Civil & Environmental Consultants, Inc.






WEST VIRGINIA DIVISION OF CORRECTIONS AND REHABILITATION

# DENMAR CORRECTIONAL CENTER AND JAIL NEW WATER TREATMENT PLANT DCR2400000002

CEC | BRIDGEPORT
Project 342-626
May 7, 2024

May 7, 2024

State of West Virginia
Division of Corrections and Rehabilitation
WV Division of Administrative Services
1409 Greenbrier Street
Charleston, WV 25311

Dear Mr. Farley:

Subject: Expression of Interest – AEOI 0608 DCR 2400000002
A/E Services for Denmar Correctional Center and Jail – New Water Treatment Plant
CEC Project 342-626

Civil & Environmental Consultants, Inc. (CEC) values the opportunity to continue our relationship by providing the State of West Virginia—Division of Corrections and Rehabilitation (WVDCR)—with professional services to evaluate, design, and provide construction administration services for a new water treatment plant at the Denmar Correctional Center and Jail in Pocahontas County, West Virginia.

CEC is a local, full-service engineering firm that proudly offers water and wastewater engineering design capabilities in West Virginia. David Watson (Project Manager), Matthew Fluharty, PE, Steve Buchanan, PE, PS, Travis Adams (water treatment expert), and Jason Heflin, bring a combined 120+ years of design experience in water and wastewater engineering to CEC. The Bridgeport office has seen continual growth in staff and clientele since opening in 2012, offering civil, environmental, and survey services to clients to meet their specific needs. Our Bridgeport office currently employs a professional staff of 125 engineers, scientists, surveyors, and technicians.

The water and wastewater design professionals in CEC's Bridgeport, WV office have the experience to maintain constant contact with the owner during each phase of the project. CEC will communicate with the owner during the preliminary design phase to clearly establish the project goals and objectives, budget to design and plan accordingly. Throughout the design process, the owner will be communicated with to ensure the construction of the design can be successfully completed while also minimizing disruption to the correctional center operations. Once the final design is accepted, the professionals at CEC will be able to follow the bidding requirements necessary to acquire a qualified Contractor to construct the project. CEC can then provide the WVDCR with construction management to include construction quality assurance and construction management to ensure the project is constructed as designed and completed within the project budget.

In regard to the project budget, the total will be broken into specific items that can be quantified and progressively tracked throughout to ensure the project remains on track to meet the established budget. The design professionals at CEC have extensive experience monitoring design budgets and construction management to ensure the project can be completed on time and within budget without costly change orders or amendments.

We trust the enclosed qualifications will provide the WVDCR with the information you need to assess our qualifications to successfully complete your project. Should you have any questions or require additional information, please do not hesitate to contact the undersigned at 304-841-2089 or email at dwatson@cecinc.com.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

David Watson
Project Manager

Steve Buchanan, PE, PS
Principal

# PROFESSIONAL ENGINEERING & CONSULTING SERVICES FOR DENMAR CORRECTIONAL CENTER AND JAIL

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# 1.0 Firm Overview

In 1989, four engineers and scientists came together with a singular vision: to be a people-first company, one that promotes a culture where clients and employees enjoy working together, and that is responsive to client needs with integrated services and high-quality work for projects both complex and routine. More than 35 years later, Civil & Environmental Consultants, Inc. (CEC) has 1,500+ team members in offices nationwide. Headquartered in Pittsburgh, Pennsylvania, we are consistently ranked on Engineering News-Record's annual lists of the Top Design Firms and Top Environmental Firms in the nation.

CEC is an expanding, multi-disciplined company that is home to:

- Civil Engineers
- Geotechnical Engineers
- Transportation Engineers
- Structural Engineers
- Environmental Scientists
- Environmental Engineers
- Chemical Engineers
- Geologists
- Hydrogeologists
- Hydrologists
- Ecologists
- Biologists
- Wetland Scientists
- Threatened & Endangered Species Experts
- Agronomists/Soil Scientists
- Emissions Testing Professionals
- Meteorologists
- Chemists
- Archaeologists
- Construction Managers and Inspectors
- Environmental Technicians
- Treatment Plant Operators
- Land Surveyors
- Landscape Architects
- GIS Analysts and Programmers

## CEC West Virginia

CEC's Bridgeport and Charleston offices are comprised of senior leaders, engineers, project managers and support staff all with significant private and public infrastructure planning, project funding, design and engineering experience. The offices are adequately staffed with a variety of professionals to ensure appropriate staff is assigned to any task.

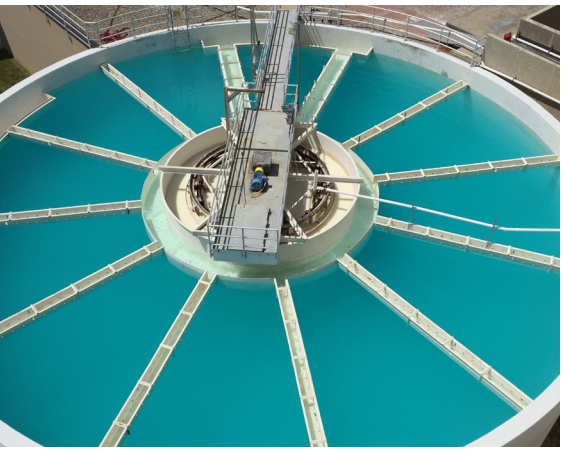
The Bridgeport and Charleston offices enjoy a positive relationship with local, regional and state regulatory officials. These relationships are critical to navigating the permitting process through the increasingly difficult regulatory environment. CEC understands the length of time required for permitting tasks and can assist the client in developing accurate project schedules. CEC also has significant experience working with local contractors on similar development, roadway, and utility projects throughout West Virginia. This knowledge of local construction techniques and a thorough understanding of the design and operation/maintenance of public infrastructure provide a technical advantage to CEC.

CEC's team provides a balance of public and private sector experience that allows us to offer an exceptional prospective to our consulting services. Our team has proven experience in both private and public sector projects throughout West Virginia, meeting intensive schedules for projects and locally funded projects while maintaining quality work.

Civil & Environmental Consultants, Inc.

# Municipal Drinking Water Treatment

**CEC offers engineering, design, and construction services to provide new or improved water treatment facilities or expansions to existing water treatment facilities for municipal drinking water systems.**



CEC engineers and scientists provide comprehensive services to study and design new facilities, or modify, expand or replace existing facilities.

## LARGER SURFACE WATER & GROUNDWATER PLANTS

CEC designs larger surface water treatment facilities and groundwater plants that clarify and/or soften raw water with lime or lime and soda ash. CEC designs chemical storage, feed systems, and treatment processes for:

- Taste and Odor Control
- Clarification (turbidity removal)
- Softening
- Iron and Manganese Removal
- Stabilization
- Disinfection
- Organics Removal
- PFAS/PFOS Removal and Regulatory Compliance

CEC also designs solids handling, storage, and disposal facilities.

## SMALLER GROUNDWATER PLANTS

CEC designs smaller groundwater treatment plants to remove methane, iron, arsenic manganese, and hydrogen sulfide. Aeration and chemical oxidation systems are designed to convert soluble iron and manganese into elemental iron and manganese for removal by either gravity or pressure filters.

CEC can further reduce any remaining soluble manganese after aeration and chemical oxidation by using synthetic greensand filter media in lieu of conventional sand media. The greensand is maintained by feeding the proper amount of potassium permanganate.

Natural water hardness can be reduced to locally acceptable levels with an optional cation exchange process. Treated water is stabilized with a sequestering chemical and disinfected before being pumped to users.

## MEMBRANE SYSTEMS

When conditions require advanced treatment technologies, CEC designs pre-treatment processes needed for the successful use of membrane technologies. In addition, CEC works with suppliers to design and specify membrane systems that treat water to very high quality standards.

## TREATED WATER STORAGE & PUMPING

CEC designs finished water storage and booster pump stations to meet EPA maximum day requirements plus fire flow conditions. When conditions require, designs for elevated storage tanks or ground storage and pump stations provide and maintain local distribution system pressure requirements.

Civil & Environmental Consultants, Inc.

# Municipal Water Distribution Systems

**CEC provides engineering, design, and construction services for new and/or improved capabilities of municipal water distribution systems.**

CEC provides municipalities with full-service capabilities including studies, analysis, and engineering, and also can provide additional support for:

- Financing and Funding
- Surveying
- Design Drawings and Specifications
- Bidding- and Construction-Related Services
- Leak Detection Services

## DISTRIBUTION ANALYSIS

CEC hydraulically analyzes existing and proposed transmission mains and local lines of a community's water distribution system. The analyses identify lines and areas requiring upgrading or reinforcing to meet local needs, Fire Underwriters Survey recommendations, and EPA requirements. Thorough hydraulic analyses of distribution systems and storage tanks can provide strategies for additional or replacement water storage tanks.

## ELEVATED AND GROUND STORAGE TANKS

CEC designs elevated water storage tanks and standpipes to provide water ready for delivery without pumping. Storage tanks that float hydraulically on the system stabilize pressures, provide water for firefighting, and allow plants to treat water at a more constant rate where their operation works best and is most efficient.

