaluation was to provide the WVDOH with an estimate of necessary capital and operation/maintenance costs and advantages/disadvantages, and provide POTESTA's recommendations to assist the WVDOH in the selection of an appropriate wastewater disposal option.

The following options were evaluated:

Option 1: Replace the existing WWTP with a recirculating sand filter.

Option 2: Pump the sewage to the Mineral Wells Public Service District.

Based on our evaluation, POTESTA recommended to the WVDOH that they should pipe the sewage to the Minerals Wells Public Service District.





LONDON LOCKS HYDROELECTRIC PLANT

American Electric Power Company Kanawha County, West Virginia

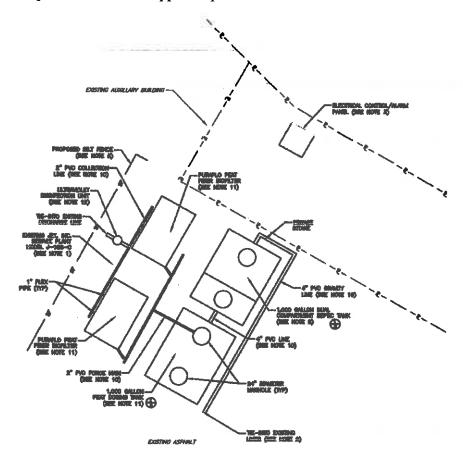
Potesta & Associates, Inc. (POTESTA) was retained by American Electric Power Company (AEP) in regards to replacing their existing wastewater treatment aeration package plant. POTESTA provided the following services.

- Assisted AEP in the design and bidding and installing of a grinder pump station and force main to replace the package plant. The force main was to be located via boring under the existing railroad track and West Virginia Division of Highways' roadway. When the bids for the project were deemed excessive for the company, POTESTA continued to assist AEP.
- Evaluated wastewater options including: (1) installing a holding tank to store the wastewater from the London Locks electric generation plant which would then be hauled to the nearest public wastewater treatment facility; (2) installing modifications to the existing wastewater treatment facility in order to meet AEP's National Pollutant Discharge Elimination System (NPDES) Permit Discharge Limits; (3) replacing the existing wastewater treatment facility with a new plant in order to meet AEP's NPDES permit discharge limits; and (4) installing a leach field for treatment thereby not having and NPDES discharge point.
- Evaluated various types of aeration package plants and peat systems and recommended a peat system.



LONDON LOCKS HYDROELECTRIC PLANT Page 2

Designed the specifications for a peat wastewater treatment plant. POTESTA then assisted AEP in preparing the Major Modification Application to the existing Individual Industrial permit for submittal to the West Virginia Department of Environmental Protection (WVDEP) and provided general assistance during the WVDEP and Kanawha County Health Department permit review and approval process.



EVALUATION OF INDUSTRIAL WASTEWATER TREATMENT PLANT

ECOLAB
Berkeley County. West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by ECOLAB to evaluate the Industrial Wastewater Treatment Plant (ITP) in Berkeley County, West Virginia. The ECOLAB facility manufactures sanitizers, lotions and other products. Wastewater from the facility is pretreated by adjusting pH, removing foam, and dechlorinating. The pretreated wastewater is then discharged to the ITP, which is operated by the Berkeley County Public Service Sewer District (BCPSSD). The effluent from the ITP had exceeded limitations for some parameters numerous times. ECOLAB's discharge to the ITP had also exceeded limits per a BCPSSD/ECOLAB agreement on numerous occasions. ECOLAB requested POTESTA's assistance in evaluating the ITP.

The ITP consists of the following equipment: equalizer tank, sequential batch reactor tank, aerobic digester tank, treatment tank, blower building, control building, piping valves and other appurtenances. Tasks completed as part of the evaluation included meeting with ECOLAB, BCPSSD, and West Virginia Department of Environmental Protection (WVDEP) officials to review and discuss the ITP, including a tour of the ITP and onsite operations evaluation; meeting with ECOLAB officials to discuss pretreatment efforts and view their pretreatment facility; review historical data provided by ECOLAB, BCPSSD, and WVDEP; and preparation of a report summarizing the evaluation and recommendations.



Aerobic Digester Tank (Left) and SBR Tank (Right)



THE VILLAGES AT COOLFONT PROJECT

Carl M. Freeman Communities Berkeley Springs, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Carl M. Freeman Communities to provide environmental and engineering consulting services in conjunction with the redevelopment of the Coolfont Recreation property in Morgan County, West Virginia. Coolfont included a lodge, lake, spa, chalets, and other recreational facilities developed in the 1960s. Carl M. Freeman Associates acquired the Coolfont resort and other adjacent properties with the plan to create a second home community with high-end amenities.



POTESTA completed pre-acquisition services including a Phase I Environmental Site Assessment, an American Land Title Association (ALTA) boundary and property survey of 997 acres, and completed an assessment of the facility's sanitary sewer wastewater treatment plant to facilitate the acquisition of the property.

POTESTA participated in a week-long planning charette with Carl M. Freeman Associates, land planners, and other design consultants in order to assess the characteristics of the property, identify opportunities and constraints for development, obtain input from local residents and businesses, and develop design guidelines for the project. At the end of the charette, a land use plan was presented including 1,300 homes, a village center, spa, expansion of an existing lake, a proposed second lake, walking/hiking/biking trails, and the necessary infrastructure.

POTESTA completed civil engineering design work for potable water and wastewater treatment facilities. POTESTA selected source well locations, drilled potable water test wells, completed field testing and permitting. POTESTA designed a 300 gallon per minute potable water treatment plant to serve the proposed development. POTESTA also designed the water storage and distribution system. The first phase of the storage distribution system was modeled so that fire protection and adequate pressure would result. The distribution system consisting of 22,500 linear feet of 12 inch to 2 inch water mains and a 316,000 gallon storage tank were designed and permitted serving the first phase of the development.

THE VILLAGES AT COOLFONT PROJECT PAGE 2

POTESTA completed the design and permitting for a 440,000 gallon per day membrane bioreactor wastewater treatment plant to serve the ultimate development. The design included the collection system consisting of 18,300 linear feet of 15 inch to 8 inch sewer main, 2 pump stations, and 5,800 linear feet of 8 inch force main for the first phase of development.

POTESTA assisted Carl M. Freeman Associates with permitting required for development of the new lake along with upgrades/expansion of the existing lake. Included were a Section 404 individual permit from the United States Army Corps of Engineers and a Section 404 water quality certification from the West Virginia Department of Environmental Protection.

POTESTA prepared roadway and stormwater management plans for the first phase of development. This included typical pavement sections, road profiles, geometric layout plan, culvert and drop inlet sizing, drainage conveyance pipe and channel profiles, and miscellaneous stormwater management details.

EVALUATION OF SANITARY WASTEWATER SYSTEM FOR THE CITY OF OAK HILL

West Virginia American Water Oak Hill, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by West Virginia American Water (WVAW) to evaluate the condition of the collection system and wastewater treatment plants (WWTPs) in the City of Oak Hill, evaluate current operation and maintenance (O&M) practices for the collection system and WWTPs, and provide recommendations on potential areas for rehabilitation and improvement in O&M practices for the Oak Hill Sanitary Collection and Treatment System.

Tasks completed as part of the preliminary evaluation included: file review at the West Virginia Department of Environmental Protection (WVDEP) Division of Water and Waste Management (DWWM); meeting with Oak Hill sanitary wastewater system personnel to review and discuss the existing sanitary wastewater system, including tours of the collection system and WWTPs; meetings with WVDEP-DWWM officials; preparation of a summary of five years of Discharge Monitoring Reports; preparation of a preliminary list of prioritized areas for sewer system evaluation study and/or rehabilitation; and preparation of a report summarizing the findings of the preliminary evaluation and providing recommendations.





EVALUATION OF SANITARY SEWER SYSTEM FOR HUNTING HILLS RESIDENTIAL DEVELOPMENT

CNX RCPC, LLC Monongalia County, West Virginia

Potesta & Associates, Inc. was retained by CNX RCPC, LLC to complete an evaluation of Hunting Hills Residential Development Sanitary Sewer System. Included in the scope of services was:

- Reviewed violations from the West Virginia Department of Environmental Protection, and preliminarily evaluated existing package plant and determined it was in a state of disrepair.
- Designed a new plant including permit level drawings and all associated permits to bring it back in to compliance.
- Performed and Inflow and Infiltration Study to evaluate problems with the sanitary collection system.
- Performed smoke testing on the sanitary collection system.
- Observed 2,200 feet of sanitary collection system pipe via CCTV (i.e., camera).
- Identified defect in the pipeline, including offset joints, cracks and breaks, and direct connections.
- Developed a preliminary estimate of a construction cost for rehabilitation.



EVALUATION OF OVERFLOWS FROM SEWAGE PUMP STATION

Salt Rock Sewer Public Service District Cabell County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Salt Rock Sewer Public Service District (Salt Rock) to evaluate overflows at the Culloden pump station. The Culloden pump station is part of a regional sewer transmission system that conveys sewage to Salt Rock's publicly owned treatment works (POTW). The pump station was overflowing during certain storm events, despite having twin 870 gallons per minute (GPM) storm pumps designed to engage during storm events. To complete the study, POTESTA:

- Reviewed project documentation, including design documents.
- Visited the project site to record observations, including electrical components.
- Coordinated obtaining flow/pressure data readings, and then compared results to design conditions.
- Prepared a report summarizing the findings and providing recommendations. Primary recommendations included studying upgrading average daily flow (ADF) pumps to increase velocities to 2 feet per second during ADF pumping to reduce solids deposition, and installation of additional metering.



Culloden Pump Station with Odor Control Chemical Feed System in Background



HOLIDAY PARK ON-SITE SEWAGE SYSTEM

Salt Rock Sewer Public Service District Padero Drive, Ona, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by the Salt Rock Sewer Public Service District to provide conceptual engineering for on-site sewage systems for residents of Holiday Park in rural Cabell County, West Virginia. The residents of Holiday Park were being served by a failing package treatment plant and complaints had been filed with the West Virginia Public Service Commission (PSC).

Specific services provided by POTESTA on this project included:

- Meeting on-site with the client and the Cabell-Huntington Health Department.
- Identifying that approximately 36 homes existed in Holiday Park that were being served by the failing package treatment plant.



Failing Package Treatment Plant

- Developing a conceptual plan for on-site sewage systems, consisting of 12 single-home septic tank/leach bed systems and eight larger septic tank/leach beds serving three homes each.
- Preparing estimates of construction cost and total project cost.
- Communicating results with client and PSC staff.

