WEST VIRGINIA STATE UNIVERSITY
1891

AEOI 0490 WSC2400000001

A&E Services –
WVSU Davis Fine Arts Center

McKINLEY
ARCHITECTURE + ENGINEERING

McKINLEY
ARCHITECTURE + ENGINEERING

March 1, 2024

Jerry Rush
Director of Purchasing
West Virginia State University
5000 Fairlawn Avenue
Ferrell Hall Room 301
Institute, WV 25112

Dear Mr. Rush and Members of the Selection Team,

McKinley Architecture and Engineering are pleased to provide West Virginia State University with our expression of interest to provide professional architectural / engineering design services for the various renovations to be completed for the Davis Fine Arts Center, which includes roof replacement, sprinkler system replacement, electrical upgrades, and complete HVAC upgrade. As you review this submission, we emphasize the following strengths of McKinley Architecture and Engineering with respect to your project:

McKinley Architecture and Engineering *(McKinley & Associates)* is a full service Architectural / Engineering firm that has been providing design services since July 1, 1981. With offices in **Charleston,** Wheeling, and Martinsburg, WV and Pittsburgh, PA, we support a professional staff of **50 employees**, which includes **Architects**, **Engineers**, **Project Managers**, an **HVAC Qualified Commissioning Process Provider, Construction Contract Administrators, Historic Preservationist,** an **AIA Safety Assessment Program (SAP) Evaluator**, and more. Our staff of also includes **LEED Accredited Professionals** and **LEED Accredited Professionals specializing in Building Design and Construction** who can add **energy efficient aspects** into your project.

We are excited to announce that for the **2nd consecutive year** we are a member of **PSMJ's 2022 Circle of Excellence** as one of the **top-performing Architecture and Engineering firms in the nation.** We are also a winner of **PSMJ's 2023 A/E/C Employer of Choice Award**, the industry's premier recognition of firms that have mastered workforce retention and productivity by achieving the highest level of employee engagement. We've made the **Building Design + Construction's 2023 Giants 400 Report** as a Top Architecture/Engineering Firm. Furthermore, we are also pleased to announce that for the **4th consecutive year**, McKinley **nationally ranks** and appears on the **Inc. 5000 list** the **most prestigious ranking of the nation's fastest-growing private companies.**

Our past experience will show our extensive experience in **similar type projects,** which you will see throughout our proposal, which allow us to use those experiences in your project. We have gained knowledge and insight to evaluate these projects, which helps us anticipate unforeseen existing elements that may occur in a renovation project. We know we have the knowledge and manpower to successfully complete all of your Goals and Objectives.

129 Summers Street - Suite 201, Charleston, WV 25301 / Phone: 304-340-4267 / Fax: 304-233-4613
Web: www.McKinleyDelivers.com / E-Mail: edellatorre@mckinleydelivers.com

McKinley Architecture and Engineering is on the **forefront of innovative design.** We have designed LEED Certified and LEED Registered projects, projects listed on the U.S. Environmental Protection Agency's ENERGY STAR program, and more. Not only have we won multiple State awards for our designs, we have also won many National awards and recognitions. McKinley Architecture and Engineering was recognized for our commitment to sustainability and high performance green buildings, and was presented with the Governor's Award for Leadership in Buildings Energy Efficiency.

One of the more exciting aspects of our job is **listening to you**, our client, in how you envision this project, and transforming your ideas into realities. This can only be accomplished by effectively working together with you. Most of our clients are repeat, which is a good indication of the services we provide. The main reason we have been able to maintain this relationship is because **we listen to their needs, and then deliver.** We encourage you to speak with our references because we feel this is the best way that our abilities can be conveyed to you.

We love what we do, so we care about the results you get. We are ready to begin **immediately** and can work to your schedule to get this project designed and constructed. Thank you for reviewing our submission and considering McKinley Architecture and Engineering for your project. **We are excited about the possibility of working with you again.**

Personal Regards,

Ernest Dellatorre
Director of Business Development
McKinley Architecture and Engineering
(304) 830-5359
edellatorre@mckinleydelivers.com

McKINLEY
ARCHITECTURE + ENGINEERING

State of West Virginia
Agency Expression of Interest
Architect/Engr

Proc Folder: 1376611 **Doc Description:** A&E Services-WVSU Davis Fine Arts Center **Proc Type:** Agency Contract - Fixed Amt			**Reason for Modification:**
Date Issued	**Solicitation Closes**	**Solicitation No**	**Version**
2024-02-13	2024-03-05 14:30	AEOI 0490 WSC2400000001	1

BID RECEIVING LOCATION

WEST VIRGINIA STATE UNIVERSITY
5000 FAIRLAWN AVENUE
FERRELL HALL RM 301
INSTITUTE WV 25112

VENDOR

Vendor Customer Code: **000000206862*
Vendor Name : McKinley Architecture and Engineering
Address :
Street : 129 Summers Street - Suite 201
City : Charleston
State : West Virginia **Country :** USA **Zip :** 25301
Principal Contact : Ernest Dellatorre
Vendor Contact Phone: (304) 340-4267 **Extension:** 115

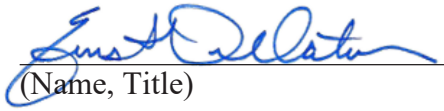
FOR INFORMATION CONTACT THE BUYER
Jerry D Rush
304-558-3397
jerry.rush@wvstateu.edu

Vendor Signature X **FEIN#** 55-0696478 **DATE** March 1, 2024

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

SIGNATURE/CERTIFICATION

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.



(Name, Title)

Ernest Dellatorre, Director of Business Development

(Printed Name and Title)

129 Summers Street - Suite 201, Charleston, West Virginia 25301

(Address)

(304) 233-0140 x115 | (304) 233-4613

(Phone Number) / (Fax Number)

edellatorre@mckinleydelivers.com

(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through e-mail, 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 Commission/Institution 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.

By signing below, I further certify that I understand the Commission/Institution is requiring the vendor to follow the provisions of WV State Code 5A-3-62 which automatically voids certain contract clauses that violate State law.

McKinley Architecture and Engineering

(Company)

(Authorized Signature) (Representative Name, Title)

Ernest Dellatorre, Director of Business Development

(Printed Name and Title of Authorized Representative)

March 1, 2024

(Date)

(304) 233-0140 x115 | (304) 233-4613

(Phone Number) (Fax Number)

Corporate Information

Founded in 1981, McKinley Architecture and Engineering is a multi-discipline full service A/E firm of 45 employees offering comprehensive professional services in Architecture, Mechanical-Electrical-Plumbing Engineering, Project Management, LEED Design, Construction Contract Administration, and more. We have a broad range of skill and experience for projects involving higher education, PK-12 schools, governmental, entertainment, sustainable and energy efficiency, municipal, historic preservation, commercial, sports and recreation, and industrial markets.

McKinley has made the 2020, 2021, 2022, and 2023 Inc. 5000 lists of the nation's fastest-growing private companies. We qualified for PSMJ's 2022 and 2023 Circle of Excellence as one of the top-performing Architecture and Engineering firms in the nation, and PSMJ's 2023 A/E/C Employer of Choice Award. We also made the Building Design + Construction's 2023 Giants 400 Report as a Top A/E Firm.

Services

Architecture
Engineering
Arch./Eng. Design
Project Management
SAP (Safety) Evaluation
Interior Design
Learning Environment Planning
Educational Facility Planning
Sustainable Design
Historic Preservation
Construction Administration

Associations

McKinley Architecture and Engineering is a member of the following organizations:

A4LE (formerly CEFPI), ACI International, AIA, ASCE, ASHRAE, ASPE, AWI, BOCA, NCARB, NFPA, WVEDC, and more

Offices

Wheeling
1324 Chapline Street
Suite 400
Wheeling, WV 26003
(304) 233-0140

Charleston
129 Summers Street
Suite 201
Charleston, WV 25301
(304) 340-4267

Martinsburg
300 Foxcroft Avenue
Suite 306
Martinsburg, WV 25401
(681) 247-5618

Wexford
5000 Stonewood Drive
Suite 220
Wexford, PA 15090
(724) 719-6975

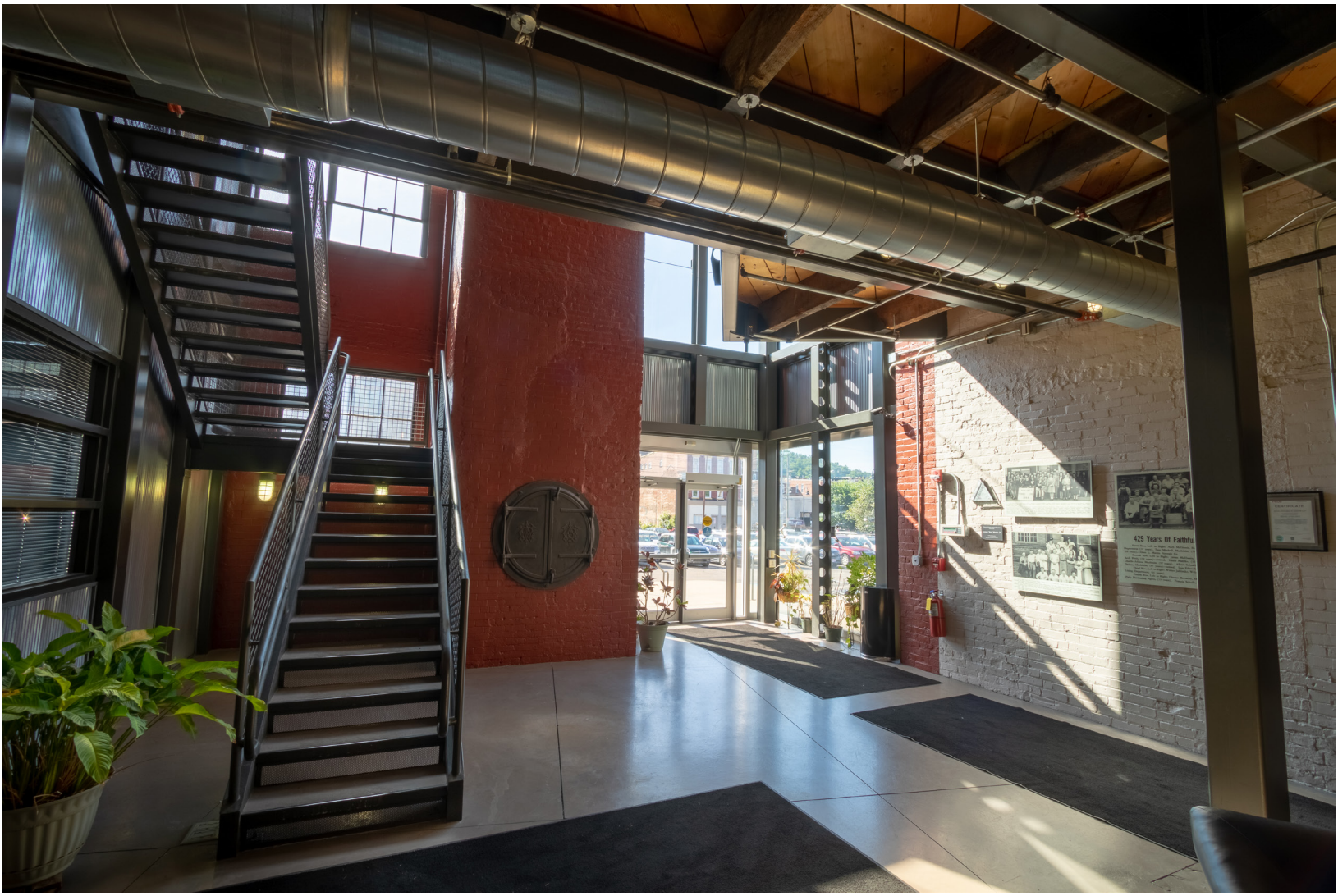
Contact

Ernest Dellatorre
Director of Business Development
edellatorre@mckinleydelivers.com
(304) 830-5359

Architecture

At McKinley Architecture and Engineering, we pride ourselves on being the best. Clients choose us for their design projects because they want to have the confidence that comes from working with an industry leader. They trust McKinley Architecture and Engineering to get projects done right, within budget and on schedule. That's because the firm's highly experienced, diversified staff is equipped with the latest technology and is on the job from start to finish.

