



**Chapman
Technical
Group**
a division of
GRW

November 18, 2015

Department of Administration
Purchasing Division
2019 Washington Street, East
Charleston, West Virginia 25305-0130

**Re: A/E Services for
Water & Wastewater System
Improvements – Babcock & Droop
Mountain State Parks**

Dear Selection Committee:

Chapman Technical Group is most interested in providing the architectural and engineering services for the proposed Water and Wastewater System Improvements projects for both Babcock and Droop Mountain State Parks. We have been fortunate to have completed numerous projects for WV State Parks in the past, some of which have been water and wastewater system improvements, and our method of approach for a successful project follows:

2.1.a. Communication: In Chapman Technical Group's project management system, the Project Manager will be the point of contact for the DNR for all communications related to the project. It will be the Project Manager's responsibility to ensure that all project team members receive design directives and are involved in resolving project issues. Having a single point of contact helps minimize confusion and is the most efficient communications method. The Project Manager will also coordinate all progress meetings and site visits during construction and will ensure that all communications are forwarded to the appropriate DNR personnel. For these projects, Greg Belcher will serve as the Project Manager.

2.1.b. Budget Control: Chapman Technical Group has an excellent track record of completing projects in budget. We recently completed nearly \$9 million worth of ski area improvements at Canaan Valley Resort State Park within budget. Our two most recent projects include the \$4.1 million renovation of the Jane Lew Elementary School, which came in under budget and is currently under construction. We also recently completed a \$6.5 million building renovation in budget for the WV Division of Highways, District 1

200 Sixth Avenue
Saint Albans, WV 25177

304.727.5501
304.727.5580 Fax

Buckhannon, WV
Martinsburg, WV
Lexington, KY

www.chaptech.com

11/18/15 13:39:28
WV Purchasing Division



Our method of cost control includes developing accurate opinions of cost in the early stages of design, so that decisions regarding the scope of the project can be addressed early when adjustments to the design are easier to achieve. As the project progresses, we will consider alternate systems that can provide the required result in a way that is cost-effective, both short-term and long-term. We will also develop alternate bid items to ensure that the project stays within the budget. During construction, we will work with the contractors to establish a team relationship so that as issues arise, we can work together to find the most cost-effective solution. We are often able to find alternative means of construction that help to costs associated with unforeseen conditions.

2.1.c. Schedule Control: We have completed many projects for the WV State Parks within the allotted schedule, including the Canaan Valley Ski Area Improvements project which was bid as eight separate contracts and involved many specialty consultants. We have a history of timely turnaround on many projects which have been provided by this project team and can meet any schedule required for this project. Our Project Manager will establish internal review deadlines with all parties which will ensure compliance with your schedule for bidding and construction. Our full service firm will allow us to address the peripheral issues of the project, such as water and sanitary sewer, effectively and efficiently.

During construction, we will strive to maintain a true team relationship so that issues are resolved quickly with input from all parties, including your field representative. As you know, work in West Virginia State Parks can be subject to extreme weather conditions, which must be taken into consideration when scheduling construction activities. As always, it takes a coordinated effort from the Engineer and the Owner apply the appropriate pressure to keep the project moving expeditiously, while maintaining a positive relationship with the Contractor. I think we have demonstrated that balance in past projects.

2.1.d. Experience: The Chapman Technical Group team will include Joseph Bird, who will assist with managing the projects internally due to his extensive involvement. Mike Johnson, PE, has designed several projects for WV State Parks including the snow making renovation work at Canaan Valley State Park, will be the lead engineer for the project. Harper Engineering will provide any necessary mechanical/electrical and plumbing engineering and we have worked



Selection Committee
November 18, 2015
Page 3

with them on numerous prior projects, including those for WV State Parks.

You will find all of the requested information regarding our firm and our ability to execute the requirements of this project within this submittal. We would very much appreciate the opportunity to present our project team and further discuss your project. In the meantime, if you have any questions or need additional information, please contact me.

Sincerely,

CHAPMAN TECHNICAL GROUP

Robert G. Belcher, PE
Vice President

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: 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 exceeds 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. Va. Code §61-5-3) 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: Chapman Technical Group

Authorized Signature: *Robert G. Behler* Date: 11-17-15

State of West Virginia

County of Kanawha, to-wit:

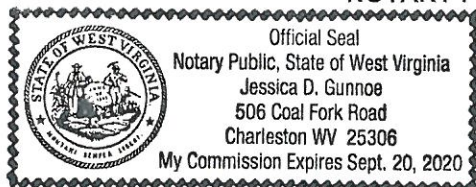
Taken, subscribed, and sworn to before me this 17th day of November, 2015.

My Commission expires September 20, 2020.

AFFIX SEAL HERE

NOTARY PUBLIC

Jessica D. Gunnoe



ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.:

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

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

Addendum Numbers Received:
(Check the box next to each addendum received)

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

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

Chapman Technical Group

Company



Authorized Signature

11-17-15

Date


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

CERTIFICATION AND SIGNATURE PAGE

By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid, 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.

Chapman Technical Group

(Company)

 Robert G. Belcher, VP

(Authorized Signature) (Representative Name, Title)

304-727-5501, 304-727-5580,

(Phone Number) (Fax Number) (Date)

EXECUTIVE SUMMARY



Selecting a firm to provide professional services can be difficult in today's market. Many firms offer computer services and technical skills; however, Chapman Technical Group offers qualities that other firms may lack. Summarized below are the benefits of selecting Chapman Technical Group:

■ Since 1984, Chapman Technical Group has been responsible for the planning, administration, design, and construction of over \$500 million of water, wastewater, and stormwater system improvements projects throughout West Virginia involving both new construction and rehabilitation/renovation of existing facilities.

■ Chapman Technical Group's staff of nearly 40 personnel, including environmental, civil, structural, and electrical engineers, as well as architects, landscape architects, surveyors, technicians, and construction representatives are available to begin work immediately.

■ In late 2013, Chapman Technical Group was acquired by GRW, a Lexington, Kentucky based E/A firm with extensive resources in the municipal water and wastewater fields, an additional asset for Chapman Technical Group. We remain Chapman Technical Group, a wholly owned subsidiary of GRW.

■ With offices in north, south, and central West Virginia, Chapman Technical Group can access the entire state on short notice.