ODOR CONTROL STUDY

Salt Rock Sewer Public Service-District-Cabell County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Salt Rock Sewer Public Service District (Salt Rock) to complete an odor control study mandated by the West Virginia Public Service Commission (WVPSC). The WVPSC had required that Salt Rock complete the study after complaints arose after a proposed lift station site was modified to include a "headworks" facility. The "headworks" facility included a screening unit and grit chamber. To complete the study, POTESTA:

- Reviewed project documentation.
- Reviewed sewage flow, hydrogen sulfide (H₂S), and chemical dosing data.
- Visited the project site 10+ times to record observations.
- Estimated capital and operation/maintenance costs for three options (chemicals only, enclosure of facilities, or relocation of facilities) to reduce odors. Included in this was sizing of key components.
- Prepared a report summarizing the findings and providing recommendations.

In addition, POTESTA provided support by responding to additional requests from the WVPSC.

Project was completed using funding from the Clean Water State Revolving Fund (CWSRF).



"Headworks" Facility with Scrubber Unit



PRELIMINARY ENGINEERING FOR HENRY WHITE ROAD SANITARY SEWER EXTENSION

Salt Rock Sewer Public Service District Cabell County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Salt Rock Sewer Public Service District (Salt Rock) to provide preliminary engineering services pertaining to a potential extension of sanitary service to Henry White Road. This project would provide service to approximately 26 customers. To complete the study, POTESTA:

- Reviewed a resident's request to be provided sewer service by Salt Rock.
- Evaluated the project area and determined that approximately 4,500 feet of 8-inch gravity collection line, 2,000 feet of 2-inch force main, and 18 manholes would be necessary to extend sanitary service to the Henry White Road area.
- Sized and approximated the location of a grinder pump station.
- Provided a Preliminary Estimate of Probable Construction Costs for the project including potential pump station upgrades, installation of pump controls, and fencing around the grinder pump station.
- Assessed power costs for the pump station in order for Salt Rock to evaluate projected rate increases due to anticipated increased project operation and maintenance costs.



Terminus of Project at Existing Ona West Pretreatment Facilities



OLD STANDARD DEVELOPMENT SEWER LINE AND WASTEWATER TREATMENT PLANT

Old Standard Development LLC
Millville, Jefferson County, West Virginia



Potesta & Associates, Inc. (POTESTA) was retained by Old Standard Development LLC to provide professional services for the design of a sanitary sewer collection line and wastewater treatment plant (WWTP) in Jefferson County, West Virginia. The project consists of a sanitary sewer collection line extending from a housing development to a WWTP with an effluent discharge line to the Shenandoah River. The collection line begins with a pump station located at the Sheridan housing development and extends along U.S. Route 340 to

County Route 27 (Bloomery Road) where the line continues toward the WWTP located on the site of the Old Standard Quarry. The effluent line will then extend onto the Old Standard Quarry property, under the CSX railroad and discharge into the Shenandoah River. The sewer collection line consists of approximately 7,300 linear feet of force main and approximately 4,370 linear feet of gravity sewer line. A gravity discharge line carries effluent from WWTP approximately 1,380 linear feet to an outfall into the Shenandoah River. The WWTP for this project is based on an activated sludge membrane bioreactor (MBR) process supplied by Enviroquip, Inc. of Austin, Texas. The plant is designed to treat a daily average flow of 50,000 gallons per day and is expandable to 250,000 gallons per day.

POTESTA responsibilities included:

- Preparation of the design, construction drawings and technical specifications for the sanitary collection and effluent line, including the lift station.
- Geotechnical investigation and foundation recommendations for the WWTP building enclosure.
- Site design of the WWTP.
- Preparation of the design, construction drawings and technical specifications for the WWTP headworks including the pre-treatment, flow equalization and the lift station facilities and onsite sludge storage.
- Preparation of permit applications including the Waste Load Allocation, West Virginia Department of Environment Protection NPDES permit for discharge into the Shenandoah River, West Virginia Department of Health to construct the collection line and WWTP, CSX railroad crossing and the West Virginia Department of Highways for road crossings, highway entrance and use of right-of way.
- Coordination of sub-consultants for the design of the foundations, heating, lighting and ventilation systems for the WWTP building enclosure and emergency backup power for the WWTP.



TUCKER COUNTY INDUSTRIAL PARK CONSTRUCTION OF ADDITIONAL WATER AND SEWER LINES

Tucker County Development Authority Tucker County, West Virginia

After completion of initial construction at the Tucker County Industrial Park, additional monies remained. The owner, Tucker County Development Authority, authorized Potesta & Associates, Inc. (POTESTA) to prepare bidding documents for construction of additional water and sewer lines at the site, using the remaining monies. More specifically, POTESTA:

- 1. Completed ground survey to develop topographic mapping to reflect "as-constructed" conditions after the first phase.
- 2. Prepared drawings and specifications depicting the construction of an additional 1,000 feet of gravity sewer line including five manholes, and 500 feet of additional water line, including construction through wetlands and across a stream.
- 3. Prepared permit applications for crossing of the stream and wetlands, and to obtain approval from the West Virginia Bureau for Public Health.
- 4. Prepared bidding documents and coordinated obtaining approval from the United States Economic Development Agency.
- 5. Presented the project at a pre-bid meeting.
- 6. Compiled contractor bid information.
- 7. Provided construction phase services, including attending a preconstruction meeting, reviewing and commenting on shop drawings on manholes, pipe and other materials; and providing nearly full-time construction observation services.

The additional water and sewer lines were successfully installed.



EVALUATION OF SANITARY SEWER SYSTEM

Pocahontas County Public Service District/Wastewater Management, Inc. Pocahontas County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Wastewater Management, Inc. to complete an evaluation of Pocahontas County Public Service District's Hawthorn Loop Sanitary Sewer System. Included in the scope of services was:

- Observed 6,200 feet of pipe via CCTV (i.e., camera).
- Reviewed previous engineering studies.
- Identified defect in the pipeline, including "humps," "swags," ovality issues, broken or separated pipe, and incorrect grades.
- Developed a preliminary estimate of a construction cost for rehabilitation.



Manhole Identified for Replacement



WVIJDC APPLICATION AND PRELIMINARY ENGINEERING – TOWN OF CEREDO MUNICIPAL WATER DEPARTMENT DISTRIBUTION SYSTEM UPGRADE

Town of Ceredo Wayne County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by the Town of Ceredo to evaluate deficiencies in its water distribution system and prepare a funding application for monies to implement upgrades to the system, including deficiencies identified in an order from the West Virginia Public Service Commission. More specifically, POTESTA:

- 1. Evaluated two alternatives for the upgrade that generally differed by whether West Virginia American Water or the Town of Ceredo would serve approximately 215 existing customers east of Twelvepole Creek. Each alternative included upgrades in water lines, installation of fire hydrants, and replacement of the town's approximate 100-year old reservoir. Preliminary estimates of probable construction cost, operation/maintenance costs, debt service, total project costs, and potential customer rates were estimated for each alternative. One alternative had an estimated total project cost of \$2,100,000, while the other had an estimated total project cost of \$4,300,000. Results of the evaluation were summarized in a preliminary engineering report.
- 2. Prepared a West Virginia Infrastructure and Jobs Development Council (WVIJDC) preliminary application for funding of the recommended alternative. The West Virginia Drinking Water Treatment Revolving Fund was identified as the source of funding. The WVIJDC application and preliminary engineering report were then submitted to the WVIJDC for approval.







POTESTA & ASSOCIATES, INC.

Charleston, WV • Morgantown, WV • Winchester, VA

SANITARY SEWER SYSTEM UPGRADES

Town of Ceredo Wayne County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by the Town of Ceredo to provide design, permitting and construction phase services for an upgrade to their sanitary sewer system. The design phase included identifying the need to upgrade piping sizes and pumping rates. The project construction included:

- Replacement of 8-inch gravity line with 12-inch gravity line.
- Replacement of 2-inch force main line with 4-inch force main line.
- Upgrade of a pump station via replacement of 35 GPM submersible pumps with a new 100 GPM vacuum primed pump station.





After construction, POTESTA completed an Asset Management Plan for the sanitary system.

Project was completed within budgeted amounts using funding from the Clean Water State Revolving Fund (CWSRF).



ASSET MANAGEMENT PLAN

Town of Ceredo Wayne County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by the Town of Ceredo to prepare an Asset Management Plan, required as part of a sanitary sewer system upgrade funded by the Clean Water State Revolving Fund (CWSRF). Our effort included:

- Met on-site and reviewed the system with Town of Ceredo personnel.
- Development of asset inventory, including gravity lines, force mains, pump stations, etc.
- Identification of level of service and critical assets.
- Identification of asset redundancy, probability of failure, consequence of failure, maintenance cost, expected effective life, and replacement costs.
- Preparation of Long-Term Funding Plan.

The United States Environmental Protection Agency (USEPA) Check-up Program for Small Systems (CUP\$\$) program was used for preparing inventories, financial evaluations, etc.

POTESTA prepared the plan, received CWSRF's approval, and presented the plan in a public

setting.

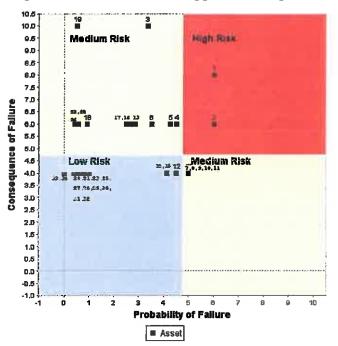


Figure from CUP\$\$ Report



UPGRADE OF TOWN OF BRADSHAW VACUUM/SEWAGE COLLECTION SYSTEMS FOR NEW SCHOOLS

ZMM, Inc.
McDowell County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by ZMM, Inc. to provide design, permitting, bidding and certain construction phase services associated with (a) a collection system associated with two new schools of the same site, and (b) the associated upgrade of the Town of Bradshaw's existing vacuum collection system. Construction included:

- Upgrading an existing single valve vacuum system buffer tank to a triple valve buffer tank.
- Upgrading an existing vacuum pump station by adding a third 10-horsepower (HP) pump.
- Installing an approximate 11,500-gallon equalization tank, with duplex 45 gallons per minute (GPM) pumps with variable frequency drives (VFDs).
- Relocating approximately 200 feet of grinder pump system pipeline.
- Installing approximately 1,500 feet of force main.
- Installing approximately 1,800 feet of 8-inch gravity sanitary sewer line.

The project was completed and went into service with completion of the schools.