Architectural design today is meeting of minds. At McKinley Architecture and Engineering, a talented range of professionals work together to deliver projects on time, on budget, and with a high degree of personal attention. We believe that design is an evolutionary process where client and architect learn from each other through frequent communication. Understanding budgets, schedules, goals and ideals, we pursue the optimum balance of these forces in the design of buildings.



Engineering

McKinley Architecture and Engineering has provided engineering design and contract administration services for numerous clients as well as other design firms.

Our engineering staff has had special opportunities and experience related to various typical and atypical building types. Our engineering department has designed the first Chilled Beam HVAC System in West Virginia, a Variable Refrigerant Volume / Air-Cooled DX Multizone System with a cost reduction of 30% compared to existing mechanisms, and a building with all interior and exterior LED lighting which came in for the same cost as conventional lighting, just to name a few. We have a well rounded range of experiences and are not afraid to take on new challenges.

Disciplines Available

+ Mechanical Engineering
+ Electrical Engineering
+ Industrial Engineering
+ Plumbing Engineering
+ Fire Protection Engineering
+ Reverse Engineering

HVAC Commissioning

On staff, we have a **Qualified Commissioning Process Provider** who can provide independent commissioning services, not only on new facilities but also existing facilities.

This professional is **Tim E. Mizer, PE, RA, QCxP.** His **QCxP accreditation** was earned at the University of Wisconsin-Madison. He has been formally trained to fully understand how integrated HVAC systems function and how systems interface with others to run your building efficiently, and has a comprehensive knowledge of the full American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Commissioning Process. From this, we commission the project to ensure everything is working properly, and to teach the maintenance personnel how to use the machinery and gives them all the correct manuals.

For existing buildings, the commissioning provider can troubleshoot the existing systems to determine the fault of non-performing equipment or the reasons for uncomfortable spaces.

For new buildings and their systems, commissioning entails the review of the design plans, verifying the installations, and the oversight of the testing of the mechanical and electrical systems to ensure the owner is getting the type and quality of product expected.

Sustainable "Green" Design

Buildings designed today will need to meet the demands of the future; McKinley Architecture and Engineering identifies the changes necessary in the design of today and to meet these demands. This approach helps to retain the buildings' long-term profitability and value, which achieves the buildings' **sustainability.**

McKinley approaches ecological design from a business perspective, offering **proactive** solutions to complex problems such as **indoor air quality**, **energy efficiency**, **resource depletion**, **water quality,** and much more.

With vast project experience in different business sectors, the McKinley Team can work alongside local designers to provide sustainable design and construction guidance. We also offer full architectural design services and guided design workshops on sustainable design issues.

Our Philosophy is to provide our clients with experienced leadership as well as state-of-the-art and **innovative** design expertise to accomplish the goals of your projects. **Function**, **economics** and **versatility**, in addition to the development of **strong aesthetic appeal**, are crucial elements in our design process.

We also believe that enhancement of the **physical environment** in which each individual lives, **learns**, and **works** should add significantly to the enjoyment of life. Our firm has dedicated our professional skills to attain these goals.

For a few recent sustainable awards, McKinley Architecture and Engineering was presented with the **2019 Governor's Award for Leadership in Buildings Energy Efficiency** at the Innovation & Entrepreneurship Day at the Capitol! We were recognized for our commitment to sustainability and energy efficiency in the design of multi-use facilities, office buildings, schools, and a wide variety of commercial, industrial, government, and historical structures.

Our designs have also won **West Virginia Department of Environmental Protection's Clean Energy Environmental Award**, **2 Black Bear Awards for the Highest Achievement** for the WV Sustainable Schools program, **2 U.S. Department of Education Green Ribbon Schools**, as well as a **Gold Medal Green Building Award** by Building of America, among others!

We also have a project that is **Collaborative for High Performance School (CHPS) Registered;** the United States' first green building rating program designed for schools.

Furthermore, we have designed 4 projects listed on the **U.S. Environmental Protection Agency's** ENERGY STAR program: **Building 55: West Virginia State Office Building in Logan**, Hilltop Elementary School, Cameron Middle/High School, and Johnson Elementary School. To receive an ENERGY STAR, you need to perform in the top 25% of the most energy efficient projects in the program. **Building 55: West Virginia State Office Building** is **one of the most energy efficient buildings in the State**, and is in the **Top 5%** of all Energy Star rated buildings in the Country!

Leadership in Energy and Environmental Design

LEED® (Leadership in Energy and Environmental Design) Green Building Rating System™ developed by the U.S. Green Building Council (USGBC) is the nationally accepted standard for the design, construction, and operation of high performance green buildings (www.usgbc.org).

In January 2001, our firm was the **first organization in West Virginia to join the USGBC.** No other WV firm joined until nearly 2 years later!

We have several **LEED Accredited Professionals** on staff, along with our skilled architectural/engineering team, who will efficiently and cost effectively achieve certification under this standard or we can guide you through the process in order to develop sustainability goals specific to your project.

We have **LEED® Accredited Professionals**, including 4 who are **specialized in Building Design & Construction**:

- Peter T. Donnelly PE, CEM, **LEED AP BD+C**
- John R. Jefferis, **LEED AP**, CCM, MPM
- Kurt A. Scheer, PE, **LEED AP**
- Christina Schessler, AIA, **LEED AP BD+C**
- Jeffrey W. Wessel, AIA, **LEED AP BD+C**
- Thomas R. Worlledge, AIA, **LEED AP BD+C**, REFP

Our **LEED Certified Projects** are (LEED Rating System in parentheses):

- **Hilltop Elementary School** in Sherrard, WV (LEED for Schools 2.0)
  - The First LEED Certified School in the State of West Virginia!
- **Building 55: West Virginia State Office Complex** in Logan, WV (LEED NC 2.2)

All of our current **LEED Registered Projects** are (LEED Rating System in parentheses):

- Bellann in Oakhill, WV (LEED EB O&M)
- Cameron Middle/High School in Cameron, WV (LEED for Schools 2.0)
- SMART Office in Williamson, WV (LEED CI)

The LEED AP Specialty Logos signify advanced knowledge in green building practices and specialization in a particular field.

The LEED AP BD+C designation that Thom, Christina, and Jeff have achieved represents specialization in commercial design and construction.

Thomas R. Worlledge, AIA, LEED AP BD+C, REFP has been a member of the USGBC since 2001; he was the first LEED Accredited Professional in the state of West Virginia! As a professional trainer for the Sustainable Building Industries Council, he teaches other design professionals in the art of High Performance School design. He is also a Founder & Chairman of the Board for the US Green Building Council's West Virginia Chapter.

Christina Schessler, AIA, LEED AP BD+C has been a member of the USGBC since 2009. In 2012 she received her Masters in Historic Preservation, so not only can she incorporate LEED "Green" aspects into new buildings; she can even incorporate energy efficient design into renovation/ preservation projects. Twenty percent of a building's energy consumption is embodied in the existing physical structure itself!

McKINLEY
ARCHITECTURE + ENGINEERING

Construction Contract Administration & On-Site Representation

Construction Contract Administrator Involved from the Beginning of the Design Phase

Observe the Construction Progress

Liaison between the Owner, Contractor, and Architects/Engineers

Responsible for All Construction Progress Meetings and Minutes

Monitor the Construction Schedule

Ensure that the Contractor is Following the Construction Documents

Verify Pay Application and Change Orders

Typically On-Site Once Every Two Weeks
(Provide Additional On-Site Representation if Requested)

Our **Construction Contract Administrators (CA)** have an extra responsibility than what most firms' Construction Administrators have; our CAs are a part of the design process from **Day 1** (they are not thrown into the project only when construction starts; they are here from the beginning), so they know the ins-and-outs of the project. Our CAs have an important role as being the **liaison between the Owner, Contractor, and Architect.** The primary objective of the Construction Contract Administration services is to ensure completion of work the way the client wants it - **as scheduled and as budgeted.** Our CAs evaluate the quality of the work to verify that it meets the level required by clients; in addition, they monitor the contractor's progress to ensure that they are following the Construction Documents. They observe the construction progress, are responsible for all construction meetings and minutes, and they verify pay application and change orders. The Construction Contract Administrator is typically on-site once every two weeks, but we can provide additional on-site representation if requested.

Project Approach

The work to be performed by your design team is very clear; to evaluate, prioritize and design within budget and schedule to meet the needs of the West Virginia State University as well as the students and teachers who utilize the Davis Fine Arts Center. We use and welcome your input throughout the project.

First and foremost we can state that our large professional staff of **50 employees** will **devote whatever time is necessary to provide you with a successful project.** If our project team is chosen for this project; they are available to **start immediately** upon our being selected, and will provide the necessary hours to complete your project on time. **In the past 43 years we have extensive experience with similar projects. We will meet all of your Goals and Objectives!**

Our Design Approach for a **renovation/upgrade project** is very different than how we approach new construction. In new construction, where you are starting from scratch, most of the time is spent in documenting the design approach and scope of the work. But in renovation projects, there is another layer of complexity because of the fact that you have existing space and systems that you need to work into the design, and each of those bring additional constraints to the final solution. Fortunately, McKinley Architecture and Engineering has been a leader in renovation projects and has creatively solved many of the issues that may come up in the design of this project. Our team of Architects, Engineers, Designers, and specialists will research all of the available documents on the space, and study the existing structure and systems prior to sitting down with your staff to define the parameters for the final design. This method allows our designers to know the conditions before they offer potential design solutions.

To start your project, a kickoff meeting will be held at the Davis Fine Arts Center with West Virginia State University representatives, end users of the building, facilities/maintenance staff, along with all our design professionals. From this meeting, the Owners Project Requirements will be defined and documented, to be used as a guideline through the design phases. We will **verify the existing conditions** of the facility through the review of the existing conditions, existing drawings if available, and with discussions with you. From our overall facility survey, we will use all this information to produce a full reporting of the current conditions, with our **recommendation** of rework to best fit the present needs of these buildings, and will create floor plans of your building. We will then use all this information to **design the roof replacement, sprinkler system replacement, electrical upgrades, and complete HVAC upgrade.** These systems will best fit the standards of today's design and **energy efficiency standards**, and will meet all current **building codes**.

