



West Virginia Purchasing Division

2019 Washington Street, East
Charleston, WV 25305
Telephone: 304-558-2306
General Fax: 304-558-6026
Bid Fax: 304-558-3970

The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at wvOASIS.gov. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at WVPurchasing.gov with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header 1

[List View](#)**General Information** | [Contact](#) | [Default Values](#) | [Discount](#) | [Document Information](#) | [Clarification Request](#)

Procurement Folder: 884060

Procurement Type: Central Purchase Order

Vendor ID: 000000208495

Legal Name: ZDS LIMITED LIABILITY COMPANY

Alias/DBA:

Total Bid: \$0.00

Response Date: 06/22/2021

Response Time: 10:18

Responded By User ID: Zachwieja

First Name: Lauren

Last Name: Headley

Email: lauren.headley@zdsdesi

Phone: 304-755-0075

SO Doc Code: CEOI

SO Dept: 0506

SO Doc ID: BHS2100000004

Published Date: 6/2/21

Close Date: 6/23/21

Close Time: 13:30

Status: Closed

Solicitation Description: BARBOURSVILLE SCHOOL
WASTEWATER TREATMENT

Total of Header Attachments: 1

Total of All Attachments: 1



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

**State of West Virginia
 Solicitation Response**

Proc Folder: 884060
Solicitation Description: BARBOURSVILLE SCHOOL WASTEWATER TREATMENT PLANT
Proc Type: Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2021-06-23 13:30	SR 0506 ESR06222100000008334	1

VENDOR
 000000208495
 ZDS LIMITED LIABILITY COMPANY

Solicitation Number: CEOI 0506 BHS2100000004
Total Bid: 0
Response Date: 2021-06-22
Response Time: 10:18:39
Comments:

FOR INFORMATION CONTACT THE BUYER
 Crystal G Husted
 (304) 558-2402
 crystal.g.husted@wv.gov

Vendor Signature X **FEIN#** **DATE**

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

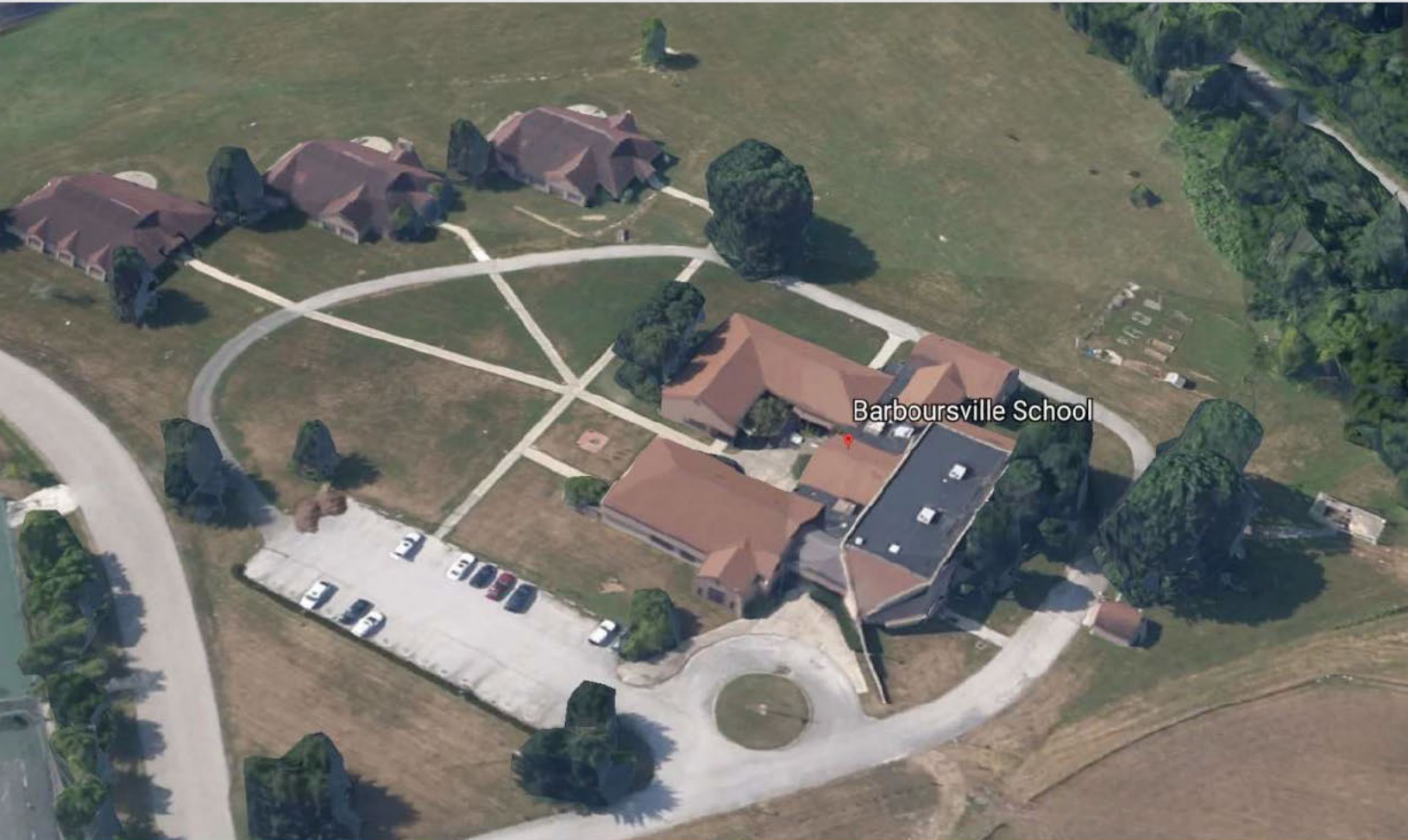
Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Barboursville School Wastewater Treatment Plant Replacement				0.00

Comm Code	Manufacturer	Specification	Model #
72121505			

Commodity Line Comments: Contract Amount TBD is selected to design project.

Extended Description:

The mission or purpose of the project for which bids are being solicited is to provide engineering services for the design involving a wastewater treatment plant at The Barboursville School located at:
 1535 Martha Rd.
 Barboursville, WV 25504
 There will be no federal funds used on this project.



Expression of Interest to Provide Professional Engineering Design Services

Barbourville School Wastewater Treatment Plant



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SECTION I.

**Executive Summary Letter
Project Goals & Objectives**

June 21, 2021



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

Please accept our Expression of Interest to provide Professional Engineering Design Services for the **Barboursville School Wastewater Treatment Plant**.

ZDS Design/Consulting Services was founded in 1994 and is in Scott Depot, WV. The project will be assigned to **ZDS'** principal-in-charge of planning/design who will follow the project from inception through design and has full authority to execute a binding contract on behalf of **ZDS**:

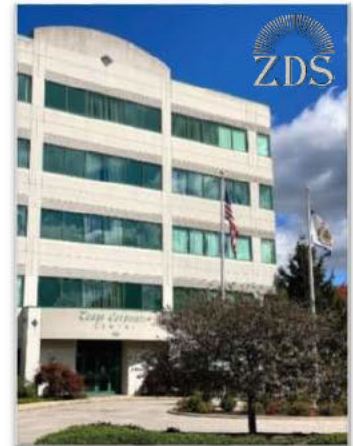
Todd A. Zachwieja, PE, CEM, LEED AP – Principal, CEO

ZDS Design/Consulting Services

135 Corporate Center Drive, Suite 532, Scott Depot, WV 25560

Office: 304-755-0075; Mobile: 304-545-4550

Todd.Zachwieja@ZDSDesign.com; www.ZDSDesign.com



For this project **ZDS** will team with **Chapman Technical Group**, a local company established in 1984 that has grown into a diverse firm offering civil engineering, architecture, interior design, landscape architecture and surveying. They have achieved an outstanding reputation for providing high-quality design projects, while meeting client schedules and budgets and have received numerous awards for their work. **Chapman Technical Group** offers a broad range of professional services, including water and wastewater system improvements which you will see in their extensive project experience sheets included in this package.

If hazardous materials are suspected, or discovered, we work with an excellent and reputable environmental consultant on an “as-needed” basis in assessment and resolution of the issue.

The **ZDS** Team will provide comprehensive engineering support for the proposed renovations. Our firms have had many successful projects including various facilities with the WVDHHR, State of West Virginia, WVArNG, WVU, Ohio University, Marshall University, cities and towns throughout the state and many others. Each member of our team brings unique strengths to the Project and realizing the similarity of mission and the desire to serve West Virginia clients, we will be honored to work with you.

Our team has designed and coordinated upgrades for many projects of all types and sizes. We have successfully phased construction activities and know we can successfully coordinate the phasing of the proposed work. We will communicate closely with the client's personnel, so their needs are addressed.

Project Goals & Objectives

- Meet with Owner and tour existing treatment facility and the area of the proposed extension of service to the Village of Barboursville Sanitary Board system.
- Discuss with the Owner the plans for the facility to establish an ultimate design flow rate for the proposed connection to the Village of Barboursville Sanitary Board system.
- Evaluate the existing treatment facility and make a recommendation for its demolition and ultimate disposal. Coordinate the same with the WV DEP.
- Meet with the WV DEP and Village of Barboursville on design and operating requirements for the proposed extension of service.
- Obtain mapping of the site. If necessary, we will field survey the area to provide appropriate topographic mapping needed for the design.
- Complete the design for the extension of service, including any necessary pump stations, as well as demolition/removal of existing plant.
- Prepare plans, specifications, and bidding documents.
- Present plan set to the Owner, WV DEP and other agencies, as required, for review and approval.
- Design shall include the shutdown, decommissioning, removal, and disposal of the existing wastewater treatment plant according to regulations of the WV DEP. The design will be such that the existing treatment plant will remain in service during construction of the connection to the Village of Barboursville system to avoid disruptions to the school's normal activities.