CEC also designs ground storage tanks with pumping facilities as an economical alternative to elevated storage tanks. CEC designs and prepares final drawings and specifications for bidding tanks, and provides construction-related services.

## PUMP STATIONS

Pump stations are used to boost area pressures and to separate pressure zones hydraulically. This commonly occurs in larger systems or when surface topography reduces area pressures significantly. CEC analyzes the community's specific needs and designs in-line booster pumps or pump stations with associated ground or elevated storage to increase area pressures.

Civil & Environmental Consultants, Inc.

# Civil Engineering & Site Development

**CEC provides civil engineering and site development consulting services to assist with the development of cost-effective designs to meet regulatory and client requirements.**

CEC has extensive experience preparing regulatory permits and managing the design, approval, and on-site construction processes associated with the site development of multi-building campuses, commercial, industrial and retail developments, institutional and educational facilities, and residential developments. CEC has developed a reputation for developing high-quality, sustainable and “buildable” design solutions within construction budgets.

## PREDEVELOPMENT SITE INVESTIGATIONS

CEC provides predevelopment investigation services to evaluate sites for specific uses, addressing site layout, zoning adherence for parking and setbacks, site access, wetlands and other environmental considerations, geotechnical concerns, grading/earthwork, and utility availability and capacity.

## CIVIL DESIGN AND PERMITTING

CEC has extensive design experience and a proven track record of successfully obtaining local, state, and federal erosion and sedimentation control (E&S) permits and/or regulatory approvals and has a working knowledge of the various state and federal E&S and National Pollutant Discharge Elimination System (NPDES) regulations and requirements. Civil design and permitting services include:

- Site Grading/Earthwork Analysis
- Erosion and Sedimentation Control/NPDES Permitting
- Stormwater Management/Water Quality Design
- Utility Design/Coordination
- Roadway Design and DOT Permitting
- Sustainability Planning and Design

## LANDSCAPE ARCHITECTURE AND PLANNING

CEC provides a diverse range of landscape architecture design services for site and land development, master development planning, feasibility studies, landscape design, green infrastructure and irrigation. CEC is recognized for leadership in applying sustainable design, green infrastructure and low-impact design solutions. CEC’s services include the preparation of graphic renderings, photo manipulation services and 3-D modeling visualizations.

## GEOTECHNICAL ENGINEERING

CEC provides geotechnical engineering services to determine foundation and retaining wall design parameters, develop site grading requirements, design pavements, and investigate slope stability, mine subsidence, landslides, and foundation failures.

## CONSTRUCTION SERVICES

CEC routinely monitors the construction of earthmoving operations, the installation of erosion control measures and building construction. CEC provides certified technicians for testing of soils, concrete, masonry, steel and fireproofing. Technicians are certifiedto meet International Building Code (IBC) Special Inspection requirements and provide construction quality assurance and construction management services for a wide range of civil, geotechnical, environmental and waste management projects.

Civil & Environmental Consultants, Inc.

# Civil Engineering & Site Development

## SITE INFRASTRUCTURE MAINTENANCE AND REHABILITATION SERVICES

CEC engineers, construction managers and field superintendents perform infrastructure assessments, develop recommendations to correct concerns, and deliver cost-effective repair, rehabilitation and maintenance services for site infrastructure, including stormwater facilities, site utilities, landscaping, parking lots and pavement.

CEC inspects, monitors, maintains, restores, repairs and improves property infrastructure. The need for such services can arise from damage, age, poor maintenance of systems, and/or changing regulatory requirements.

Civil & Environmental Consultants, Inc.

# Geotechnical Engineering

**CEC offers comprehensive geotechnical engineering services to planners, public agencies, industry, architects, developers, and contractors.**

CEC supports the client's geotechnical needs throughout a project – from assistance with site selection through construction. As a full-service consulting firm, CEC geotechnical engineers work in-house with other disciplines during projects. This results in a more comprehensive approach to project planning and early identification of geotechnical-related issues. It also results in a more cost-effective approach to site development.

During the site selection or the planning phase of a project, CEC offers the following services:

- Geotechnical Desktop Survey
- Site Reconnaissance
- Geo-Hazard Assessment

As a project progresses, CEC geotechnical engineers support conceptual designs and conduct investigations to assess development and construction issues. Projects include:

- Commercial and Residential Buildings
- Industrial and Office Park Developments
- Industrial Facilities
- Dams

During the design phase, CEC geotechnical engineers perform analyses, prepare reports, and support the preparation of drawings and specifications. Analyses and designs performed include:

- Earthwork Design and Recommendations
- Foundation Analysis and Design
- Grouting and Ground Improvement Design
- Landslide Investigation and Stabilization
- Mine Subsidence Investigations, Risk Assessments, and Stabilization
- Pavement Analysis and Design
- Seepage Analyses
- Soil and Bedrock Stabilization
- Slope Stability and Retaining Structure Design
- Subsurface Investigation, Sampling, and Testing

Prior to and during construction, CEC can support project bidding and contractor selection, as well as provide construction oversight and inspection services. CEC's skilled field engineers and technicians have experience inspecting:

- Fill Placement and Earthwork Operations
- Deep and Shallow Foundation Construction
- Landslide and Deep Mine Stabilization
- Pavement Installation
- Retaining Wall Construction
- Concrete Construction
- Building Materials

Additionally, CEC engineers and technicians often provide construction management services and/or design-build services. Additional professional consulting services provided by CEC include forensic analyses, as well as litigation support on projects such as mine subsidence, retaining wall failures, landslides, and groundwater issues.

Civil & Environmental Consultants, Inc.

# Construction Management

**CEC engineers, construction managers, and field superintendents provide tailored Construction Management (CM) services to deliver seamless completion of projects. CEC's proactive approach saves time and cost while providing quality results that achieve client objectives.**

## CONSTRUCTION MANAGEMENT APPROACH

CEC provides CM services as an agency or as an Owner's Representative, as well as CEC-led Design/Build arrangements to provide a turnkey solution. CEC's collaborative team approach enables early, impactful decisions about a project's design intent, schedule, budget, materials, and more. As the Construction Manager, CEC acts as the Owner's Representative and advocate, managing the construction trades, budgeting, and scheduling. Trade contracts are "held" either by the owner or by CEC as the Construction Manager. In a Design/Build approach, where CEC is responsible for both design and construction of a project, CEC contracts directly with the Owner and is fully responsible for the delivery of the project. CEC's typical Design/Build approach is to offer an integrated team with CEC providing design and engineering on a turnkey basis.

The benefits of a CEC-led CM approach are:

- Builder/contractor selection flexibility
- Early input on constructability
- Early budget and schedule input/control
- Faster schedule delivery
- Owner advocacy

CEC provides a single point of responsibility for both design and construction.

## CONSTRUCTION MANAGEMENT SERVICES

CEC's suite of construction-related services provides for client advocacy and confidence while we deliver projects in many forms, including:

- Pre-Construction
- Project Administration
- Construction Inspection
- Constructability Reviews
- Project Controls and Document Management
- Scheduling
- Cost Estimating
- Cost Control and Value-Engineering
- Change Order Management
- Claims Management and Resolution
- Quality Assurance
- Startup and Testing
- Project Close-out

## CONSTRUCTION MANAGEMENT EXPERIENCE

CEC has delivered on-schedule and on-budget quality construction management for a variety of projects, including:

- Site Development
- Earthwork and Grading
- Site Utility Construction
- Soil and Groundwater Remediation
- Landslide Repair and Remediation
- Erosion & Sedimentation Controls Installation
- Wetland and Stream Restoration
- Access Road Rehabilitation and Construction
- Mine Grouting
- Soil Retention Systems
- Paving
- Post-Construction Restoration

Civil & Environmental Consultants, Inc.

# Survey/Geospatial Services

**With a seasoned team of registered professionals and survey staff, combined with cutting-edge technology and equipment, CEC offers a full range of surveying and geospatial services both on land and in water that meet the changing needs of clients.**

## LAND SURVEYING

CEC surveyors have a depth of professional experience combined with advanced technical skills to locate, analyze, and map property boundaries and existing conditions for a variety of land use and development purposes. From reviewing aged deeds to utilizing the latest survey technology, reconciling boundary and title exceptions, and preparing high-quality documents and deliverables, CEC surveyors are proven expert measurers. Licensed professionals are experienced with various agency and governmental requirements, as well as state and national survey standards. Robust professional capabilities, specialized experience, and technical competence and capacity allow CEC to provide the following surveys:

- Boundary and ALTA/NSPS Land Title
- Topographic, Utility, and As-Built
- Horizontal and Vertical Control
- Construction Surveys and Staking
- Volumetric
- Settlement and Deformation Monitoring
- Route and Right-Of-Way
- Roadway and Railway

## BATHYMETRIC/HYDROGRAPHIC SURVEYS

CEC performs bathymetric/hydrographic surveys using its in-house fleet of survey vessels and depth-sounding equipment to satisfy diverse industry needs for mapping underwater environments. Our vessels are outfitted with required United States Coast Guard (USCG) safety equipment and are operated by CEC personnel with a USCG Captain's License and/or safe boat operation training, and who have been trained to work in aquatic environments.