Over the years, McKinley Architecture and Engineering has designed **hundreds of projects which involve roof, HVAC, sprinkler, and electrical assessments, renovations, replacements, upgrades, and/or repairs,** which gives us invaluable experience to utilize within your project, whether it is working with alternate suppliers or evaluating and recommending the best HVAC concepts. During the past **43 years**, our expertise has been called upon many times upgrading outdated and antiquated machinery, bringing the systems and load requirements up to compliance, designing **energy efficient systems**, **scheduling for phased construction around occupied areas of the projects**, and even evaluating and correcting errors in existing design (pipe sizing, piping material errors, control valving, equipment accessibility, etc). We currently support clients on a number of significant renovation projects that illustrate this ability.

Our design team will strive to achieve the **best overall indoor air quality**; studies have shown that it not only has health benefits to the students and teachers, but also enhances the environment. To

achieve this our team pays careful attention to the **exterior enclosure** to eliminate water penetration and minimize air leakage, specifies systems and materials that limit the pollutants from entering the building, and our **HVAC** engineers control the quality and quantity of fresh air into the building maximizing the air quality and energy efficiency. We offer thoughtful design options that enhance the space, protect the environment, and meet the budget constraints.

The **timeline** of any project, especially an **HVAC project**, is **critical**. Whereas almost all systems and equipment have a multi-month lead time, potential issues could be lead times for hardware and equipment, or compatibility with any existing systems. McKinley Architecture and Engineering has a **great working relationship with various HVAC suppliers**, which has helped us reduce the response time for our recent projects. A **positive relationship with the installing contractors is also needed**, and we have worked with all of the major HVAC contractors in the area. Therefore, we know we can successfully complete your project on time and budget.

Our **HVAC redesign** will include any required Building Load Calculations of the renovation space for accurate sizing of new equipment. This will be used for the evaluations of the existing spaces and also to include any additional new conditions as described by the Davis Fine Arts Center personnel. McKinley can also work with the Contractors and Testing Adjusting & Balancing (Rebalancing) Company to verify proper system operation. The purpose is to verify all systems and equipment are operating as intended, and to the designed efficiency.

Next, our first action for any **roof renovation** is to examine the entire roof with our architects and engineers. This will help us in determining the root cause of any deterioration, possible damages, and any water infiltration. Roofing projects require a concise mapping of the existing roofing system including existing materials condition (above and below the roof line), mapping of the building's roof penetrations, and observation of the performance of the rain water collection system. How does it respond to a 100 year rain event; is any action/correction necessary to control; does the current assembly meet all current building code standards? Present unknowns for your roof may include: incorrect slope and drainage, possible sealant and flashing condition defects, deterioration of existing roof deck, degradation of the roof structure, and damage to interior building components due to previous water infiltration.

Once the problems are forensically understood, the next step is to **develop possible solutions**. It will be important to sit down to review the various alternatives and propose the best method to solve the problems. For example, existing roof systems without adequate slope and proper drainage, and/or leaking can also cause significant wood rot, mold, mildew, algae and other such growths, which are unhealthy for the environment for the students and teachers. Any pooling water issues can provide incubators for mosquitoes, etc. and needs addressed. Another safety factor which should be considered is, the design of the roof systems should include analysis to determine if secondary emergency roof drainage is warranted to prevent structural failures from blockage of the primary roof drainage system. Modifications to drainage system and existing mechanical equipment and service feeds may also be required to achieve code required minimum slopes for roof replacement. We will also look at safety railing.

Some of our projects replaced roofs that were beyond their life span, were leaking, had ponding water, were sliced and damaged, had inadequate roof slope, had inadequate drainage systems, and many caused water damage throughout the interior and/or exterior of the building - even the smallest pinhole can allow significant water infiltration. **Our designs replace the roofing system,**

added safety rails, fix the leaks, create proper water flow and drainage, meet the current code with compliant systems which increased the building's safety, and are lower maintenance.

McKinley is proposing to also examine the building **exterior**. With many buildings, the structures are solid but the exterior may be showing signs of damage, wear, air infiltration, and water damage. Many started with a roof leak, which caused damaged within the envelope and the windows. Sometimes these areas of concern have progressed to the point of needing immediate attention.

Also, a **new sprinkler system**, meeting the requirements of the WV State fire code and associated NFPA codes, shall be designed. WVSU shall be coordinated with to determine your standards as to brand, communication requirements, and/or preferences in operation. Adjustments of device locations due to ADA or Fire Code shall be reviewed, and aesthetic solutions shall be presented.

To meet the needs of one client, we designed **3 types of sprinkler systems in one building renovation**: a chemical fire suppression (rather than water sprinkler) was utilized in the most sensitive of their Archive spaces, pre-action water sprinkler systems were used for less sensitive archive areas, and conventional wet pipe systems were used for non-sensitive spaces such as general offices, corridors, etc.

Finally, our approach to **electrical design** requires a dialog with the owner and the end users of the facility. This helps us to determine the present inadequacies with the electrical systems within this Davis Fine Arts Center. We will send our team of professionals to complete a building evaluation of all the pertaining elements and existing conditions that will be included within the specific project, as well as documenting any Electrical Code deficiencies that will be addressed during the design. Our electrical design qualifications include power distribution, lighting, emergency/standby power, onsite generators, telephone/sound/communications, data communications, audio/video, fire alarms, security alarms, video surveillance, electric access, and more.

The **electrical engineering** staff for the project would contain the experience of Professional Engineers and electrical designers. Included in this knowledge base, our lead electrical designer has over 40 years of electrical field installation work as a licensed electrician, which provides a unique understanding for problem solving by having knowledge from both the design and the construction phases of the projects.

We also have a **LEED Accredited Professionals** and **LEED Accredited Professionals specializing in Building Design & Construction** who can help choose **energy efficient solutions** such as **energy monitoring system on the main switchboards, systems which have lower maintenance, receptacles with integrated USB chargers, LED interior and exterior lighting, thermal comfort controllability, HVAC energy recovery units, using regional materials,** and much more.

With our **vast roofs, HVAC, electrical, and sprinkler systems renovation experience, our understanding of codes**, and our **great working relationship with various state agencies**; we are confident that we have the talent and technology needed to make this project successful.

Also, as your **MEP Engineers / Architects** and **single point of responsibility,** you can be reassured of **smooth project delivery and sensitivity to all relevant guidelines in our state. We will meet your goals and objectives.**

Design Team Flow Chart

Project Manager / Point of Contact

TJ Tharp, CSM

Architectural Team

Thomas R. Worlledge, AIA, LEED AP BD+C, REFP
Charleston Office Manager / Senior Architect / LEED Accredited Professional specializing in Building Design & Construction

Jeremiah Hatfield, AIA, NCARB
Architect

Engineering Team

Tim E. Mizer, PE, RA, QCxP
Director of Engineering Services / Architectural Engineer / Architect / Qualified Commissioning Process Provider

Kurt A. Scheer, PE, LEED AP
Senior Mechanical Engineer / LEED Accredited Professional

Alan M. Gaber, PE
Senior Electrical Engineer

Scott D. Kain
Engineering Production Manager / Senior Plumbing Engineering Designer

Michael J. Clark Sr.
Senior Electrical Engineering Designer

Richard G. Berger
Senior Mechanical Engineering Designer

David A. Ullom
BIM Coordinator / Fire Protection Engineering Designer

Construction Contract Administration

Heath L. Fain

** McKinley Architecture and Engineering is willing to dedicate more professionals if they are needed, including more Architects, Engineers, Designers, LEED Accredited Professionals, CAs, etc.*

TJ Tharp, CSM

Associate Project Manager

EDUCATION:

University of Phoenix
B.S. Business Administration –
Certified in Project Management - 2023

PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

Certified Project Manager in the LEAN Process

Certified ScrumMaster

PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Associate Project Manager
Wheeling, WV (2023 to present)

PCS&build
Construction Project Manager
St. Clairsville, OH (2021-2023)

Lombardi Development
Construction Project Manager
Follansbee, WV (2021)

Property Maintenance Services Inc
Director of Operations
Bridgeport, OH (2017-2021)

Bedway Development Corporation
Director of Operations
Morristown, OH (2015-2017)

MILITARY SERVICE AND AWARDS:

United States Marine Corps 2004-2008

Honorable Discharge

Purple Heart Recipient

Meritorious promotions, Letters of commendation, Letters of recognition, Overseas deployment to Iraq, Combat Veteran, Global War on Terrorism Award, Good Conduct Award, Navy and Marine Corps Commendation Medal

SUMMARY OF EXPERIENCE:

Mr. Tharp is an associate project manager with many years of experience in managing large-scale construction projects. He has a proven track record directing project-wide operations administering multi-million dollar budgets, negotiating contracts, controlling expenses, and boosting efficiency and productivity. TJ will be responsible for the coordination and the completion of your project on time, within budget, and within scope. He will ensure instruments of service are meeting contractual requirements and he is key in managing client relationships and expectations.

NOTABLE PROFESSIONAL EXPERIENCES:

Ohio Valley Regional Transportation Authority - OVRTA roofing & exterior rehabilitation

Fort Henry Building - Fourth Floor office build-out and renovations

Friends of Wheeling - 722-724 Main Street renovations

Vineyard Children's Center & Cafe build-out and renovations

City of Glen Dale - Glen Dale Pool

Jefferson County Commission - McCollough Children's Home

Voto Sales

Clay County Schools - Clay Elementary School HVAC renovation

Mason County Schools - County-Wide Safety/Security Entrances

Ohio County Schools - Wheeling Middle renovations

Steubenville City Schools - Several Projects County-Wide

Wayne County Schools - Buffalo School additions and renovations

Wayne County Schools - Wayne Elementary classroom additions

Wayne County Schools - Wayne High Vo-Ag Metal Building

Wood County Schools - North Parkersburg Elementary School

Wood County Schools - Lubeck Elementary School

Wood County Schools - New Vienna Elementary School

Wyoming County Schools - Baileysville ES/MS Upgrades

Wyoming County Schools - Career & Technical Center Multipurpose Building

Wyoming County Schools - Mullens PK-8 School

Thomas R. Worlledge, AIA, LEED AP BD+C, REFP

Architect / Specialized LEED AP / Educational Facility Planner

EDUCATION:

Virginia Polytechnic Institute & State University
Master of Architecture - 1992

Fairmont State College, School of Technology
B.S. Architectural Eng. Tech. - 1983

PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

Registered Architect in:
West Virginia
Ohio
Pennsylvania
Tennessee
Virginia

National Board Certification:
NCARB #48600

President:
West Virginia Society of Architects

Member:
The American Institute of Architects
US Green Building Council
Sustainable Building Industries Council
Recognized Educational Facility Professional (REFP)

Former voting member:
ASHRAE 90.1 International Energy Code Committee

PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Manager, Charleston Office
Charleston, WV (2005 to present)

Proactive Architecture Inc.
President
Charleston, WV (1999-2005)

Silling Associates Inc.
Vice President
Charleston, WV (1992-1999)

TAG Architects
Charleston, WV (1985-1990)

Alpha Associates Inc.
Morgantown, WV (1983-1985)

SUMMARY OF EXPERIENCE:

Mr. Worlledge is a skilled **Architect** with over 40 years of experience, who has been the former President of the WV chapter of AIA, has received State and National design awards, and placed in National and Global design competitions. Thom is a **Recognized Educational Facility Planner** as designated by the Association for Learning Environments; a credential for industry professionals who plan and design quality educational facilities. Unlike many architects who are new to green building and alternate energy, Thom started his career designing and building alternate energy systems, and was the first LEED Accredited Professional in West Virginia! He believe energy efficient design is simply good design practice. As a **LEED Accredited Professional specializing in Building Design & Construction (LEED AP BD+C)** and a **recognized sustainable design expert**, he has **2 LEED Certified** projects, **multiple LEED Registered** projects, several other energy-efficient projects, has articles published in State and National trade publications, was a featured speaker at multiple State and National conferences, served on the committee that set the ASHRAE 90.1 Standards for the International Energy Code, professionally teaches and trains other professionals in the art of High Performance Design, is a Founder & Chairman of the Board for the US Green Building Council's West Virginia Chapter, and much more.