Permits, fees, and licenses as required.

- Engineer will work with the WV DEP for the required modification of the existing NPDES Permit to allow connection to the Village of Barboursville Sanitary Board and demolish the existing treatment plant upon completion of construction.
- Work with the Owner for all remaining permits, such as:
 - a) WV DOH (if construction within their right-of way)
 - b) WV DEP – Stormwater Permit
 - c) US ACOE – Stream Crossing(s) (if required)
 - d) WV DEP or WV BPH for Permit to Construct

Bidding Process:

- Preparation of bid documents and assist with the bidding procedures as required.

- Attend Pre-Bid Conference and provide any needed additional information for addenda as required.

Construction:

- A preconstruction meeting is held with the selected contractor to go over all aspects of the construction. This meeting can include the Owner, Engineer, Funding agency representatives, existing utility representatives and others as needed.
- Assist Owner with coordinating and obtaining power to the site(s).
- Prepare responses to contractors' questions (RFI process).
- Review and process Contractor submittals/shop drawings, pay requests, etc.
- Our team strongly encourages allowing the Engineer to provide full-time construction observation services throughout the construction period to provide a better assurance that the Contractor is complying with all the requirements of the project, including being the liaison between the Owner and Contractor to assist with resolving any on-site problems during construction.
- Construction time is usually established by the Owner and Engineer and can vary based on the complexity of the project, time of year, etc.
- Provide the Owner with operations and maintenance manuals for all equipment necessary for the project.
- When the project is functional, issue a Notice of Substantial Completion at appropriate time which establishes the beginning and end of the one-year construction warranty period.

Post Construction:

- Final walk through is made of the newly constructed project and a punch list of incomplete work is established and provided to the Contractor for resolution prior to making final payment.
- Construction is under warranty for one year, or longer if requested by the Owner, to be included in the Bidding documents.
- Construction red-line drawings updated during construction are turned into Record Drawings (As-Builts) and presented to the Owner. This information will be provided in hard (paper) copy, electronic (pdf) copy, or by GIS.

Our Team has an excellent track record of completing projects on time and in budget. We are ready and willing to start immediately on your project and are confident that our specialties will provide you with the best expertise to provide the most economical solutions for your project. We look forward to discussing our qualifications. If there are any questions, please do not hesitate to call.

Sincerely,



Todd A. Zachwieja, P.E., CEM, LEED AP
Principal, Chief Executive Officer



SECTION II.

Firm Overviews

FIRM OVERVIEW

Founded in 1994, celebrating **26+** years!

ZDS Design/Consulting Services is a three-generation family owned MEP/Commissioning Engineering Firm located near Charleston, West Virginia. ZDS provides comprehensive professional services for Master Planning/Feasibility Studies, HVAC, Plumbing, Electrical, Indoor Environmental Quality, Energy Engineering, Forensic Engineering and Commissioning. ZDS has extensive proven high performance building design experience for commercial, governmental, educational facilities, and healthcare experience in 24 states across the country, the State of West Virginia, local government and Federal agencies. Specializing in renovation projects with **proven results of from 30% to over 50% reduction in energy/operating costs** earning Energy Star Certification and EPAct qualified on government renovation projects!

- ◆ Mechanical
- ◆ Electrical
- ◆ Plumbing
- ◆ Forensic
- ◆ Energy
- ◆ Commissioning
- ◆ Indoor Environmental Quality (IAQ/IEQ)
- ◆ High Performance Sustainable Buildings

The ZDS team is made up of **seasoned professionals** who have dedicated their careers to engineering design excellence and quality. A strong foundation in Performance Contracting is incorporated into design and commissioning with an appreciation for the maintenance staff to be able to operate the systems over the life of the facility. We pride ourselves in having the most up to date state of the art technology to provide our clients the very best possible services. We offer **comprehensive** practical solutions to our clients with proven World Class results.



COMPANY LEGAL NAME

ZDS Limited Liability Company
dba ZDS Design/Consulting Services

OFFICE LOCATION

135 Corporate Center Drive / Suite 532
Scott Depot, WV 25560

FOUNDERS

Todd A. Zachwieja, P.E., C.E.O.

Lori L. Zachwieja, C.P.A., C.F.O.

Daniel H. Kim, Ph.D.



“Family Owned & Operated Engineering Firm
providing Professional Design Services for over 26 years”

FIRM OVERVIEW



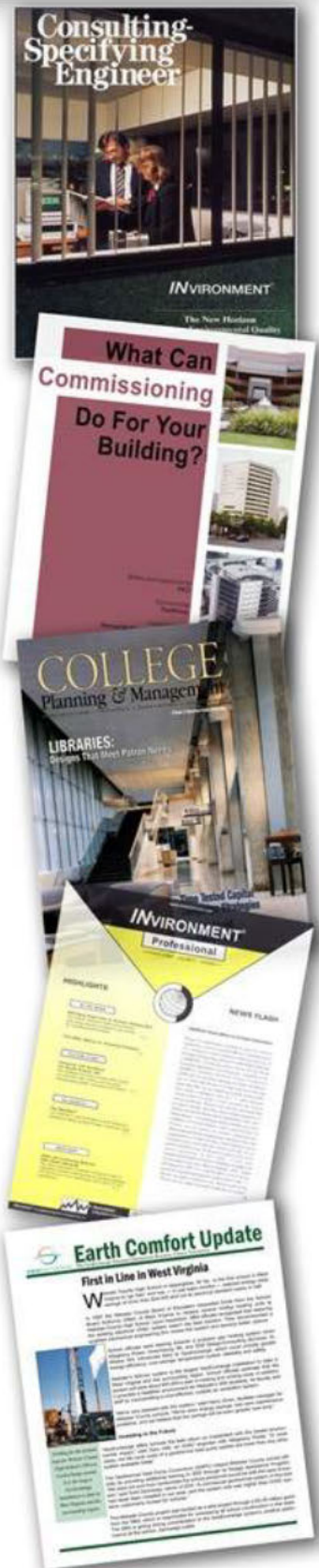
ZDS provides forensic engineering services for the Indoor Environmental Quality (IEQ) including “Indoor Air Quality (IAQ). These services include: strategic planning for renovation and new construction projects; technical research and writing; specialized applications software development; corporate and professional training programs; publications support and fulfillment; and site-specific engineering and scientific consultation. Todd Zachwieja, **ZDS** Principal, is contributing editor for the following publications:

- Technical Review Panel for the publication of the *INvironment™ Handbook of Building Management and Indoor Air Quality*, by Chelsea Group and published for Powers Educational Services
- Technical Review Panel for the quarterly publication of the *INvironment™ Newsletter*, by Chelsea Group for Powers Educational Services
- *Ventilation for a Quality Dining Experience: A Technical Bulletin for Restaurant Owners and Managers*
- *The New Horizon: Indoor Environmental Quality*, published as a supplement to an issue of *Consulting-Specifying Engineer* magazine, a trade magazine distributed to roughly 50,000 engineers
- Editorial Advisory Board member reviewing the articles of the monthly publication *INvironment™ Professional*

ZDS provides Indoor Air Quality (IAQ) services for major corporations, government organizations and property owners to resolve their specific facility problems:

- *Resolve “sick building syndrome”*
- *Identify solutions to building-related illnesses due to extensive biological contamination*
- *Develop solutions for HVAC systems, temperature controls, equipment, operating and maintenance practices for indoor air quality*
- *Commission new and renovated facilities to minimize or eliminate IAQ issues before problems arise*
- *Develop and establish master plans as well as conduct training seminars for IAQ of schools and commercial buildings*

As one of the nation’s leaders in Indoor Air Quality (IAQ), **ZDS** provides sophisticated technical expertise that enables our client to be proactive in solving and preventing indoor environmental problems.



COMPANY OVERVIEW



Established in 1984, Chapman Technical Group has steadily grown to a diverse firm of professionals, many of who 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 remain Chapman Technical Group, a wholly owned subsidiary of GRW, with offices in St. Albans and Buckhannon, 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



SECTION III.

Description of Project Experience

Additional Project Experience Brochures

William R. Sharpe, Jr. Hospital

Weston, WV



Size: 219,754 ft² plus 33,000 ft² Addition

Date Complete: 2017

219,754 ft² Renovation plus 33,000 ft² New Construction

Prime for Engineering Master Planning, HVAC Renovations, Lighting Upgrades, Emergency Generator, Fire Protection, Electrical Renovations, Roof Replacement, Commissioning, 3D Scanning.

Consultant for all MEP engineering through IKM, Inc. for the addition.

MEP Engineering design and Commissioning services for both the HVAC/lighting/roof Renovation project retrofitting Hospital and the patient wing addition. Comprehensive MEP engineering and commissioning services for a central domestic hot water services, central boiler/chiller plant and 1.8 MW bi-fuel emergency generator system. VVW Pumping for heating, cooling and domestic hot water. Integrated DDC controls for central monitoring, troubleshooting and control including demand control ventilation and outside air measuring/monitoring. The HVAC system is also an integral part of the smoke control system. Lighting systems upgraded to LED and controlled to minimize energy. IAQ enhancements were incorporated into the high performance HVAC systems. Careful phasing, and the need to disrupt only small portions of the Hospital at a time, resulted in an extended construction period.

*“The **ZDS** staff are great planners and designers! They help us make the best decisions for the long term. We would recommend them to anyone!”*
former Chief Operations Officer



Renovations resulted in a 48% reduction in lighting and 28.8% reduction in energy for HVAC renovations over ASHRAE 90.1-2001 standards qualifying the project for EPCAct.