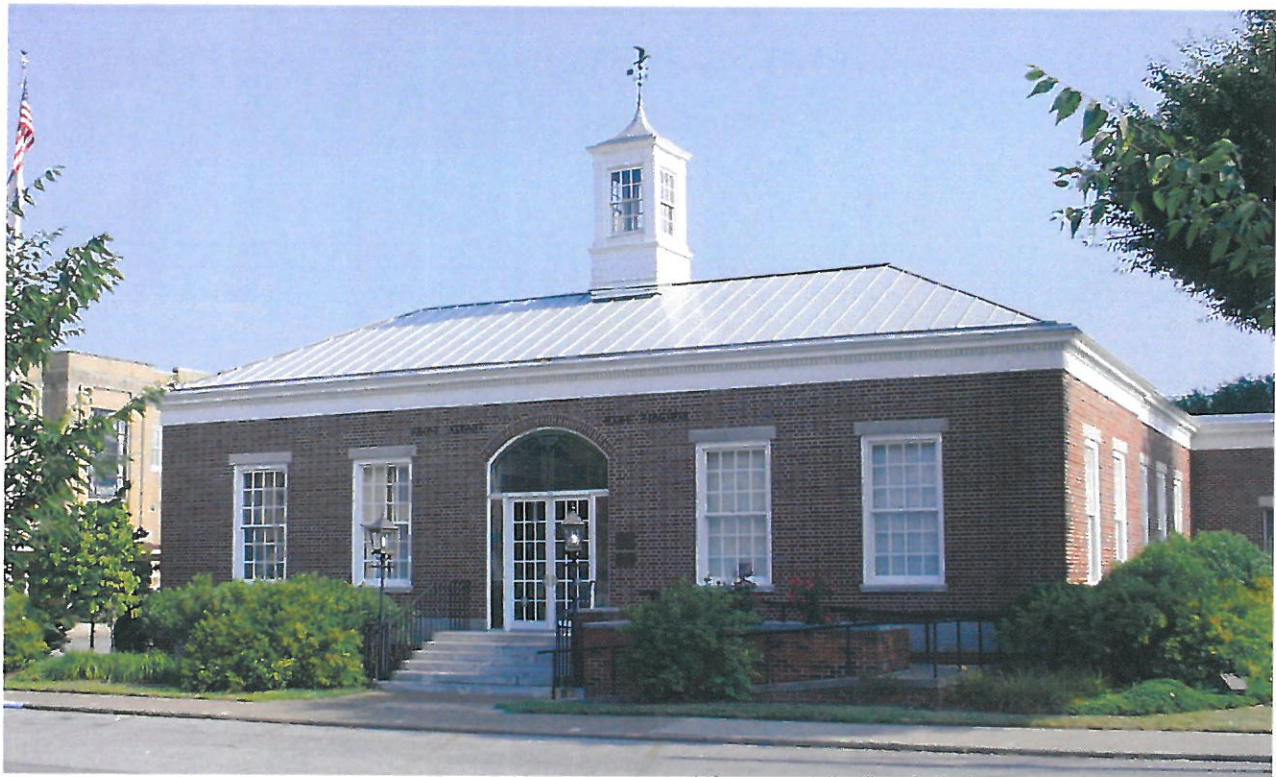
■ We are a true West Virginia firm, and our personnel have a wealth of experience in the potable water, wastewater, and stormwater fields in West Virginia, and are adept at dealing with the many challenges our unique terrain presents.

■ Most Chapman Technical Group employees are natives of West Virginia and are graduates of West Virginia colleges and universities.

■ Preparation of preliminary engineering reports and feasibility studies are frequent tasks that Chapman Technical Group regularly provides. Our experience in the water, wastewater, and stormwater engineering fields, our knowledge and experience with all funding agencies, and our working relationship with regulatory agencies all provide invaluable resources towards the successful development of any project.

■ Our reputation for providing innovative and cost-effective design solutions, our commitment to client satisfaction, and our proven track record in meeting schedules and budgets have all combined to make Chapman Technical Group the clear leader in the environmental engineering consulting field in West Virginia.

COMPANY OVERVIEW



Established in 1984, Chapman Technical Group has steadily grown to a diverse firm of professionals, many of whom were educated in West Virginia colleges and universities. We have achieved an outstanding reputation for providing high-quality design projects, while meeting client schedules and budgets and have received numerous awards for our work. In late 2013, Chapman Technical Group was acquired by the Lexington Kentucky based A/E firm of GRW, allowing us to provide a wider range of services while expanding our resources. We are a full-service consulting firm with offices in St. Albans, Buckhannon, and Martinsburg, West Virginia offering an extensive range of professional services.



Chapman Technical Group offers a broad range of professional services.

- Airport Design
- Architecture
- Civil Engineering
- Interior Design
- Landscape Architecture
- Recreational Facilities
- Roads, Highways, & Bridges
- Site Development
- Space Planning
- Surveying
- Water & Wastewater Systems
- Geospatial

AWARDS



- WV CHAPTER, AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS - HONOR AWARD FOR EXCELLENCE IN PLANNING & DESIGN PROJECTS, 2012 - Upper Big Branch Miners Memorial.
- WV CHAPTER, AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS - MERIT AWARD FOR EXCELLENCE IN PLANNING & DESIGN PROJECTS , 2012 - Nuttallburg Mine Complex.
- WV CHAPTER, AMERICAN COUNCIL OF ENGINEERING COMPANIES - ENGINEERING EXCELLENCE AWARD, 2012, Gold Award - Water & Wastewater Category for the Corporation of Shepherdstown Wastewater Treatment Plant Project.
- WV CHAPTER, AMERICAN COUNCIL OF ENGINEERING COMPANIES - ENGINEERING EXCELLENCE AWARD, 2012, Gold Award - Transportation Category for the Appalachian Regional Airport Project, Mingo County.
- WINNER - "COMMISSIONER'S ENGINEERING ACHIEVEMENT AWARD", WVDOT - DIVISION OF HIGHWAYS - 2013, Large Roadway Category for WV10 Rum Creek to Stollings; 2013, Small Roadway Category for Corridor H Paving WV 42/93 Interchange to 2.8 miles east WV 42/93; 2011, Large Roadway Category for WV10 North Davy Branch to Rum Creek; 2000: Large Bridge Category for WV10 Buffalo Creek Bridge, Logan County, West Virginia.
- WV CHAPTER, AMERICAN INSTITUTE OF ARCHITECTS - MERIT AWARD FOR EXCELLENCE IN ARCHITECTURE, 2009 - Interstate 79 Rest Areas.
- WV CHAPTER, AMERICAN COUNCIL OF ENGINEERING COMPANIES - ENGINEERING EXCELLENCE AWARD, 2009, Gold Award - Special Projects Category for the Mercer County Airport Runway Safety Area Project
- AMERICAN SOCIETY OF CIVIL ENGINEERS, 2009, National Superior Employer in the Private Sector Award.
- WV CHAPTER, AMERICAN INSTITUTE OF ARCHITECTS - HONORAWARDFOR EXCELLENCE IN ARCHITECTURE, 2008 - Upshur County Courthouse Restoration and Renovations.
- WV CHAPTER, AMERICAN COUNCIL OF ENGINEERING COMPANIES - ENGINEERING EXCELLENCE AWARD, 2008, Bronze Award - Wastewater Category for the Spring Run State Fish Hatchery Improvements
- WV CHAPTER, AMERICAN COUNCIL OF ENGINEERING COMPANIES - ENGINEERING EXCELLENCE AWARD, 2007, Silver Award - Structures Category for the Mercer County Airport Runway Safety Area Project.
- WV CHAPTER, AMERICAN COUNCIL OF ENGINEERING COMPANIES - ENGINEERING EXCELLENCE AWARD, 2003, Gold Award - Water Treatment Category for the City of Fairmont Water Treatment Plant Project.
- FINALIST - "COMMISSIONER'S ENGINEERING ACHIEVEMENT AWARD", WVDOT - DIVISION OF HIGHWAYS - 1999: Large Roadway Category for WV10 Buffalo Creek-Taplin Project; 2000: WV10 Buffalo Creek-Huff Junction Project, both in Logan County, West Virginia.
- WV CHAPTER, AMERICAN COUNCIL OF ENGINEERING COMPANIES - ENGINEERING EXCELLENCE AWARD, 1999, Silver Award - Water and Wastewater Category, for the City of Beckley Piney Creek Wastewater Treatment Plant Project.
- ENTREPRENEUR OF THE YEAR AWARD - FINALIST, 1999 and 2000, Sharon L. Chapman, President, was named one of twenty finalists in the West Virginia Area Entrepreneur of the Year Award. Sharon was recognized for leading Chapman Technical Group to become one of the most highly regarded engineering firms in the state after the death of her husband and company founder, Harvey R. Chapman.
- "EXPECT THE BEST FROM WEST VIRGINIA AWARD", 1998, Charleston Regional Chamber of Commerce.
- WV CHAPTER, AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS - HONORAWARD, 1994, Shrewsbury Street Area Redevelopment Plan, for excellence in planning and design projects. Joseph E. Bird, ASLA, Project Manager.
- "GOVERNOR'S AWARD FOR ENGINEERING EXCELLENCE", 1990, The West Virginia Chapter of the American Public Works Association, in recognition of outstanding Public Works Engineering and Design of Projects within West Virginia.
- "GEORGE WARREN FULLER AWARD", Harvey R. Chapman, P.E., 1984, Robert G. Belcher, P.E., 2001, and Sharon L. Chapman, 2005, American Water Works Association, for distinguished service in the water supply field in the State of West Virginia.