NOTABLE PROFESSIONAL ACHIEVEMENTS:

West Virginia State University - Gus R. Douglass Economic Development Center (DigiSo) renovations/repurpose

Fairmont State University - College Student Housing Apartments 3 Building Complex ($30M)

Southern WV Community & Technical College - Wyoming/McDowell Campus and Williamson Campus renovations

West Virginia University - University Police Building office fit-out

WVU Institute of Technology - Maclin Hall Dormitory build-out

Building 55: WV State Office Complex in Logan (**LEED Certified** / **ENERGY STAR Rating of 91**)

West Virginia Department of Health & Human Resources' Ohio County Office Building fit-out / renovations

United States Postal Service - multiple projects throughout WV

West Virginia State Police - state-wide projects

Veterans Affairs Medical Centers - multiple VAMCs around WV and PA

Nicholas County Division of Homeland Security & Emergency Management - E-911 and Emergency Operations Center

Summit Building renovations

Charleston Enterprise Center renovation (**WV AIA Design Award**)

Harrison County Schools - new Johnson Elementary School (**ENERGY STAR Rating of 90 / NCWV Media's Public Project of the Year / Collaborative for High Performance School registered**)

Marshall County Schools - new Hilltop Elementary (**LEED Certified** / **ENERGY STAR Rating of 86** / **won multiple State and National Awards & Recognitions**)

Jeremiah Hatfield, AIA, NCARB

Architect

EDUCATION:

Louisiana State University
Bachelor of Architecture - 1999

PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

Registered Architect in:
West Virginia
Kentucky
Michigan
Virginia

National Board Certification

PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Architect
Charleston, WV (2021 to present)

Adkins Design, Inc.
Architect / Project Manager
Charleston, WV (2009-2021)

SUMMARY OF EXPERIENCE:

Mr. Hatfield values clients and enjoys assisting them with their projects at all levels of design and construction and with all building types, including residential, governmental, educational, commercial, offices and hospitality projects. Jeremiah has over 15 years of experience with CAD, Sketchup and Microsoft Office. His skills also include Adobe Illustrator, Drafting, Revit, Interior Design, Adobe Photoshop, SolidWorks, Project Management, and Adobe Creative Suite. Jeremiah has completed InDeed Assessments, which provides skills tests that are not indicative of a license or certification, or continued development in any professional field. In these tests, he ranked Highly Proficient in "Attention to Detail" (identifying differences in materials, following instructions, and detecting details among distracting information) as well as "Following Directions" (following multi-step instructions), which are an asset to an **Architect**.

NOTABLE PROFESSIONAL EXPERIENCES:

Fayette County Schools - Institute of Technology renovations

Fayette County Schools - Meadow Bridge PK-12 School

Fayette County Schools - Midland Trail High Gym renovations

Fayette County Schools - Oak Hill High Gym renovations

Fayette County Schools - Valley PreK-8 renovations

Fayette County Schools - Outdoor Classrooms

Fayette County Schools - Windows & Doors replacements

Hancock County Schools - New Manchester Elementary addition

Hancock County Schools - Weirton Middle addition

Mason County Schools - Soccer Building

Summers County Schools - HS/MS addition & renovations

Wayne County Schools - ESSERF Work

Wayne County Schools - Window replacements

Wayne County Schools - Tolsia High Gym

Wayne County Schools - Wayne High Vo-Ag Metal Building

Wetzel County Schools - Paden City Elementary Multipurpose Addition

Wood County Schools - Pre-Bond Services

Ft. Henry Building renovations & restoration

WV Lottery Building roof

Tim E. Mizer, PE, RA, QCxP

Architectural Engineer / Architect / HVAC Commissioning Provider

Director of Engineering Services

EDUCATION:

Kansas State University
B.S. Architectural Engineering - 1983

University of Cincinnati
Architecture

PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

Registered Engineering in:
West Virginia
Ohio

Registered Architect in:
Ohio

Qualified Commissioning Process Provider

PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Director of Engineering Services
Architect / Engineer / Commissioning
Wheeling, WV (1995 to present)

M.C.C. Engineering
Director of Design
Columbus, Ohio (1988-1995)

Schooley Caldwell and Associates
Electrical & Mechanical Design
Columbus, Ohio (1986-1988)

Mizer Design
Free Lance Architectural Engineering Design
Columbus, Ohio (1985-1986)

Envirotek, Inc.
Drafting and Electrical & Mechanical Design
Raleigh, NC (1984-1985)

SUMMARY OF EXPERIENCE:

A very talented and unique professional who is registered **both** in **engineering** and **architecture** which has provided him with a total understanding of the engineering components and the process necessary for integrating architectural design and building systems. Furthermore, as a **Qualified Commissioning Process Provider**, he has been **formally trained to fully understand how integrated HVAC systems function and how systems interface with others to run your building efficiently. He understands that the HVAC system's performance can reduce operating and maintenance costs, improve the comfort of a building's occupants, and extend the life of equipment.** He joined McKinley Architecture and Engineering in 1995, and has over 40 years of experience. As the **Director of Engineering Services**, Mr. Mizer's presence is a key to the design procedures required to coordinate the functionality of the engineering systems into the aesthetics of a building space.

NOTABLE PROFESSIONAL EXPERIENCES:

West Virginia University - Colson Hall renovations, State Fire Training Academy, University Police Building renovations

West Virginia University's Institute of Technology - Conley Hall renovations, Maclin Hall Dormitory renovations

Fairmont State University / Pierpont Community & Technical College / Braxton County HS - Braxton County Center renovations/addition

Glenville State College - R.F. Kidd Library renovations

Southern WV Community and Technical College - Williamson Campus renovations, Wyoming Campus renovations

West Liberty University - College Union Building / Dining Hall renovations, Bonar Hall Dormitory renovations, Snack Bar renovations

West Virginia Northern Community College - B. & O. Building renovations, Board Room renovations, Education Center renovations, Hazel-Atlas Building renovations

Washington & Jefferson College - Old Main renovations

Wheeling University - Erma Ora Byrd Center for Educational Technologies / NASA's Classroom of the Future R&D Center

Boone County Schools - County-Wide Projects

Brooke County Schools - County-Wide Projects

Grant County Schools - County-Wide Projects

Hancock County Schools - County-Wide Projects

Ohio County Schools - County-Wide Projects

Wood County Schools - County-Wide Projects

Kurt A. Scheer, PE, LEED AP

Senior Mechanical Engineer / LEED Accredited Professional

EDUCATION:

Penn State University
B.S. Architectural Engineering - 2001

PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

Registered Engineering in:
Pennsylvania
West Virginia

Member:
US Green Building Council

ASHRAE

ASPE

PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Senior Mechanical Engineer
Wexford, PA (2020 to present)

Allen & Shariff Corporation
Senior Mechanical Engineer
Pittsburgh, PA (2018-2020)

BDA Engineering, Inc.
Senior Mechanical Engineer
Homestead, PA (2006-2018)

Allen & Shariff Corporation
Mechanical Engineer
Pittsburgh, PA (2004-2006)

LLI Technologies, Inc.
Mechanical Engineer
Pittsburgh, PA (2001-2004)

SUMMARY OF EXPERIENCE:

Mr. Scheer is a **Mechanical Engineer** with 20 years of experience in the Architectural Engineering industry with a focus on mechanical systems design. In addition, Kurt has overseen electrical, plumbing, and fire protection engineering for all his projects for 15 years. Market sectors such as hospitality, higher education, and commercial office are areas where he has significant experience. Additionally, Mr. Scheer has experience with **LEED Certified** projects and energy modeling, and he will design an energy efficient HVAC system that will meet all of your goals and objectives.

NOTABLE PROFESSIONAL EXPERIENCES:

Glenville State University - Mollohan Building Renovations

Glenville State University - School of Health Sciences study

Glenville State University - We Proudly Serve

California University – Herron Hall Renovation*

Edinboro University - Crawford Hall Boiler Replacement*

Grove City University – New Student Housing*

Point Park University – Frontier Hall Renovations*

University of Pittsburgh – Amos Hall Renovation*

University of Pittsburgh – Public Safety Building*

University of Pittsburgh – William Pitt Student Union Renovations*

University of Pittsburgh (Greensburg) – Frank A. Cassell Hall*

Westminster College – Student Housing*

Cabell County Schools - Milton Elementary

Fayette County Schools - new Meadow Bridge PK-12 School & School Based Health Clinic

Fayette County Schools - Oak Hill High Gym renovations

Fayette County Schools - Institute of Technology renovations

Hampshire County Schools - new Central Elementary School

Hampshire County Schools - new North Elementary School

Hampshire County Schools - new West Elementary School

Harrison County Schools - new Lost Creek Elementary School

Wirt County Schools - ESSERF Projects

** previous work experience with a firm other than McKinley Architecture and Engineering*

Alan M. Gaber, PE

Senior Electrical Engineer

EDUCATION:

Ohio Northern University
B.S. Electrical Engineering
with a Computer Science Option - 1986

PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

Registered Engineer in:
Ohio
Pennsylvania

PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Electrical Engineer
Wexford, PA (2022 to present)

Stantec Architecture
Electrical Engineer
Butler, PA (2018-2022)

Penn-Ohio Electrical Contractors
Electrical Engineer
Masury, OH (2013-2018)

HHSDR Architects & Engineers
Electrical Engineer
Sharon, PA (1995-2013)

Sturgeon Engineering, Inc.
Engineer-in-Training
Grove City, PA (1987-1995)

United Engineers & Constructors
Engineer-in-Training
Philadelphia, PA (1986-1987)

SUMMARY OF EXPERIENCE:

Mr. Gaber is an **Electrical Engineer**, who for over 36 years, has a broad range of electrical and professional experiences designing building systems. He has experience working collaboratively with others to research and identify the clients' needs, and successfully meeting those needs. Alan takes pride in providing designs that are concise, efficient and within the client's budget. Each phase of his career has exposed him to different aspects of electrical design for the building construction industry, from utility company commercial service design, to commercial, industrial & institutional building design, and electrical construction management. Mr. Gaber's experiences also include K-12 & post secondary education, municipal/civic, personal care/senior living, and other sectors of business. His electrical design qualifications include lighting, power distribution, emergency/standby power, onsite generators, telephone/sound/communications, data communications, master clock/program, audio/video, fire alarms, security alarms, video surveillance, electric access, and more.