Equalization Tank/Pump Station During Construction



BOY SCOUT CAMP WATER AND SEWER SYSTEMS AT DILLEY'S MILL

Buckskin Council – Boy Scouts of America Pocahontas County, West Virginia

Potesta & Associates, Inc. (POTESTA) worked with the Buckskin Council of the Boy Scouts of America (BSA), the West Virginia Department of Environmental Protection (WVDEP) and the West Virginia Department of Health and Human Resources (WVDHHR) to correct problems with the existing drinking water and sanitary sewer systems at the Buckskin Reservation at Dilley's Mill, Pocahontas County, West Virginia.

After problems were discovered at the camp, the BSA asked POTESTA to review the sanitary sewer system and make recommendations regarding the upgrade and replacement of the existing lines. POTESTA was also asked to evaluate the existing sewage lagoon to determine if the facility was of adequate size. A site review of well locations, tank site, sewage treatment lagoon and alignment and location of both water and sewer lines was completed, and a report on problems identified and recommendations for correction was submitted to the BSA.

POTESTA provided administration and oversight of closure and abandonment of two of the camp's drinking water wells and the drilling of a replacement potable water well. Evaluation, recommendations and a master plan for replacement of the existing sanitary sewer system were provided by POTESTA engineers. The camp's sewage treatment lagoon was evaluated and recommendations were made for completely rehabilitating the lagoon to meet current regulatory standards.

POTESTA provided regulatory liaison and assistance with the forms required for well closure and abandonment, installation of a replacement well and replacement of the existing sewer system. Bid packages were developed for the required work and POTESTA worked closely with the BSA to issue and administer the contract with the successful bidder. After evaluation, the sewage lagoon was found to need replacement, and POTESTA worked with the BSA to provide design and construction of the replacement facility.





CHARLES TOWN RACES & SLOTS WASTEWATER TREATMENT PLANT

PNGI Charles Town Gaming, LLC Charles Town, Jefferson County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by PNGI Charles Town Gaming, LLC to provide professional services for the design and permitting of a wastewater treatment plant (WWTP) in Jefferson County, West Virginia. The WWTP is to treat waste from the Charles Town Races & Slots race track and gaming resort. The facility is required due to the race track's planned expansion and the local Public Service District's lack of additional capacity.

The planned expansion included waste flow from horse washing stalls, race track grandstands, restaurants, gaming facilities and hotels. A gravity main provides influent to the WWTP where a lift station and screening is provided. The WWTP for this project is based on a sequencing batch reactors (SBR) process supplied by Aqua-Aerobics Systems, Inc. Tertiary filtration and chemical treatment (ferric chloride and polymer) is provided to meet Chesapeake Bay standards for nutrient removal. Post-treatment with ultraviolet disinfection and aeration was also incorporated into the WWTP. The facility is designed to meet an initial design daily flow of 250,000 gallons which can be increased to 325,000 gallons per day. Buildings were provided to house the headworks equipment, blowers, emergency generator, tertiary filter and ultraviolet unit and the motor control center, laboratory, office and garage.

POTESTA's responsibilities included:

- 1. Evaluation of existing WWTP to serve proposed development.
- Preparation of permit applications including the Waste Load Allocation, West Virginia Department of Environment Protection NPDES permit for discharge into the Flowing Springs Run, West Virginia Department of Health to construct the WWTP, and CSX railroad crossing
- 3. Conducting a wetland delineation.
- 4. Site design of the WWTP.
- 5. Specifying and selecting treatment and other associated equipment.
- 6. Design, detailed construction drawings and technical specifications for the WWTP.
- 7. Assistance during construction.



Wastewater Treatment Plant



LIME KILN, AGGREGATE PLANT AND RAIL EXPANSION PROJECT

Carmeuse Lime & Stone Winchester, Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Carmeuse Lime & Stone to provide consulting engineering and environmental services for the expansion of their current quarry operations at their Winchester Quarry in Winchester, Virginia. The expansion includes the addition of two new vertical lime kilns and associated equipment, increasing their current aggregate crushing operation, and expanding their rail system to allow for increased shipping of product. The products include limestone aggregate, lime, and milled limestone. POTESTA, working with our railroad engineering consultant, designed the rail expansion to include grading, stormwater management, and an access road crossing for a rail loop with two side-by-side tracks encircling the lime kilns and aggregate crushing areas with rail spurs for loading and unloading of product to connect to two mainline rail carriers (Winchester and Western to the north and the CSX to the south). The total project track length consists of approximately 29,000 linear feet of rail. The design of the rail expansion also includes all trackside ditches, culverts, stormwater management systems, gas line relocations and crossings, rail crossings, and internal plant roadways, as well as grading for the expanded aggregate plant and lime kilns. Additional designs included civil/site services for a new office building and design of the sanitary water treatment system for this building. POTESTA acquired the necessary approvals to construct this project, such as approvals from local planning and zoning, inspections, health departments, and state governments such as Virginia Department of Transportation, Department of Environmental Quality (DEQ) and Department of Mining and Mineral Extraction (DMME). It was also determined that the grading for this rail project would impact wetlands; therefore, POTESTA conducted wetland delineations, developed reports, and completed applications to the Norfolk District (Northern Virginia field office) of the United States Army Corps of Engineers (USACE).







EDUCATION

M.S. Civil Engineering, 1979 West Virginia University

B.S. Civil Engineering, 1978 West Virginia University

EMPLOYMENT HISTORY

1997-Present Potesta & Associates, Inc.
1994-1997 Terradon
1979-1994 GAI Consultants, Inc.
1978-1979 West Virginia University
1976-1977 West Virginia Department of Highways

PROFESSIONAL REGISTRATIONS

(summers)

Professional Engineer – West Virginia, Illinois

Professional Surveyor – West Virginia

PROFESSIONAL CERTIFICATIONS

40-Hour Health and Safety Training

SERVICE ON BOARDS AND COMMISSIONS

- Environmental/Technical Committee member West Virginia Coal Association
- Environmental Committee member Kentucky Coal Association

- Past Board of Directors member and current Waste Team Chairman on the Environmental Safety and Health Committee – West Virginia Manufacturers Association
- Environmental and Safety Committee member Independent Oil and Gas Association of West Virginia
- Environmental Committee member West Virginia
 Oil and Natural Gas Association
- Past President West Virginia Society of Professional Engineers, Professional Engineers in Private Practice
- Past President and past Board of Directors member American Council of Engineering Companies West Virginia Chapter
- Past Chairman of Transportation Committee American Council of Engineering Companies West Virginia Chapter
- Past Board of Directors member Society of American Military Engineers Huntington Post
- Member Committee D-18 on Soil and Rock American Society for Testing and Materials (ASTM)

PROFESSIONAL AFFLIATIONS

- American Society of Civil Engineers
- National Society of Professional Engineers
- WV Society of Professional Surveyors

AREAS OF SPECIALIZATION

Management of design and permitting of civil, environmental, geotechnical, and mining engineering projects. Siting, design, and permitting of industrial and municipal waste disposal sites; reclamation of abandoned mine lands; and development of stormwater management plans and groundwater sampling programs. Environmental/reclamation liability assessments. Development of site plans for commercial and industrial facilities including hydrologic and hydraulic analyses. Expert witness testimony. Directs engineering division including day-to-day operation of headquarters and three branch offices concerning staffing, coordination, training, business development; and overall management of technical and support staff.

Principal-in-Charge for site grading plans, stormwater management system, site surveying, roadway/parking lot design, wetland delineation/mitigation, and construction monitoring for the 400,000-square foot Coldwater Creek distribution center in Parkersburg, West Virginia.

Principal-in-Charge for the civil/site design for the new Sissonville Middle School in Kanawha County, West Virginia. Project included site grading plan with more than 230,000 cubic yards of earthwork to obtain 20 acres of level ground for a 74,000-square foot school, football field, soccer field, baseball field, access roadways, and parking areas. Project included utility designs for water service and sanitary and sewer. Stormwater collection systems and erosion and sediment control plan/permit completed.

Principal-in-Charge for civil/site design for new Riverview High School and Bradshaw Elementary School in McDowell County, West Virginia. Project included 2,500 linear feet of relocated WV Route 80, relocation of 1,200 feet of Oozley Branch, and site work (grading, stormwater drainage, geotechnical recommendations, sanitary sewer, water, and electrical services) to serve the two schools. Project design included site survey, geotechnical exploration, foundation recommendations, design of excavation slopes, layout of schools, parking areas and athletic fields, utility design, roadway relocations plans, and stream relocations plans. Responsible for the design and preparation of contract bid documents (specifications and drawings) for civil/site work. POTESTA served as a subconsultant to ZMM on this project.

Principal-in-Charge for civil/site design and permitting associated with the construction of three synthetic fuel pellet plants in McDowell County, Nicholas County, and Kanawha County, West Virginia. Project included developing synthetic fuel manufacturing facilities on inactive surface mining sites. Services included subsurface exploration, foundation recommendations, grading plans, stormwater management plans, preparation of permit applications, and construction monitoring for site grading and foundation construction. The McDowell County site included a water source study to identify and select water sources for the manufacturing process. The three plants had a construction cost of \$25 million. Project was a design/build arrangement with POTESTA working directly for the owner.

Carmeuse Lime & Stone — Principal-in-Charge of engineering and environmental services for the expansion of current quarry operations at Winchester quarry in Winchester, Virginia. The expansion includes the addition of two new vertical lime kilns and associated equipment, increasing their current aggregate crushing operation, and expanding their rail system to allow for increased shipping of product.

- Design included grading, stormwater management, and an access road crossing for a rail loop encircling the lime kilns and aggregate crushing areas with rail spurs for loading and unloading of product to connect to two mainline rail carriers.
- The total project track length consists of approximately 29,000 linear feet of rail.
- The design of the rail expansion includes trackside ditches, culverts, stormwater management systems, gas line relocations and crossings, rail crossings, and internal plant roadways, as well as grading for the expanded aggregate plant and lime kilns.
- Additional designs included civil/site services for a new office building and design of the sanitary water treatment system for this building.
- Acquired the necessary approvals to construct this project, such as approvals from local planning and zoning, inspections, health departments, and state governments such as Virginia Department of Transportation, Department of Environmental Quality (DEQ) and Department of Mining and Mineral Extraction (DMME).
- Conducted wetland delineations, developed reports, and completed applications to the Norfolk District (Northern Virginia field office) of the United States Army Corps of Engineers (USACE).

Development of specifications for a sand mound treatment system in the U.S. Air Training Center near Pittsburgh, Pennsylvania.