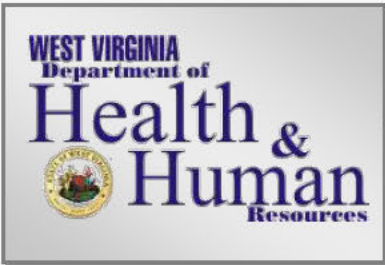
Construction Costs:	Phase I HVAC Cost	\$ 1,403,000	Completed in 2011
	ARRA Funded Lighting Upgrade Costs	\$ 618,700	Completed in 2011
	Comprehensive Renovation Cost	\$30,000,000	Completed in 2017
	Addition Project Cost	\$13,500,000	Completed in 2014

Hopemont Hospital, Terra Alta, WV Boiler Plant Renovations

ZDS' initial work addressed their fire alarm needs in 2003. ZDS was contacted again in 2010 to provide master planning, boiler system upgrades and ARRA funded lighting upgrades. The boiler plant optimization initial phase involved replacing underground piping between the central plant and hospital, along with comprehensive steam trap upgrades. This required engineering planning, design, supervision, preparation of construction documents, specifications, and construction administration of the boiler systems including lighting upgrades with replacement of T-12 lighting fixtures and incandescent lights with energy efficient T-8/T-5 and LED lighting, reducing lighting energy usage by over 30%.



Project Cost:
ARRA Renovation \$760,000;
Fire Alarm \$175,000;
Hospital Size: 124,800 ft²



Jackie Withrow Hospital, Beckley, WV Boiler Plant Renovations

ZDS was the Prime for this project. Renovations included creating a central plant at one end of the large facility which included three 3,000 MBH, 125 psi steam boilers with upgrades to the condensate return system and comprehensive steam trap upgrades, providing a new gas service to the new boiler plant. The existing boiler plant in the opposite end of the large facility was upgraded to lengthen the life of it including a 2,500 MBH steam boiler. Several old or poor condition boilers were removed or isolated from providing heat to the system. The natural gas service upgrades were coordinated through the State Fire Marshal for approval to meet emergency backup fuel needs required by current code for both heating and emergency power.



Heating Project Cost: \$1,907,000
Hospital Size: 408,820 ft²

Engineering for State & Local Government Facilities

ZDS engineering project experience includes facilities registered as official Historic Buildings



Jackie Withrow State Hospital

WVDHHR hired ZDS to engineer the upgrades for three historic hospital facilities in three separate locations. ZDS successfully completed the projects while meeting the requirements of the State Historic Preservation Office (SHPO).



Hopemont State Hospital



Mildred Mitchell-Bateman State Hospital

Renovations included HVAC, fire safety, energy efficient lighting, plumbing, indoor air quality and electrical power engineering.



Design/Consulting Services

Engineering for State & Local Government Facilities



Governor's Mansion

Engineering planning and design for central heating plant, DDC controls, Air Handling Unit replacements and retrofits, operating and maintenance, training, heat recovery, fuel conversion, VFD's, variable water volume pumping, steam/heating hot water and chiller optimization.

Renovations included HVAC, fire safety, lighting, plumbing, indoor air quality and electrical power engineering.



Building #3



State Capitol



LEED Certified Candidate



Design/Consulting Services

Engineering for State & Local Government Facilities

Welcome Center and Rest Area



ZDS engineered the prototype for several Welcome Centers and Rest Areas.

ZDS provided engineering planning, design, bidding and construction admin services for M/E, Plumbing and Fire Protection.

ZDS also evaluated the existing courthouse's potential power needs and incorporated those in the new Judicial Annex's electrical systems while providing emergency power.

Mercer County Annex



Division of Culture and History

A 228,500 ft² Facility



Emergency Power Generator

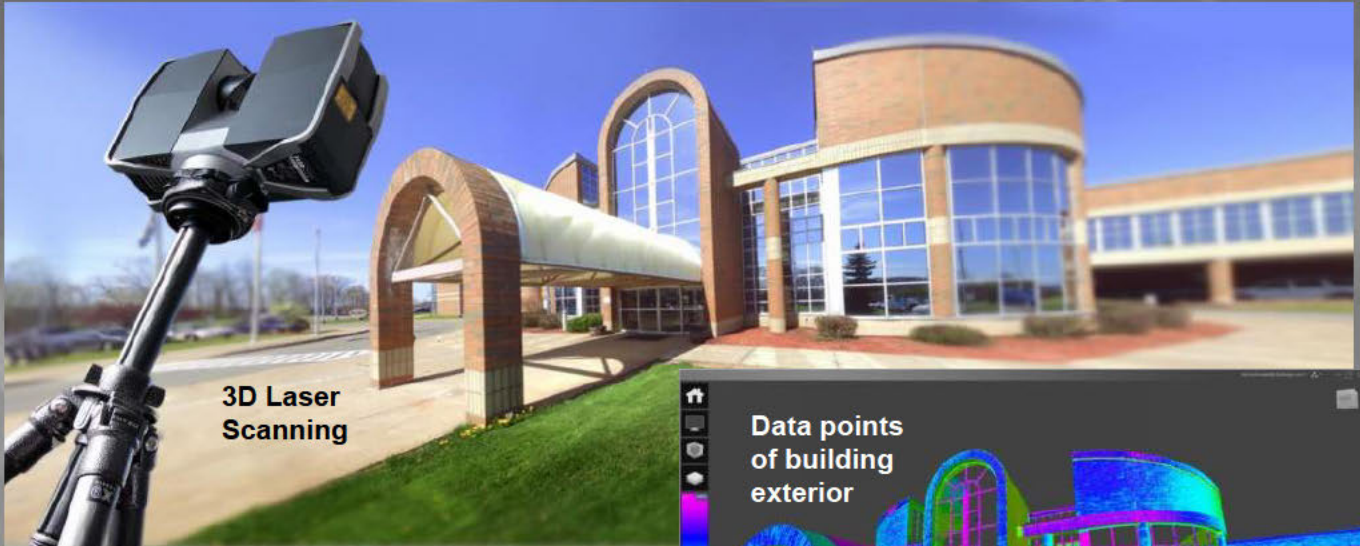
Renovations save the Museum nearly \$153,000 in annual energy costs while preserving the State's priceless collection with proper HVAC, humidification, lighting, electrical and power generator systems.



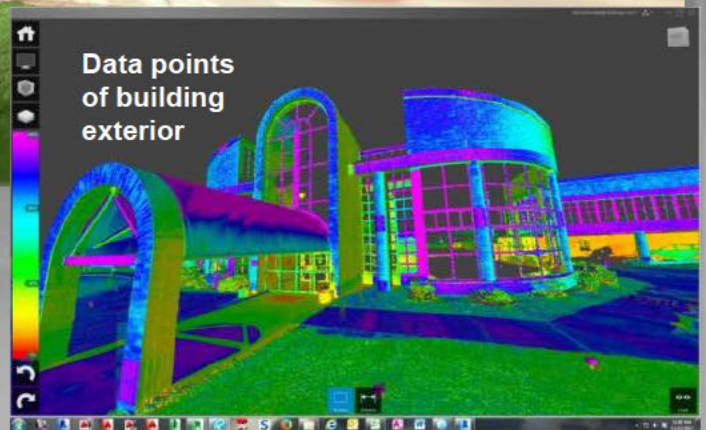
Design/Consulting Services

BIM - 3D Digital Imaging

Our 3D Laser Scanning Services helped William R. Sharpe, Jr. Hospital document existing conditions and integrate their 50-bed addition.



3D Laser Scanning



Why 3D Laser Scanning is better:

3D laser scans reveal significant differences between existing conditions and the original drawings.

3D laser scans also provide superior details by capturing data that is more comprehensive and precise than conventional methods.

“With the 3D laser scanning service, ZDS saved us countless hours communicating to all project team members, even to those who work or live far away.

Also, we now have an accurate record of the existing conditions that DHHR can easily access now and into the future.”

former Chief Operations Officer



Web Share:

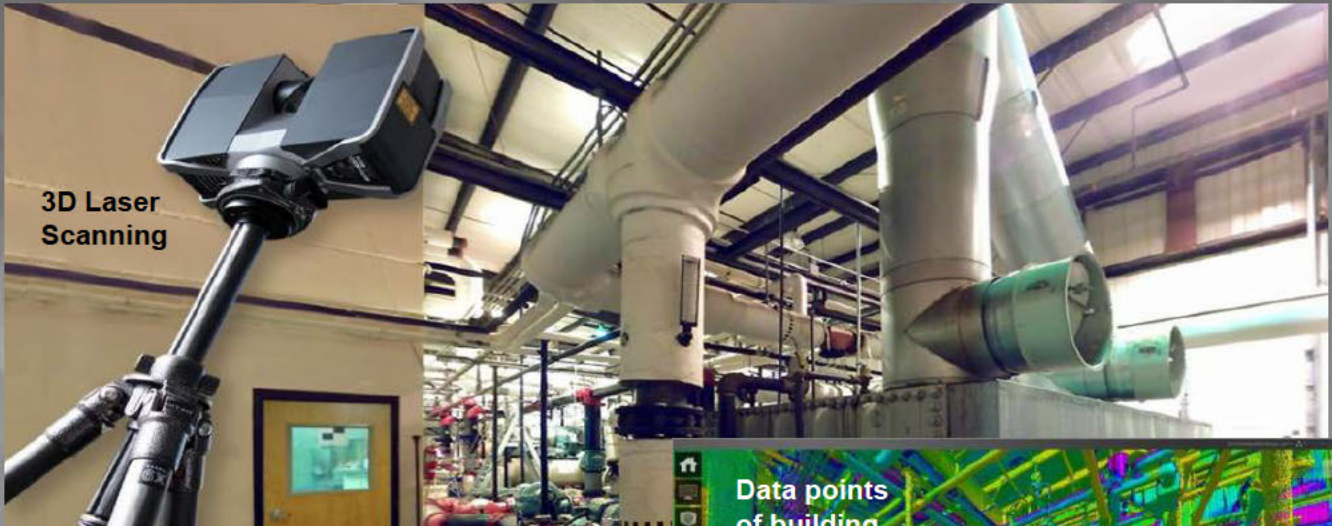
3D laser Scanning allows facility owners to view and measure areas with others on their planning and construction team.