NOTABLE PROFESSIONAL EXPERIENCES:

West Virginia University - Agricultural Sciences Building animal science lab renovations*

West Virginia University - School of Dentistry Health Sciences Center Building renovation*

Glenville State University - School of Health Sciences study

Carnegie Mellon University - Hamerschlag Hall labs renovations*

Carnegie Mellon University - Mellon Institute labs renovations*

Harrisburg University - High Rise University Building*

Penn State University - Ritenour Building science lab renovation*

Yale University - Yale Science Building science lab renovation and an autopsy lab*

Cabell County Schools - Milton Elementary

Hampshire County Schools - new Central Elementary School

Hampshire County Schools - new North Elementary School

Hampshire County Schools - new West Elementary School

Hancock County Schools - Weir High Gym additions

Fayette County Schools - new Meadow Bridge PK-12 School

Fayette County Schools - Institute of Technology renovations

** previous work experience with a firm other than McKinley Architecture and Engineering*

Scott D. Kain

Engineering Production Manager / Senior Plumbing Designer

EDUCATION:

Technology Education College /
Ohio State University
Associates in Mechanical Design - 1996

PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Engineering Production Manager
Engineering Designer
Wheeling, WV (2001 to present)

HAWA Inc.
Mechanical Designer
Columbus, OH (1998-2001)

Autotool Inc.
Engineer
Columbus, OH (1995-1998)

SUMMARY OF EXPERIENCE:

Mr. Kain, our Engineering Production Manager, is an accomplished engineering designer who has performed in all the engineering trades we provide; specializing in electrical, plumbing, and fire protection. He has been utilized for various McKinley projects that needed additional mechanical, structural, and architectural manpower. In addition, Mr. Kain has also provided 3D renderings, to aid in business development, during his long tenure at McKinley Architecture and Engineering.

NOTABLE PROFESSIONAL EXPERIENCES:

West Virginia State University - Gus R. Douglass Economic Development Center (DigiSo) renovations/repurpose

Fairmont State University - "University Terrace" College Student Housing Apartments Complex

Glenville State College - R.F. Kidd Library renovations

Glenville State University - School of Health Sciences study

Washington & Jefferson College - Multiple Projects

West Liberty University - College Union renovations

West Liberty University - Dining Hall renovations

WV Northern Community College - B. & O. Building renovations

WV Northern Community College - Education Center renovations

West Virginia University - Colson Hall renovations

West Virginia University - ADA Assessment and Transition Plan

West Virginia University - State Fire Training Academy

West Virginia University - Stalnaker Hall roof replacement

West Virginia University - University Police Building renovations

WVU Institute of Technology - Maclin Hall renovations

WVU-Reynolds School of Nursing

Wheeling University - Sports Complex Master Planning

Building 55: WV State Office Complex in Logan (LEED Certified)

Building 34: WV State Office Complex in Weirton

West Virginia Health & Human Resources Wheeling Office renovations

WVDRS Wheeling District's new office space fit-out

The Towers Building renovations

Belmont County Commission - Courts & Offices build-outs

Fort Henry Building renovations

Michael J. Clark Sr.

Senior Electrical Engineering Designer

EDUCATION:

Eastern Gateway Community College
A-ATS Electro-Mechanical Engineering - 2012

Jefferson Community College
A-ATS Electrical Trade Technology - 2003

PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

Certified in SMAW Weld Process & Basic Welding and Applications 2002

West Virginia Journeyman License

Ohio Fire Alarm License

OSHA 30 Certified

PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Electrical Engineering Designer
Wheeling, WV (2012 to 2018, 2020 to present)

Arcelor Mittal
Maintenance Technician Electrician
Weirton, WV (2012)

M.J. Electric
Journeyman Electrician
Iron Mountain, MI (2010-2012)

Erb Electric Company
Journeyman Electrician
Bridgeport, OH (2009-2010)

Bechtel Group Inc.
Journeyman Electrician
Glendale, AZ (2009)

Cattrell Companies, Inc
Journeyman Electrician
Toronto, OH (1998-2009)

SUMMARY OF EXPERIENCE:

Mr. Clark is an Electrical Engineering Designer and a Certified Journeyman Electrician with over 25 years of industrial, commercial and residential experience. He is knowledgeable in all areas of the national electrical code and excels in analyzing and solving problems with various electrical controls and systems. Mr. Clark brings a cross-trained background to our projects, being skilled in both the design and the construction ends which gives him a unique ability to understand all aspects of a project. He is also adept in performing electrical and mechanical installations, maintenance and repairs in plant facilities. Furthermore, he is seasoned as an Electrical Foreman and Superintendent on both commercial and industrial job sites. His key skills include Electrical Systems & Controls, Installations & Maintenance, Electromechanical Repairs, Blueprints & Schematics, Generators & Transformers, Switches & Circuit Breakers, Electrical Code, Safety & QA, Wiring Diagrams, Troubleshooting, Testing Instruments, Motors & Conduit, CAD-2D/3D, Welding, & Residential construction. Mike has designed for similar renovation projects, and your project might need his design for electrical system improvements, powering of all new mechanical equipment, electrical distribution, updated controls, switch gears, energy efficiency, upgrades to power feeds, access control, safety & security alarm systems, and more

NOTABLE PROFESSIONAL EXPERIENCES:

Fairmont State University - "University Terrace" College Student Housing Apartments Complex

Glenville State University - Mollohan Building Renovations

Glenville State University - School of Health Sciences study

Glenville State University - We Proudly Serve

Washington & Jefferson College - Multiple Projects

West Liberty University - West Family Stadium / Russek Field lighting

West Liberty University - new Soccer & Track Stadium / West Family Athletic Complex

WV Northern Community College - Campus-Wide parking lots

Franciscan University OP#1 Multi-tenant Retail Building

Franciscan University OP#2 Office / Retail Building

United States Postal Service - open-end IDIQ / multiple projects

Holiday Inn Express Hotels - on-call contract / multiple projects

Building 55: WV State Office Complex in Logan (LEED Certified)

Brooke County Schools - new Brooke Middle School

Fayette County Schools - new Meadow Bridge PK-12 School

Richard G. Berger

Senior Mechanical Engineering Designer

EDUCATION:

CCAC of Allegheny County
Concentration: HVAC

PROFESSIONAL AFFILIATIONS AND REGISTRATIONS:

Pennsylvania Sheet Metal Journeyman License

Volunteer Fireman (retired)

PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Senior Engineering Designer
Wexford, PA (2020 to present)

CJL Engineering
Lead HVAC Senior Mechanical Designer
Moon Township, PA (2019-2020)

Lovorn Engineering
Lead HVAC Senior Mechanical Designer
Blawnox, PA (2013-2019)

Stantec Corporation (formerly Burt Hill)
Lead HVAC Mechanical Designer
Butler, PA (1997-2013)

Peter F. Loftus division of Eichleay Engineers
Lead HVAC Mechanical Designer
Pittsburgh, PA (1989-1997)

SSM Industries, Inc.
Sheet Metal Professional Licensed Journeyman
Pittsburgh, PA (1979-1989)

SUMMARY OF EXPERIENCE:

Mr. Berger is a mechanical engineering professional with over 35 years of experience in HVAC design. His skills include Revit, AutoCadd, Microstation CADD, HVAC duct work and piping design, HVAC calculations, project management, and HVAC and piping field experience. Rich is a Professional Sheet Metal Journeyman license Sheet Metal Workers Local 12. Have designed for healthcare, K-12 schools, universities, high rise commercial, lab renovations and hotels. He will help in the mechanical assessment for the initial facility visits to fully determine the scope of work, as well as designing, specifications, equipment selection using various manufacturer's selection software, heating/cooling loads, shop drawing submittals, and more.

NOTABLE PROFESSIONAL EXPERIENCES:

Cornell University - new Physical Science Building*

University of Pittsburgh - Scaife Hall labs renovations*

Cabell County Schools - Milton Elementary

Fayette County Schools - new Meadow Bridge PK-12 School & School Based Health Clinic

Fayette County Schools - Oak Hill High gym renovations

Fayette County Schools - Valley PreK-8 renovations

Fayette County Schools - Institute of Technology renovations

Hampshire County Schools - Several Project County-Wide

Hancock County Schools - Weir High mechanical upgrades

Harrison County Schools - Gore Elementary School build-out

Harrison County Schools - Simpson Elementary renovations

Harrison County Schools - South Harrison Middle HVAC

Marshall County Schools - Cameron High HVAC Chiller

Ohio County Schools - Several Project County-Wide

Steubenville City School District - Steubenville High School commons renovations

Wetzel County Schools - Paden City ES Multipurpose addition

Wetzel County Schools - Short Line School HVAC

Wetzel County Schools - Bus Maintenance Garage

Wirt County Schools - County-Wide ESSERF Projects

* *previous work experience with a firm other than McKinley Architecture and Engineering*

David A. Ullom

BIM Coordinator / Mechanical Engineering Designer

EDUCATION:

Fairmont State University
B.S. Mechanical Engineering Technology - 2011

Pierpont Community and Technical College
Associates Degree in Applied Sciences:
Drafting and Design - 2011

PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
BIM Coordinator
Engineering Designer
Wheeling, WV (2019 to present)

Kennametal Inc.
Sales Engineer (2016-2019)
Applications Engineer (2012-2016)
Latrobe, PA

Marion County Assessors Office
Map Developer
Fairmont, WV (2010-2012)

SUMMARY OF EXPERIENCE:

Mr. Ullom, our BIM Coordinator, is a results-driven individual who prioritizes safety, cost-effective solutions, and exceeding customer expectations. He is proficient in Autocad, Inventor, and Revit software. David also has experience as a Sales Engineer, Applications Engineer, and Map Developer, which provides an unique understanding for problem solving. Mr. Ullom will assist in the evaluation and designs of all of the mechanical systems (and possibly plumbing and fire suppression systems) in your facility.

NOTABLE PROFESSIONAL EXPERIENCES:

Glenville State University - Mollohan Building Renovations

Glenville State University - School of Health Sciences study

Glenville State University - We Proudly Serve

Mid-Ohio Valley Technical Institute (MOVTI) renovations

Cabell County Schools - Milton Elementary

Fayette County Schools - Institute of Technology renovation

Fayette County Schools - new Meadow Bridge K-12 project

Fayette County Schools - Valley PreK-8 renovations

Hampshire County Schools - new Central Elementary School

Hampshire County Schools - new North Elementary School

Hampshire County Schools - new West Elementary School

Harrison County Schools – Lost Creek Elementary renovations

Harrison County Schools – Gore Elementary build-out

Ohio County Schools - Bridge Street Middle renovations

Ohio County Schools - Elm Grove Elementary renovations

Ohio County Schools - Middle Creek Elementary renovations

Ohio County Schools - Triadelphia Middle addition

Ohio County Schools - Warwood School renovations

Ohio County Schools - Wheeling Middle renovations

Ohio County Schools - Wheeling Park High renovations

Ohio County Schools - Woodsdale Elementary renovations

Steubenville City School District - Steubenville High renovations

Summers County Schools - HS/MS addition & renovations

Heath L. Fain

Construction Contract Administrator

EDUCATION:

Putnam Career and Technical College
Certificate in Journeyman Carpentry - 2005

West Virginia State University
Associate in Architectural Drafting / Construction Management - 2003

PROFESSIONAL LICENSEES AND CERTIFICATIONS:

Capital Fund Specialist

UPCS Certified Housing Inspector

LEED Green Associates Sustainable Green Building Practices

HVAC Technician Type I, II

Lead Paint Removal

PROFESSIONAL EMPLOYMENT:

McKinley Architecture and Engineering
Construction Contract Administrator
Charleston, WV (2023 to present)

Union Mission Ministries Incorporated
Vice President of Operations
Charleston, WV (2018-2023)

Camel Technologies
Operation Manager
Dunbar, WV (2013-2018)

Local Union 128 & 1207
Journeyman Carpenter
Charleston, WV (1995-2016)

Charleston-Kanawha Housing Authority
Modernization Coordinator
Charleston, WV (2004-2013)

SUMMARY OF EXPERIENCE:

Mr. Fain has vast experience in construction, with construction management, business management, and contract contract administration. With a proven track record of success within several industries he brings a well-rounded approach to keeping things on task, finding solutions and working to see a job completed in excellence. As your CA, Heath will observe the construction progress; is the liaison between the owner, contractor, and architect/engineer; will ensure that the contractor is following the construction documents; and more.