Water Lines, Water Storage Tanks, and Water Treatment Plants

New extensions and replacement of existing lines:

- Cassity Fork Water Supply Extension Project Randolph County, WV (Project Manager)
- Godby Branch Water Supply Extension Project Logan County, WV (Project Manager)
- Beaver Creek Water Supply Extension Upshur County, WV (Project Manager)

DANA L. BURNS, P.E., P.S. Page 5

Sewer Lines and WWTPs

Washington County Industrial Development Agency – Design of a holding tank and ventilation system vault near Houston, Pennsylvania.

West Virginia American Water Company – Principal-in-Charge for evaluation of wastewater collections systems and treatment plants for two municipalities (Oak Hill and White Sulphur Springs) in West Virginia. Included were site visits to observe system, discussions with system operators and regulatory officials, records review, compilation of DMR data and issuance of findings in reports.

Geotechnical

Subsurface exploration, evaluation, and design of remedial measure for landslides:

- Soldier beam and lagging retaining walls
- Gabion walls
- Grade/drain/compact in-place
- Geo-grid reinforcement with grade/drain/compact inplace

Plasma Processing Corporation – Management of subsurface exploration and preparation of soils report near Ravenswood, West Virginia.

West Virginia University – Principal-in-Charge for the following projects:

- WVU Intermodal Parking Garage on the Medical Center Campus – geotechnical and civil engineering
- WVU Engineering Building geotechnical evaluation

Principal-in-Charge for Williamson Landslide Project involving an abandoned mine land site. Geotechnical exploration and design of 480-foot long soldier beam and lagging retaining wall with tiebacks to support loose mine spoil backfill along the edge of a previously mined area with steep terrain. Project was required to protect an existing 125-bed nursing home facility.

Landfills/Solid Waste/Waste Disposal

Design and permitting of new landfills and development of cell closure plans:

Municipal Landfills -

- West Virginia Solid Waste Management Board/Monongalia County Sanitary Landfill – Morgantown, WV
- North Folk Landfill Wheeling, West Virginia
- Disposal Service, Inc. Landfill Hurricane, WV
- Sycamore Landfill, Inc. Hurricane, WV
- City of Charleston Landfill Charleston, WV
- Mingo County Landfill Mingo County, WV
- Omar Landfill Omar, WV
- Pocahontas County Landfill Marlinton, WV
- HAM Sanitary Landfill Peterstown, WV
- Kanawha- Western Landfill Cross Lanes, WV
- S&S Landfill West Milford, WV
- Brooke County Landfill Brooke County, WV
- Wetzel County Landfill Wetzel County, WV
- WVDEP's Landfill Closure Assistance Program
 - Montgomery Sanitary Landfill Montgomery, WV
 - Wyoming County Sanitary Landfill Pineville, WV
 - Jackson County Sanitary Landfill Ripley, WV
 - City of Moundsville Landfill Charleston, WV

Industrial Solid Waste (Fly Ash, Bottom Ash, Scrubber Sludge) –

- Mobay Hazardous Waste Landfill Natrium, WV
- American Cyanamid (4 projects) Willow Island,
 WV
- Client confidential Parkersburg, WV
- Monsanto Company (multiple projects) Nitro, WV
- Harrison Power Station Haywood, WV
- Fort Martin Power Station Morgantown, WV
- Mount Storm Power Station Mount Storm, WV
- Keystone Power Station Elderton, PA
- New Castle Power Station New Castle, PA
- Conemaugh Power Station New Florence, PA
- Alcoa Corporation Newsburg, IN
- Portsmouth Power Station Portsmouth, VA
- F.B. Culley Power Station Newburgh, IN
- Hatfield Power Station Masontown, PA
- Armstrong Power Station Armstrong County, PA
- Cheswick Power Station -- Springdale, PA

Design, permitting, economic analyses, and preparation of construction bid documents for coal ash/refuse sites including HDPE and PVC liner systems:

- Virginia Electric and Power Company
 - Portsmouth Power Station ash pond to dry fill conversion project
 - Mount Storm Interim Ash Site
- Pennsylvania Electric Company

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- Rhone Poulenc Ag Company 3 sites for industrial landfill
- Virginia Electric and Power Company Mt. Storm Power Station
- Southern Indiana Gas and Electric Company 4 sites at F.B. Culley Station
- Aloca Generating Corporation 7 sites at Warrick Station

American Cyanamid Company – Management of QA/QC monitoring program for the first RCRA industrial waste impoundment in EPA Region 3. Composite liner system consisted of 3-foot soil-bentonite liner and two 60-mil HDPE synthetic liners separated by HDPE drainage net. Provided on-site testing laboratory. Daily and weekly project reports were provided. Prepared summary report and necessary "certifications" for submittal to WV Division of Natural Resources and EPA in Willow Island, West Virginia.

American Cyanamid Company – Management of QA/QC monitoring program for a stormwater retention basin consisting of 3' soil bentonite liner with concrete overlay. Daily, weekly, and project summary reports were prepared in Willow Island, West Virginia.

American Cyanamid Company – Preparation of plans, specifications, and permit application for the closure of an industrial waste disposal site. The capping system included geogrid to assist in supporting the overlying HDPE liner and soil cap in Willow Island, West Virginia. Electric Power Research Institute – Preparation of the Coal Ash Disposal Manual and various manuals for the High Volume/Low Technology Fly Ash Utilization Program.

Electric Power Research Institute – Development of a computer program that provides a detailed cost estimate for a coal ash disposal area.

Rhone Poulenc Ag Company – Evaluation of settling characteristics for an emergency fly ash disposal pond and design of associated modifications at a plant in Institute, West Virginia.

American Cyanamid Company – Management of QA/QC monitoring for a closure of a 3-acre hazardous waste disposal area with sludge stabilization and an HDPE cap. Provided an on-site testing laboratory, daily and weekly project reports, a summary report, and agency required certifications in Willow Island, West Virginia.

American Cyanamid Company – Management of QA/QC monitoring for the stabilization and capping of 10-acre hazardous waste equalization basin in Willow Island, West Virginia.

Rhone Poulenc Ag Company – Sampling/sounding of two basins containing sludge from secondary biological treatment of industrial wastewater and subsequent determination of sludge quantities.

Development of alternative truck transportation cost schemes:

- Industrial and Hazardous Waste Management Study
 Allegheny County, PA
- Holcomb, KA Power Station Sunflower Electric Cooperative
- Portsmouth Station remote ash structural fill –
 Virginia Electric and Power Company

Roadway Design

Principal-in-Charge for design of new entrance roadway to the University of Charleston and the utility extension, surveying, and general civil engineering for a 440-bed dormitory. Project was a design/build.

West Virginia Divisions of Highways – Inspection of bridge and highway construction.

Managed numerous industrial access roads. Roadways were designed for the private sector. Design was coordinated with and approved by the West Virginia Division of Highways and roadways were accepted into the state transportation system.

- ZMM Architects Relocation of State Route 80 for construction of new elementary and high schools at Bradshaw in McDowell County, WV
- Jackson County Development Authority and Double
 C Enterprises Industrial park access road and
 County Route upgrade in Kenna, WV
- Roane County Economic Development Authority National Industrial Lumber access road in Amma, WV
- Tucker County Development Authority Tucker County Industrial Park access road in Davis, WV
- Wood County Development Authority Luigino's access road in Parkersburg, WV
- University of Charleston Design of new entrance road to University of Charleston and redesign of

Principal-in-Charge on numerous Independent Third-Party Audits at sites for various coal producers. Independent Third-Party Reviews of mines/complexes were undertaken with a thorough review to assess compliance of the operation to various federal statues and equivalent to state laws. Specific areas of review included are generally determined by the needs of the client or the requirements of governmental agencies and have included an assessment of the client's compliance with the following:

- Clean Air Act
- Clean Water Act
- Resource Conservation and Recovery Act
- Safe Drinking Water Act
- Toxic Substance Control Act
- Comprehensive Environmental Response,
 Compensation and Liability Act
- Emergency Planning and Community Right to Know Act
- Federal Insectide, Fungicide and Rodenticide Act
- Oil Pollution Act
- Mine Safety and Health Administration
- Surface Mining and Reclamation Act
- National Pollution Discharge Elimination System
- Others as required

Development of reclamation plans for over 70 projects including landslides, mine fires, acid mine drainage, mine subsidence, refuse piles, water supply systems, and asbestos abatement. Projects were completed for West Virginia Division of Energy, West Virginia Division of Environmental Protection, Virginia Abandoned Mine Lands, and Ohio Department of Natural Resources and include the following:

- Duncan Hill Subsidence
- Beckley Subsidence
- Jonben (Haga) Subsidence
- Holden (Padgett) Subsidence
- Gray and Iaquinta Subsidence
- St. John's Road Subsidence
- Route 19/28 Subsidence
- Mt. Hope Subsidence
- Huffman Street Subsidence
- Morgantown Airport Drainage/Subsidence
- Fairmont East Subsidence
- Fairmont IV Subsidence
- Cheyenne Sales Company Reclamation
- Little Whitestick Refuse
- Crany Mine Dump

- Morgan Mine Fire
- MacArthur Phase 2 Subsidence
- Lake Lynn Complex
- MacArthur Mine Subsidence
- East Lvnn II
- Flipping Hollow Complex
- Sundial (Hatfield) Refuse Piles
- Mill Creek Refuse Pile
- John's Branch Coal Refuse Dam
- Jessop Highway #10
- Lando (Edwards) Drainage
- Taylorville (Cantrell) Drainage
- Borderland (Matney) Portals
- Peach Ridge Complex
- Measle Fork Refuse
- Georges Creek Portals
- Putney Impoundment
- Kopperston (John's Branch) Refuse Emergency
- Marmet (Wells Drive) Landslide Emergency
- Marmet (Clark) Drainage
- Pringle Run #2
- Mountain Run Refuse and Portals
- Fairmont East Mine Drainage
- May Portal (Virginia Abandoned Mine Lands)
- Williamson (Hatfield) Landslide
- Georges Creek (Lucas) Rockslide
- Rachel Refuse
- Grass Run Refuse
- Allen Sheridan Hazardous Facility (asbestos)
- Elk City- Century- Volga Phase I/II Water Study
- Camp Mohonegan Regrade
- Comfort Run Coal Company (asbestos)
- Allen AMD
- Cora Mine Drainage No. II
- Covey Creek Mine Fire
- Vivian Refuse Pile
- Summerlee Refuse Pile (won 1996 southern reclamation award)
- Kimball Refuse Pile (won 1995 southern reclamation award)
- Hampden (Smith) Landslide
- Bear Run Refuse (won 1994 Ducks Unlimited award)
- Charleston (Ratcliffe) Landslide
- Garrison Complex
- Mulberry Fork (Stover) Landslide
- Courtright Highwall
- Belle Landslide
- Minden Drilling
- Kitchen/Gibson Landslide
- High Coal Tipple

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Plasma Processing Corporation – Management of numerous projects in Ravenswood, West Virginia including:

- Subsurface exploration and preparation of soils report
- NPDES Permit
- Development of sampling program for Plasma to follow in obtaining samples for NPDES Stormwater Analyses
- Development of hazardous waste operations manual
- Acquisition of WV Air Pollution Commission permits
- Environmental audit of facility operations

Hydrology and Hydraulics

City of Charleston – Hydrologic and hydraulic analyses of South Ruffner Watershed. Project analyzed various storm events and presented conceptual recommendations to reduce effects of these storms.