CEC collects comprehensive bathymetric data to assist manufacturing, mining, natural gas, power, and transportation companies with projects requiring accurate water depth/ bottom surface elevation data. Capabilities and services include:

- Dual-Frequency and Side-Scan Capabilities
- Manned and Autonomous Survey Vessels
- Pre- and Post-Dredging and Demolition Surveys
- River, Harbor, and Impoundment Surveys
- Maintenance Dredging Scans
- Draft and Trench Verification
- Storage Volumes and Resident Time Calculations
- Utility Crossing Alignment Surveys
- Horizontal Directional Drilling (HDD) Scans

## UNMANNED AERIAL SYSTEMS (UAS)

CEC utilizes UAS to conduct site inspections, topographic surveys, construction site monitoring, stockpile and landfill volumetric calculations, vegetation analyses, optical gas imaging, and other similar projects. UAS provide a cost-effective, low-environmental-impact solution that optimizes the quality and value of collected data.

# 2.0 Project Goals and Objectives

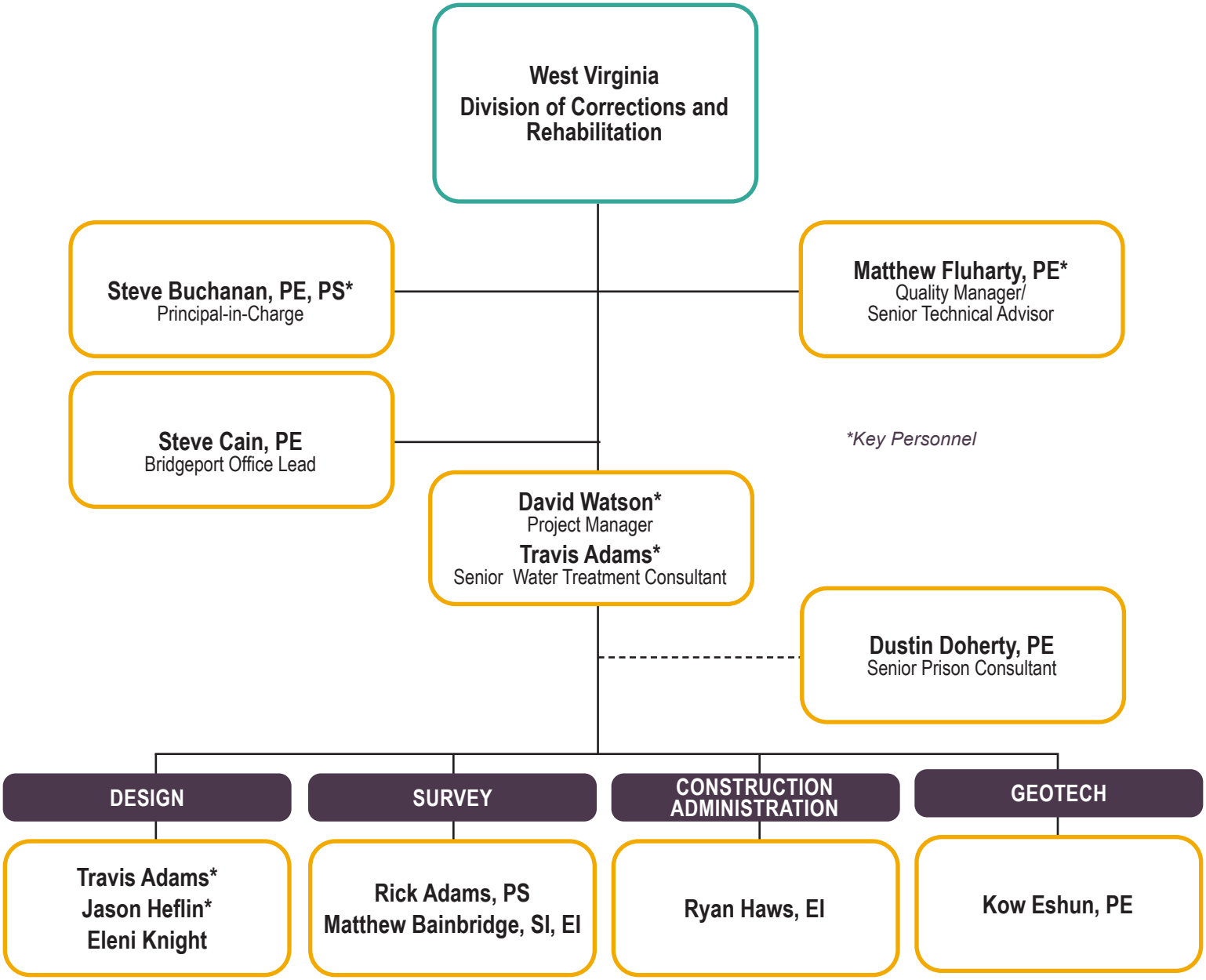
The goals and objectives for the Denmar Correctional Center and Jail (DCC&J) water treatment plant project primarily consist of the following:

- Demolition of the existing water treatment plant and replacing it with a new water treatment plant.
- The Correctional Center will continually be in operation during the entire time of the construction period. The new water treatment plant can be constructed in close proximity to the existing water treatment plant.
- Detailed design of the new water treatment plant.
- Preparation of bidding and contract documents.
- Evaluation of bids received.
- Project award and pre-construction conference.
- Construction phase monitoring and inspection services to ensure compliance with plans and specifications.

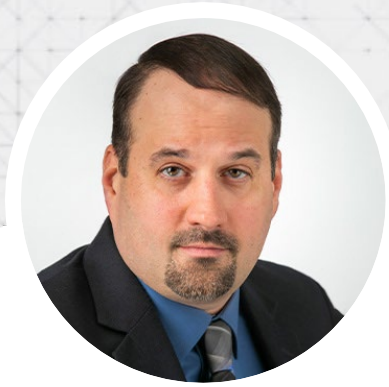
The West Virginia Division of Corrections and Rehabilitation is proposing to replace the existing Denmar Correctional Center and Jail (DCC&J) water treatment plant with a new water treatment plant. The existing water treatment plant is over seventy (70) years old and has reached the end of its useful life.

The Denmar Correctional Center and Jail is a medium-security correctional center that houses 232 offenders and has 110 staff. The existing water treatment plant gets its raw water from the Greenbrier River. Once the raw water is treated, the potable water is pumped to a 300,000 gallon glass-lined water storage tank located on the mountain above the facility. The potable water is used for both domestic and fire protection. The existing WTP currently operates at 150 gallons per minute. The existing river intake will be investigated to determine if any parts of the system can be reused and incorporated into the new WTP. During the design phase, existing water usage records will be analyzed to determine the correct size for the new WTP. Civil and Environmental Consultants, Inc. (CEC) will prepare construction plans, specifications, design report, along with required WV Health Department forms in order to obtain a permit for the new WTP. Additional permits may consist of U.S. Army Corps of Engineers and WVDNR Office of Lands and Streams. CEC will assist the West Virginia Division of Corrections and Rehabilitation during the bidding phase of the project by addressing questions and evaluating bids received. CEC will participate in the award of the project and attend the pre-construction conference held at the DCC&J. Additionally, CEC will review submittals, attend construction progress meetings, and provide inspection services if requested by the WV Division of Corrections and Rehabilitation.

# 3.0 Project Team



# Matthew Fluharty, P.E.
## Vice President



### 24 YEARS OF EXPERIENCE

### EDUCATION

B.S., Civil Engineering, West Virginia University, 2000

### EXPERTISE

Water Hydraulics

Pumps

Hydraulic Modeling

Wastewater and Water Treatment

Water Storage Tanks

Fire Pumps

### REGISTRATIONS

Professional Engineer
- WV 16375
- PA PE076002
- MD 33491
- OH 75521

### CERTIFICATIONS

10-hour Construction Safety, Occupational Safety & Health Administration

SafeLand USA - Basic Orientation, PEC Safety

Mr. Fluharty has 24 years of experience in the engineering and consulting industry servicing private commercial and industrial, Oil and Gas, and government sectors. His project practice focus includes the design and engineering of fluid hydraulics, hydraulic modeling and treatment systems, Mr. Fluharty's engineering experience include: detailed engineering including water pipelines and pumping stations, water storage tanks, plant layouts, equipment sizing and selection, hydraulics analysis; plans and specifications for bidding and construction; engineering cost estimating including project control-level budgeting and life-cycle costs; bidding and procurement; project planning and permitting. He has worked with a variety of projects including wastewater, raw water, produced water, and brine water.