NOTABLE PROFESSIONAL EXPERIENCES:

McKinley Architecture and Engineering

WV Lottery Building roof

Kanawha Valley Memorial Garden

Cabell County Schools - new Milton Elementary

Fayette County Schools - county-wide window and door replacements

Fayette County Schools - 6 Schools' Outdoor Classrooms

Fayette County Schools - new Meadow Bridge PK-12 School

Fayette County Schools - Valley PK-8 School renovations

Summers County Schools - HS/MS addition and renovations

Summers County Schools - Talcott Gym renovations

Wayne County Schools - county-wide plumbing replacements

Wayne County Schools - county-wide window replacements

Wayne County Schools - Tolsia High School gymnasium

Wyoming County Schools - Westside HS Field renovations

Wyoming County Schools - Wyoming East HS Field renovations

Union Mission Ministries Incorporated*
Mr. Fain was employed as the VP of Operations and he worked as a part of the administrative team, to facilitate programs, purposes and policies detailed by the CEO to ensure the success and sustainment of Union Mission Ministries. He assisted in budget preparation, maintaining budget restraints, tracking expenditures, and had direct oversight of all Union Mission facilities, vehicles and equipment. His experience also included supervision over multiple directors and staff. He met with, directed, and trained staff on a regular basis. Mr. Fain coordinated and supervised all outside contractor maintenance work, maintained work order program, as well as maintained working drawings and possessed ability to read and interpret those drawings.

** previous work experience with a firm other than McKinley Architecture and Engineering*

Roof Renovation Experience

Our firm has completed a **variety of projects,** which serve to illustrate the **creative** and **talented nature** of our professional design staff. The following examples are chosen to exhibit a partial assortment of **Roof Renovation** projects we have successfully completed:

A.I. Boreman Elementary School
A.T. Allison Elementary School
Artisan Center
Bennett Square
Brooke Primary School
Carenbauer's Distribution Warehouse
Catholic Heritage Center
Center McMechen Elementary School
Elm Grove Elementary School
Flatwoods Elementary School
Ft. Henry Building
Grave Creek Mound Museum
Harrison County Courthouse
Jefferson Co. Dept. of Job and Family Services
Jefferson County Justice Center
John Marshall High School
Lincoln National Bank
Madison Elementary School (Ohio Co)
Madison Middle School (Boone Co)
Magnolia High School
Martin Luther King, Jr. Recreation Center
Maxwell Centre
McNinch Elementary School
Middle Creek Elementary School
New Manchester Elementary School
Oak Glen High School
Ohio County Justice Center
Orrick's Global Operations Center
Presbyterian Church of Cadiz
Scott High School gym
Sistersville Elementary School
SWVCTC - Williamson Campus
Steel Valley Regional Transit Authority
Steenrod Elementary School
Steubenville Justice Center
Stifel Fine Arts Center
Sutton Elementary School
The Towers Building in Steubenville
Tucker County BOE Office
Tyler Consolidated MS/HS
Union Educational Complex
USPS - multiple projects
Vertical Farm
Wagner Building
W&J College – Old Main Building
Washington Lands Elementary School
WLU – College Union Bldg.
West Virginia Independence Hall
WVNCC - B. & O. Building
WVNCC – Education Center
WVSP – multiple projects
WVU – Colson Hall
WVU – Stalnaker Hall
WVU IOT - Maclin Hall
Wetzel Co. Center for Children and Families
Wheeling Dollar Bank
Whg Island Casino Fairgrounds
Willow Glen Mansion
Wilson Lodge pool room
(*and much more*)

HVAC Replacement Projects

On the previous page was a partial list of Roof Replacements. The following examples are chosen to exhibit a partial assortment of **HVAC system replacement** projects we have successfully completed:

Barnesville School District
Bayer Heritage Federal Credit Union
Bennett Square
Boone County Schools - multiple projects
Braxton County Schools - multiple projects
Braxton County Senior Center
Brooke County Schools - multiple projects
Capitol Theatre
Cardinal Health - multiple projects
Carenbauer Wholesale Corporation
Charleston Enterprise Center
Clay County Schools Middle School
Coldwater Creek Distribution Centers
Community Action Southwest Senior Center
Community Trust Bank - multiple projects
Convenient Food Mart
Cornerstone Group - Highlands Office
Coronet Foods - multiple projects
Diocese of Wheeling/Charleston Rectory
Dr. Chapman DDS Office Building
Dr. Ganzer Medical Office Building
First Choice America Federal Credit Union
First National Bank Williamson
Franciscan Multi-Tenant Building
Franciscan Office Building
Fresh-Twist
Glenville State College - RF Kidd Library
Grant County Schools - multiple projects
Grave Creek Mound Museum
Hampshire County Courthouse
Hancock County Schools - multiple projects
Hope VI Units
Jefferson County Justice Center
Linsly School - multiple projects
Marshall County Court
Marshall County Schools - multiple projects
Martins Ferry Stadium
McDowell County Schools - Mount View
McKinley Carter Wealth Services renovations
Mt. Calvary Chapel
Oglebay - Glassworks
Ohio County Schools - multiple projects
Orrick's Global Operations Center
Panhandle Cleaning & Restoration
PRT Technical Center renovation
Raleigh County Emergency Services Authority
Ritchie County Schools - MS/HS
Sisters of St. Josephs Convent
Southern WV Community & Technical Center
St. Matthews Church Parish Hall
Steubenville MLK Recreation Center
Summers County Schools - Summers Middle
The Towers Building in Steubenville
Tyler County Schools - multiple projects
Union Bank Sistersville Branch
USPS - multiple projects
Wagner Building
WV Department of Health and Human Resources
WV Department of Highways
West Virginia Independence Hall
West Virginia Northern Community College
WV State Police - multiple projects
West Virginia University - multiple projects
Wetzel County Schools - multiple projects
Wood County Schools - multiple projects
(*and much more*)

West Virginia State University

Economic Development Center / DigiSo

Charleston, West Virginia

Owner
West Virginia State University

Size
5,032 SF

Construction Cost
$850,000

Project Architects-Engineers
McKinley Architecture and Engineering

Project Architect
Thomas R. Worlledge,
AIA, LEED AP BD+C, REFP

We are proud of this project that we designed for you, and even have employees (*such as Thom Worlledge, seen below*) who utilize the spaces.

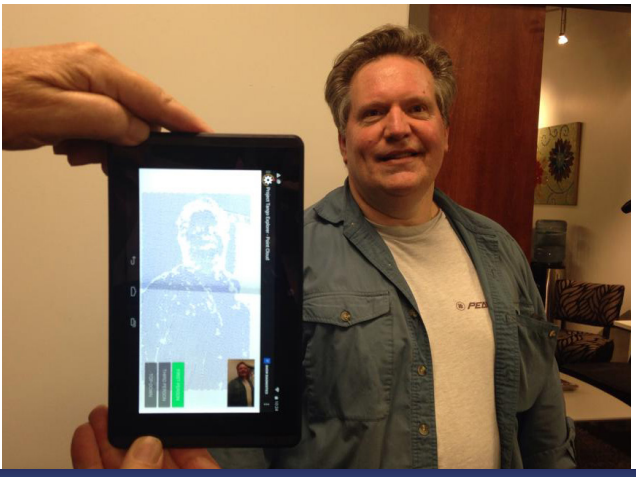
West Virginia State University's Gus R. Douglass Economic Development Center (EDC) is top of mind and **nationally recognized** for **regional digital/ creative/innovation economy education, sustainable community development, workforce programming, creative business acceleration and incubation, and as an ambassador for WVSU Extension Service, WVSU degree programs, and multidisciplinary program innovation. The EDC supports the growth of students, sustainable communities, and digital, creative and innovation economy workers, businesses, and communities by creating and facilitating creative economy and innovation-centered education and workforce development programs, social capital building events, and equally creative program delivery models, and by initiating and participating in collaborative community-building programs.** They offer research-driven education and workforce training programs based on trending and emerging industry workforce data. They also have an innovative business incubator/accelerator program designed to serve in-house tenants, and non-tenant, new economy businesses.

McKinley Architecture and Engineering **masterfully renovated** an office building into the **multi-functional space** including 10 offices, the "open" Oasis area, 2 workforce training rooms/meeting rooms built with flex space (one is a gallery, as well), DigiSo Multimedia Production Studio and Makerspace, conference room, kitchen, and restrooms.

The **exterior** of the building is simple and modern featuring a glass storefront, and outdoor tables for the visiting chefs.

The Oasis area includes an informal meeting space with seating, a 6-seat workbar, five drop-in workstations, lobby, reception, 3 internet TVs and a coffee bar w/ microwave, fridge, etc.

The DigiSo Multimedia Production Studio offers students, mobile creatives, and solopreneurs professional video capture space with large green screen, high def cameras, lighting kits, grid, jib, etc.; as well as voice studio, control booth, and editing suites. The voice and capture studios have special rubber tile floors and acoustically enhanced ceilings and wall coverings.



Furthermore, the basement is the DigiSo Makerspace: an additional 5,000 SF of collaborative desktop fabrication and prototyping space and equipment for tinkerers of all ages, including but not limited to students, inventors, researchers, scientists, jewelry makers, artisans, and others curious about the Maker movement. This is a civic innovation lab, where people come together to share resources and knowledge to build and make things; with interests and skills that range from electronics, robotics, satellites, gaming, security, industrial design, prototyping, sewing, traditional craft, etc. Everybody has access to prototyping space, tools, and specialty equipment like soldering stations, laser cutters, 3D printers, sewing machines and computers with open-source design software.

Through the DigiSo brand, EDC is positioned to serve the regional community as part talent hub, part incubator, part accelerator, part new-media-new-business think-tank. The EDC is a physical and virtual talent convener, designed exclusively to engage, develop, and support entrepreneurs, ideas, and opportunities in digital and creative industries.