U.S. Army Corps of Engineers, Jacksonville District – Determination of watershed areas along the Suwannee River Basin.

Groundwater

Dilley's Mill – Principal-in-Charge for review of regional groundwater information for a summer Boy Scout camp facility to locate and construct a replacement drinking water well for the facility. Responsibilities included the development and review of existing facility usage, determination of the location and depth of the proposed water well and design of the well to meet with the requirements of the State of West Virginia Department of Health standards. Design of sewage collection system and synthetic lined sewage treatment lagoon including permitting.

Groundwater sampling programs:

- Herr's Island Urban Redevelopment Authority of Pittsburgh
- Robertshaw Controls in New Stanton, PA
- New Castle Power Station
- Pennsylvania Power Company
- Portsmouth Power Station
- Virginia Electric and Power Company
- Rhone Poulenc Ag Company Institute, WV

Management of pump tests:

- Peabody Coal Company Bim, WV
- Southern Ohio Coai Company Meigs County, OH
- Rhone-Poulenc Ag Company Institute, WV

Rhone Poulenc Ag Company – Development of specification manual for conducting soil and groundwater sampling programs. Manual detailed decontamination methods and proper handling/disposal methods in Institute, West Virginia.

Air Pollution/Air Services

Principal-in-Charge for internal and external methane gas monitoring at nursing home facility in Boone County, West Virginia.

Urban Redevelopment Authority of Pittsburgh – Preliminary and detailed air pollution modeling for Pittsburgh's convention center complex and for the Washington Heights development.

Eastern Associated Coal Corporation – Management of certified emission statements for 11 coal preparation plants and air emission inventories for 8 coal preparation plants for submittal to the West Virginia Office of Air Quality.

Nicholson Construction Company – Operation permit from West Virginia Air Pollution Control Commission for cement/grout portable batch plant for mine subsidence control project in Follansbee, West Virginia.

Stream/Wetland Delineation, Permitting and Mitigation

Columbia Gas Transmission Corporation – Management of stream stabilization and restoration plan for segment of East Fork of Queer Creek in Hocking County, Ohio.

Environmental Assessments/Impact Statements

Management of numerous environmental assessments for property transactions:

- Arch Coal Multiple WV Tracts ESA (60,500 acres)
- Massey Coal Services Red Cedar Surface Mine (850 acres)
- Duke Energy Chicopee Environmental Audit (6,000 acres)



EDUCATION

B.S. Civil Engineering, 1982 West Virginia University

EMPLOYMENT HISTORY

2011-Present	Potesta & Associates, Inc.
1991-2011	West Virginia American Water
1988-1991	Dunn Engineers, Inc.
1982-1988	Kelley, Gidley, Blair & Wolfe, Inc.

PROFESSIONAL REGISTRATIONS

- Professional Engineer West Virginia
- Professional Surveyor West Virginia

PROFESSIONAL AFFILIATIONS

- American Water Works Association
- National Society of Professional Engineers

AREAS OF SPECIALIZATION

Water including design of water mains, water storage tanks, booster stations, pressure reducing stations, advanced metering infrastructure – (AMI) and Automated Meter Reading – (AMR) systems. Extensive knowledge in water distribution systems operation and maintenance.

PROFESSIONAL EXPERIENCE

Water Lines, Water Storage Tanks, and Water Treatment Plants

Confidential Coal Company – Onsite water management, reuse and disposal project; services included construction of 8,500 gallon per minute combination high pressure pump/pressure reducing station, controlling a 14 mile 26" HDPE pipe, an 8,500 gallon per minute pressure sustaining valve station, energy dissipation structure, river outfall and SCADA system.

Responsible for engineering at West Virginia American Water (WVAW):

- Supervising an engineering staff of eight, working in conjunction with other departments at WVAW.
- Developing and prioritizing multiple capital projects while developing and managing the multi-million capital budget for West Virginia. Budgeting includes developing and creating large investment projects, multiple public private partnerships and several acquisitions.
- Involved in multiple operational issues/projects including non-revenue water reduction, comprehensive planning studies including interconnection studies to combine operations to increase efficiencies.
- Worked on the automation of Bluestone Water plant which is intended to be the first one shift automated and unattended surface water treatment plant in West Virginia.
- Design of multiple pressure reducing stations and booster stations.
- Overseeing a \$1.5+ million per year tank painting program.
- Managed tank painting program, which included evaluating, prioritizing, draining and refilling tanks, tank inspections, preparation of contract documents, bidding, bid evaluations, contract awards, scheduling, taking tanks out of service while maintaining uninterrupted service to customers.
- Responsible for over 300 tanks in the largest water system in West Virginia.

Responsible for the Fayette AMI project, a \$4.3 million-dollar meter replacement/automation project to automate almost 12,000 water meters in Fayette County, West Virginia. This project was part of an EPA Green Project and the project was successfully publically bid using a

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Quarry Creek Subdivision consisting of vertical turbine booster station and a 330,000-gallon water storage tank, with an elevated storage tank bid option and water lines.

Kellys Creek Project consisting of 16-inch water main extension, booster station, and water storage tank along Route 60 using WVDEP, AML funding.

Little Sandy, Aarons Fork and Edens Fork Projects. Construction of water mains, a booster station and a 160,000-gallon storage tank utilizing two Small Cities Block Grants with KCDRA.

Summers-Mercer Water Project included design of an 8-inch water main to Hinton and a 24-inch water main from the new Bluestone plant to Princeton, including the pressure reducing stations along with the 300,000-gallon water storage tank near Pipestem.

Designed and constructed multiple small water main extensions, working with developers, customers and small contractors to serve new subdivisions and unserved areas.

Sewer Lines and WWTPs

Project Manager for the replacement of the Wastewater Treatment Plant at Point Pleasant, West Virginia. This included being responsible for design, plans, specifications, regulatory approval, bidding and bond sale, and construction management.

Inspection of wastewater collection systems, writing Operation and Maintenance Manuals, Facility Plans, and Grant Applications for various clients.

Project Manager for the Big Sandy Sewer Public Service District Vacuum System Project, which included the design and construction of three vacuum sewer stations, two sewage pump stations, a 9-mile force main, and the vacuum sewer collection system. Responsibilities of the above involved the preparations of engineering contracts, planning reports, plans and specifications, bid documents, operation and maintenance manuals, and change orders for state and federally funded wastewater and water projects. The process involved cost-effective analysis, public relations, technical writing, and public speaking.

Project Engineer for the Logan Wastewater Interceptor Project, the Town of Barboursville Lagoon Improvements, and the Philippi Wastewater Project including a new Oxidation Ditch Plant, renovation of an existing pump station, sewer main replacement design, and construction. Experience included designing wastewater treatment plants, sludge handling facilities including belt filter presses, wastewater collectors and pumping systems, site developments, access roads, and combined sewer overflow (CSO) facilities.



EDUCATION

M.S. Civil Engineering, 1989 West Virginia University

B.S. Civil Engineering, 1987 West Virginia University

EMPLOYMENT HISTORY

1999-Present Potesta & Associates, Inc.

1989-1999 GAI Consultants

1987-1989 West Virginia University

1985-1987 West Virginia Division of Highways

(summers)

PROFESSIONAL REGISTRATION

Professional Engineer - West Virginia, Virginia

PROFESSIONAL CERTIFICATION

- Troxler Moisture-Density Gauge
- American Red Cross Standard First Aid and CPR
- OSHA 40-Hour Hazardous Waste Worker Training

AREAS OF SPECIALIZATION

Water and wastewater engineering and permitting; preparation of studies, design calculations, drawings, technical specifications, and cost estimates; bidding phase services; and construction phase services, including construction administration.

PROFESSIONAL EXPERIENCE

Water Lines, Water Storage Tanks, and Water Treatment Plants

Project Manager/Project Engineer for more than 70 water supply projects involving design and, permitting of water treatment facilities, water line extensions, water storage tanks, booster stations, chlorine boosters, pressure reducing valve stations, service connections and providing fire flow demands. Tasks include client/contract management; mapping development; hydraulic design; geotechnical investigations; preparation of drawings, specifications, and cost estimates; and preparation of Bureau of Public Health, Public Lands Corporation, United States Army Corps of Engineers, West Virginia Division of Highways, and NPDES permit applications.

Projects funded by federal, state and private funding including small cities block grant, United States Department of Agriculture, Rural Economic Development Agency, Drinking Water Treatment Revolving Fund (DWTRF), West Virginia Infrastructure and Job Development Council, Congressional Supplemental Appropriations (SAP), Abandoned Mine lands, United States Army Corps of Engineers, Governor's office funding, county commissions and private funding.

West Virginia Bureau for Public Health (Region III and Region VI Planning and Redevelopment Councils) – Project Manager for 5 contracts for source water protection:

- Source water reports for 133 public water systems
- Preparation and presentation of state-wide source water awareness symposiums
- Source water assessment and protection plan reports for 68 public water systems
- Engineering study for contingency planning for public water systems

Town of Ceredo – Project Manager for 20,000 feet of water line replacement, water tanks, telemetry, and booster stations.

Boone County Public Service District – Project Manager for 15+ water supply extension projects in Boone County District from 2004 to present. Included were Preliminary

4,000 feet of 1-inch to 12-inch diameter pipe, fire hydrants, meters, and valves. Prepared construction drawings, specifications, and quantities.

Short Line Public Service District/Harrison County Planning Commission — Project Manager for feasibility/rates analysis study for the proposed Reynoldsville, Wallace, and Clarksburg Water Supply Extension Project. Included evaluation of six options at multiple loan/grant funding scenarios.

West Virginia American Water – Hydraulic analysis for water supply extensions (total of 23 miles) in Cabell County, West Virginia, including line sizing and design of booster station and PRVs.