### PROJECT EXPERIENCE

**Public Utilities - Water and Wastewater**

**Water Distribution and Water Treatment Improvements, City of Thomas, Thomas, West Virginia**
**Role**: Principal Engineer
Severing as the Principal Engineer to oversee the detailed design plans and specifications, project permitting, bidding, and construction support. This project involves the necessary improvements to the City's existing water treatment and water distribution systems. A complete hydraulic model was built with KY Pipe software to asses the required improvements to the water system. This project involves water line replacement, ns, new water storage tanks, new booster pump stations, new telemetering system, and a new 600 GPM water treatment plant.

**Water Distribution and Water Treatment Improvements, Town of West Union, West Union, West Virginia**
**Role**: Principal Engieer
Serving as Principal Engineer for this project. This project involves the necessary improvements to the Towns existing water treatment and water distribution systems. A complete hydraulic model was built with KY Pipe software to asses the required improvements to delivery additional water to a Regional Jail and provide future growth in the local area. This project involves several water line replacements, new water line extension, new control valve stations, new water storage tanks, new booster pump stations, new telemetering system, and a new 1,000 GPM water treatment plant.

**Water Distribution and Water Treatment Improvements, Town of Coalton, Coalton, West Virginia**
**Role**: Project Manager
Served as Project Manager for this project. I over saw the funding, design, permitting, bidding, and construction for this project. This project will involve the replacement of the existing potable water distribution system with 6”, 4" and 2” water lines, refurbishing the existing 100,000-gallon water storage tank, replacing the existing 100 GPM water treatment plant and the installation on new meter pits with new meters.

**Water Line Replacement Project, City of Bridgeport, Bridgeport WV**
**Role**: Design Engineer

# Matthew Fluharty, P.E.
## Vice President

Served as the design engineer for the water line replacement project. Project involved the replacement of approximately 6,000 linear feet of water line, installation of new main line valves, fire hydrants, meter setting, and service tubing. Additionally, this project involved the necessary permits, detailed specifications and contract documents, bidding, and construction support.

**Charles Point Water System, Bridgeport Utility Board, Bridgeport Harrison, WV***
**Role**: Project Engineer
Water system extension for proposed new development of Charles Pointe and the new United Hospital Center. Project involved the construction of 16" and 12" water line distribution system, two 500,000 gallon water storage tanks, 700 GPM booster pump station, and telemetering system.

**Water Distribution and Water Treatment Support, Clarksburg Water Board, Clarksburg Harrison, WV***
**Role**: Project Manager
Severed as General Engineer for the Clarksburg Water Board on various projects and tasks. Related projects, Perry Hollow water line extension, Cedar Heights water system improvements, water storage tank rehabilitation, Chestnut Street water line replacement, Farland Avenue River Crossing, VA Park river crossing, Upgrades to electrical generator for 20 MGD water treatment plant, replacement of 8,000 water meters with automatic read.

**Southern Lewis County Water Line Extension Project, Lewis County Commission and Lewis County EDA, Lewis County, WV***
**Role**: Project Manager
Water line extension project involving approximately 42 miles of water line to serve 400 new customers. Project involved two (2) new 100,000 gallon glass-lined bolted steel water tanks and a 200 GPM booster pump station. Project provided water service along Georgetown Road to US RT 119 and served the communities of Walkersville, Ireland, Duffy, and Vandalia.

**Hodgesville Water Line Extension Project, Hodgesville Public Service District, Upshur County, WV***
**Role**: Project Engineer
Water distribution extension involving approximately 30 miles of water line to serve 250 new customers. Project involved a new 240,000 gallon welded steel water tank and a 250 GPM package water booster pump station and telemetering system.

**State Route 5 Water Line Extension Project, Gilmer County Public Service District, Glenville Gilmer, WV***
Water line extension project to extend water service throughout Gilmer County. Project involved the construction of 19 miles of water line to serve 115 new customers.

**Water Line Extension Project, Masontown Water Works, Masontown WV***
**Role**: Project Manager
Water line extension project involving 15 miles of water line to extend to 90 new customers. Project also involved adding additional 250,000 gallon water storage tank, 200 GPM booster pump station, solenoid operated pressure reducing valve station, and telemetering system.

**1.2M Gallon Water Storage Tank Replacement, Kingwood Water Works, Kingwood, WV***
**Role**: Project Manager
Project involves the replacement of an existing water storage tank with a new 1,200,000 gallon water storage tank and valve vault, and a new 100 GPM constant pressure booster station.

**Water Treatment Plant Upgrades, City of Parsons, Parsons, WV***
**Role**: Project Engineer
This project involved the replacement of the existing clearwell with a new 500,000 gallon glass lined water storage tank, new backwash pump station, new filter to waste piping, and new plant water pump supply system.
** Work performed prior to joining CEC*

**PROFESSIONAL AFFILIATIONS**

American Water Works Association

American Society of Civil Engineers

# Steven V. Buchanan, P.E., P.S.
## Principal

### 40 YEARS OF EXPERIENCE

### EDUCATION

B.S., Civil Engineering, West Virginia University, 1984

### REGISTRATIONS

Professional Engineer
- WV 11060
- PA 040992-R
- MD 26197
- OH 67421

Professional Surveyor
- WV 1009

Steve has civil engineering experience in both the private and public sectors in the areas of highway engineering, traffic engineering, site engineering, municipal engineering, potable water engineering, wastewater engineering, passive acid mine drainage treatment engineering, miscellaneous engineering experience, and surveying. This broad ranged experience allows him to approach projects comprehensively. Representative project experience related to the project(s) for which this statement of qualifications is made includes the following:

### PROJECT EXPERIENCE

**Potable Water Engineering**

**Bath Water System Improvements Phase IV, Berkeley Springs Water Works, Berkeley Springs (Bath), West Virginia***
**Role**: Engineer
Design and construction administration.

**Middlebourne Water Treatment Plant Improvements and Water System Improvements, Town of Middlebourne, Middlebourne, West Virginia***
**Role**: Engineer
Construction administration.

**Paw Paw Water System Improvements, Town of Paw Paw, Paw Paw, Morgan County, West Virginia***
**Role**: Engineer
Design and construction administration.

**Terra Alta Water System Improvements, Town of Terra Alta, Terra Alta, Preston County, West Virginia***
**Role**: Engineer
Design.

**Fowler Road Water Line Extension, Southwestern Public Service District, Taylor County, West Virginia***
**Role**: Engineer
Design and construction administration.

**Pennsboro Phase I Water System Improvements, City of Pennsboro, Pennsboro, West Virginia***
**Role**: Engineer
Design.

**Chestnut Ridge Public Service District Water System Improvements, Chestnut Ridge Public Service District, Barbour County, West Virginia***
**Role**: Engineer
Design.

# Steven V. Buchanan, P.E., P.S.
## Principal

**Clarksburg Water Board Phosphate System, Clarksburg Water Board, Clarksburg, West Virginia***
**Role**: Engineer
Design and construction administration.

**Clarksburg Water Source Water Advance Warning System, Clarksburg Water Board, Clarksburg, West Virginia***
**Role**: Engineer
Design.

**Lewis County Economic Development Authority Alum Fork and Laurel Lick Water Line Extensions, Lewis County Economic Development Authority in cooperation with West Virginia American Water Company, Lewis County, West Virginia***
**Role**: Engineer
Design and construction administration.

**Lewis County Economic Development Authority Northwest Water Line Extensions, Lewis County Economic Development Authority in cooperation with West Virginia American Water Company, Lewis County, West Virginia***
**Role**: Engineer
Construction administration.

**New Cumberland Water Treatment Plant Improvements and Water System Improvements, City of New Cumberland, New Cumberland, Hancock County, West Virginia***
**Role**: Engineer
Design and construction administration.

**West Virginia University Evansdale Campus Water Pump Station, West Virginia University, Morgantown, West Virginia***
**Role**: Engineer
Design and limited construction administration.

**Arlington/Glen Falls Water Line Replacement, Clarksburg Water Board, Clarksburg, Harrison County, West Virginia***
**Role**: Engineer
Design and construction administration.

**South Chestnut Street Water Transmission Line Replacement, Clarksburg Water Board, Clarksburg, West Virginia***
**Role**: Engineer
Design.

**Clay-Battelle Public Service District Water System Improvements, Clay-Battelle Public Service District, Monongalia County, West Virginia***
**Role**: Engineer
Design and construction administration.

**Fountain Public Service District Water System Improvements, Fountain Public Service District, Mineral County, West Virginia***
**Role**: Engineer
Design and construction administration.

**Piedmont Water Treatment Plant Improvements and Water System Improvements, City of Piedmont, Piedmont, West Virginia***
**Role**: Engineer
Design and construction administration.
** Work performed prior to joining CEC*

# David L. Watson
## Senior Project Manager

## 29 YEARS OF EXPERIENCE

### EDUCATION

B.S., Civil Engineering Technology, Fairmont State University, 1995

Mr. Watson has many years of experience in the engineering and consulting industry servicing private commercial and government sectors. His project practice focus includes design and engineering of fluid hydraulics, hydraulic modeling, pumping stations, water distribution systems, and sanitary sewer collection systems. Mr. Watson's engineering experience includes: detailed engineering including water pipelines and pumping stations, water storage tanks, sanitary sewer collection systems and pumping stations, plans and specifications for bidding and construction, engineering cost estimating, bidding and procurement, project planning and permitting. He has worked on numerous projects involving wastewater and potable water in West Virginia.