BIM - 3D Digital Imaging

“The 3D laser imaging improves quality, saves time and money while providing a valuable resource now and into the future.”

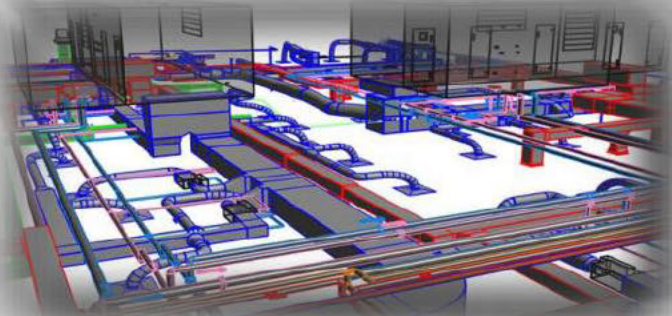
DHHR



“The 3D laser scans safely document hard-to-reach interior areas — this greatly reduces our risk for liability.

Also, the excellent details of the laser scans convert to accurate construction drawings, both architectural and engineering.”

DHHR Director of Construction & Project Management



3D Engineering Drawing:
Sample of 3D mechanical drawing converted from 3D laser scan data points.

Web Share: Helps construction team members integrate existing conditions into BIM models.



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/SSES Studies/CSO Plans
- I/I Analysis/SSES Studies/CSO Plans Stormwater
- Management Programs
- Funding and Regulatory Assistance

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.



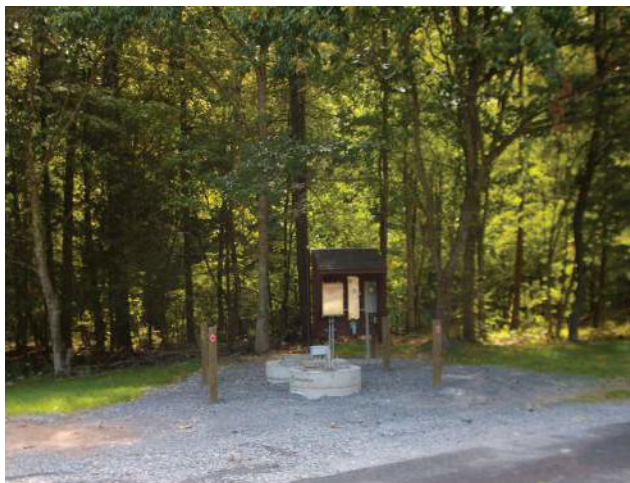
Blackwater Falls State Park Wastewater System Improvements

1584 Blackwater Lodge Road
Davis, West Virginia

As part of its project to develop 13 new cabins at Blackwater Falls State Park, Chapman Technical Group designed a sanitary sewer collection and treatment system to serve the cabins. The park has an existing 6,100 gpd wastewater treatment plant; however, due to topographical and geographical constraints, it was determined the most economical method of providing service to the cabins was by the construction of a new wastewater collection and treatment system.

The collection system is a conventional gravity system with a single duplex grinder pump station to transport the flow to the treatment plant. The wastewater treatment plant is a 4,000 gpd recirculating sand filter treatment system with ultraviolet disinfection.





WV DNR Camp Creek State Park Wastewater System Improvements

The West Virginia Division of Natural Resources, Park and Recreation Department, retained Chapman Technical Group to provide design and construction phase services for a wastewater collection and treatment system at Camp Creek State Park in Mercer County, West Virginia. The existing facilities were served with septic tanks and leach fields which were failing due to shallow rock, a high groundwater table, and overloading during seasonal peak flows. The initial phase of the project was completed in July of 2010 and included a 6,400 GPD re-circulating sand filter wastewater treatment plant with UV disinfection and a grinder pump station which serves the superintendent's residence as well as the park's RV dump station. The treatment plant was constructed on engineered fill to elevate it above the historical high water level. Both the treatment plant and pump station were designed to facilitate future expansions of the wastewater system to pick up other park facilities when funding becomes available.

WASTEWATER ENGINEERING



Boone County Public Service District Wastewater Treatment 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 constructed 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 200,00 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



Town of Harman Wastewater Treatment Plant

Post Office Box 125
Harman, West Virginia 26270



Chapman Technical Group provided design and construction observation services for the Wastewater System Improvements project that was completed in November 2009. The project consisted of the construction of a new wastewater treatment plant and gravity sewer system to serve the Town of Harman, which did not have a centralized public sewer system. The new wastewater treatment plant consists of a new 50,000 GPD wastewater treatment plant, expandable to 100,000 GPD, consisting of pre-screening system; a 50,000 GPD Sequencing Batch Reactor (SBR) system consisting of a Pre-Equalization basin, SBR basin, Post-Equalization basin, and aerobic digester; UV disinfection system; Control Building; plant lift station; site work; plant piping; electrical; emergency generator; and perimeter fencing.

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.





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.



SECTION IV.

Proposed Team Staffing Plan

Team Certifications

Team Resumes

Barboursville School WWTP Renovations



Ted Zachwieja III, PE, CEM
CTO/BIM Manager
MEP Engineer



Management Team



Todd Zachwieja
PE, CEM, LEED AP
Principal-in-Charge



Jim Watters
Associate, MEP Design
Cost Estimating/Construction Admin



Mark Estep, PE
MEP Engineer



Vineel Busa, MSME, EI
MEP Designer



Meher Meka, MSEE, EI
MEP Designer



Billy Smith, BSME
MEP Designer

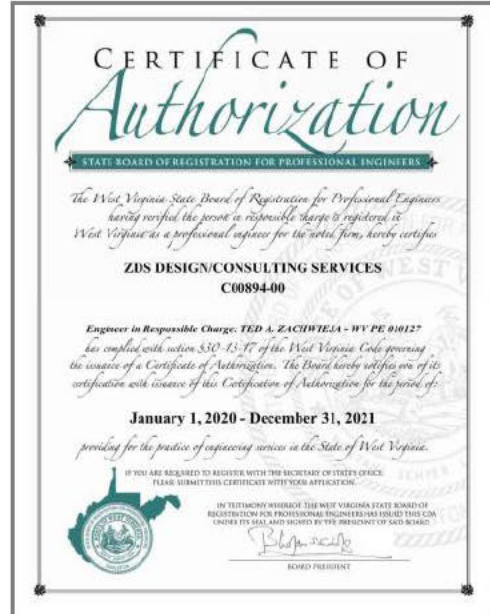
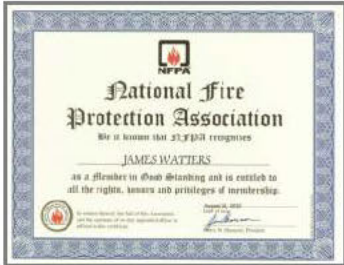
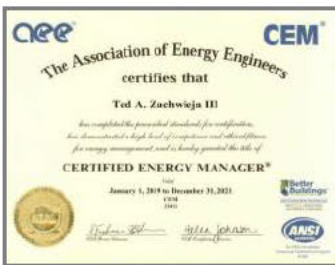
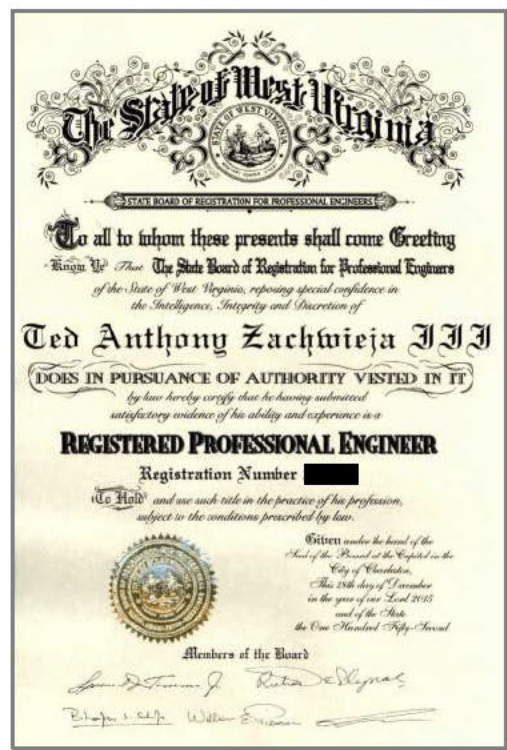


Robert "Greg" Belcher, PE
VP, Project Officer

Bob Bragg, PE
Civil/Environmental Engineer

Matt Tanner, PE
Civil/Environmental Engineer

TEAM CERTIFICATIONS



Todd has over 40 years of experience involving the analysis, design, construction management and specifications for mechanical engineering, heating, ventilating, air conditioning, plumbing, fire protection, electrical and lighting, as well as indoor environmental quality analysis, building system commissioning and forensic engineering for educational, governmental, military, commercial, industrial and health care clients. He is also recognized as a campus master planner for utility infrastructure providing master planning at many Universities, hospitals and the State of WV Capitol Complex.

Prior to starting a consulting engineering firm, Todd Zachwieja coordinated comprehensive energy conservation programs resulting in annual energy savings of millions of dollars. He has managed a profitable regional office for one of the country's largest energy companies that service the southeastern United States. Todd also developed computer modeling programs for building energy analysis and monitoring. He has been invited as an industry leader to present technical papers and speak at professional conferences both regionally and nationally.