ENVIRONMENTAL ENGINEERING



Chapman Technical Group primarily involves water and wastewater system analysis, planning, design, construction administration, and construction observation services for all aspects of municipal and commercial/industrial projects. Our vast experience in these areas has enabled our firm to become one of the clear leaders in the fields of water, wastewater, and stormwater engineering. This enables the development and betterment of our communities by improving our environment and providing for the public's health, safety, welfare, and convenience.



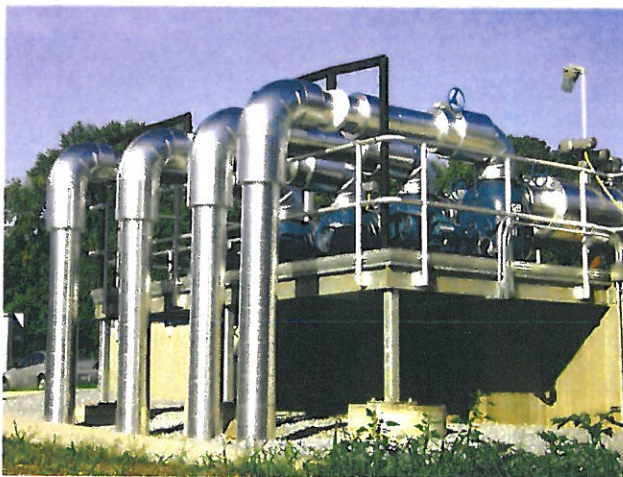
Water Engineering

Chapman Technical Group's experience with water system projects has encompassed new construction as well as renovations and rehabilitation of existing treatment, storage, pumping, and distribution facilities ranging in size from small on-site systems supplying only a handful of people to larger systems supplying approximately 100,000 people. Our firm also provides in-depth comprehensive planning studies, including source of supply studies relating specifically to record and recurring droughts, as well as detailed computerized hydraulic analyses of entire systems in order to identify and eliminate any significant



Wastewater Engineering

Chapman Technical Group's experience with wastewater system projects has encompassed new construction as well as renovations and rehabilitation of existing treatment, pumping, and collection facilities ranging in sizes from small on-site systems to larger systems supplying approximately 100,000 people. Our firm also provides in-depth comprehensive facility planning studies, including extensive field investigations for performing detailed infiltration/inflow analysis and subsequent sanitary sewer system evaluation surveys.



Overall Capabilities

- Feasibility Studies/Facility Plans
- Water and Wastewater Treatment Design
- Water Distribution and Storage
- Wastewater Collection and Pumping
- Computerized Hydraulic Network Analysis
- I/I Analysis/SSS Studies/CSO Plans
- I/I Analysis/SSS Studies/CSO Plans Stormwater
- Management Programs
- Funding and Regulatory Assistance

WATER STORAGE AND DISTRIBUTION



City of St. Albans Municipal Utility Commission

Water System Improvements

Post Office Box 1270

St. Albans, West Virginia 25177



In 2007, the St. Albans MUC recognized the need to undergo a major renovation project at the treatment plant, as well as renovate their storage tanks and replace a significant portion of their aged and deteriorated water distribution system.

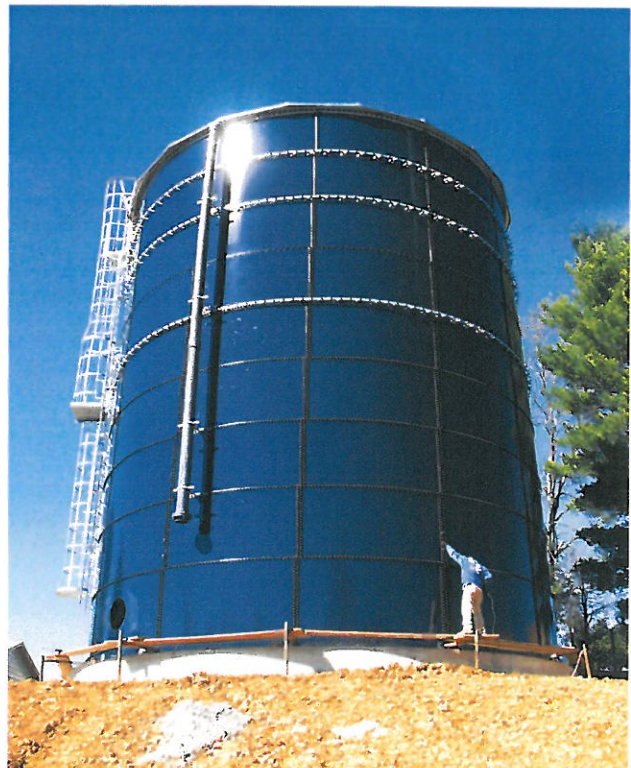
The Phase II project began in 2010 and consisted of replacing approximately 57,900 feet of the water distribution system, which is approximately 18% of the total system, at a cost of approximately \$8.5 million. The majority of the work involved replacing pipes in excess of 80 years old, and was not completed until 2013. These improvements to the distribution system not only improved service and water quality, but also reduced water losses, improved fire protection capabilities within the system, and reduced overtime labor due to emergency repairs.

WATER ENGINEERING - STORAGE



City of Lewisburg Public Works Fairlea Water Storage Tank Replacement 531 Feamster Road Lewisburg, West Virginia

The project consisted of the removal of an existing 200,000 gallon welded steel ground water storage tank and constructing a new 279,000 gallon factory-coated bolted steel tank in the same location. Also included in this project, was the demolition of a second 100,000 gallon welded steel tank. CTG provided design, assistance in obtaining funding, construction administration and observation, and project close out.



WATER STORAGE AND DISTRIBUTION



City of Belington Water System Improvements

Post Office Drawer 926
Belington, West Virginia

Chapman Technical Group provided design and construction observation services for the City of Belington's water distribution system improvements project. The project consisted of upgrading undersized waterlines to increase fire protection, reducing unaccounted for water losses by replacing deteriorated waterlines, and to improve water quality in the distribution system. The improvements consisted of the construction of approximately 3,500 L.F. of 10" PVC C-900 waterline; 440 L.F. of 10" PE directional bore river

crossing pipe; 12,500 L.F. of 8" PVC C-900 waterline; 6,300 L.F. of 6" PVC C-900 waterline; 60 L.F. of 6" DIP restrained joint stream crossing; 275 L.F. of 4" PVC C-900 waterline; 1,030 L.F. of 2" PVC SDR-21 waterline; 58 connections to the existing distribution system; 80 gate valves; and 28 fire hydrants. Other improvements consisted of the installation of 6' perimeter chain link fences around the City's existing two (2) water storage tanks and the installation of tank level monitoring system that was incorporated into the City's new water

WATER ENGINEERING STORAGE



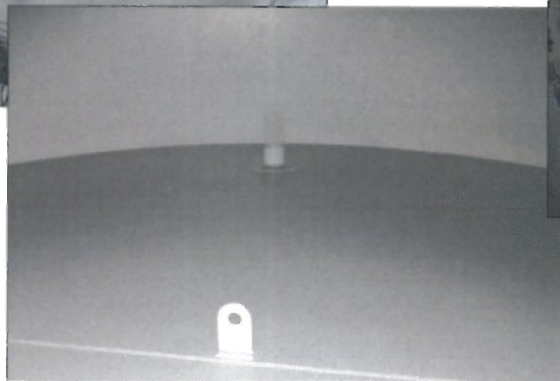
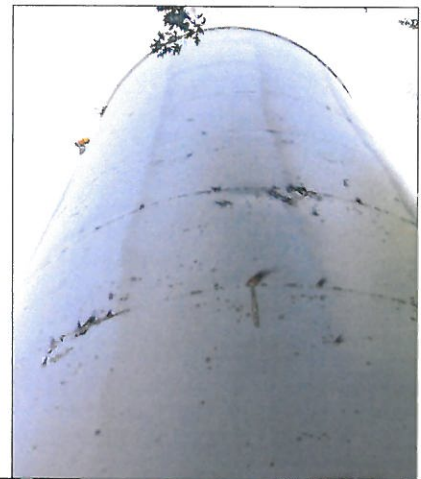
City of St. Albans Municipal Utility Commission Water Storage Tank

Post Office Box 1270
St. Albans, West Virginia 25177



In 2007, the St. Albans MUC recognized the need to undergo a major renovation project at the treatment plant, as well as renovate their storage tanks and replace a significant portion of their aged and deteriorated water distribution system.