### PROJECT EXPERIENCE

**Wastewater Treatment Plants**

**Donald R. Kuhn Juvenile Center Wastewater Treatment Plant, State of WV Division of Corrections and Rehabilitation, Julian, West Virginia**

**Role**: Project Manager

Serving as Project Manager for a $3.2 million dollar project that consists of replacing an existing packaged wastewater treatment plant. This project proposes to install a 20,000 GPD Packaged Sequencing Batch Reactor (SBR) WWTP consisting of two (2) SBR tanks, floating decanters, mixers, fine bubble diffusers, rotary positive displacement blowers, sludge wasting pumps, and ultraviolet disinfection system. A new duplex submersible pump station is to be installed along with a new mechanical screening unit ahead of the SBR WWTP.

**Town of Junior Sewer Plant Upgrade, Town of Junior, Town of Junior***

**Role**: Project Manager

Served as Project Manager for a $3 million dollar project that consisted of upgrading the Junior Wastewater Treatment Plant from 140,000 GPD to 280,000 GPD. Upgrade was needed to handle increased sewer flows from Norton Harding Jimtown Public Service District. Upgrades consisted of the following: Installation of a new clarifier, conversion of existing sludge holding tank to a clarifier, conversion of two (2) clarifiers to sludge holding tanks, installation of a new concrete oxidation ditch, site piping and electrical work, and abandonment and removal of existing oxidation ditch.

**Stonewall Resort Wastewater Treatment Plant Improvements, Stonewall Resort, Roanoke, West Virginia**

**Role**: Project Engineer

Served as Project Engineer for a $800,000 project that consisted of upgrading the existing 100,000 GPD package wastewater treatment plant located at Stonewall Resort in Lewis County, West Virginia. Upgrades consisted of a new ultraviolet disinfection system, new post aeration basin, sand bed filter media replacement and refurbishment, new office building, replacement of gravity sewer piping with ductile iron piping, flow equalization tank modifications, and replacement of flow equalization tank pumps and controls.

**Water Systems and Tanks**

**Town of Monongah Water System Improvements, Town of Monongah, Marion County, West Virginia***

**Role**: Project Manager

Served as Project Manager for a $7 million dollar project that consisted of replacing 70,000 LF of water lines ranging from 2" to 12", construction of two (2) 530,000 gallon water storage tanks, one (1) 185,000 gallon water storage tank, painting of a 300,000 gallon

and a 175,000 gallon water storage tank, replacement of 350 water meters, installation of a backwash pump building at the water treatment plant, and upgrades to the telemetering system.

**Phase I Water System Improvements, Ice's Run Route 250 Public Service District, Marion County, West Virginia**
**Role**: Project Manager
Serving as a Project Manager for a $640,000 project that consists of upgrading a portion of the existing water distribution system. The Phase I project consists of replacing 5,000 LF of existing 6" water line with 8" HDPE water line, installation of 400 LF of 6" HDPE water line by Horizontal Directional Drilling (HDD), and numerous reconnections to the existing distribution system.

**Midland Public Service District Kelley Mountain Water Line Extension, Midland Public Service District, Midland Public Service District***
**Role**: Project Manager
Served as Project Manager for a $5 million dollar project that consisted of installing 75,000 LF of new water lines ranging from 2" to 6" to serve 120 new customers, construction of a 43,000 gallon and 105,000 gallon water storage tanks, 155 GPM booster pump station, 135 GPM booster pump station, 55 GPM booster pump station, nine (9) pressure reducing valve vaults, and telemetering system.

**Site Utility Projects**

**Grand Vue Park RV Park, Grand Vue Park, Moundsville, West Virginia**
**Role**: Project Manager
Served as Project Manager for a $3 million dollar project that consisted of constructing a 40 site RV park located at Grand Vue Park in Marshall County, West Virginia. The project consisted of installing 3,700 LF of 4", 6", and 8" gravity sewer pipe, 2,000 LF of 3" force main pipe, seven (7) sanitary manholes, two (2) duplex grinder pump stations, 2,000 LF of 6" PVC water line, 2,200 LF of 3/4" service tubing, one (1) fire hydrant, forty (40) pressure reducing valves, 55,000 CY excavation and embankment, 1,300 TN asphalt, and 350 LF of HDPE storm drain pipe. All collected sanitary sewer is pumped into the City of Moundsville sewer system. The 6" PVC water line was connected into the Marshall County PSD3 system.

**Shepherdstown Elementary School Off-Site Water and Sewer Utilities, ZMM Architects & Engineers, Shepherdstown, West Virginia**
**Role**: Project Manager
Serving as Project Manager for a $1.9 million dollar project to provide off-site water and sewer utilities to the Jefferson County Board of Education proposed Shepherdstown Elementary School. Sanitary sewer system consists of installing a 50 GPM duplex sewage grinder pump station, 6,000 LF of 3" force main pipe, ten (10) force main cleanouts, and connecting to the Shepherdstown Sewer System. Potable water system consists of connecting to the Shepherdstown Water System, installing 6,300 LF of 10" PVC water line, two (2) air release valves, one (1) fire hydrant assembly, and a water meter vault at the school.
** Work performed prior to joining CEC*

**UNITED STATES NAVY "RETIRED"**

# Travis Adams
## Senior Project Manager

### 26 YEARS OF EXPERIENCE

### EDUCATION

B.S., Environmental Science (Emphasis on Water Quality), West Virginia University, 1998

### EXPERTISE

Design of Municipal Water and Wastewater Treatment Plants

Acid Mine Drainage (AMD) Treatment & Control

Sanitary Sewer Collection and Water Distribution System Design

### CERTIFICATIONS

Adult and Pediatric First Aid/CPR/AED, Red Cross

Certified Compaction Technician, West Virginia Department of Transportation

Certified Concrete Field Testing Technician, West Virginia Department of Transportation

Aggregate Certified Technician, West Virginia Department of Transportation

SafeLand USA - Basic Orientation, PEC Safety

Mr. Adams has 26 years of experience in the consulting engineering industry servicing municipal, private, commercial, industrial, Oil and Gas, and government sector clients. His project practice focus includes the detailed engineering design of water and wastewater treatment plants, water distribution systems, and wastewater collection systems. Mr. Adams's engineering experience includes: Detailed engineering design of water distribution pipelines, booster pump stations, water storage tanks, sanitary sewer collection pipelines, force mains, existing water and sewer system rehabilitation, development of CSO LTCP, and sanitary sewer pump station design. He has served as the overall project manager for numerous large municipal water and wastewater treatment plant projects as well as numerous water distribution and wastewater collection system projects, leading a team of professionals to evaluate, design, permit, bid, and construct projects with challenging construction obstacles and complex technical and regulatory requirements. Mr. Adams serves as the primary point of contact with the client and ownership team, regulatory personnel, and external team members throughout the life of the project.

### PROJECT EXPERIENCE

**Water Resources/Public Utilities**

**Donald R. Kuhn Juvenile Center Wastewater Treatment Plant, State of WV Division of Corrections and Rehabilitation, Julian, West Virginia**

**Role**: Senior Designer

Serving as Senior Designer for a $3.2 million dollar project that consists of replacing an existing packaged wastewater treatment plant. This project proposes to install a 20,000 GPD Packaged Sequencing Batch Reactor (SBR) WWTP consisting of two (2) SBR tanks, floating decanters, mixers, fine bubble diffusers, rotary positive displacement blowers, sludge wasting pumps, and ultraviolet disinfection system. A new duplex submersible pump station is to be installed along with a new mechanical screening unit ahead of the SBR WWTP.

**Town of Coalton - New Water Treatment Plant, Town of Coalton, Randolph County, WV**

**Role**: Senior Project Manager

This project consisted of the design and permitting of a new 100 GPM water treatment plant to provide a source of safe potable water to the community of Coalton. The new water treatment plant was designed to treat raw ground water from the town's existing source water well. The selected treatment technology consists of a two (2) pressure filter vessels utilizing a dual bed media of Greensand Plus and Anthracite to accomplish the catalytic oxidation and subsequent removal of iron and manganese. Chlorine and Potassium Permanganate chemical feed systems were designed to serve as pre-oxidants for iron and manganese ahead of the media filters. A new 3484 square foot pre-engineered metal building was designed to shelter the filters and all treatment plant equipment including an under the slab concrete clearwell, new high service pumps, new filter backwash pumps, miscellaneous chemical feed systems, and all required plant control equipment. A separate detached FRP building was constructed to house the new gas chlorination system.