West Virginia Division of Environmental Protection — Project Manager/Project Engineer for numerous conceptual waterline designs for 20 unserviced areas (between 1991 and 2007) in coal mining areas in West Virginia. Included hydraulic evaluation, booster station, and water storage tanks sizing, waterline sizing, and estimation of construction cost. Work completed in Barbour, Boone, Brooke, Fayette, Harrison, Lincoln, Logan, McDowell, Putnam, and Randolph Counties.

West Virginia Division of Environmental Protection — Project Manager for design of booster station upgrade for the Clinton Water Association's Ringgold pump station, including preparation of drawings, specifications, and cost estimate.

West Virginia Department of Energy – Groundwater contamination study for drinking water wells near Cassity, Randolph County, West Virginia, including water supply inventory of over 50 residents, collecting and analyzing well and surface water samples, and researching records to determine the percentage of homes whose water supply had been degraded by acid mine drainage.

Public Utility General – Project Manager for construction administration including preconstruction meetings, shop drawing review, coordination with construction technician team(s), contractor pay application review, public record drawings, and public interface for 15+ water and wastewater utility and/or infrastructure projects including utility line extension and upgrades, construction and modifications of treatment facilities. Clients include municipalities, public service districts, industry, county development authorities and private utilities.

Construction included water and sewer lines, booster stations, tanks, lift stations, vacuum sewer stations, treatment basins, dewatering equipment, clarifiers, chemical fee systems, buildings associated with treatment systems, outfall modifications, and diffusers.

Mingo Logan Coal Company – Project Manager for design, building, and permitting services for potable water system at the new Mountain Laurel Mine in Logan County, West Virginia. Project includes booster station, water storage tank, and 10,000 feet of HDPE pipe.

Sewer Lines and WWTPs

Project Manager for more than 30 wastewater projects, including municipal sanitary sewer treatment systems, industrial pretreatment systems, modification of sewer treatment plants, outfall modifications including diffuser installation, and upgrades to municipal collection systems. Also included were completions of studies mandated by the West Virginia Public Service Commission.

Projects funded by State Revolving Fund (SRF), West Virginia Infrastructure and Jobs Development Council, United States Economic Development Agency and Private Funding sources.

Boone County Public Service District – Preliminary engineering, funding application, and final design for WWTP upgrade. Funding proposed through the Clean Water State Revolving Fund (SRF).

- Mechanical bar screen replacement
- Grit removal system replacement
- Mechanical aerator replacement
- Addition of third clarifier
- RAS pump addition
- UV unit replacement
- Belt filter press replacement
- Wash water system upgrade
- Other upgrades

Town of Ceredo – Perform design, bidding, and construction phase services for upgrade of existing sanitary sewer collection system, including upgrades to gravity and force main lines, and a lift station. Funding was thru the Clean Water State Revolving Fund (SRF).

Town of Ceredo - Evaluation of remaining capacity of grinder pump system.

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Project Engineer for design and permitting of sanitary waste water treatment system for coal mines in Logan and Raleigh Counties, West Virginia. Included was preparation of drawings and specifications.

- Eastern Associated Coal Corp.
- Rum Creek Coal Sales

West Virginia Department of Environmental Protection, LCAP – Design of 1.2 miles of pressure and gravity sewer line at the Jackson County Landfill to convey landfill leachate to an existing sanitary collection system. Included were provisions for servicing residences along the pathway, hydraulic sizing, and preparation of drawings, specifications and a cost estimate.

West Virginia University – Research assistant for developing an interactive optimal sewer design program SODES.

Evaluation of options for future treatment of wastewater at a chemical industrial facility along the Ohio River in West Virginia. Included were evaluation of options, estimation of capital and O&M costs, and preparation of a report to a law firm in West Virginia.

Mining

Estimation of AMD treatability and treatment costs at multiple mining sites in West Virginia as part of preacquisition site assessments, including records review of 303(d) TMDL list.

Eastern Associated Coal Corporation – Project Manager for oversight of water supply inventory of structures over a 3200-acre SMCRA permit expansion (during 1994-1995) of the Federal No. 2 longwall deep mine in Monongalia County, West Virginia. Included were negotiations with the West Virginia Division of Environmental Protection (WVDEP) of the locations of permanent surface and groundwater monitoring points.

Eastern Associated Coal Corporation – Project Manager for design of Guyses Run AMD facility. Design included a 3,000,000-gallon pond, 180 feet of relocated stream, and stream crossings. Included was regulatory approval from USCOE, PLC, and WVDEP. Deliverables included drawings, specifications, and a cost estimate.

Old Ben Coal Company - Project Engineer for preparation of PHC statement for SMCRA permit

application for the Nile Stone Slurry Impoundment in Mingo County, West Virginia.

Pre-mining, pre-blast surveys, including field investigations and report preparation, for various coal companies in Ohio, Virginia and West Virginia.

- Elk Run Coal Company
- Island Creek Coal Corporation
- Oneida Coal Company
- Southern Ohio Coal Company

Eastern Associated Coal Corporation – Project Manager for preparation for SMCRA Incidental Boundary Revision and NPDES permit modification applications for addition of 3.7-million-gallon mine drainage treatment pond at Martinka Coal Company's Guyses Run AMD facility.

Southern Ohio Coal Company – Project Manager for water supply interviews with occupants of 70 structures in Gallia, Meigs, and Vinton Counties, Ohio.

Project Engineer for grouting project to abate acid mine drainage at the Omega Mine Complex project in Monongalia County, West Virginia. Project involved collaboration of private/public agencies to provide resources for approximate \$2,500,000 project.

Meadow River Coal Company – Project Manager for water supply inventory of 37 structures over a deep mine in Fayette County, West Virginia, and preparation of subsequent SMCRA permit revision to incorporate water supply inventory to existing permit.

Eastern Associated Coal Corporation – Project Engineer for identification of permanent groundwater and surface water monitoring points including negotiation of locations with the West Virginia Division of Environmental Protection (WVDEP) for 1,750-acre and 3,200-acre SMCRA permit expansions of the Federal No. 2 longwall deep mine in Monongalia County, West Virginia.

Rum Creek Coal Sales, Inc. – Project Engineer for preparation of probable hydrologic consequences (PHC) statement for SMCRA permit application for below drainage deep mine in Logan County, West Virginia.

Eastern Associated Coal Corporation – Project Engineer for preparation of probable hydrologic consequences (PHC) statement for SMCRA permit application for 5000+ acre Montcoal Eagle longwall deep mine,

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development of specifications and construction drawings for remedial work on mine subsidence affecting 30 acres and 50 homes were conducted.

Project Engineer for Holden (Padgett) Subsidence Project, Whitman Junction, West Virginia. The project included subsurface investigation to determine extent of mine workings, development of stabilization plan, including drainage channels/pipes and mine seals. Construction documents were prepared, and participation in pre-bid and pre-construction meetings was completed.

Assisted on Jonben (Haga) Subsidence Project, Jonben, West Virginia. Subsidence control on an emergency basis including sinkhole backfilling and drainage control. Project included drilling to determine the extent of mining and subsidence, field surveying to develop topographic mapping and development of a backfilling and drainage plan.

West Virginia Division of Environmental Protection – Project Manager for 380 residence water supply inventory (including sampling) as part of the Phase II Water feasibility study for the New Haven Study Area in Fayette County, West Virginia.

West Virginia Division of Environmental Protection — Project Manager for 600 resident water supply inventory (including sampling) as part of the Phase II Water feasibility study for the Mill Creek Study Area in Boone, Lincoln, and Logan Counties, West Virginia.

West Virginia Division of Environmental Protection — Project Manager for 200+ residence water supply inventory as part of the Phase II water feasibility study for the Gauley River Study Area in Fayette and Nicholas Counties, West Virginia.

West Virginia Department of Energy – Abandoned Mine Lands – Project Manager for Phase II groundwater contamination study for drinking water wells in the Crooked Creek, Cow Creek, and Upper Rum Creek communities in Logan County, West Virginia. Work included water supply inventories of 250+ residences, collection and analyzing surface and well water samples, researching water quality records, designing and costing remedial measures, and calculating the percent of wells that had been degraded by mining activity.

Environmental Assessments/Impact Statements

Environmental site assessments, including record searches and field investigations, for numerous sites in West Virginia, Virginia, Ohio, and North Carolina. Specialization in large acre tracts, typically ranging from 1,000 acres to 65,000 acres, including coal properties:

- Dominion Resources
- Goldman Associates
- DiMucci Development
- FDIC
- Rhone-Poulenc Ag Company
- GSA
- General Electric
- West Virginia University
- Peabody Coal Company
- Massey Coal Services
- Kanawha County Solid Waste Authority
- Capel, Incorporated
- Plasma Processing Corporation
- Sun Bank South Florida
- Vaughan Railroad Company
- Foodland
- Jackson & Kelly
- Spilman, Thomas and Battle

University of North Carolina — Preparation of an Environmental Assessment showing no significant environmental impact for a proposed 1,400-foot television tower near Chapel Hill, North Carolina.

West Virginia Division of Highways – Project Engineer for completion of hazardous waste portion of environmental assessment for 22 miles of proposed upgrade to US 19, north of Summersville, West Virginia. Included site reconnaissance, interviews, and records search to identify potential hazardous waste sites along path of proposed upgrade.

Storage Tanks

Marshall University – Project Engineer for closure, sampling, and remediation activities associated with an UST closure at a new football stadium.

Project Engineer for sampling associated with an underground storage tank removal at a site in Harrison County, West Virginia.

landfill facilities including storm water structures, drawings, permit application text, NPDES permit application, and negotiations with the WVDEP until permit issuance.

- Project Manager for preparation of construction documents for Phase 1, 2, 2B and 3 expansions of the S&S Landfill in Harrison County, West Virginia. Work included design of liner system and storm water drainage structures, drawings, specifications, quantities, assistance in bidding and contractor selection.
- Project Manager for construction monitoring of the Phase 1, 2, 2B and 3 expansions of S&S Landfill in Harrison County, West Virginia. Work included regular meetings with contractor, preparation of weekly progress reports, preparation of liner system certifications, and submittal to the WVDEP of final certification. Included was construction monitoring of storm water drainage structures.
- Project Manager for preparation of drawings and specification for closure of the old S&S Landfill in Harrison County, West Virginia. Work also included designing proposed grade, storm water structures, landfill cap features, and preparation of quantities.
- Design of a landfill leachate pump station, force main, and primary and secondary containment tanks, including preparation of drawings, technical specifications, quantities, and a cost estimate.
- Renegotiation of a municipal waste water treatment plant NPDES permit, including preparation of corrective action plan for facility, to allow for acceptance of more landfill leachate.
- Project manager for design of valve vault for leachate handling facilities at the S&S Landfill in Harrison County, West Virginia.
- Project manager for construction of additional sedimentation pond at the S&S Landfill in Harrison County, West Virginia.
- Project engineer for permit modifications to allow alternate landfill liner systems at the S&S Landfill in Harrison County, West Virginia.