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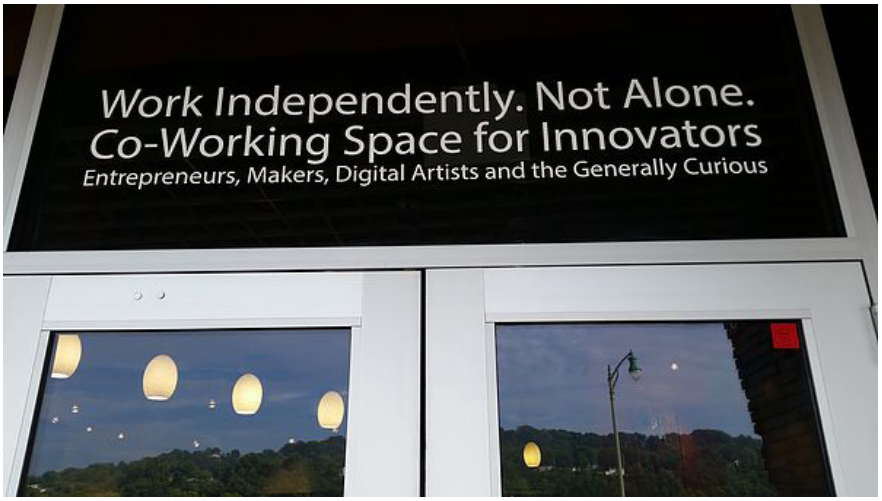
West Virginia State University

Economic Development Center / DigiSo



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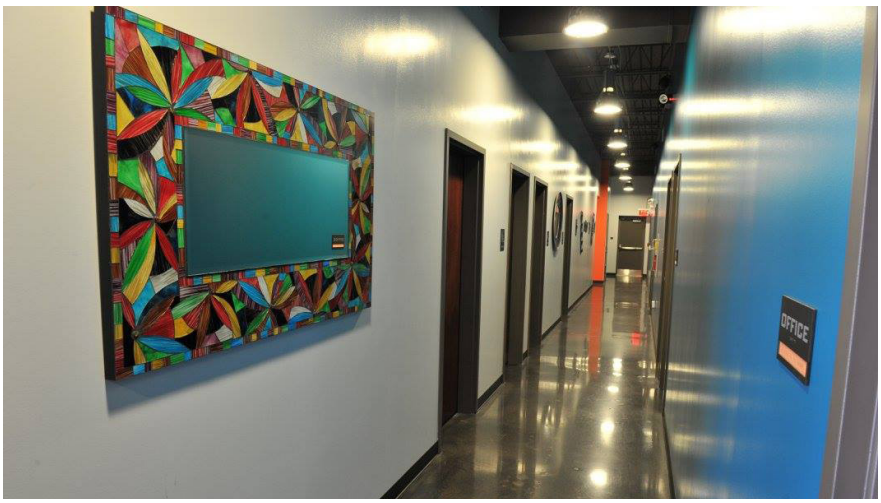
West Virginia State University

Economic Development Center / DigiSo



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2 Open-Ended IDIQ Contracts

United States Postal Service

Appalachian Area (West Virginia & Virginia) and Erie/Pittsburgh District in Pennsylvania

Owner
United States Postal Service

Construction Cost
Multiple projects completed under 2 multi-year open-ended contracts

Project Architects-Engineers
McKinley Architecture and Engineering

McKinley Architecture and Engineering has had **2 separate multiple year open-ended IDIQ agreements with the United States Postal Service.** One is for the **Appalachian Area** [Indefinite Quantity Contract 360070-15-J-0095, which includes the State of West Virginia, and 49 counties and/or independent cities in Virginia], which was awarded on September 29, 2015, and is our **fourth consecutive** multiple year open-ended contract for WV. The second is for the **Erie/Pittsburgh District in Pennsylvania** (Indefinite Quantity Contract 362575-09-J-0232).

We have designed **dozens of facilities** for the USPS, including **new construction, additions, renovations, and rehabilitations** in numerous cities within these areas. We have completed studies, reports, general building renovations, **HVAC systems improvements**, **sprinklers, roofs**, building envelope improvements, windows, utility infrastructure, and much more. **HVAC projects include commissioning, testing and balancing.** One recently completed example was a $1.8 million **build-out / renovation project** for the Parkersburg Carrier Annex & Hub, which includes **new HVAC systems, testing and balancing,** masonry wall, concrete work, exterior wall thermal and moisture protection, site concrete paving, etc. In addition, we have designed over 100 Postal facilities for ADA compliance. We have also completed **Historic Preservation** work, such as extensive interaction with The Secretary of the Interior's (NPS) Standards for the Treatment of Historic Properties and working with the Section 106 process required by SHPO and the Federal Department of the Interior.

For the newest projects, they incorporate **energy efficient** design which follow the newest USPS Standards compliance **to provide a more efficient systems.** For example, **the energy saving on a recent HVAC replacement project was achieved with the use of economizers to allow free cooling when ambient temperatures are below 60° F, and there was commissioning provided on the RTUs. We followed the USPS Standards, and we also completed Form ECC-EZ - Energy Compliance Certification for Low Energy-Impact R&A Projects.**

A majority of the projects we have completed for the USPS over the past 20+ years have been various HVAC projects, including these recent examples which were all completed while the buildings remained occupied!:

-Altoona, PA Post Office - $350,000 HVAC project involved Air Handling Units be replaced along with an addition of a DDC Control System in a historic 1931 facility.

-Charleston Processing & Distribution Center - $375,000 HVAC renovation project involved replacing thermofusers and the ceiling fan coil units with 8 fan powered VAV boxes and 3 single duct VAV boxes with hot water reheat coils; replacing 3 failed rooftop units with new RTUs with electric heat and economizers; installing 2 new 5-ton mini split AC units in an area without cooling; and extending the existing DDC control system to control these new items. The new RTUs have economizers to allow the unit to provide free cooling whenever the outside air temperature is below 55° F, by modulating the amount of outside air delivered through the unit.

-Clarksburg Finance Station - $460,000 HVAC project involved the replacement of the outdated 120-ton water cooled chiller and two 107-ton cooling towers, with new energy efficient systems.

2 Open-Ended IDIQ Contracts

United States Postal Service

-Huntington Processing & Distribution Center - $201,000 HVAC project replacing hot water boiler with like-in-kind.

-Martinsburg Processing & Distribution Center (*seen below*) - $280,000 HVAC project replacing 4 Packaged Rooftop Units with new, like-in-kind, Packaged Rooftop Units. While the RTUs are similar, there were some design changes made to bring the units in to USPS Standards compliance and to provide a more efficient system. The new units were installed on the existing RTU curbs and tied into the existing duct systems. In order the meet the USPS Standards, the units all utilized R-410A refrigerant. The energy saving mentioned above were achieved with the use of economizers to allow free cooling when ambient temperatures are below 60° F. The existing equipment consists of Packaged Rooftop Heating and Cooling Units with DX Cooling and Gas Heating. The workroom, which makes up the majority of the building square footage houses high amounts of equipment providing high levels of internal heat gain, requiring DX Cooling when the outside air temperatures are below the economizer enable setpoint. As a result, currently to maintain space comfort the RTUs must operate DX Cooling into the heating months or the units are turned off, to save energy. The new equipment provides increased operating efficiencies with the addition of Economizers.

-Monongahela, PA Main Office - $330,000 HVAC project replacing hot water boiler with 2 high efficiency condensing boilers in a historic 1913 facility; we recommended the most energy efficient solution that is life cycle cost effective over a 20-year period (with the upgrade from 83% to 95% efficient boilers the system operates more efficiently). While cutting the openings in the structural slab for the supply and return duct, the contractor created and/or noticed cracks; therefore we performed an emergency engineering site visit the next day on the condition of the concrete, provided a sketch for the required structural reinforcements, and the reinforcements were installed.

-Williamson Main Office - $422,000 HVAC project replacing hot water boiler with high efficiency condensing boiler.

BEFORE and AFTER

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Statewide On-Call Agreement

WVDOT, Division of Highways

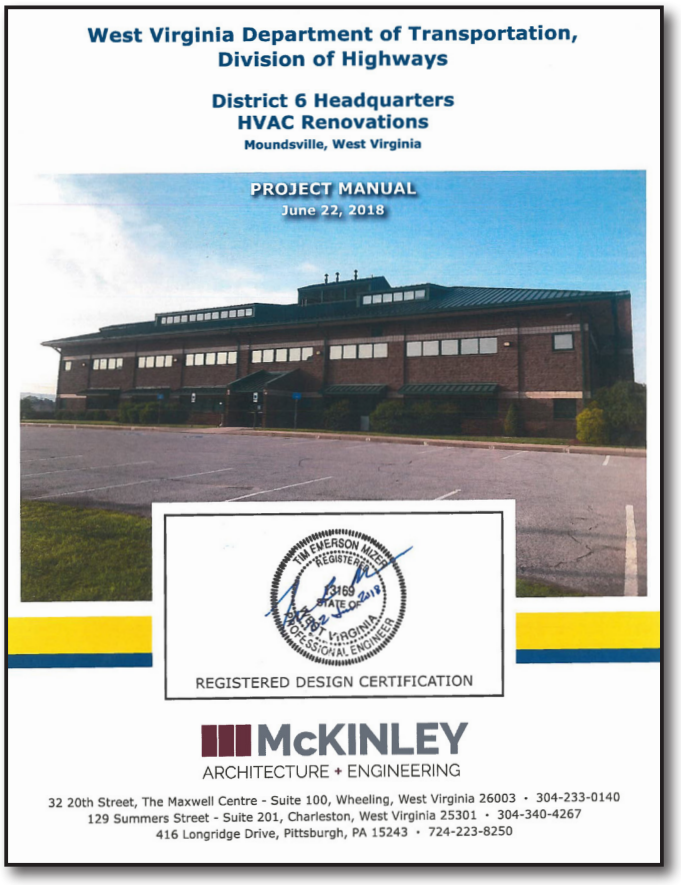
State-wide, West Virginia

Owner
West Virginia Department of Transportation,
Division of Highways

Construction Cost
Multiple projects completed under
2 multi-year open-ended contracts

Project Architects-Engineers
McKinley Architecture and Engineering

Project Engineer
Tim E. Mizer, PE, RA, QCxP



McKinley Architecture and Engineering has been honored to be a partner with the **West Virginia Department of Transportation, Division of Highways**, and we are now on our **2nd consecutive Statewide On-Call Agreement** with them. This open-ended contract is to provide both architectural/engineering consulting services (along with Construction Contract Administration, and more) for the performance of various "tasks."

The **scope of services** generally consist of planning, studying, designing, renovating, repairing, conducting plan/specification reviews, preparing equipment specifications and related services for Department of Transportation facilities, including the site, utilities, buildings, and structures.

For one task, we designed the **HVAC replacement** to the existing 2-story, 8,820 square foot **WVDOH Equipment Division Facility in Buckhannon** (State Project N081-BLD/GR-0.00 00). We designed a new Variable Refrigerant Flow (VRF) air handling unit with remote condensing unit to condition the offices and conference room. A complete digital controls system was installed, with a desktop computer to allow authorized users access to the system.

For another task, we designed the **HVAC replacement** to the **WVDOH District 6 Headquarters Complex in Moundsville** (State Project N081-BLD/GR-0.00). The 31,000 SF building was conditioned with cooling only Air Handling Units and duct mounted heaters. That served full floors of office cubicles with no regard to proper zoning. As the conditioning units began to fail, it was determined that the complete system be replaced with a more economic system. McKinley Architecture and Engineering designed 2 Air Handling Units that provided ventilation air to VRF cassettes in the ceilings above the office areas. This solution provided individual control of all office spaces.