Today, the treatment plant has undergone a major restoration project to preserve this valuable investment for the MUC's over 6,000 customers. At a cost of \$2.7 million, the work not only included the improvements to the treatment plant, but the restoration and painting of the Dry Ridge and Lakewood water storage tanks.



WATER ENGINEERING - STORAGE



Corporation of Shepherdstown
Water Storage Tanks
Post Office Box 248
Shepherdstown, West Virginia

Chapman Technical Group provided design and construction observation services for Water Storage Tank Improvements project. The project consisted of replacing the two (2) existing 500,000 gallon welded steel ground storage tanks with two (2) new 700,000 gallon elevated factory-coated bolted steel tanks. The new tanks provide the system with 2-days storage, increased water pressure and fire flow to the Mecklenburg Heights area, as well as improve water age in the system.



WATER STORAGE AND DISTRIBUTION



Elkins Road Public Service District Phase I Water System Improvements

Route 2, Box 105
Buckhannon, West Virginia

Design and construction phase services for the Phase I Water System Improvements project completed in 1999. The project included over 106,000 feet of primarily 6" and 8" water mains, fire hydrants, an 86,000 gallon water storage tank, a 75 gpm duplex water booster station, and radio telemetry for the new tank and booster station as well as the District's existing tanks and booster stations with central controls at the City of Buckhannon Water Treatment Plant. The project initially served approximately 180 customers and due to an underrun in budgeted construction funds, an extension was added to the project to provide service to an additional 20 customers involving an additional 10,000 feet of water main and a constant-run recirculating duplex water booster station.



WATER STORAGE AND DISTRIBUTION



WV American Water Company Cabell County Waterline Extensions

1600 Pennsylvania Avenue
Charleston, West Virginia

Design and construction phase services for the waterline extensions project was completed in 2001. The project included approximately 86,560 feet of primarily 2", 6" and 8" water mains, gate valves, and connections to the existing water system. The project provided water service to Charleys Creek/Hudson Hollow/Wolfpen Hollow, Little Ridges Creek, Ridges Creek to Suzannah, Cavill Creek, Tyler Creek at Bells Gap, Hinchman-Bend/Donald Gue, Toler/Trace Creek, Childress Hollow Road, and Little Two Mile in Cabell County and Upper Bear Creek in Lincoln County.



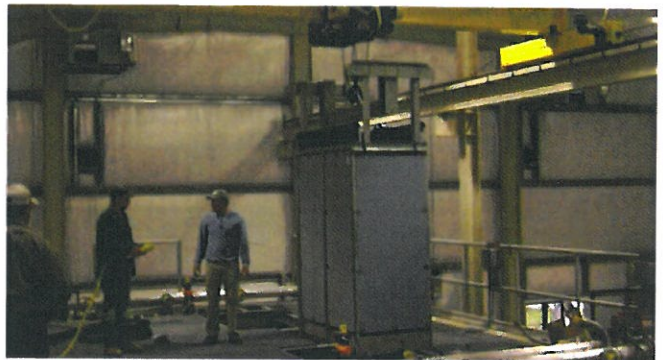
WASTEWATER ENGINEERING



Corporation of Shepherdstown Wastewater Treatment Plant

Post Office Box 248
Shepherdstown, West Virginia

Chapman Technical Group provided design and construction observation services for Wastewater System Improvements project consisting of the renovation and upgrade of the existing wastewater treatment plant in order to meet growth and nutrient removal initiated by the Chesapeake Bay Program. The treatment capacity will increase from 0.40 MGD to 0.80 MGD. The upgrade/renovation consists of a new headworks facility featuring one (1) 3 mm coarse screen, two (2) 2 mm fine screens, screening wash compactor, 2.5 MGD grit removal system, all housed in a 1,120SF metal building; 800,000 GPD Membrane Bioreactor (MBR) treatment system consisting of converting the existing aeration basins to bioreactor treatment basins, construction of new membrane treatment tanks and MBR equipment housed in a 5,100SF pre-engineered metal building; new aerobic digester; new UV disinfection unit; non-potable water system; chemical feed equipment; renovate existing plant lift station; relocate existing rotary fan press; new sludge conveying equipment; improvements to the existing Control Building and demolition of existing aerobic digester, break room building, sludge drying beds, existing secondary clarifiers, existing sludge pump building and chlorine contact tank.



WASTEWATER ENGINEERING



Sanitary Board of Bluefield Wastewater Treatment Upgrades

Post Office Box 998
Bluefield, West Virginia



The team of Chapman Technical Group and Willis Engineering was hired in April of 2009 by the Sanitary Board of Bluefield to provide funding application preparation, design, bidding, construction administration, and construction observation services for the Westside Wastewater Treatment Plant Equipment Upgrade project. The Sanitary Board was seeking funding from the WV DEP's Clean Water SRF, Green Reserve program which was funded by the American Recovery and Reinvestment Act (ARRA) of 2009. The Chapman Technical Group / Willis Engineering project team was able to meet the application deadline by preparing and submitting the PER and IJDC funding application in May of 2009. The project involved replacement of existing EPDM membrane fine bubble diffusers, replacement of existing and outdated sludge presses, installation of post-lime feed with mixing screw conveyor, replacement of new aeration blowers, and installation of a dissolved oxygen control system. Each component of the project was evaluated and designed to improve energy efficiency of the facility which will ultimately result in higher quality effluent as well as significant savings on long term operation and maintenance costs.





**City of Beckley Sanitary Board
Wastewater Treatment Plant**
301 South Heber Street
Beckley, West Virginia

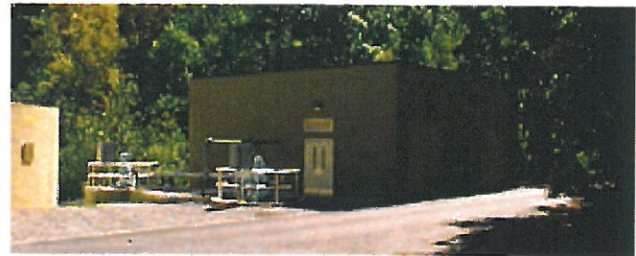


The Wastewater System Improvements Project consisted of 1) Wastewater Treatment Plant Expansion and Improvements, 2) Whitestick Pump Station Improvements, and 3) Pinecrest Interceptor Replacement. The total project cost was approximately \$11,400,000. Chapman Technical Group provided all design and construction phase services for all three projects. The WWTP Expansion and Improvements, along with the Whitestick Pump Station Improvements, were completed in July 1999. The Pinecrest Interceptor Replacement was completed in October 1996.