West Virginia Solid Waste Management Board — Technical review of proposed batch treatment plant/sludge handling equipment for treating landfill leachate.

Feasibility study for future disposal options of residual wet waste from steam plants at a chemical plant in West Virginia. West Virginia Division of Environmental Protection, LCAP – Assistance with QA/QC review for construction drawings and specifications for the Central Landfill project in Braxton County, West Virginia and the Mingo County Landfill project in Mingo County, West Virginia.

West Virginia Division of Environmental Protection, LCAP — Preparation of construction drawings and specifications for the leachate collection and storage facilities for the closure of the Fleming Landfill in Kanawha County, West Virginia.

West Virginia Solid Waste Management Board – Preparation of an NPDES permit application for a municipal solid waste landfill near Morgantown, West Virginia.

Project manager for preparation of annual cross sections depicting liner elevations, existing elevations, and cap elevations for S&S Landfill in Harrison County, West Virginia and the Carolina Grading, Inc. landfill in South Carolina from 1995 to 1999. Work also included estimating volume of waste disposed, and volume of air space remaining.

- S&S Grading, Inc.
- Carolina Grading, Inc.

Carolina Grading, Inc. – Project manager for redesign of landfill subbase elevations to allow increased airspace at Carolina Grading landfill in South Carolina.

Eastern Environmental Services, Inc. – Project manager for estimation of remaining airspace volume at the Bayside of Marion Landfill in Florida and at a landfill in Maryland.

West Virginia Solid Waste Management Board – Project engineer for study evaluating seven alternatives for future operation of the Monongalia County Landfill.

Air Pollution/Air Services

Plasma Processing Corporation – Preparation of air pollution control permit applications, permit modifications, and compliance testing for secondary aluminum facilities in West Virginia and Tennessee.

Preparation of an air pollution control permit (construction and operating) applications for loadouts, coal preparation plants, and associated areas of coal

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technical specifications including WVDOH standard specifications.

Martinka Coal Company – Project Manager for design of an access road associated with a new 3,700,000-gallon pond at a deep mine in northern West Virginia. Project included subsurface investigation, hydrology calculations, channel and culvert design, cut/fill balance, low water crossing design, embankment design, and selection of road surfacing material. Deliverables included specifications, including references to WVDOH specifications. USCOE and Public Lands Corporation permits were obtained.

S&S Grading, Inc. – Project Manager for design of an access road associated with a closure cap on an old landfill in Harrison County, West Virginia. Project included site grading, hydrology calculations, channel and culvert design, design of subsurface drains under the road, cut/fill balance, embankment design, and selection of road surfacing material. Deliverables included drawings and technical specifications, including references to WVDOH specifications. Roadway quantities were estimated.

Ranger Fuel Corporation – Design of an access road for a new deep mine portal at the Clinton No. 4 Mine in Boone County, West Virginia. Project included site grading, hydrology calculations, channel and culvert design, cut/fill balance, and selection of road surfacing material. Deliverables included drawings and specifications. Regulatory approval was obtained.

West Virginia Division of Environmental Protection — Project Manager for the design of site drainage along WV Route 16/2 (including channels and culverts), reclamation of two landslide areas along WV Route 16/2, and a soldier (pile and lagging) wall to support a slip in WV Route 16/2. In addition, responsibilities including compiling technical specifications, including WVDOH standard specifications and communications with WVDOH for design approval.



EDUCATION

M.S. Engineering Management, 2006 Marshall University

B.S. Civil Engineering, 1988 University of Florida

Administration – United States Air Force Technical School

EMPLOYMENT HISTORY

2007-Present	Potesta & Associates, Inc.
2000-2007	
2000-2007	WV Dept. of Health and Human
	Resources
1997-2000	Summit Engineering, Inc.
1997	Pyramid Consultants, Inc.
1995-1997	Haworth, Meyer and Boleyn, Inc.
1989-1995	GAI Consultants, Inc.
1979-1983	United States Air Force

PROFESSIONAL REGISTRATION

Professional Engineer - West Virginia

AREAS OF SPECIALIZATION

Drinking water and wastewaster including funding coordination; hydrologic and hydraulic analysis including dam break; chemical and municipal solid waste disposal; surface coal mining; limestone quarry mining; abandoned mine lands reclamation; and site development.

PROFESSIONAL EXPERIENCE

Sewer Lines and WWTPs

Huntington Sanitary Board – Client Manager for oversight of designed construction of the following:

- Design, bidding, and construction management of combined sewer replacement project on 13th Street West and 19th Street, which included a combination of full trench replacement and trench-less technology pipe lining (cured-in-place pipe) for approximately 3,000 feet of 24 through 36-inch pipe.
- Redesign, bidding, and construction management of conversion of four ejector stations to submersible pump stations to include altering design from a castin-place concrete cap to allow building to remain. Design included new hatches and hoisting, ventilation equipment, heating, bypass features, and oversight of electrical design.
- 13th Street Pump Station design, bidding, and construction management of installation of 30-inch bypass on 48-inch prestressed concrete cylinder pipe and replacement of 2-24" failing 90 degree discharge pipe bends, including air release valves. Project included installations of water stops in existing 48" pipe and coordination with the WVDEP to discharge into river during construction work.
- Assistance regarding the CSO long-term control plan's implementation schedule and lead participation development of asset management plan.
- Preparation of wastewater treatment plant incinerator failure analysis and replacement analysis.
- Environmental remediation of fly ash lagoon through West Virginia Voluntary Remediation Program and design of bioretention basin at WWTP for treatment of stormwater fitting "green" project criteria.
- Management of study and preparation of Preliminary Engineer Report for replacement of Huntington's primary 33 MGD pump station facility (13th Street).
- Evaluation of the mixing zone for the Wastewater Treatment Plant discharge.
- Replacement of 54" of PCCP force main crossing flood level at WWTP entrance.
- Design, bidding, and construction management of replacement of 54-inch CMP effluent line with 48inch HDPE line and diffuser at WWTP, including installation of connection vault, degassing manhole, two manholes, and overflow channel and

Webster County Commission, Countywide Water Study — Secured grant from the West Virginia Bureau for Public Health to conduct county wide study to include consolidation of county service providers to provide better service to customers in Webster County, West Virginia. Prepared preliminary engineering reports to provide service to Erbacon and Route 82 areas of Webster County.

Oil and Gas

In-house consultant with major FERC regulated natural gas transmission company — Developed environmental management plans for natural gas pipeline and storage projects to accompany construction drawings which included environmental controls including stream and wetland crossings, sediment and erosion controls, road access. Prepared FERC application documents containing plans and specifications; conducted onsite monitoring and site visits to make sure contractor was in compliance with plans.

Classified Natural Gas Production Company – Conducted water studies of ground, deep mine, and surface water sources to determine most feasible source to provide water for impoundments within the Marcellus shall basin in West Virginia to conduct fracking operations to obtain natural gas. After the water source was selected by the company conducted design of the raw water pump system and transmission line to the impoundment.

Hydrology and Hydraulics

City of Charleston – Stormwater analysis on existing and future developments of residential watershed in Charleston, West Virginia. Preliminary design of channels, culverts, and flood detention structures. Preparation of design report in which various alternative hydraulic structures were compared with respect to cost and constructability.

Preliminary design of a stormwater management system and grading plans for a regional mall in Western Pennsylvania. Evaluation of several drainage alternatives and pond designs for a site containing numerous wetlands.

Analysis and design of stormwater management for six separate sites, two of them shopping centers, including storm channels, surface and subsurface stormwater detention facilities, culverts, and pipe sizing design.

Design, installation, monitoring and analysis of data from a stream gage for a water supply study of a power generating plant owned by an independent power company.

Pennsylvania Department of Transportation – Drainage structure designs for various projects to include hydrologic analysis, storm channel and detention pond design.

Private Dam Owners – Hydrologic and hydraulic analysis on various private dams within West Virginia to determine impacts from multiple storm events on dam principal and emergency spillways, overtopping and impacts to downstream structures, including dam break conditions using HEC-HMS and HEC-RAS computer programs.

Civil/Site Design

Vaughan Railroad – Preparation of construction specifications for railroad line construction, including erosion and sediment control, culvert installation and subgrade compaction.

U.S. Army Corps of Engineers – Participated in utility relocation planning for two local flood protection projects for Petersburg and Moorefield, West Virginia to include utility relocation design and quantity and cost estimation.

Abandoned Mine Lands

West Virginia Department of Environmental Protection – Analysis and design of stormwater channels, culverts, energy dissipation systems, and dewatering underdrain systems for two landslides and two coal refuse regrading projects.

West Virginia Department of Environmental Protection, Abandoned Mine Lands (WVDEP-AML) (Ducks Unlimited Award Winner) — Primary engineer for Bear Run project, consisting of regrading of three coarse coal refuse piles, and re-establishing eight fine coal refuse impoundments with breached embankments into wetland areas, each connected by a designed stream channel in Gilmer County, West Virginia. Project included preparation of conceptual report based on field reconnaissance for Bear Run abandoned mine reclamation project; and evaluation of several hydrologic reclamation alternatives to include wetland and channel locations and re-establishment of impoundments. Project also included

PATRICK A. TAYLOR, P.E. Page 5

liner systems were evaluated in the capping system design, including analysis of slope stability.

Design of two solid waste and one industrial waste landfills, including analysis of sedimentation controls and hydrologic analysis, design of liner system, sediment and leachate ponds, decant structures, sedimentation channels, grading and underdrain system. Also provided drawings and specifications for design and permitting package.

American Cyanamid – Analysis of infiltration characteristics of cover materials for closure of an industrial sludge basin using Hydrologic Evaluation of Landfill Performance model computer system.



STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

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of the Mule of West Virginia, reposing special confidence in the Intelligence. Interprety and Discretion of

Dana C. Burns

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REGISTERED PROFESSIONAL ENGINEER

Registration Mumber

(To Halo) and use such title in the practice of his professione, subject to the conditions presore but by law



Citres under the hand and the Soal of the Board at the Capital in the City of Charleston 11th day of Tept. in the year of our Lord One Thousand Nine Hundred and Eighty-Fire and of the State the One Hundred Twenty ~ Second

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

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Mark A. Sankoff

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REGISTERED PROFESSIONAL ENGINEER:

Registration Mamber

(To thold) and use such title in the practice of his profession, subject to the conditions presorbed by law.