Todd selected and designed the pilot project for one of the largest geothermal heat pump applications in the Eastern US including designing custom geothermal rooftop AHU's. He has retro-commissioned HVAC systems for millions of square-feet for facilities located in 10 states. He has been involved with many commercial structures including high-rise commercial building renovations. Todd designed renovations to many existing facilities which received **Energy Star Certifications** placing them in the nation's top 25% of energy efficiency schools. *The College Planning and Management Magazine* featured Todd and his work with a major University for the performance contracting programs that save millions of dollars in energy and operating costs. Most projects also qualified for EPA's Act which requires buildings use over 50% less energy than buildings designed using ASHRAE 90.1.



PROFESSIONAL REGISTRATIONS

Professional Engineer:

Florida
Georgia
Kentucky
Maryland
North Carolina
Ohio
Pennsylvania
South Carolina
Virginia 0402
West Virginia

Fire Investigation Certification under the direction of Peter Vallas, Sr.

CEM[®] Certified Energy Manager
(C.E.M.) National
Certification No. 2205

LEED AP LEED Accredited Professional,
National Certification through

EDUCATION

Masters of Science in Engineering
Management from West Virginia University
College of Graduate Studies.
Bachelor of Science in Mechanical
Engineering from West Virginia
Institute of Technology.

HEALTH CARE EXPERIENCE

- Bluefield Regional Medical Center
- Cabell Huntington Hospital
- Charleston Area Medical Center Memorial Division (millions in renovation and new construction design, including commissioning of CAMC Surgery Center
- Charleston Area Medical Center General Division (millions in renovations)
- Charleston Area Medical Center Women & Children's Hospital (millions in renovations)
- Charleston Surgical Center
- Family Practice Center
- Jackie Withrow Hospital
- John Manchin Sr. Health Care Center
- Hometown Healthcare Center
- Hopemont Hospital
- Lakin Hospital
- Lewistown Outpatient Surgical Facility, PA
- Mercy Medical Center
- Mildred Mitchell-Bateman Hospital
- Monongalia General Hospital
- Montgomery General Hospital
- St. Joseph's Hospital
- St. Mary's Hospital
- Summersville Regional Medical Center
- Surgicare Center
- Thomas Memorial Hospital
- United Hospital Center
- VA Hospital - Clarksburg
- VA Hospital - Huntington
- Wayne Memorial Hospital
- Webster Memorial Hospital
- Welch Community Hospital
- William R. Sharpe, Jr. Hospital Additions and Renovations

PROFESSIONAL AND COMMUNITY AFFILIATIONS

Member of Investigative Engineers Association (I-ENG-A) and founder of I-ENG-A of the Tri-State Region

Past President 2013-14, current Governor - WV ASHRAE Chapter, Served as ASHRAE's Energy and Technical Affairs Chairman for six years. Recognized by ASHRAE Region VII in 2014 with the David Levine Award of Excellence, Presidential Award of Excellence,

Recognized by the International Who's Who of Professionals

Recognized nationally as West Virginia's Business Man of the Year

Recognized by AEE nationally in 2007 as a Legend in Energy

Recognized by AEE nationally in 2008 as a Charter Legend in Energy

Charter Life Member of the Association of Energy Engineers

Professional Affiliate Member of the American Institute of Architecture

Associate Member West Virginia Society for Healthcare Engineering

Member of the International Code Council

Member of the National Society of Professional Engineers



OTHER RECOGNITIONS

Selected by WVU and the WV Division of Energy to train Code officials and the design community on ASHRAE 90.1 State Energy Code

Presented at regional and national conferences including the annual National System Commissioning Conference

Contributing editor and served on the Editorial Review Panel for *"The Handbook of Building Management and Indoor Air Quality"*

Contributing editor *"Ventilation for a Quality Dining Experience"*

Contributing editor and served on the Editorial Review Panel for *INvironment Professional, Power Prescriptions* and other publications and articles featuring Indoor Air Quality (IAQ) and MEP engineering systems

Energy Star Certified for facilities in the nation's top 25% of energy efficiency

1st Place 2014 ASHRAE Technology Award, Region VII

LEED Silver Certified WVANG Fuel Cell/Maintenance Hangar, Charleston, WV

LEED Gold Certified Harvard Arboretum, Boston, MA

First ASHRAE bEQ certified building in West Virginia, 2015



Ted has over 16 years of experience in building construction design industry. His strategic thinking and development of technical resources at ZDS has helped streamline design processes and improve quality of work office wide. Ted is an innovative problem solver in engineering design, communication methods and management of BIM models between stakeholders during a design project. As a pioneer and a believer in technological processes Ted has championed Integrated Design Practices that has become the fabric of ZDS's day to day operations.

Ted developed ZDS's 3D Scanning services which have assisted in collecting key existing conditions for renovation projects, forensic engineering, historical preservation, and high definition reality capture. Ted has in depth experience on collection, registration, and scan to BIM processes. He has provided training and developed materials for best practices when using 3D scan data. Ted's 3D scanning experience includes governmental, educational, health care, industrial, and commercial facilities. He also has experience in speaking on how 3D laser scanning impacts our industry today.

Ted develops, designs and manages the IT systems. The experience encompasses development and deployment of central server systems to networked client computer systems, strategic development for ZDS' Integrated Design Processes, and research and development into new technologies to continue staying on the cutting edge for ZDS and others.

Ted's project experience includes design and commissioning for heating, ventilating, air conditioning, plumbing, fire protection, electrical and lighting systems for educational, health care, industrial and commercial facilities. His experience encompasses working both on new construction and renovation projects. He also is experienced in historical facilities including theatrical.

Ted maintains an active membership to the ASHRAE professional society and also has a lifetime membership to the Association of Energy Engineers. He maintains an active continuing education towards today's standards and codes as well as participates in ASHRAE at both a local and society level. He was recently appointed to the Electronic Communications Standing Committee with ASHRAE. Ted has designed renovations to existing K-12 schools which received **Energy Star Certifications** placing them in the nation's top 25% of energy efficiency schools.

HEALTH CARE EXPERIENCE

- CAMC Patient Room Renovations
- Jackie Withrow Hospital, Beckley: Master Planning Study, new central steam plant and renovations to heating system and lighting renovations.
- Hopemont State Hospital, Terra Alta: Master Planning Study, renovations to heating system and lighting systems.
- John Manchin, Sr. Health Care Center, Fairmont: Master Planning Study, renovations to lighting systems.
- Lakin State Hospital, West Columbia: Master Planning Study and exterior envelop renovations and lighting renovations.
- Mildred Mitchell-Bateman Hospital, Huntington: Master Planning Study and lighting renovations.
- Roane General Hospital, Spencer, WV
- United Hospital Center Renovations, Clarksburg, WV
- VA Hospital Clarksburg and VA Hospital Huntington, WV including new Fisher House
- Welch Community Hospital, Welch: Master Planning Study and lighting renovations.
- William R. Sharpe, Jr. Hospital, Weston: fifty bed forensic addition and renovations to entire existing hospital while building remains in use including new central heating/cooling plant, 1,800 KW emergency power station and comprehensive HVAC and electrical renovations throughout the facility.



PROFESSIONAL REGISTRATIONS

Professional Engineer:

Florida [REDACTED]

West Virginia [REDACTED]

Certified Energy Manager (C.E.M.)

National Certificate

No. [REDACTED]



EDUCATION

Bachelor of Science in Mechanical Engineering from Rochester Institute of Technology, Rochester, NY

AWARDS AND RECOGNITIONS

Awarded 2012 Legend in Energy by the Association of Energy Engineers

Awarded acceptance into ASHRAE's 2015 Leadership University

ASHRAE Blue Ribbon Award of Excellence
Co-Author at Autodesk University



Energy Star Certified for facilities in the Nation's top 25% of energy efficiency



Member & Co-Founder
I-ENG-A of the
Tri-State Region

Jim has over 40 years' experience in design and implementation of lighting, HVAC, plumbing and electrical systems including nine years in the construction industry. He has a comprehensive knowledge of construction documents, contracts, and development of cost estimates, budgets and schedules. Jim's strengths reside in his ability to manage projects and people in an organized and cost-effective manner. Jim has been involved with the design and production of mechanical and electrical drawings including HVAC, plumbing, fire protection, lighting, electrical power, fire alarm and specialized systems. He has worked with and managed engineers in projects for health care, educational and commercial buildings in the states of West Virginia, Florida, Maryland, Pennsylvania, Ohio, Kentucky, Virginia, Georgia, New York, Arizona, Illinois and Massachusetts.

Jim has extensive experience in energy savings' programs for lighting, HVAC, plumbing and electrical systems in hospitals, state and government office buildings, school systems, and manufacturing facilities, as well as managing performance contracts for a large facility's campus totaling \$10,000,000 in construction costs on various projects, including the conception, design and construction administration for the installation of a 1.5 Megawatt emergency generator. The propane-fired generator and associated switchgear in conjunction with 60,000 gallons of propane fuel storage served to provide peak shaving/load shedding to save on the campus utility costs as well as emergency power functions. Through the years, Jim has researched and implemented into practice International Building Codes, NFPA Codes, National Electrical Codes, Life Safety Codes, IES standards, AIA Guidelines for Design and Construction, and ADA guidelines. His involvement in construction through the years has been mainly from the design side of the industry with a 9 year stint working for a contracting firm at the turn of this century. His experience includes coordinating with Architects, Owners and Agencies including an excellent relationship with the office of State Fire Marshal.