# Travis Adams
## Senior Project Manager

**Town of Terra Alta Water Treatment Plant Upgrade & Water Line Extension to Corinth, Town of Terra Alta, Preston County, WV***

**Role**: Served as Senior Project Engineer

The project scope consisted of the planning, funding, design, bidding, and construction management of upgrades to the Town's existing Water Treatment Plant and the extension of the Town's potable water distribution system to provide potable water service to approximately 200 new residential customers in Corinth. The WTP upgrades consisted of the design and construction of a new pre-treatment sedimentation basin constructed in a new engineered metal building complete with rapid mixers, chemical feed equipment, pumps, and controls. The waterline extension consisted of the extension of 8", 6", 4", and 2" main waterline, a new 100,000 gallon water storage standpipe, 200 new customer meter settings, and miscellaneous fire hydrants, valves, and trench repair items. The residents of Corinth had approached the Town about providing public water service because the area was previously mined and the majority of the residential water wells in the Corinth area had become polluted with large amounts of iron, sulfur, and manganese making the majority of the ground water in the area un-usable. Due to the presence of previous mining activity impacting the ground water supply, the Engineer was able to secure grant funds from the WVDEP Abandoned Mine Lands (AML) Program which resulted in low water customer user rates making the project very affordable.

**New 700 GPM Potable Water Treatment Plant & Water Distribution System Extension to the Hazelton Federal Prison Complex, Preston County, WV, Preston County PSD #4, Preston County, WV***

**Role**: Served as Project Engineer and Construction Manager

The project scope consisted of the design, permitting, bidding, and construction management of a new 700 GPM Water Treatment Plant and Water Distribution System Extension to serve the Hazelton Federal Prison Complex. Major items included the design and development of source water wells to provide raw water to the new WTP, New 700 GPM Water Filtration Plant, Two (2) new 700 GPM Booster Pump Stations, Three (3) new Water Storage Tanks including a 1 Million Gallon Elevated Water Storage Tank located near the prison complex, and the installation of a new 16" Ductile Iron Waterline installed across country from the new WTP to the Federal Prison Complex.

**Newell Water Company 1,400 GPM Potable Water Treatment Plant, Newell Water Company, Hancock County, WV***

**Role**: Served as Senior Project Engineer

Project scope consisted of the design, permitting, bidding, and construction management of a new 1,400 GPM Water Treatment Plant to serve residential, commercial, and one (1) large industrial customer near the city of Newell in Hancock County, WV. This project was funded privately by the Homer Laughlin Fiesta Ware China Company who required a constant supply of high quality potable water for their Fiesta Ware china manufacturing facility. The water treatment process consisted of pressure filtration vessels designed to remove iron and manganese from the incoming raw water supply wells.

** Work performed prior to joining CEC*

**PRESENTATIONS**

Travis W. Adams. "No Surface Discharge Allowed". WVAWWA/WEA 2018 Joint Conference, Canaan Valley Resort, Davis, WV, May 21, 2018

# Jason B. Heflin
## Assistant Project Manager

### 30 YEARS OF EXPERIENCE

### EDUCATION

A.S., Applied Science, West Virginia University of Parkersburg, 1993

### EXPERTISE

- Sanitary Wastewater Treatment Plants
- Sanitary Sewer Systems and Pump Stations
- Raw Water Intake Structures
- Domestic and Raw Water Distribution Lines

Mr. Heflin has many years of experience working under multiple engineers as a senior designer. His design experience includes sanitary sewer collection systems and wastewater treatment plants, sewer line replacement and rehabilitation including lining and pipe bursting, potable water lines and plants, raw water intakes and distribution lines for the oil and gas industry, storm systems and pump station, earth slip and slide repairs and general aerial base mapping generation.

### PROJECT EXPERIENCE

#### WATER TREATMENT PLANTS

**New Water Treatment Plant, Town of Coalton, Randolph County, WV**
**Role**: Assistant Project Manager/Designer
This project consisted of the design and permitting of a new 100 GPM water treatment plant to provide a source of safe potable water to the community of Coalton. The new water treatment plant was designed to treat raw ground water from the town's existing source water well. The selected treatment technology consists of a two (2) pressure filter vessels utilizing a dual bed media of Greensand Plus and Anthracite to accomplish the catalytic oxidation and subsequent removal of iron and manganese. Chlorine and Potassium Permanganate chemical feed systems were designed to serve as pre-oxidants for iron and manganese ahead of the media filters. A new 3484 square foot pre-engineered metal building was designed to shelter the filters and all treatment plant equipment including an under the slab concrete clearwell, new high service pumps, new filter backwash pumps, miscellaneous chemical feed systems, and all required plant control equipment. A separate detached FRP building was constructed to house the new gas chlorination system.

#### WATER SYSTEMS AND TANKS

**Water Distribution and Water Treatment Improvements, Town of Coalton, Randolph County, WV**
**Role**: Assistant Project Manager/Designer
This project will involve the replacement of the existing potable water distribution system with 6”, 4" and 2” water lines, refurbishing the existing 100,000-gallon water storage tank, replacing the existing 100 GPM water treatment plant and the installation on new meter pits with new meters.

**Raw Water and Re-use water lines, Southwestern Energy Corporation, Northern West Virginia**
**Role**: Designer and plan preparation
Served as Senior Designer on multiple raw water and re-use line extensions from water sources to well pads

**Water booster station, Melanson Bros. Inc., Lancaster, MA**
**Role**: Designer and plan preparation
Served as Senior Designer for a 44 GPM constant pressure water booster pump that included a 750 GPM fire pump to provide water service and fire protection to a new residential development located near Lancaster, MA.

**Water system improvements, City of Bridgeport, Bridgeport,WV**
**Role**: Designer and plan preparation
Served as the Senior Designer for the water line replacement project. Project involved the replacement of approximately 6,000 linear feet of water line, installation of new main line valves, fire hydrants, meter setting, and service tubing.

# Jason B. Heflin
## Assistant Project Manager

### SANITARY WASTEWATER TREATMENT PLANTS

**Donald R. Kuhn Juvenile Center Wastewater Treatment Plant, State of WV Division of Corrections and Rehabilitation, Julian, West Virginia**
**Role**: Senior Designer
Serving as Senior Designer for a $3.2 million dollar project that consists of replacing an existing packaged wastewater treatment plant. This project proposes to install a 20,000 GPD Packaged Sequencing Batch Reactor (SBR) WWTP consisting of two (2) SBR tanks, floating decanters, mixers, fine bubble diffusers, rotary positive displacement blowers, sludge wasting pumps, and ultraviolet disinfection system. A new duplex submersible pump station is to be installed along with a new mechanical screening unit ahead of the SBR WWTP.

**Wastewater treatment plant upgrade project, West Virginia DNR, Blackwater Falls State Park - Davis, WV**
**Role**: Designer
Served as Senior Designer for this project. Project consisted of replacement of approximately 2,000 LF of an existing a sanity sewer gravity pipe, a new grinder pump station and forcemain, and making improvements to the existing wastewater treatment plant to extend the useful life of the treatment plant. Prepared plans and details.

**Wastewater treatment plant, Preston County Economic Development Authority, Hazelton, WV***
**Role**: Designer and plan preparation
Served as Senior Designer on 50,000 GPD Mack Industries package wastewater treatment plant with alternating sand filter beds

**Wastewater treatment plant upgrade project, City of Mount Vernon, Mount Vernon, OH**
**Role**: Designer and plan preparation
Served as Senior Designer of installation of new sludge pumps, sludge press screen, new anaerobic digester internals and cover, and heat exchanger

**Wastewater treatment plant, Preston County PSD, Hazelton, WV***
**Role**: Designer and plan preparation
Served as Senior Designer on 500,000 GPD SBR wastewater treatment plant

**Wastewater treatment plant, City of Thomas, Thomas, WV***
**Role**: Designer and plan preparation
Served as Senior Designer of a 150,000 GPD wastewater treatment plant

**Wastewater treatment plant upgrade project, City of Clarksburg, Clarksburg, WV***
**Role**: Designer and plan preparation
Served as Senior Designer, partnered with another engineering firm on existing wastewater treatment upgrades, my job included expansion of clarification system by designing new clarifier, retaining wall and access road

**Wastewater treatment plant upgrade project, Town of Terra Alta, Terra Alta, WV***
**Role**: Designer and plan preparation
Served as Senior Designer of 250,000 GPD SBR wastewater treatment plant

**Wastewater treatment plant upgrade project, Town of West Union, West Union, WV***
**Role**: Designer and plan preparation
Served as Senior Designer of a 200,000 GPD wastewater treatment plant expansion and abandonment of existing wastewater treatment plant
** Work performed prior to joining CEC*

# 4.0 Project Experience

Civil & Environmental Consultants, Inc.