WASTEWATER ENGINEERING



City of Beckley Sanitary Board
Piney Creek Wastewater Treatment Plant
301 South Heber Street
Beckley, West Virginia



The Wastewater Treatment Plant Project consisted of the construction of a new 4.5 MGD WWTP and improvements to the existing 3.5 MGD Piney Creek WWTP. The new WWTP operates in conjunction with the existing WWTP and began operation in July 1999. The design average daily and peak daily flows for the combined treatment plants are now 8.0 MGD and 18.0 MGD, respectively. The new 4.5 MGD WWTP includes: two sequencing batch reactor (SBR) treatment tanks; equalization basin; SBR control/blower building; influent distribution box; rate-of-flow control valve; 18.0 MGD ultraviolet (UV) disinfection system; emergency generator; and site work. Improvements to the existing treatment plant included a new headworks building housing a mechanically-cleaned bar screen, grit removal system, septage receiving unit, and vector truck dumping station; headworks lift station; plant lift station; belt filter press building with two (2) 1.5 meter combination belt presses and sludge handling pumps, and two sludge holding tanks. Also included was the replacement of the existing mechanical surface system with fine bubble diffused aeration and a 300 HP single-stage centrifugal blower, sludge transfer and digester pumps, combined effluent outfall, and SCADA system. The Beckley Sanitary Board solicited bids and pre-purchased the SBR equipment, combination belt filter presses, and the UV disinfection system equipment in advance of the general construction contracts. We prepared all procurement documents and performed the evaluation of all proposals received.

WASTEWATER ENGINEERING



Silling Associates
Huttonsville Wastewater Treatment Plant
405 Capitol Street
Charleston, West Virginia

Design and periodic construction observation services for a new 200,000 GPD wastewater treatment facility and a new main interceptor sewer to serve the Huttonsville Correctional Center including stormwater separation and infiltration/inflow reduction. Project included the renovation of portions of the existing primary treatment plant and incorporating these units in the new plant design to provide a cost savings to the owner. Responsibilities also included the interfacing and coordination with all regulatory agencies having jurisdiction.

WASTEWATER ENGINEERING



Boone County Public Service District Wastewater Treatment Plant

Post Office Box 287
Danville, West Virginia

Chapman Technical Group provided design and construction observation services for the Wastewater System Improvements project that was completed in June 2009. The project consisted of the construction of a new wastewater treatment plant and collection system renovations to transport wastewater to the plant. The new WWTP replaces an existing package plant and 14 septic tanks. The new 200,000 GPD wastewater treatment plant consists of pre-screening system; Control Building; a 200,000 GPD Sequencing Batch Reactor (SBR) system, 48,000 gallon aerobic digester and effluent tank; UV disinfection system; plant lift station; site work; plant piping, electrical; SCADA system; emergency generator; and perimeter fencing.



WASTEWATER ENGINEERING



**Culloden Public Service District
Wastewater System Improvements**
Post Office Box 405
Culloden, West Virginia

Chapman Technical Group provided design and construction observation services for the Wastewater System Improvements project that was completed in 2007. The project consisted of the removal and replacement of approximately 3,600 feet of existing 8" VCP with 10", 12" 15" and 18" PVC/DIP gravity sewer pipe; installation of approximately 4,670 feet of new 6", 8", 12" and 15" PVC/DIP gravity sewer; 755 feet of 3" PVC force main; 30 new pre-cast concrete manholes; removal and replacement of 17 existing manholes; one (1) new 55 GPM duplex submersible grinder lift station; and the replacement of one (1) existing 180 GPM lift station with a new 180 GPM top-mounted lift station.



Town of Monongah
Wastewater System Improvements
Post Office Box 9119
Monongah, West Virginia

Construction was completed in June 2000 for the Town of Monongah's wastewater system improvements project. Chapman Technical Group was hired by the Town in 1995, and provided all planning, design, and construction phase engineering services for the project. The Town's system was originally constructed in the 1960's and consisted of a primary treatment facility, three lift stations, and approximately eight miles of sewer collection lines. The majority of the collection system was a combined system, and numerous bypasses and overflows occurred on a regular basis. The treatment facility was unable to meet secondary discharge limits, and the lift stations were in need of major repairs. Upon completion of the project, Monongah's sanitary sewer is being transported to the City of Fairmont for treatment and disposal via a new lift station and over two miles of forcemain, which parallels an area rails-to-trails park. Since the City of Fairmont is master metering all flow received



from Monongah, it was of paramount importance that Monongah's collection system undergo rehabilitation in order to remove stormwater from their collection system. After extensive field investigations, including smoke and dye testing, the most critical problem areas were identified for rehabilitation and corrected. The nearly \$2.5 million project also included the replacement of the two remaining lift stations, including auxiliary power sources at the two major stations, as well as the renovation of Fairmont's existing lift station, which directly accepts the flow from Monongah.

WASTEWATER ENGINEERING



New 0.370 MGD WWTP



Lift Station Improvements



I/I Rehabilitation



Storm Water Separation on US Route 250

City of Belington
Wastewater System Improvements
Post Office Box 926
Belington, West Virginia

Chapman Technical Group provided design and construction observation services for the above project which was completed in 2013. The project consisted of I/I reduction with the rehabilitation of approximately 3.5 miles of the existing wastewater collection system; stormwater separation from sanitary sewers; upgrading capacity of existing lift stations; and the construction of a new 370,000 GPD WWTP (70% increase in capacity). This work was performed in order to reduce/eliminate CSO discharges for compliance with the Town's Long Term Control Plan requirements.

WASTEWATER ENGINEERING

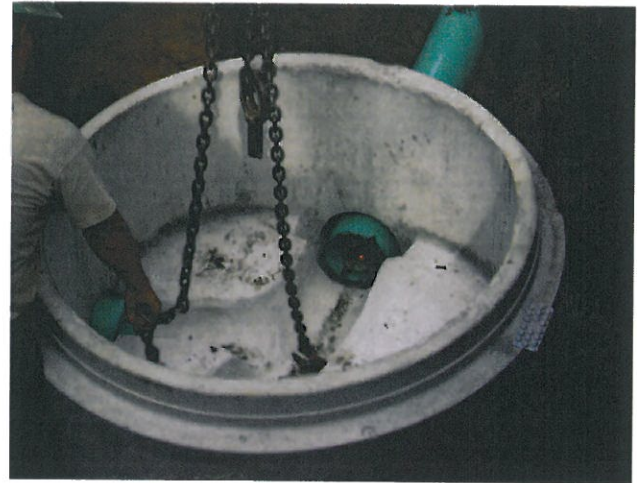


Town of Pocahontas
Wastewater System Improvements
100 Main Street
Pocahontas, West Virginia

Chapman Technical Group provided design and construction observation services for a sewer collection system rehabilitation project completed in 2013. The project consisted of I/I reduction with the rehabilitation of approximately 1.2 miles of the existing wastewater collection system. Our relationship with the Town of Pocahontas Sanitary Board began in 1987, and as spanned over four (4) decades.