PROFESSIONAL AFFILIATIONS

Member of Investigative
Engineers Association (I-ENG-A)
of the Tri-State Region



Member of the National
Fire Protection
Association (NFPA)



Member of the Health
Care Section of the NFPA

Member of the Illuminating
Engineering Society (IES)

Past member of the American Society
of Plumbing Engineers (ASPE)

Past member of the Institute of
Electrical Engineers (IEE)

OTHER RECOGNITIONS

Energy Star Certified
for facilities in the
Nation's top 25% of
energy efficiency



HEALTH CARE EXPERIENCE

- Cabell Huntington Hospital
- Charleston Area Medical Center (CAMC) (prior to joining ZDS)
Lab III Renovations; 750 kW Emergency Generator/Underground Fuel System; Two -Four West Nursing Wing; Main Electrical Service Upgrade; Emergency Room Renovations; Surgical Intensive Care Retrofit' Two/Three East Patient Room Renovations; Four-North HVAC Renovations; Nuclear Medicine Renovations; Special Care Facility Contract Administration; Allied Health, Physical Therapy & Hydrotherapy; Three-Six Floor Patient Room South; Emergency Generator Retrofit Design; Heliport and pilots quarters; Wound Center; Pediatric Intensive Care & Newborn Intensive Care Unit; Central Electric Metering Design; CT Scan Addition; LDRP/Gynecology; Surgery Addition; Operating and Recovery Room HVAC System; Medical Office Building – General Division
- Kings Daughters Medical Center, Ashland (prior to joining ZDS)
Projects included: Cardiac Care Center; Medical Office Building
- Thomas Memorial Hospital
- St. Mary's Medical Center, Huntington
- United Hospital Center
- VA Hospital, Huntington –steam distribution system to serve six additional facilities on campus, main hospital domestic water line replacement and CT Scan renovations
- Jackie Withrow Hospital, Beckley: new central steam plant and renovations to heating system and lighting renovations.
- Hopemont State Hospital, Terra Alta: renovations to heating system and lighting systems.
- John Manchin, Sr. Health Care Center, Fairmont: renovations to lighting systems.
- Lakin State Hospital, West Columbia: lighting renovations.
- Mildred Mitchell-Bateman Hospital, Huntington: lighting renovations.
- Welch Community Hospital, Welch: lighting renovations.
- William R. Sharpe, Jr. Hospital, Weston: fifty bed forensic addition and renovations to entire existing hospital, 1,800 KW emergency power station.

Mark has over 18 years of experience and is responsible for the design of commercial, institutional, and industrial mechanical and electric projects. He works with architects, civil and structural engineers to coordinate design and construction documents. He is responsible for project specifications and submittal review. Mark holds Degrees in Engineering and Architectural Technology which provide more than engineered solutions. He designs solutions that incorporate essential and functional needs, as well as aesthetic, life-safety, and constructability considerations.

Before joining ZDS, Mark was the President and Principal Engineer of another firm where he provided mechanical and electrical engineering design and analysis for commercial construction projects and was responsible for acquiring new projects.

PERSONAL HEALTHCARE PROJECT EXPERIENCE

- Valley Health Medical Center; New one-story medical office building.
- HIMG Region Medical Center; Design-build, 150,000 sf renovation of a former Wal-Mart building into a multi-tenant medical mall.
- Summersville Hospital; Air Handler.
- Cancer Treatment Centers; Approximately 7,000 sf each, the treatment centers provided a CT scan and radiation treatment. The facilities also provided exam rooms, waiting areas, and administrative offices.
- St. Mary's Medical Center; 510 car, four elevated-levels. Parking facility also has a pedestrian connection bridge to the main hospital facility.
- King's Daughters Hospital Parking; 530 cars on five levels. The garage is design to add three additional elevated levels in
- New River Health Association; New Medical Office Building.
- Pretera Center; Elevator Implementation.
- WV Department of Health and Human Resources; Completed several WVDHHR projects throughout the State.



PROFESSIONAL REGISTRATIONS

Professional Engineer:

West Virginia [REDACTED]
Maryland [REDACTED]
Virginia [REDACTED]
Kentucky [REDACTED]
Ohio [REDACTED]

EDUCATION

Bachelor of Science
Mechanical Engineering
WV Institute of Technology

Bachelor of Science
Architectural Engineering Technology
Associates of Science
Mechanical Engineering Technology
Fairmont State College



Vineel is a graduate Mechanical Engineer with a Masters Degree in Mechanical Engineering and nearly 5 years experience in HVAC & Refrigeration. Technically sophisticated engineering professional with solid history of effective integration, qualification and deployment of HVAC systems. Significant experience in designing, commissioning and implementing efficient HVAC systems for various commercial, healthcare and educational facilities.

Vineel is knowledgeable on HVAC systems, Heat Transfer, Refrigeration and Thermodynamic specializing in HVAC heating and cooling load calculations, Psychrometric and hydronic analyses and Energy modeling. He has applied that foundation in the manufacturing industry and the commercial industry. Vineel has a comprehensive knowledge of mechanical principles and drafting techniques.

He is experienced hands-on in designing Variable Refrigerant Flow systems, Steam Systems, hydronic systems, Geothermal systems and Building Automation System. He is also proficient in Revit, AutoCAD, IESVE, Navisworks, and Autodesk Recap. Vineel is experienced in utilizing point clouds in the development of Scan to Building Information Modeling (BIM) and performing 3D scanning. Vineel is well-versed in technical specification writings and development of construction drawings. He has hands-on experience in performing Functional Performance Testing in leading Commissioning projects.



PROJECT EXPERIENCE

- New Bluefield Elementary School Commissioning
- Clay County High School Commissioning
- North Fork Elementary School HVAC/Roof Renovations, 3D Scanning, Scan-to-BIM and Commissioning
- Pendleton County Middle/High School HVAC/Roof Renovations, 3D Scanning, Scan-to-BIM and Commissioning
- New 911 Center high performance “Net Zero” facility and Commissioning
- Tyler County Courthouse Additions/Renovations and Commissioning
- Riverside High School HVAC/Lighting Renovations
- Roane General Hospital Commissioning
- Kanawha County Judicial Building Renovations & Commissioning
- New Clendenin Elementary School Commissioning
- Marshall University—Jomie Jazz HVAC Renovations
- Veteran Administration Clarksburg Hospital Mechanical BIM
- Veteran Administration Huntington Hospital Mechanical-Electrical BIM
- WV Capitol Complex Campus Heating System Renovations Buildings #1, #3, #4, #5 and #7 over multiple phases

PROFESSIONAL REGISTRATIONS

Engineer Intern:
Indiana [REDACTED]

EDUCATION

VIT University
Bachelor of Science
in Mechanical Engineering

Southern Illinois University Edwardsville
Master of Science
in Mechanical Engineering

University of Cumberland
Working on PhD in Project Management

AWARDS AND RECOGNITIONS

Certified by ASHRAE in
HVAC Design Essentials & Applications

Certified Engineer in Training (E.I.T)
Fundamentals of Engineering (F.E)

Meher is a graduate Electrical Engineer with a Masters Degree in Electrical Engineering and nearly 5 years of experience in Power Distribution & Protection, Lighting design, Lightning protection, Fire Alarm, Communications and Schematics. He also is experienced in plumbing design for educational, commercial and governmental facilities.

He leads solar power applications including WV's first net zero 911 Center involving aggregate net metering where the additional solar power generated at a new 911 Center is credited towards the County's Courthouse. Knowledgeable in High performance building design.

PERSONAL PROJECT EXPERIENCE

- CEA office
- Blennerhassett Island Dock Study
- Coney Island Hot Dogs Central Kitchen
- C.R. Hipp Industrial Warehouse
- Eucalyptus Wellness Company
- Ed Harleys Private Garage
- High Wire Distillery
- Kanawha County Judicial Bldg.
- Jones Trading Upfit office space
- Kimley Horne Charleston Buildout
- HSGS Solar Office Space
- IX Artistry Salon
- JW Aluminum upfit office space
- J McLaughlin Upfit Retail Outlet
- Maple Street Office Building
- North Fork Elementary Retrofit
- Northwood Middle School
- River Oaks Storage
- Riverside High School Renovations
- Orange Theory Fitness, Acworth
- Orange Theory Fitness, Milton GA
- Pack Rat Storage Bees Ferry road
- Pendleton County Middle/High School Renovations
- Sherwin Williams
- South State Bank Renovations
- Steel City Pizza Cranes
- Stella Nova Cigar Factory
- Trimnal Mayers Law office
- Tyler County 911 Center
- Tyler County Courthouse Retrofit
- VA Hospital - Clarksburg
- VA Hospital - Huntington
- WV Capitol Complex Renovations Bldg. #1, #3, #4, #5 and #7
- Airforce Base Clinic
- Canadian Consulate office
- JBL Harman office space
- HP Office Space



PROFESSIONAL REGISTRATIONS

Engineer in Training (E.I.T)
Fundamentals of Engineering (F.E)

EDUCATION

Bachelor of Technology, Electrical and
Electronics Engineering

UNC Charlotte
Master of Science
Electrical & Computer Engineering

Billy provides design, bidding, construction administration and Commissioning support for mechanical, plumbing, fire protection and electrical systems. His experience encompasses a broad range of Projects including, but not limited to Commercial, Government, Healthcare, Educational and Industrial facilities. Billy also has experience designing multiple building HVAC systems intended to meet high performance criteria, including one that will achieve net zero energy consumption. Knowledgeable with ASHRAE codes and Standards.

Experience includes 3D Scanning, high definition reality capture and Scan-to-BIM which is invaluable for renovation projects and to assist in the development of "Built" conditions in 3D space for Revit. Proficient in Revit, HVAC load programs and air side HVAC equipment selection. Experience in steam heating and distribution systems, hydronic piping/pumping, geothermal, commissioning, custom air handling unit design and HVAC equipment selection and specifications.

Billy is an active ASHRAE professional society member, serving on committee chairs for the WV ASHRAE Chapter. He regularly participates in chapter activities and works to maintain an active continuing education towards today's standards, codes, and technology.