# DONALD R. KUHN JUVENILE CENTER WWTP

## OWNER/CLIENT

State of West Virginia

## LOCATION

Julian, West Virginia

## CEC SERVICES

Utility Design

Detailed Design

Construction Support

Municipal Water and Wastewater Treatment

Construction Surveys/Staking

Horizontal & Vertical Control Surveys

Topographic Surveys

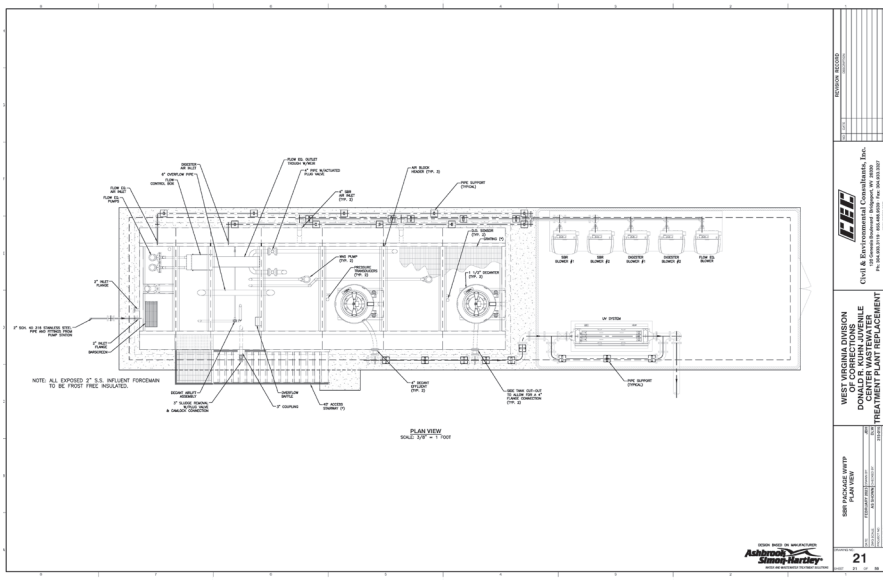
Structural Engineering

## OWNER OBJECTIVE

The West Virginia Division of Corrections and Rehabilitation owns and operates a wastewater treatment plant (WWTP) to treat wastewater flows generated from the Donald R. Kuhn Juvenile Center (DRKJC) located in the community of Julian in Boone County, West Virginia. The existing WWTP was constructed in 2002 and uses the extended aeration activated sludge process to treat domestic wastewater. The WWTP was designed to treat 17,000 GPD sewage flows and discharges into the Little Coal River. The WWTP has reached the end of its useful life and needs to be replaced.

## CEC APPROACH

The West Virginia Division of Corrections and Rehabilitation selected CEC to design a new WWTP to replace the existing failing WWTP. CEC designed a 20,000 GPD Sequencing Batch Reactor (SBR) Alfa Laval WWTP. The WWTP can handle peak daily flows of 50,000 gallons. The new WWTP will consist of the following key components: New Huber RakeMax Mechanical Bar Screen, New 45 GPM Influent Pump Station, New 20,000 GPD SBR WWTP, and a New Enaqua Ultraviolet (UV) Disinfection System. After discussions with WVDOC personnel, it was decided to construct the new WWTP adjacent to the existing WWTP. The existing WWTP can continue to treat wastewater flows while the new WWTP is being constructed. CEC obtained permits from the WV Health Department and the WV Department of Environmental Protection (WVDEP) in February 2023. The project was bid in April 2023 and construction started in October 2023. The project is anticipated to be completed in November 2024.



Civil & Environmental Consultants, Inc.

# TOWN OF COALTON - WATER SYSTEM IMPROVEMENTS

## OWNER/CLIENT

Town of Coalton

## LOCATION

Coalton, WV

## CEC SERVICES

Funding

Engineering Design

Permitting

Construction Quality Assurance

Construction Management

## OWNER OBJECTIVE

Located in Randolph County, West Virginia the Town of Coalton owns and operates a water treatment plant and water distribution system to serve the residents of the Town. The original system was built in the late 1960s and like many water systems this old the system is experiencing breakdowns and failures of the system, especially at the water treatment plant.

## CEC APPROACH

The Town selected CEC to complete an evaluation of the systems and to assist with the funding, design, permitting, and constructing of the proposed system improvements. The proposed improvements will involve the replacement of the water distribution system, including improvements and painting of the existing 100,000 gallon water storage tank. Also included is a new 100 GPM water treatment plant and completion of a backup water well.

CEC completed the design in February 2022 and a WV Health Department permit has been issued. Construction started in July 2023 and is anticipated to be completed in 2025.

Civil & Environmental Consultants, Inc.

# ICE'S RUN PSD WATER SYSTEM UPGRADES

## OWNER/CLIENT

Ice's Run Route 250 Public Service District (IRPSD)

## LOCATION

Marion County, West Virginia

## CEC SERVICES

Erosion & Sedimentation Control/NPDES Permitting

Detailed Design

Construction Quality Assurance

Construction Surveys/Staking

Topographic Surveys

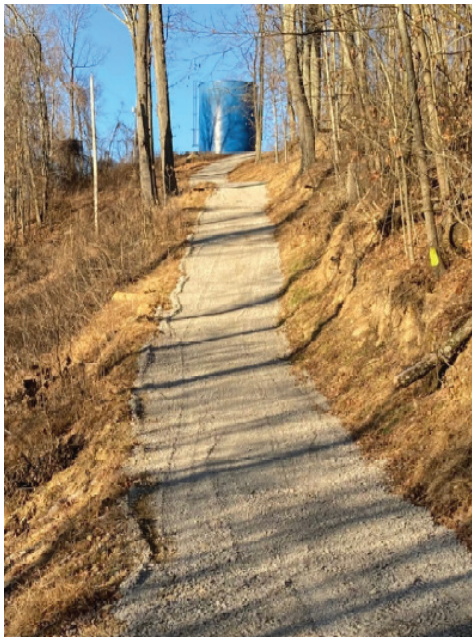
Construction Management

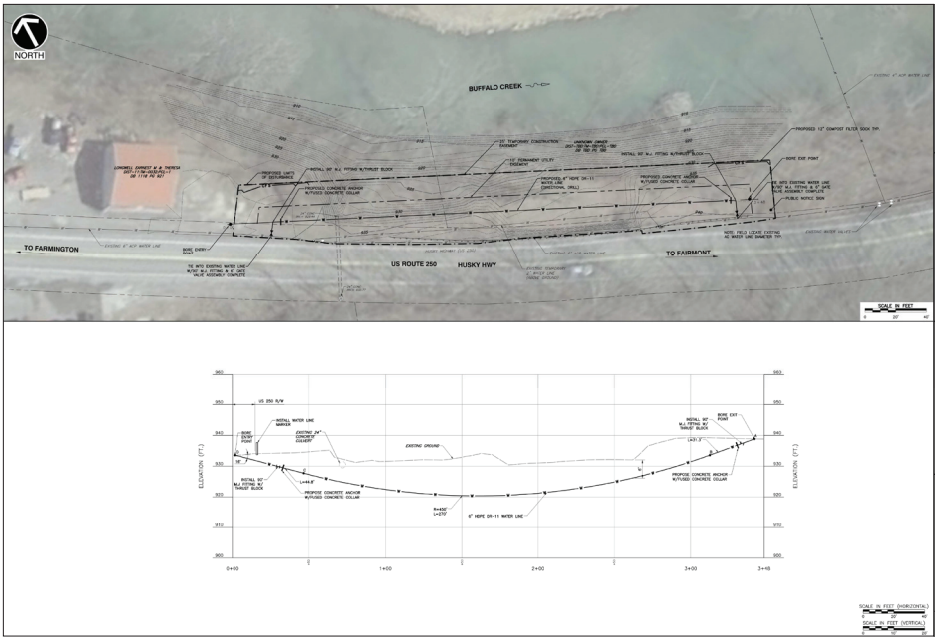
## OWNER OBJECTIVE

Ice's Run Route 250 Public Service District (IRPSD) provides potable water service to approximately 500 customers in Marion County, West Virginia. IRPSD purchases all of its water from the City of Fairmont Water Department. Water is pumped to the Gaston Knob water tank by the Goose Run Booster Pump Station owned by IRPSD. IRPSD repaired several water line breaks on existing lines coming from the Gaston Knob water tank. The lines were old and needed to be replaced. Additionally, a section of U.S. Route 250 roadway near Katy, WV slipped and damaged a section of 6 inch water line. IRPSD temporarily installed a 2 inch water line to restore service to its customers. IRPSD needed assistance from an Engineer to secure funding and to design the improvements.

## CEC APPROACH

CEC was tasked with developing preliminary construction costs for the project and to help secure funding for the needed improvements. The total cost of the project was $650,000.00 and consisted of 5,200 LF of 8" HDPE Water Line, 500 LF of 6" HDPE Water Line, and the upgrade of the Gaston Knob gravel access road. CEC requested funding assistance from the Marion County Commission American Rescue Plan Act (ARPA). The Marion County Commission funded the entire project. CEC provided detailed construction plans and specifications, project permitting, bidding, and construction support. Construction started in December 2022 and was competed in December 2023.





Civil & Environmental Consultants, Inc.

# WV 74 WATERLINE EXTENSION (PHASE I)

## OWNER/CLIENT

City of Pennsboro

## LOCATION

City of Pennsboro and Clay District, Ritchie County, WV

## CEC SERVICES

Utility Design

Water Quality & Quantity Modeling

Aerial Photography/Videography

Construction Management

## OWNER OBJECTIVE

The City of Pennsboro has historically provided water and sewerage service to customers within City limits. The objective of this project was to provide potable water to more than 30 out-of-town customers, some of which reported arsenic in their well water, who were without a safe and reliable source of water.