WASTEWATER ENGINEERING



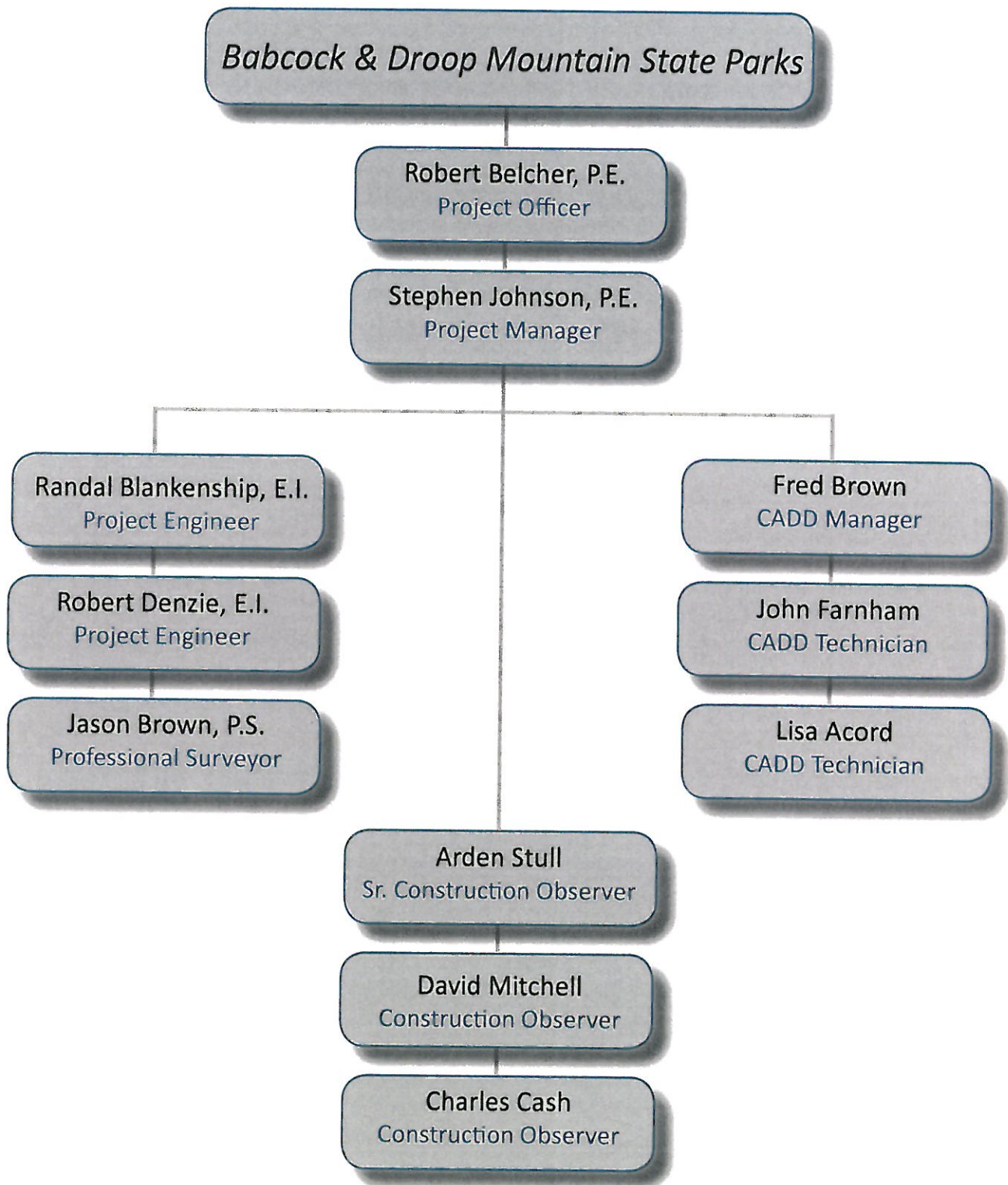
Boone County Public Service District Wastewater Collection System

Post Office Box 287
Danville, West Virginia

Chapman Technical Group provided design and construction observation services for the Wastewater System Improvements project that was completed in June 2009. The project consisted of the construction of a new wastewater treatment plant and collection system renovations to transport wastewater to the plant. The collection system consists of the construction of 437 L.F. of 12", 221 L.F. of 10", 1,328 L.F. of 8" and 55 L.F. of 6" DIP gravity sewer pipe; 2,757 L.F. of 10", 6,831 L.F. of 8" and 5,553 L.F. of 6" PVC gravity sewer pipe; removal and replacement of approximately 270 L.F. of 10" and 1,196 L.F. of 8" PVC; 238 L.F. of 4" DIP ball and

socket force main; 2,825 L.F. of 4" and 2,501 L.F. of 3" PVC SDR 21 force main; 124 L.F. of 3" PVC YELOMINE™ force main; 45 L.F. of 1" PE SDR 11 force main 40 L.F. of 24", 110 L.F. of 20", 80 L.F. of 16", 140 L.F. of 12" and 275 L.F. of 8" steel casing pipe, bore and jack; 20 L.F. of 16" steel casing, open-cut; removal and replacement of 12 existing manholes; 81 new manholes; abandonment of existing sanitary sewer lines, manholes, septic tanks and one package plant; several service connections and reconnections; six (6) lift stations; and miscellaneous surface restoration.

PROJECT TEAM



Robert G. Belcher, P.E.

Vice President
Project Officer



Years of Experience: 33

Years with Chapman: 29

Education

B.S., Civil Engineering, 1983,
West Virginia University
Institute of Technology

Registration

Civil Engineer: WV, OH

Affiliations

WV Water Environment Association
Contractor's Association of WV
WV American Water Works Association
WV Society of Professional Engineers
WV American Council of
Engineering Companies
WVUIT Civil Engineering Advisory Board
WV Qualifications Based Selection Council

Awards

George Warren Fuller Award, 2001

Qualifications

Water Systems

Design and project management for numerous water systems for both public and private water companies. Projects include new water treatment plants as large as 10 MGD, improvements to existing plants, water mains and distribution systems. Water storage projects include glass-lined steel tanks, welded high-strength steel tanks, and elevated pedestal tanks.

Wastewater Systems

Design and project management for numerous wastewater systems throughout West Virginia. Projects include new, secondary and tertiary wastewater treatment plants as large as 4.5 MGD, improvements to existing plants, small-flow treatment plants, new and rehabilitation of wastewater collection systems, and facility plan updates.

Miscellaneous

Design and project management for large highway and bridge projects, airport improvements projects, large stormwater management projects including assistance with MS4 compliance, as well as potable water and wastewater system design for site development projects throughout West Virginia.

Stephen M. Johnson, P.E.

Civil/Environmental Group Manager



Years of Experience: 11
Years with Chapman: 9

Education

B.S., Civil Engineering, 2004,
West Virginia University
Institute of Technology

Registration

Civil Engineer: WV, NC, VA

Affiliations

Water Environment Association
WV American Water Works Association
WV & VA Rural Water Association
Water for People

Miscellaneous

National Electric Code Certified, 2011
SDI Certified SCUBA Diver

Projects Include

Bluefield Sanitary Board
Wastewater System Improvements
(Bluefield, WV/VA)

St. Albans Water/Wastewater/Stormwater
Improvements (St. Albans, WV)

Elkins Road PSD Water System Improvements
(Elkins, WV)

Middle Creek Decentralized Wastewater
System Improvements
(Tazewell County, VA)

Qualifications

Water Systems

Overall experience includes planning, design, bidding, and construction administration/management of various public and private water system projects throughout West Virginia, Virginia, and North Carolina. Specific project experience includes distribution systems, river crossings, horizontal directional drills, wells, raw water intakes, transmission lines, booster stations, treatment plants, ground and elevated water storage tank design, painting, and rehab, SCADA systems, computer modeling, treatment process evaluation, and problem troubleshooting in existing systems.

Wastewater Systems

Overall experience includes comprehensive system master plans, design, bidding, construction administration and management of various public and private wastewater system projects throughout West Virginia, Virginia, and North Carolina. Specific project experience includes gravity and low-pressure collection systems, pump stations and force main transmission systems, treatment plant process evaluation and design, trenchless pipeline rehabilitation, bypass pump system design, odor and corrosion control, effluent infiltration ponds, decentralized and alternative on-site disposal systems, and SCADA systems.

Storm Water Systems

Overall experience includes water management planning and facility design in West Virginia and Virginia. Specific project examples include MS4 compliance plans, NPDES construction storm water permitting, SWPPP preparation, design of bio-retention areas, infiltration basins, ponds, and underground storage/detention facilities.

Randal D. Blankenship, E.I.

Civil Engineer



Years of Experience: 3
Years with Chapman: 3

Education

B.S., Civil Engineering, 2012,
West Virginia University Institute
of Technology

Registration

Engineer Intern: WV

Affiliations

WV American Water Works Association
American Society of Civil Engineers
WV Rural Water Association
Water and Environment Association

Projects Include

Bluefield Sanitary Board, VA/WV:
Wastewater System Improvements

City of St. Albans, WV:
Water/Wastewater System Improvements

City of Winfield, WV:
Wastewater System Improvements

Camelot Court Townhomes, VA:
Stormwater System Improvements

Leatherwood Subdivision, VA:
Stormwater System Improvements

Qualifications

Water Systems

Overall experience includes planning, and design of various public water system projects throughout West Virginia. Specific project experience includes distribution systems, transmission lines, treatment plants, and problem troubleshooting existing systems.