EDUCATION

West Virginia University
Bachelor of Science
in Mechanical Engineering

PROJECT EXPERIENCE

- North Fork Elementary HVAC/Roof Renovations, Commissioning and 3D Scan-to-BIM
- Pendleton County Middle/High School HVAC/Roof Renovations, Commissioning and 3D Scan-to-BIM
- Historical Tyler County Courthouse Additions/Renovations
- New Tyler County 911 Center, projected Net Zero high performance facility
- WV Capitol Complex Campus Heating System Renovations for Buildings #1, #3, #4, #5 and #7 over multiple phases
- Marshall University, Jomie Jazz Center HVAC Renovations and 3D Scan-to-BIM
- Riverside High School HVAC Renovations including geothermal closed loop HVAC system designed to reduce HVAC Energy by 50% over previous system
- Kanawha County Judicial Building HVAC Renovations, Commissioning, 3D scanning
- Veteran Administration Clarksburg Hospital Mechanical-Electrical BIM

RECOGNITIONS

WVU Valedictorian Scholarship
Promise Scholarship
WVU Honors Program
Presidential Scholarship
WV Engineering,
Science & Tech. Scholarship
WVU Deans list:
Fall 2016, Fall 2017, Spring 2018

Robert G. Belcher, P.E.

Vice President
Project Officer



Years of Experience: 35
Years with Chapman: 32

Education

B.S., Civil Engineering, 1983,
West Virginia 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, elevated pedestal tanks, and pre-stressed concrete 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.

Bob Bragg, P.E.

Civil/Environmental Engineer



Years of Experience: 35
Years with Chapman: 1

Education

B.S., Civil Engineering, 1992
B.S., Electronic Engineering Technology,
1983
A.S. Electrical Engineering Technology, 1980

Registration

Civil Engineer: WV, VA

Projects with Chapman Include:

Southern Jackson County PSD
Wastewater System Improvement Project
(Fairplain, WV)

City of Elkins
Water Systems Improvements Project
(Elkins, WV)

Projects with other consulting Firms include:

Town of Elizabeth
Wastewater Plant Upgrade
(Elizabeth, WV)

City of Weston
Sewer Interceptor Replacement
(Weston, WV)

Town of Sophia
Coal City Sewer Service Extension and
Wastewater Plant Upgrade
(Sophia, WV)

Carbonyx Corporation
Coal Processing Site Development
(Ravenswood, WV)

City of Elkins
City-Wide Infiltration and Inflow Study
(Elkins, WV)

City of Weston
CSO Long Term Control Plan
Sanitary/Storm Sewer Separation Project
(Weston, WV)

Qualifications

Water Systems

Overall experience includes comprehensive system master plans, design, bidding, and construction administration/management of various public and private water system projects throughout West Virginia. Specific project experience includes distribution systems, river crossings, horizontal directional drills, raw water intakes, transmission lines, booster stations, treatment plants, water storage tank design, painting.

Wastewater Systems

Overall experience includes comprehensive system master plans, facility planning reports, design, bidding, construction administration and management of various public and private wastewater system projects throughout West Virginia. Specific project experience includes gravity sewers and low-pressure collection systems, pump stations, force main transmission systems, decentralized and alternative on-site disposal systems, and SCADA systems, and I/I reduction projects.

Storm Water Systems

Overall experience includes water management planning and facility design in West Virginia. Specific project examples include NPDES construction storm water permitting, SWPPP preparation, and design of detention and retention basins.

Matt T. Tanner, P.E.

Civil/Environmental Engineer



Years of Experience: 13
Years with Chapman: 1

Education

MSE, Environmental Engineering, 2019
(In Progress) Marshall University

BS, Engineering Mechanics 2005,
Lipscomb University

Registration

WV, TN, IL, MO, OH, PA, KS, AL, KY, MI, MD

Affiliations

Water Environment Federation
American Water Works Association

Projects Include

City of Saint Albans Municipal
Utility Commission
Wastewater Treatment Plant Improvements
(Saint Albans, WV)

Culloden Public Service District
Virginia Avenue Sewer Replacement and
Lift Station Relocation
(Culloden, WV)

Qualifications

Water Systems

Overall project experience includes design, permitting, and construction management of public and private water system projects. Specific project experience includes permitting and design of distribution system extensions and water treatment system modifications for public water system compliance.

Wastewater Systems

Overall experience includes design, permitting, bidding, construction administration and management of various municipal and industrial wastewater systems. Specific project experience includes gravity collection systems, forcemain transmission systems, stream crossings, industrial wastewater treatability studies, onsite wastewater treatment systems, and municipal and industrial wastewater treatment facility improvements.

Storm Water Systems

Overall experience includes stormwater control and management design and permitting in West Virginia, Kentucky, Ohio, and Tennessee. Specific project examples include NPDES construction stormwater permitting, NPDES Multi-Sector Stormwater permitting, SWPPP preparation, and design of stormwater control and management best management practices.



SECTION V.

References

Client Testimonial Letters

REFERENCES



ZDS has worked on hundreds of projects in West Virginia including many with Governmental agencies.



We encourage you to call the references listed below:

1. **Chuck Smith**, Executive Director, Kanawha County Schools: (304) 348-6148, or (304) 395-9352; for projects with Kanawha County Schools.
2. **Gary Boyd**, Director of Facility Services, University of Charleston & WVU: (304) 357-4871, garyboyd@ucwv.edu; worked on projects at both WVU and University of Charleston involving MEP systems since 1990's.
3. **Amanda Washington**, Director of Facility Management, Monongalia County Schools: (304) 276-2373, amanda.washington@k12.wv.us; for projects with Kanawha County Schools.
4. **Amanda Kimble**, Director of Facilities, Tyler County Schools: (304) 758-2145, akimble@k12.wv.us; for renovations to Tyler Consolidated Middle/High School.



REFERENCES



- 1. Honorable Doug Martin
Mayor
Town of Davis
Post Office Box 207
Davis, WV 26260
(304) 259-5302

- 2. Mr. Bob Pingley
Operations Manager
City of Elkins
401 Davis Avenue
Elkins, WV 26241
(304) 636-1414

- 3. Honorable Scott James
Mayor
City of Saint Albans
1499 MacCorkle Avenue
Saint Albans, WV 25177
(304) 722-3355

- 4. Mr. Shannon Bailey, PE
Executive Director
Sanitary Board of Bluefield
100 Rogers Street
Bluefield, WV 24701
(304) 325-3681

- 5. Honorable Phil Serevicz
Mayor
Town of New Haven
Post Office Box 217
New Haven, WV
(304) 882-3203

Tyler County Schools

P.O. Box 25
Middlebourne, WV 26149
(304) 758-2145
Fax (304) 758-4566

A. Shane Highley, Superintendent

Linda Hoover, President
Katrina Byers, Vice-President
Dave Roberts, Member
Larry Thomas, Member
P.J. Wells, Member

February 4, 2020

To Whom It May Concern:

This letter is to recognize the outstanding performance of ZDS Design/Consulting Services regarding their team and services rendered to Tyler County Schools. ZDS worked with Tyler County Schools on the Tyler Consolidated Middle/High School HVAC Equipment Replacement Project.

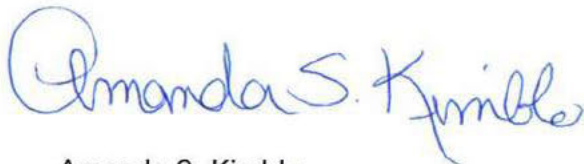
ZDS Design/Consulting Services are to be commended for their patience, diligence, and HVAC engineering expertise with our recent project. The project was complicated with funding and scheduling issues, and ZDS was able to overcome these hurdles and deliver a construction project that had very little issues. Their knowledge of the building systems and project construction administration were key.

From initial project planning, design development, bidding, construction administration, and closeout, ZDS was beside Tyler County Schools to provide any necessary support needed to make this project successful. Their professional team worked closely with our staff to ensure the design accommodated all of the needs for our students and staff.

It has been a pleasure working with the staff at ZDS. I wholeheartedly recommend ZDS Design/Consulting Services for projects similar to the scope of this one.

Please feel free to contact me if you may have any questions or comments.

Sincerely,



Amanda S. Kimble
Director of Support Services and Facilities
Email - akimble@k12.wv.us Office - # 304-758-2145



Michael Pickens

172 Oak Street

Dunbar, WV 25064

(304) 400-9993

RE: ZDS Design/Consulting Services

I have had the privilege to work with ZDS Design/Consulting Services' principals and many of their staff since working at the School Building Authority in the 1990's in my roles at the School Building Authority to my current role as Executive Director of the Office of School Facilities at the West Virginia Department of Education.

When an emergency issue arose, they would immediately make themselves available to help. ZDS's principal, Todd Zachwieja, did not hesitate to board a helicopter during a weekend to help assess the damage to the State's school facilities when damaging floods occurred. Helicopters were the only way to reach many of the facilities because the roads had been washed away or were impassible. Anytime a challenging issue has arisen that no one knew how to resolve, ZDS has stepped up to solve the challenges. Their extensive engineering knowledge of energy efficient systems, HVAC, controls, lighting, power and plumbing systems has always been at the leading edge in the industry, providing innovative solutions that also minimize energy and operating costs. I have always considered their approach in engineering design and commissioning for buildings to be the best and would highly recommend them to anyone.

Their ability to work with the State Fire Marshal and other agencies – while guiding everyone to a practical design approach – always provided each project with the best value. They are much more than excellent design engineers; they also understand the importance of operating and maintaining equipment and have hands-on knowledge to troubleshoot and also commission to ensure our projects were a great success. Their combined engineering design and commission skills prove to be invaluable.

ZDS Design/Consulting Services was also selected to help the WV Department of Education and the School Building Authority in writing new codes and standards to raise the bar for the entire State. They were chosen because their projects were a success while we were having challenges with others. Todd Zachwieja was also asked to teach school facility staff members, and his reference books continue to be used today. I would always think of ZDS first whenever a challenge would occur, knowing I would get the best results possible.