## CEC APPROACH

CEC assisted Pennsboro is obtaining a Critical Needs Grant from the West Virginia Infrastructure and Jobs Development Council in the amount of $2,000,000. CEC provided all planning, design, permitting, easement exhibit preparation, funding, and bidding services. The design included hydraulic modelling of 2-inch, 6-inch, and 8-inch waterline totaling approximately 5.5 miles in length in a hilly area with significant changes in elevation/pressure throughout the new service area. Fire flows along the 6-inch and 8-inch waterlines were accommodated in the design. The design also anticipated future extensions off of this waterline to serve other customers in need of safe and reliable potable water. CEC is currently providing Engineering During Construction (Contract Administration) services as well as full time Resident Project Representation. Accurate Record Drawings and a complete record of all Daily Monitoring Reports will be the final deliverables to the City of Pennsboro to allow it to operate and maintain this new portion of its water system.

## 4.1 Additional Correctional Facility Experience

### 1.5 MGD Hazelton Federal Prison Complex, Preston County, West Virginia

The project consisted of the planning, design, permitting, bidding, and construction management of a new continuous flow Sequential Batch Reactor (SBR) Wastewater Treatment Plant and gravity sewer line extension to serve the new Hazelton Federal Bureau of Prisons Complex located in Preston County, West Virginia. This project was funded by the U.S. Department of Justice/Federal Bureau of Prisons and required the Preston County Public Service District (client) to meet an expedited schedule, which was accomplished.

### Southeastern Correctional Institute (SCI) Watermain Improvements, Lancaster, Ohio

The SCI is a correctional detention facility is comprised of multiple buildings in a correctional setting. This project consists of design and specifications for the replacement of domestic water service pumps, and the replacement of approximately 750 linear feet of 8-in domestic water line from the service pumps to the water tower.

Services Provided:

- Surveying
- Permitting
- Site Layout
- Grading
- Stormwater Management
- Utility Coordination
- Erosion & Sedimentation Control
- Construction Quality Assurance

CEC was able to provide many different services for a watermain extension. CEC was hired as a single source consultant to provide civil site design, survey, and construction quality assurance services.

### Lebanon Correctional Institution (LeCI) and Warren Correctional Institution (WCI) Plumbing Upgrades and Renovations, Lebanon, Ohio

The “project site” is located at the Lebanon Correctional Institution (LeCI) & the Warren Correctional Institution (WCI), in Lebanon, Ohio.

This project consists of a number of plumbing upgrades and interior renovations to improve the dormitory and kitchen facilities at the two institutions. CEC provided professional design, permitting, and construction administration services to the DRC for the improvements listed below.

**Lebanon Correctional Institution improvements:** Infrastructure improvements including water lines to feed the facility, shower replacement throughout the buildings for both cell block areas and the camp area and sanitary sewer replacements. Also included are kitchen infrastructure improvements such as plumbing, ventilation, electrical and architectural issues to renovate the kitchen area. Some specific items include hot water main, cold water main, power plant water and sanitary, kitchen and bathroom exhaust and shower replacement.

**Warren Correctional Institution improvements:** Includes assessment and repair/replacement of plumbing, water, and sanitary infrastructure in various buildings on the campus. Upgrades include fixtures, hardware, and plumbing systems. Sustainability, water conservation and security issues were addressed, by CEC. Additionally, the project includes assessment and repairs/reconstruction of kitchen floors and freezer areas. Movement of floors (sinking) to be addressed and corrected.

### Terry Collins Re-entry Center (TCRC) Shower and Watermain Improvements, Chillicothe, OH

CEC investigated and designed a cost-effective solution to the Issues being experienced with the shower and restroom facilities at the Terry Collins Re-Entry Center located in Chillicothe, Ohio.

The facility was unable to service half of the residential wings of the building with hot water to the showers, and extensive site investigations were necessary to determine the issue before design could even begin. CEC began by providing both the OFCC and the Institution with pre-design services which included an internal kick off meeting, and prior to beginning any field work, the CEC team researched and reviewed record information pertaining to the project. This could be in the form of reports, record drawings, GIS shapefiles, technical memorandums, etc. From CEC’s preliminary review and desktop analysis, CEC was able to become familiarized with the existing conditions including topography, utilities, soil conditions, and other potential challenges that will affect the proposed infrastructure upgrades.

Next, CEC began the construction documentation and construction administration phase of the project. During this CEC prepared all the necessary construction documentation to illustrate the approved schematic design, as well as preparing specification, and opinion of probable cost to be utilized during the bidding process. CEC then prepared all the necessary documents for bidding, in addition to holding a pre-bid meeting for contractors to become more aware of the project scope and to answer any outstanding questions

# 5.0 References

**Andy Blake**
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ablake@cityofmartinsburg.org

**Kortni Sandridge**
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Town of West Union
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kortnisandridge@yahoo.com

**John Carson**
Utility Manager
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jcarson@fairmontwv.gov

**Jim Rossi**
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**Chad Kleeh**
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Village of Valley Grove
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ckleeh54@comcast.net

***"Civil and Environmental Consultants (CEC) is a quality consultant who invests their time, resources, and expertise in projects from inception to completion. CEC teams up with the City of Bridgeport on infrastructure and utility upgrades, site developments, geotechnical concerns, environmental initiatives, and much more. Their services are a valuable asset, providing continued growth and advancement within our municipality." – Beth Fox, Director of Engineering & Public Utilities, City of Bridgeport***

***"The City appreciates the time and effort of the staff at CEC, to ensure Mayor and Council's initiatives are completed in a timely fashion. The City is proud of the public improvements we are able to complete throughout the City's residential and commercial neighborhoods.***

***CEC is truly a part of our success." – Mark Baldwin, Former City Manager, City of Martinsburg***

# Additional Forms

**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.

Matthew Fluharty, Vice President

(Name, Title)

Matthew Fluharty, PE - Vice President

(Printed Name and Title)

120 Genesis Boulevard, Bridgeport, WV 26330

(Address)

304-933-3119 / 304-933 3327

(Phone Number) / (Fax Number)

mfluharty@cecinc.com

(Email address)

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation/Contract 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/Contract 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..

Civil & Environmental Consultants, Inc.

(Company)

(Authorized Signature) (Representative Name, Title)

Matthew Fluharty, PE - Vice President 5-7-2024

(Printed Name and Title of Authorized Representative) (Date)

May 7, 2024

(Date)

304-933-3119 304-933-3327

(Phone Number) (Fax Number)

mfluharty@cecinc.com

(Email Address)

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)*

| | |
|---|---|
| [x] Addendum No. 1 | [ ] Addendum No. 6 |
| [ ] Addendum No. 2 | [ ] Addendum No. 7 |
| [ ] Addendum No. 3 | [ ] Addendum No. 8 |
| [ ] Addendum No. 4 | [ ] Addendum No. 9 |
| [ ] Addendum No. 5 | [ ] 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.

Civil & Environmental Consultants, Inc.
Company

Authorized Signature

May 7, 2024
Date

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

STATE OF WEST VIRGINIA

# 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 §15A-3-14, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

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

**DEFINITIONS:**

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

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

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

**AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. 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: Civil & Environmental Consultants, INC

Authorized Signature: _____ Date: 5/7/24

State of WV

County of Lewis, to-wit:

Taken, subscribed, and sworn to before me this 7th day of May, 2024.

My Commission expires September 7th, 2028

**AFFIX SEAL HERE**

**NOTARY PUBLIC** Eleni K. H. Knight

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
Eleni K. H. Knight
312 Landmark Estates
Jane Lew, WV 26378
My Commission Expires Sep. 7, 2028

# State of West Virginia
# DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT
## *West Virginia Code* §21-1D-5

**STATE OF WEST VIRGINIA,**

**COUNTY OF** Harrison **, TO-WIT:**

I, Matthew Fluharty, after being first duly sworn, depose and state as follows:

1. I am an employee of Civil & Environmental Consultants, Inc. (Company Name); and,

2. I do hereby attest that Civil & Environmental Consultants, Inc. (Company Name)

maintains a written plan for a drug-free workplace policy and that such plan and policy are in compliance with ***West Virginia Code*** §21-1D.

The above statements are sworn to under the penalty of perjury.

Printed Name: Matthew Fluharty

Signature: [signature]

Title: Principal

Company Name: Civil & Environmental Consultants, Inc.

Date: 5/7/24

Taken, subscribed and sworn to before me this 7th day of May, 2024.

By Commission expires September 7, 2028

(Seal)

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
Eleni K. H. Knight
312 Landmark Estates
Jane Lew, WV 26378
My Commission Expires Sep. 7, 2028

[signature]
(Notary Public)

Civil & Environmental
Consultants, Inc.

120 Genesis Boulevard | Bridgeport, WV 26330 | www.cecinc.com