Wastewater Systems

Overall experience includes design of various public wastewater system projects throughout West Virginia. Specific project experience includes gravity pump stations and force main transmission systems, treatment Plant process evaluation and design.

Stormwater Systems

Overall experience includes comprehensive system master plans, and design of various public and private stormwater system projects throughout West Virginia. Specific project experience includes drainage basin hydraulic analysis, stormwater collection, detention and BMP system design, construction stormwater management plan preparation, and MS4 permit guidance.

Robert C. Denzie, E.I.

Civil Engineer



Years of Experience: 1
Years with Chapman: 1

Education

B.S., Civil Engineering, 2014,
Marshall University

Registration

Engineer Intern: WV

Affiliations

Member, American Water Works Association
Member, Water Environment Federation

Qualifications

Water Systems

Overall experience includes planning, and design of various public water system projects throughout West Virginia. Specific project experience includes distribution systems, transmission lines, treatment plants, and problem troubleshooting existing systems.

Wastewater Systems

Overall experience includes design of various public wastewater system projects throughout West Virginia. Specific project experience includes gravity and force main transmission systems, as well as lift stations.

Stormwater Systems

Overall experience includes planning and design of various public and private stormwater system projects throughout West Virginia. Specific project experience includes, construction stormwater management plan preparation, and MS4 permit guidance.

Jason E. Brown, P.S.

Professional Surveyor



Years of Experience: 20
Years with Chapman: 5

Education

A.S., Land Surveying, 2002,
Glenville State College, WV

Registration

Professional Surveyor: WV, KY, VA

Affiliations

WV Society of Professional Surveyors

Qualifications

Highways

Established control, site surveying, topographic surveying, courthouse research, drawing production, Right-of-Way Questionnaires, bore hole stake out, and all surveying associated with the initial and final design of WV highways.

Site Development

Experienced in all types of surveying associated with site development, to include control, topographic boundaries, research, and drawing production. Projects include military complexes, public housing, commercial development, industrial and institutional complexes, churches, resorts and public facilities throughout the state.

Parks and Recreation

Associated surveying for projects including swimming pools, bathhouses, cabins and support facilities for the West Virginia Division of Natural Resources and similar facilities for county and municipal park systems.

Water/Wastewater/Stormwater Systems

Associated surveying for the design of water systems, sanitary sewer systems, and stormwater systems, including treatment facilities for both private and public systems throughout the state. Also, field experience in the inventory and collection of attribute data using GPS equipment for uploading to GIS databases.

Airports

Associated surveying for the design of runways, airport facilities, lighting, and asphalt design for holding pads for small and large airport facilities throughout the state.

Boundary Surveys

Experienced in full boundary surveys and ALTA surveys for military complexes, private residences, prison facilities, commercial sites, and all boundaries associated with various engineering projects throughout the state.

Arden L. Stull

Senior Construction Representative



Years of Experience: 40
Years with Chapman: 14

Education

B.S., Psychology, 1973,
Morris Harvey College
B.S., Environmental Science/Technology,
1998, West Virginia University

Qualifications

Construction Observation

Responsible for supervision of construction observers, field engineering, coordination of sub-contractors, assist project engineer, attend client/owner meetings, and administration of several contracts simultaneously. Also construction record keeping, documentation of as-built quantities, line testing, observation of concrete testing, soil density testing, compiling "punch lists," final inspections, review shop drawings, review and approve periodic estimates, and resolve customer complaints. Experience consists of water, wastewater, and airport improvement projects.

Projects Include

City of Lewisburg, WV:
Water System Improvements

Beckley Sanitary Board, WV:
Wastewater System Improvements

City of St. Albans, WV:
Water System Improvements

City of Fairmont, WV:
New Water Treatment Plant

Buckhannon-Upshur County Airport, WV:
Runway Extension

Mingo County Airport, WV:
New Appalachian Regional Airport

David R. Mitchell

Construction Representative



Years of Experience: 17
Years with Chapman: 17

Education

A.S., Applied Science, 1998
Lee College
LA Wilson Technological Center, 1982

Projects Include

Mercer County Airport, WV:
Runway Safety Area and Piling Wall

Raleigh County Airport, WV:
Runway Paving

Eastern WV Regional Airport, WV:
Taxiway Paving

Bluefield Sanitary Board, VA/WV:
Westside Sewer Plant Upgrade and
ADDA Wastewater Plant Upgrade

Elkins-Randolph County Airport, WV:
Runway Re-Paving, Lighting, PAPI System

City of St. Albans, WV:
Water System Improvements

Qualifications

Construction Observation

Responsibilities include all aspects of field construction and observation from commencement of construction through project start-up. Maintains field diaries and construction log books; monitors shop drawing approvals and fabrication schedules; observes field testing of completed work; verifies contractor's periodic payment requests; verifies completed site work for as-built drawings; attends construction progress meetings; and updates clients on project progress.

Water and Wastewater

Construction observation for water/sewer line and wastewater treatment plant upgrades.

Airport

Construction observation for runway, taxiway light installation, paving taxiway and runway, runway safety area, AWOS installation, piling wall, and PAPI installation.

Surveying

Assists with various types of field surveying for all types of projects.

Charles David Cash, Jr.

Construction Representative



Years of Experience: 25
Years with Chapman: 23

Education

WV DOH Portland Cement
Concrete Course, 1998
WVDOH Hot-Mix Asphalt Course, 1998

Registration

WV Bureau of Public Health,
Authorized Sample Collector for
New Water Mains, 1997

Qualifications

Construction Observation

Responsibilities include all aspects of field construction and observation from commencement of construction through project start-up. Maintains field diaries and construction log books; monitors shop drawing approvals and fabrication schedules; observes field testing of completed work; verifies contractor's periodic payment requests; verifies completed site work for as-built drawings; attends construction progress meetings; and updates clients on project progress.

Field Experience

Most recently served as Construction Representative for the new Boone County Public Service District Wastewater Treatment Plant construction, the new City of Belington Water Treatment Plant construction, as well as renovations and upgrades to the Corporation of Shepherdstown Wastewater Treatment Plant for Chesapeake Bay compliance.

John R. Farnham

CADD Technician



Years of Experience: 41
Years with Chapman: 19

Education

Ben Franklin Career Center

Qualifications

Architectural and Structural

Responsible for CADD drafting on recreational and commercial floor plans, building cross sections and details, structural framing plans, foundation plans and details, and building renovations.

Water and Wastewater

Responsible for CADD drafting on treatment plants, improvements on existing and new facilities, stormwater plans and profiles, booster stations, meter vaults, water system updates for both public and private sectors, PRV plans and details.

Project Include

Corporation of Shepherdstown:
Wastewater System Improvements

City of Elkins:
Water System Improvements

City of Lewisburg:
Water System Improvements

Corporation of Shepherdstown:
Water Treatment Improvements

Lisa D. Acord

CADD Technician



Years of Experience: 18
Years with Chapman: 17

Education

BS, Industrial Technology, 1997,
West Virginia Institute of Technology
BS, Drafting/Design Engineering Technol-
ogy, 1995, West Virginia Institute of Tech-
nology

Qualifications

Bridge and Highway

Responsible for CADD drafting of design and preparation of construction plans and details for roadway and bridge work. Involvement includes final design drawings for bridges, signing, pavement marking plans, maintenance of traffic plans, lighting plans, right-of-way plans, geotechnical boring logs and cross-sections.