I trust ZDS's staff in their technical expertise and their approach in solving challenging engineering issues and believe that anyone who uses them will be as satisfied as I have been. They are worth it!

Sincerely,

A handwritten signature in blue ink that reads "Michael E. Pickens". The signature is written in a cursive style with a large initial "M".

Michael E. Pickens



ELSWICK & ASSOCIATES, LLC

To Whom It May Concern:

I am distinctly honored to provide this letter of recommendation for ZDS Design/Consulting Services to your organization. I have known ZDS's principals and many of their staff since working with Ted and Todd Zachwieja at West Virginia Institute of Technology located in Montgomery, WV, from the 1970's, while I was the Physical Plant Director there. That relationship continues through today. Their knowledge of energy efficient systems related to Heating, Ventilating, and Air-Conditioning (HVAC), Building Automation Systems (BAS), lighting, power distribution, and plumbing systems has always been at the cutting edge of the industry. They have routinely provided innovative solutions to complex design challenges while minimizing energy and operating costs and enhancing maintenance efficiency. I have always considered their approach to engineering design and commissioning systems first for higher education, hospitals and schools to be superior and I would recommend them to anyone.

Throughout my career I have continued my working relationship with Ted and Todd Zachwieja and Jim Watters while I was Director of Facilities Management at Charleston Area Medical Center (CAMC), General Division, located in Charleston, WV. During that time, they provided mechanical, electrical, and plumbing (MEP), engineering, and construction administration services for all areas of CAMC's facilities. Their knowledge of health care code and practical design approach always provided the uniqueness required for the scope of the work. They understood the importance of operating and maintaining equipment and used their hands-on knowledge to ensure all our projects were on schedule and within budget. As a matter of fact, Todd led the first energy services performance contract in West Virginia. Through Todd's leadership, CAMC saved in excess of \$800,000.00 annually in energy costs and those savings were used for mechanical, electrical, and infrastructure upgrades at all three CAMC divisions. Ted, Todd, and Jim also assisted in many other projects at all CAMC divisions, including commissioning the work implemented as part of the energy savings program. Their combined engineering design and commissioning skills proved to be invaluable.

I also worked with ZDS Design/Consulting Services while I was Director of Facilities, Planning and Management at Washington & Lee University in the 1990's. They designed, acted as the construction project manager and commissioned the campus chilled water plant and distribution system to address the needs of the growing campus while fast tracking the project from start to finish in just nine months. I would always think of ZDS first whenever I was faced with a challenge, knowing that I would get the best technical expertise available.

513 Havana Dr.
Charleston, WV 25311
304.542.8877

Likewise, ZDS helped establish one of the first performance contracting programs in the State of Ohio's higher education system for Ohio University, saving the Athens campus millions annually while the savings were used for the mechanical, electrical and building automation improvements to generate the savings.

I have the utmost confidence in the technical expertise, the collaborative approach and ethical standards of ZDS Design/Consulting Services. Furthermore, these individuals are truly honorable professionals. In this regard, if you have questions or need additional information, please don't hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Bill Elswick", with a stylized flourish extending to the right.

Bill Elswick, MBA, CEO

Boyd, Gary MA, CFP

2300 MacCorkle Ave. SE | 304 357-4871 | garyboyd@ucwv.edu

To Whom It May Concern

With well earned respect I would like to recommend ZDS as a high quality MEP design firm.

I have had multiple opportunities to work on highly technical projects with Todd Zachwieja and his team of skilled engineers. The first project that I had the opportunity to work with ZDS was a WVU project that connected several older chillers to develop a chilled water loop on the downtown campus. The project included piping through congested areas, load calculations, differential pressure and pump control, and load balancing. This project was designed to become a phased approach to a central chiller plant which is now in operation. The project was efficiently managed and the performance exceeded expectations. As the system changed and older chillers were removed from the loop, Todd always responded to questions and concerns to insure a positive outcome for the overall objective.

At present I am working with ZDS on a University of Charleston project constructing a new Innovation Center and Athletic Complex. ZDS has accommodated many twist and changes to this project. We are on track to open the new facility in December of this year. I have found Todd and his team to be highly responsive and professional.

Sincerely,



Boyd, Gary MA, CFP
Director of Facilities
University of Charleston

SECTION VI.

Attachments

State of WV Centralized Expression of Interest

Disclosure of Interested Parties to Contracts

Designated Contact Form

State of WV Purchasing Affidavit



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

State of West Virginia
 Centralized Expression of Interest
 Architect/Engr


Proc Folder: 884060			Reason for Modification:
Doc Description: BARBOURSVILLE SCHOOL WASTEWATER TREATMENT PLANT			
Proc Type: Central Purchase Order			
Date Issued	Solicitation Closes	Solicitation No	Version
2021-06-02	2021-06-23 13:30	CEOI 0506 BHS2100000004	1

BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Customer Code: 000000208495

Vendor Name:  ZDS 26+
Years of Service

Address: DESIGN/CONSULTING SERVICES

Street: 135 Corporate Center Drive, Suite 532

City: Scott Depot

State: West Virginia **Country:** USA **Zip:** 25560

Principal Contact: Todd A. Zachwieja

Vendor Contact Phone: 304-755-0075 **Extension:** 1001

FOR INFORMATION CONTACT THE BUYER
 Crystal G Hustead
 (304) 558-2402
 crystal.g.hustead@wv.gov

Vendor Signature X  **FEIN#** 550735995 **DATE** 06/23/2021

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

ADDITIONAL INFORMATION

THE WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES, IS SOLICITING EXPRESSIONS OF INTEREST FROM QUALIFIED FIRMS TO PROVIDE PROFESSIONAL ENGINEERING SERVICES FOR THE COMPLETE DESIGN PLAN FOR CONNECTING THE BARBOURSVILLE SCHOOL WASTEWATER TO THE EXISTING VILLAGE OF BARBOURSVILLE SEWER SYSTEM PER THE ATTACHED DOCUMENTATION.

QUESTIONS REGARDING THE SOLICITATION MUST BE SUBMITTED IN WRITING TO CRYSTAL.G.HUSTEAD@WV.GOV PRIOR TO THE QUESTION PERIOD DEADLINE CONTAINED IN THE INSTRUCTIONS TO VENDORS SUBMITTING BIDS

INVOICE TO	SHIP TO
HEALTH AND HUMAN RESOURCES BBH/HF 350 CAPITOL ST, RM 350 CHARLESTON WV 25301-3702 US	STATE OF WEST VIRGINIA JOBSITE - SEE SPECIFICATIONS No City WV 99999 US

Line	Comm Ln Desc	Qty	Unit Issue
1	Barboursville School Wastewater Treatment Plant Replacement		

Comm Code	Manufacturer	Specification	Model #
72121505			

Extended Description:

The mission or purpose of the project for which bids are being solicited is to provide engineering services for the design involving a wastewater treatment plant at The Barboursville School located at:

1535 Martha Rd.
Barboursville, WV 25504

There will be no federal funds used on this project.

SCHEDULE OF EVENTS

Line	Event	Event Date
1	VENDOR QUESTION DEADLINE	2021-06-11

West Virginia Ethics Commission
Disclosure of Interested Parties to Contracts

(Required by W. Va. Code § 6D-1-2)



Name of Contracting Business Entity: _____ Address: 135 Corporate Center Drive, Suite 532
Scott Depot, WV 25560

Name of Authorized Agent: _____ Address: _____

Contract Number: _____ Contract Description: _____

Governmental agency awarding contract: _____

Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (attach additional pages if necessary):

1. Subcontractors or other entities performing work or service under the Contract

Check here if none, otherwise list entity/individual names below.

2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)

Check here if none, otherwise list entity/individual names below.

3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)

Check here if none, otherwise list entity/individual names below.

Signature: Todd A. Zachwieja Date Signed: 06/23/2021

Notary Verification

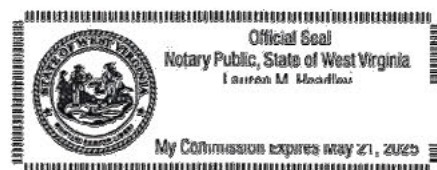
State of West Virginia, County of Kanawha:

I, Todd A. Zachwieja, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this 23rd day of June, 2021.

Lauren M. Headley
Notary Public's Signature

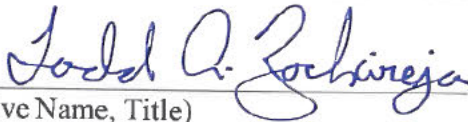
To be completed by State Agency:
Date Received by State Agency: _____
Date submitted to Ethics Commission: _____
Governmental agency submitting Disclosure: _____



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.

ZDS Design/Consulting Services
(Name, Title)
Todd A. Zachwieja, Principal/CEO
(Printed Name and Title)
135 Corporate Center Drive, Suite 532, Scott Depot, WV 25560
(Address)
(304)755-0075 / (304)755-0076
(Phone Number) / (Fax Number)
todd.zachwieja@zdsdesign.com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand 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.

ZDS Design/Consulting Services
(Company)

(Authorized Signature) (Representative Name, Title)
Todd A. Zachwieja, Principal/CEO
(Printed Name and Title of Authorized Representative)
06/23/2021
(Date)
(304)755-0075 / (304)755-0076
(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 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: (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: ZDS Design/Consulting Services

Authorized Signature: *Todd A. Zochewicz* Date: 06/23/2021

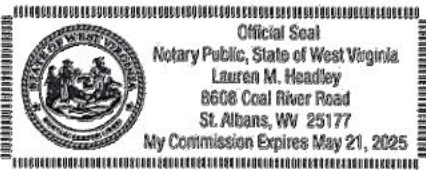
State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 23rd day of June, 2021.

My Commission expires May 21, 2025.

AFFIX SEAL HERE



NOTARY PUBLIC

Lauren M. Headley