Giram under the hand, and the Leab of the Board at the Capital in the City of Charleston day of Fibruary in the year of our Lord One Thousand Nine Hundred and Eighty Nine and of the State the One Hundred Twenty - Fifth.

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

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THE STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

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of the State of West Virginia, reposing special confidence in the Intelligence: Integrity and Descretion of

Patrick A. Taylor

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REGISTERED PROFESSIONAL ENGINEER:

Registration Rumber

(To thole) and use such title in the practice of his profession, subject to the conditions, prescribed by law:



Aires under the hand and the Soul of the Board at the Expitel in the Expitel in the Esty of Charleston, this 2nd day of Aug in the year of our Lord One Thousand Nine Hundred and Ninety Four and of the State the One Hundred Thirty First

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

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SHE STATE BOMED OF REGISTRATION FOR PROFESSIONAL ENGINEERS

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Terence C.Moran

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REGISTERED PROFESSIONAL ENGINEER:

Registration Number

(In Mail) and use such title in the practice of his profession, subject to the conditions presembed by law



Citron under the hand and the Seal of the Board at the Capital in the Eity of Charleston Ber dayof Feb in the year of our Lord One Thousand Nine Hundred and Ninety Sw and of the State the One Hundred Thirty Lecond

Neumally H. Meana Goldble Lett Franklindy

West Virginia Ethics Commission Disclosure of Interested Parties to Contracts

(Required by W. Va. Code § 6D-1-2)

Name of Contracting Business Entity: Potesta & Ass	sociates, Inc. Address:	7012 MacCorkle Avenue, SE, Charleston, V
Name of Authorized Agent: Contract Number: DNR 1900000003 Contract Number: Division of	Address: _25 Contract Description	12 MacCorkle Avenue, SE, Charleston, WV 304 Pipestem Resort State Park, Wastewater Improvement Project
Governmental agency awarding contract: ☐ Check here if this is a Supplemental Disclosure List the Names of Interested Parties to the contract which entity for each category below (attach additional pages in 1. Subcontractors or other entities performing worth ☐ Check here if none, otherwise list entity/individual	n are known or reasonably of necessary): or service under the C	
 Any person or entity who owns 25% or more of concept Check here if none, otherwise list entity/individual in Ronald R. Potesta Dana L. Burns Any person or entity that facilitated, or negotiatiservices related to the negotiation or drafting of the Check here if none, otherwise list entity/individual results. 	names below. ted the terms of, the a he applicable contract)	
Signature: Signature: Burns Notary Verification	Date Signed:	2/20/19
State of West Virginia Communication of Dana L. Burns entity listed above, being duly sworn, acknowledge that the penalty of perjury.	the authori he Disclosure herein is b	zed agent of the contracting business eing made under oath and under the
Taken, sworn to and subscribed before me this 20 To be completed by State Agency: Date Received by State Agency:	Notary Public's S	Signature
Date submitted to Ethics Commission: Governmental agency submitting Disclosure:		OFFICIAL SEAL Rhonda L. Henson Notory Public State of West Virginia Revised June &F 2018 February 14, 2024 1978 Wolf Pen Drive Charleston, WV 25312



Purchasing Divison 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

State of West Virginia **Centralized Expression of Interest** 02 - Architect/Engr

Proc Folder: 544956

Doc Description: A/E Services for Pipestem Resort SP Wastewater Improvements

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No		Version
2019-02-01	2019-02-22 13:30:00	CEOI 0310	DNR1900000003	1

BID CLERK

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION

2019 WASHINGTON ST E

CHARLESTON

W

25305

US

Vendor Name, Address and Telephone Number:

Potesta & Associates, Inc. 7012 MacCorkle Avenue, SE Charleston, WV 25304 (304) 342-1400

FOR INFORMATION CONTACT THE BUYER

Guy Nisbet (304) 558-2596 guy.l.nisbet@wv.gov

31-1509066

All offers subject to all terms and conditions contained in this solicitation

Page: 1

FORM ID: WV-PRC-CEOI-001

ADDITIONAL INFORMATION:

Expression of Interest Request

The West Virginia Purchasing Division is soliciting Expression(s) of Interest for the Agency, The Division of Natural Resources from qualified firms to provide necessary engineering, and other related professional services to design and specify for construction as well as provide construction contract administration, for repairs and renovations to certain wastewater treatment and collection systems at Pipestern Resort State Park. The planned improvements may also include any other work necessary for, or related to, the aforementioned facilities, as well as any other necessary ancillary work; all located in Pipestern Resort State Park in Summers County, West Virginia. per the bid requirements, specifications and terms and conditions as attached hereto.

* Online submissions of Expressions of Interest are Prohibited

INVOICE TO	SHIP TO
DIVISION OF NATURAL RESOURCES PARKS & RECREATION-PEM SECTION	SUPERINTENDENT DIVISION OF NATURAL RESOURCES PIPESTEM STATE PARK
324 4TH AVE	3405 PIPESTEM DR
SOUTH CHARLESTON WV25305	PIPESTEM WV 25979-0150
us	US

Line	Comm Ln Desc	Qty	Unit Issue	
1	Civil engineering		-	

Comm Code	Manufacturer	Specification	Model #	
81101500				

Extended Description:

Architectural/engineering services and contract administration for wastewater treatment and collection systems at Pipestem Resort State Park.

	Document Phase	Document Description	Page 3
DNR1900000003	Final	A/E Services for Pipestern Resort SP	of 3
		Wastewater Improvements	

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the
Contract Administrator and the initial point of contact for matters relating to this Contract.
(Name, Title) Dana L. Burns, Vice President
(Printed Name and Title) 7012 MacCorkle Avenue, SE, Charleston, WV 25304
(Address) 304-342-1400/304-343-9031
(Phone Number) / (Fax Number) dlburns@potesta.com
(email address)
the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.
Potesta & Associates, Inc.
(Company)
(Authorized Signature) (Representative Name, Title)
Dana L. Burns, Vice President
(Printed Name and Title of Authorized Representative)
2/20/19 Date:
304-342-1400/304-343-9031

(Phone Number) (Fax Number)

STATE OF WEST VIRGINIA Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(I), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, 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: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. 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.

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.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Ve. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE: Vendor's Name: Potesta & Associates, Inc. Authorized Signature: Date: 2/20/19 State of Weck Virginia County of Kanawha, to-wit: Taken, subscribed, and sworn to before me this 20 day of February 20/19 My Commission expires February 14, 2024 AFFIX STAN HERE OFFICIAL SEAL Rhonda L. Henson Notary Public NOTARY PUBLIC Ahonda L. Jenson

Purchasing Affidavit (Revised 01/19/2018)

State of West Virginia My Commission Expires

February 14, 2024 1978 Wolf Pen Drive Charleston, WV 25312

ADDENDUM ACKNOWLEDGEMENT FORM SOLICITATION NO.: DNR1900000003

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

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

Addendum Numbers Received: (Check the box next to each addendu	im received)
Addendum No. 1 Addendum No. 2 Addendum No. 3 Addendum No. 4 Addendum No. 5	☐ Addendum No. 6 ☐ Addendum No. 7 ☐ Addendum No. 8 ☐ Addendum No. 9 ☐ Addendum No. 10
discussion held between Vendor's ren	e receipt of addenda may be cause for rejection of this bid presentation made or assumed to be made during any oral presentatives and any state personnel is not binding. Only added to the specifications by an official addendum is
Potesta & Associates, Inc.	
Company Jana L. Bu	rns
Authorized Signature	
2/20/19	
Date	
NOTE: This addendum acknowledgem	nent should be submitted with the bid to expedite

Revised 06/08/2018

document processing.

KCOLLINS



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 03/14/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s). CONTACT Ames & Gough 8300 Greensboro Drive PHONE (A/C, No, Ext): (703) 827-2277 FAX (A/C, No): (703) 827-2279 EDDRESS: admin@amesgough.com Sulte 980 McLean, VA 22102 INSURER(S) AFFORDING COVERAGE NAIC# 20508 INSURER A: Valley Forge Insurance Company A(XV) INSURED INSURER B: Continental Casualty Company (CNA) A, XV 20443 INSURER C: American Casualty Co of Reading, PA A(XV) 20427 Potesta & Associates, Inc. 7012 MacCorkle Avenue, SE INSURER D: Evanston Insurance Company 35378 Charleston, WV 25304 **INSURER E:** INSURER F : **COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:** THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. POLICY EFF POLICY EXP ADDL SUBR INSD WVD TYPE OF INSURANCE **POLICY NUMBER** 1,000,000 X COMMERCIAL GENERAL LIABILITY EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) 100,000 CLAIMS-MADE | X | OCCUR 6057035330 03/07/2018 03/07/2019 S 15,000 MED EXP (Any one person) 1,000,000 PERSONAL & ADV INJURY 2,000,000 GEN'L AGGREGATE LIMIT APPLIES PER: GENERAL AGGREGATE s 2,000,000 X POLICY PRO PRODUCTS - COMP/OP AGG \$ OTHER: COMBINED SINGLE LIMIT
(Fa accident) 1.000.000 **AUTOMOBILE LIABILITY** ANY AUTO 6057035327 03/07/2018 03/07/2019 BODILY INJURY (Per person) SCHEDULED AUTOS OWNED AUTOS ONLY BODILY INJURY (Per accident)
PROPERTY DAMAGE
(Per accident) HIRED ALTOS ONLY NON-OWNED AUTOS ONLY 9,000,000 В X UMBRELLA LIAB X OCCUR EACH OCCURRENCE 6057035358 03/07/2018 03/07/2019 9,000,000 **EXCESS LIAB** CLAIMS-MADE AGGREGATE 10,000 DED X RETENTIONS WORKERS COMPENSATION AND EMPLOYERS' LIABILITY X | PER STATUTE 6057035344 03/07/2018 03/07/2019 1.000.000 ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) E.L. EACH ACCIDENT s Ν N/A 1.000.000 E.L. DISEASE - EA EMPLOYEE \$ f yes, describe under DESCRIPTION OF OPERATIONS below 1,000,000 E.L. DISEASE - POLICY LIMIT 03/07/2018 03/07/2019 Per Claim/Aggregate Professional Liab. MKLV7PL0003081 5,000,000 DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Pollution Liability is included in the Professional Liability policy and shares the limits per the policy terms and conditions. CERTIFICATE HOLDER CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. **EVIDENCE OF COVERAGE** AUTHORIZED REPRESENTATIVE Vankuse