Water and Wastewater

Responsible for drafting profiles, site layout and proposed grading, booster stations, PRV's, master meter vaults, septic systems, plant valve pit, chemical feed vault, raw water intake and details, and various miscellaneous water treatment plant details.

Site Design

Drafting for site layout and proposed grading, including site access and parking areas. Also, assisted in construction documents for lake dredging projects, including dredging scheme, disposal site design, and a sediment control plan for both the dredging operations and the disposal site. Performed several pre-subsidence surveys in conjunction with a deep mines operation.

ABILITY TO MEET BUDGETS & DEADLINES



Representative Project Budgets

1.	City of St. Albans Water Distribution System Improvements	
	* Estimated Cost	\$6,000,000.00
	* Actual Bid	\$4,853,711.00
	* 19.10% Under Engineer's Estimate	
2.	City of Beckley Sanitary Board - Pinecrest Sewer Line Replacement	
	* Estimated Cost	\$935,000.00
	* Actual Bid	\$895,000.00
	* 4.28% Under Engineer's Estimate	
3.	City of Lewisburg Water Storage Tank	
	* Estimated Cost	\$467,500.00
	* Actual Bid	\$379,000.00
	* 18.93% Under Engineer's Estimate	
4.	Corporation of Shepherdstown Water Storage Tanks	
	* Estimated Cost	\$3,700,000.00
	* Actual Bid	\$3,506,848.00
	* 5.22% Under Engineer's Estimate	
5.	Huttonsville Correctional Center 150,000 GPD Wastewater Treatment Plant	
	* Estimated Cost	\$1,290,000.00
	* Actual Bid	\$1,249,360.00
	* 3.15% Under Engineer's Estimate	

Representative Project Budgets

		Project Cost	Scheduled Completion	Actual Completion
1.	Corporation of Shepherdstown Lowes Bypass (Green Reserve)	\$376,000	60 days	45 days
2.	St. Albans 1.5 MG Steel Water Tank	\$335,000	90 days	30 days
3.	Culloden PSD Water Storage Tank	\$250,000	90 days	30 days
4.	Elkins Road PSD Water System Improvements	\$3,500,000	120 days	120 days
5.	Greater St. Albans PSD Sewer System	\$3,838,000	270 days	180 days
6.	Town of Davis Stormwater System Improvements (Green Reserve)	\$271,000	60 days	30 days
7.	Clay - Roane PSD Water System	\$274,000	120 days	45 days

REFERENCES



1. Honorable Dick Callaway
Mayor

City of St. Albans
1488 MacCorkle Avenue
St. Albans, WV 25177
(304) 727-2971
2. Honorable Joe Drenning
Mayor

Town of Davis
Post Office Box 207
Davis, WV 26260
(304) 259-5302
3. Ms. Bonnie Osburn
Office Manager

Culloden Public Service District
100 Spanish Oak Drive
Culloden, WV 25510
(304) 743-6349
4. Honorable John Manchester
Mayor

City of Lewisburg
942 Washington Street West
Lewisburg, WV 24901
(304) 645-3776
5. Mr. Shannon Bailey
Executive Director

Sanitary Board of Bluefield
100 Rogers Street
Bluefield, WV 24701
(304) 325-3681

TECHNOLOGY RESOURCES



To better serve the growing needs of the contemporary client, Chapman Technical Group has the following hardware and software selections available to its staff...

▪ Backbone

St. Albans Local Area Network (LAN): 96 Node Category 5E Twisted Pair Ethernet, 4 Hewlett Packard Gigabit Ethernet Managed Hubs, 10G Fiber Trunk Connecting the Server Room to Network Closet

Buckhannon Local Area Network (LAN): 40 Node Category 5 Pair Ethernet, 2 Hewlett Packard Gigabit Ethernet Hub

Martinsburg Local Area Network (LAN): 12 Node Category 5 Twisted Pair Ethernet, 1 Hewlett Packard Gigabit Ethernet Hubs,

Corporate Wide Area Network (WAN): 25 Mbs Metro E Fiber WAN, T1/Frame Relay Digital Communications Link, 2-7.1 Megabit ADSL Lines (back up), 2 Cisco 1841 Routers, 2 Sonicwall firewalls, Voice over IP Telecommunications between offices

▪ File Servers

HP x 1800 File Server (St. Albans), Sun Fire V-240 - UNIX based file server (St. Albans), HP x 1400 File Server (Buckhannon)

▪ Peripherals

2 Oce' TDS 400 Digital Wide Format Printers, 2 Hewlett Packard Designjet Plotters, 5 Hewlett Packard Laserjet Printers, Contex HD 3650 Color Scanner

▪ Workstations & Computers

17 Xeon Systems with minimum 32 GB ram and dual 24" monitors, 17 Core 2 Systems with a minimum 8 GB ram and 17" monitors, 6 Notebook Computers

▪ Accounting

Deltak Vision v7.2, CCH Electronic Tax Library, Microsoft Access 2013

▪ Operating Systems

Sun Solaris v 10, Microsoft Windows 8.1 Professional, Microsoft Windows 7 Professional, Microsoft Windows Server 2008 R2

▪ Marketing

Adobe In Design CS6, Adobe Photoshop CS6, Adobe Illustrator CS6, Adobe Acrobat Professional X, Microsoft PowerPoint 2013

▪ Spreadsheet/Word Processing

Microsoft Office 2013

▪ Transportation Engineering

PCAPAV - Concrete Thickness Design, Comp Air - Life-Cycle Cost Comparison for Airports, Airport - Thickness Design of Asphalt Pavements, FAA Airport Design - Geometric Design of Airports, FAA Pavement Design - Thickness Design of Rigid and Flexible Pavements for Airports, Airport - Concrete Thickness Design, Autodesk Civil 3D 2015

▪ CAD Production

AutoCAD 2015, Bentley MicroStation v 8i



▪ Environmental Engineering

Bentley WaterCAD v8i 8.11 with AutoCAD, Bentley StormCAD v8i 8.11, Bentley Flowmaster PE v 8.11, Bentley Culvert Master v 3.03, Bentley NWS - Dam Breach Wave Analysis, KYPIPE3 - 4,000 Pipe Version, Sigma Flow Analysis and Data Collection Equipment, Uni-flange - Pipe Thrust Restraint Design Program, CIPP Designer 2.0

▪ Structural Engineering

Bentley Ram Elements, RISA - 3D v8.0, Enecalc Structural Engineering Library v 6, Merlin Dash - Straight Girder Bridge Design v 3.0, GL Sizer - AITC Glulam Member Design, American Institute of Architects Masterspec Specifications System

▪ Site, Civil Engineering, & Landscape Architecture

Autodesk Infrastructure Design Suite 2015, Autodesk Raster Design 2015, Trimble Sketchup Pro 2014

▪ Architectural

AutoCAD Revit Architecture 2015, AutoDesk Building Design Suite 2015, AutoDesk Navisworks 2015, American Institute of Architects Masterspec Specifications System, Herman Miller - CAD Symbol Libraries, Steelcase CAD Furniture Symbol Library, Anderson Window - CAD Symbol Library, Butler Manufacturing - CAD Details

▪ Geospatial

1 Magellan Mobile Mapper CX Sub Meter, ESRI Arc GIS 10.2.2, Autodesk Map 3D 2015, Autodesk Raster Design 2015

▪ Surveying

Field Equipment: 1 Topcon Hiper GA Dual Frequency (base and rover) RTK package, 1 Topcon PS 3 Robotic Total Station, 1 Leica Sprinter 100M Digital Level, 1 Topcon AT-G3 Auto Level

Date Collection & Surveying Applications: 1 Carlson Surveyor + Carlson Surv CE Software Version 2.52, 1 Carlson Explorer II with Carlson Surv CE Software Version 2.05, Carlson Survey 2015, Autodesk Civil 3D 2015, Topcon Tools V.8 (GPS post processing)