Building 55
West Virginia State Office Complex

Logan, West Virginia

Owner
State of West Virginia

Size
53,200 SF approx.

Project Architects-Engineers
McKinley Architecture and Engineering

Project Architect
Thomas Worlledge,
AIA, LEED AP BD+C, REFP

Contractor
Massaro Corporation

Commissioning Agent
Iams Consulting, LLC

This new 5-story building underscores its major role in the development and revitalization of downtown Logan by uniting office space for 127 employees for **6 State agencies** under one roof, whom were once scattered throughout the city. The 53,200 SF building provides current technology, flexibility for future growth, and security features for existing and future tenants.

At the request of the Owner, the building was designed to be **energy efficient** and meet **sustainable design** goals, confirmed by LEED and energy star requirements. In March 2014, this project became **LEED Certified** for energy use, lighting, water, material use, as well as incorporating a variety of other sustainable strategies.

To help achieve this, the **HVAC System** included the installation of custom air handling units with chilled and hot water coils, variable air volume boxes with hot water heating coils, 2 high efficiency condensing boilers, pumps with variable speed drive control, water cooled chiller with cooling tower, packaged rooftop energy recovery ventilator, and direct digital controls.

For the building **exterior**, a tight building **envelope** was created with closed cell foam insulation and thermal efficient windows.

The **windows** are both energy efficient and secure. One of the unique features of the building is the daylight system. The design takes clues from older buildings that were designed to let daylight penetrate deep into the buildings by necessity. To enhance this effect we added "light louvers" which are devices that redirect daylight to the ceiling and diffuse natural light throughout the space. The open offices were placed around the exterior of the building and the enclosed offices along the interior wall so more of the tenants receive quality light. In addition, interior windows allow the daylight to pass to the center offices.

After the project was completed, the firm *alliantgroup* completed an **Energy Efficient Commercial Building Tax Deduction study** regarding the energy efficient features of the building (***seen on the following pages***), and they **projected the building's total energy costs and power costs to have savings of $34,231 annually!**

View Showing Both Natural Daylighting with Light Louvers, as well as Light from Bulbs

McKINLEY
ARCHITECTURE + ENGINEERING

alliantgroup®

September 5, 2014

Sent Via CMRRR: 7013 2630 0000 2069 4021

Mr. David J. Hildreth
West Virginia Department of Administration
900 Pennsylvania Ave., Ste. 500
Charleston, WV 25302

Re: Logan State Office Bldg. – Energy Efficient Commercial Building Deduction

Mr. Hildreth:

alliantgroup has completed an Energy Efficient Commercial Building Tax Deduction study for Logan State Office Bldg. for Massaro Corporation. As required by U.S. Tax Code § 179D, notification must be given to the building owner regarding the energy efficient features of the building and the building's projected annual energy costs.

Below is a list of the energy efficient features of the building which were installed on or in the building as part of a plan designed to reduce the total annual energy and power costs in comparison to a reference building which meets the minimum requirements of ASHRAE (American Society of Heating and Refrigeration, and Air-Conditioning Engineers) Standard 90.1-2001.

Heating, Ventilation, and Air Conditioning Systems:

- Boilers
- Unit Heaters
- Chillers
- Energy Recovery Ventilation

Interior Lighting Systems:

- Fluorescent Bulbs
- LEDs
- Occupancy Sensors

Building Envelope System:

- Pre-Cast Panels
- Rigid Polyisocyanurate
- Gypsum Board

3009 POST OAK BOULEVARD, SUITE 2000 | HOUSTON, TEXAS 77056
www.alliantgroup.com | 800.564.4540

The projected annual energy cost for Logan State Office Bldg. was calculated to be $34,231. Please note that the projected annual energy costs may vary from the building's actual energy costs due to the exclusion of process loads, exterior lighting, variations in occupancy, and variations in usage schedules among other variables.

Please be advised that the amount of the deduction that has been allocated to Massaro Corporation is $98,658 for the building envelope, HVAC and hot water, and lighting systems in the building. For more information on the allocation of the section 179D deduction, please refer to the U.S. Tax Code § 179D and IRS Notice 2008-40. A copy of the notice can be found at www.IRS.gov

If you have any questions, please do not hesitate to contact me.

Very truly yours,

Rizwan Virani
Managing Director

www.alliantgroup.com | 800.564.4540

West Virginia Department of Health and Human Resources Office Building

Wheeling, West Virginia

Owner
WV Department of Administration:
Real Estate Division

Size
56,783 SF

Construction Cost
$2 million

Project Architects-Engineers
McKinley Architecture and Engineering

Project Architect
Thomas R. Worlledge, AIA, LEED AP BD+C, REFP

We were asked by our client to **adaptively reuse/ renovate** a former car showroom and service area into an **office building** (now called the Mary Margaret Laipple Professional Building). The first fit-out includes space for the **Department of Health and Human Resources' (DHHR) new Ohio County office.** We worked with our client to fit the DHHR's program into the space and maximize the use of the space.

The **initial $2 million project** was built in **three phases,** so the project could be **fast tracked to meet the Owner's move-in requirements.**

The exterior was completed in the first phase, and included **new exterior skin / envelope (*seen top right*), windows (*seen bottom right*),** doors, etc. The showroom **windows** were mostly in-filled **because of the sensitive nature** of the materials in the DHHR's office, but windows high on the wall provide **natural daylight** in the space daylighting, for just one example of the building's **multiple energy-efficient features**.

The second phase was the **interior, and included** offices build-outs, flooring, painting, **systems**, including **major HVAC / mechanical** and **electrical** systems to provide a state of the art facility for the DHHR's use, etc..

The final phase was the parking lot and emergency exit fire stair tower.

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West Virginia Independence Hall

Wheeling, West Virginia

Owner
WV Division of Culture & History

Size
22,000 SF

Project Architects-Engineers
McKinley Architecture and Engineering

Project Architect
Christina Schessler,
AIA, LEED AP BD+C

Originally built in **1859** in **Wheeling, WV,** the **Wheeling Custom House** is considered to be the **"Birthplace of West Virginia."** The 22,000 square foot building, now appropriately renamed **West Virginia Independence Hall**, was added to the **National Register of Historic Places** in 1970, and was designated as a **National Historic Landmark** in 1988. **McKinley Architecture and Engineering was presented with a Heritage Tourism Award from the Preservation Alliance of West Virginia, for our achievements** in preserving Independence Hall.

The **West Virginia Division of Culture & History** engaged the professional services of McKinley to conduct on site analysis and to document and confirm as much of the existing conditions as possible (short of destructive investigation) in preparation for restoration activities. Afterwards, we completed **multiple renovations and restorations**, including aesthetic improvements, a **new mechanical / HVAC system, electrical, fully automatic sprinkler system, fire alarm detection system,** and plumbing were designed to be **completely concealed within the existing walls and ceilings.**


During Construction

A combination of water intrusion conditions existed at the beginning of the restoration; the building had a **failed roofing system, failed box guttering,** broken stone, missing mortar and deteriorated wooden windows. Restoration and renovation work of the building addressed all of these issues, and more.

The failed metal **roofing** system was removed and replaced with 5,000 SF of new standing seam metal and a new custom metal guttering and downspout system **(*seen below*)**. This metal roofing is emblematic of the period of 1859 when the original structure was completed.

Of particular concern was the face of the **exterior** stone envelope; over time the stone face had deteriorated due to weathering and ground water absorption, which permitted water penetration at the surface of all the façades. Restoration scope included pointing and stone cornice replacement, and resurfacing of some of the stone using 2 inch thick slabs pinned to the existing backup stone. Also, all of the 44 double-hung wood windows have been fully restored and reglazed.


During Construction


& After

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The Towers Building

Steubenville, Ohio

Owner
Jefferson County Commissioners

Size
76,300 SF

Construction Cost
$6.1 million approx.

Project Architects-Engineers
McKinley Architecture and Engineering

We have worked with the Board of Commissioners of the County of Jefferson on several projects over the past few years, and currently have an engineering and architectural services open ended contract with them.

One major project example is multiple phases of renovations and upgrades to **The Towers Building.** This is a **40+ year old, 8 story high-rise** in downtown Steubenville. Unusually cold weather, age, and the culmination of years of insufficient maintenance had resulted in a series of situations resulting in frozen pipes, systems shutting down, and continuing emergency maintenance issues in the building.

We have **designed multiple phases of renovations for the building**; a **main roof replacement**, **mezzanine roof replacement** and new lobby skylight, building envelope repairs, a **new boiler**, new ADA handicapped ramp, and an **overall HVAC replacement**. In addition, there was an adaptive reuse of a former bank on the first floor, into an **office fit-out / renovations** for the Jefferson County Board of Elections. **Our designs addressed repair options, efficiency and energy saving solutions.**

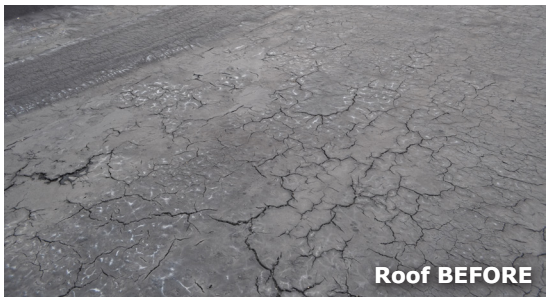
The construction was performed with the building in operation. These projects were completed over time, with different General Contractors. For one example, the **new boiler** project involved the replacement of existing inefficient electric boilers with a new gas fired boiler. The new boiler is **high energy efficiency**, and has a much **smaller footprint**.

The **$800,000 exterior envelope repair project (*seen to the left*)** required masonry-clean all precast panels, including remove and replace all joint sealant, precast column repairs to realign columns as closely as possible, attached new steel anchors, patch precast concrete where required, restoration of glazing system including new gaskets and anodized caps, and more. The contractor for that Phase was Church Restoration Group.

The **$3.4 million HVAC replacement** project included **renovations to the entire building.** The **demolition** included the removal existing cooling tower, exhaust fan, rooftop unit, and associated ductwork and piping from upper roof (tower); removal of existing exhaust fan and gravity ventilating intake hoods from lower roof (mezzanine); removal of basement air handling units, chilled water piping and pumps, condenser water piping and pumps, ductwork, chiller, and VAV boxes throughout the building. **The new HVAC system** included the installation of variable refrigerant flow system (VRF) throughout the building; installation of new dedicated outside air system (DOAS-1) on the upper roof (tower) and an air handling unit (AHU-1) in the basement with the condensing unit installed on the lower roof (mezzanine); installation of new and the reworking of existing ductwork; new shut-off and control valves installed on the existing hot water perimeter finned-tube baseboard; and installation of a new DDC Control system throughout the building. The electrical work included disconnecting existing power from demolished equipment and the installation of new circuits to the new equipment, which included adding a sub-panel on every floor. There was also partition extensions, ceiling removal and replacement, fire sealant work, and fireproofing repairs.

On the following page are pictures of the Roof and HVAC replacements.

The Towers Building


Roof BEFORE


& AFTER


Outside HVAC BEFORE


& AFTER


Inside HVAC BEFORE


& AFTER

Raleigh County 911 and Emergency Operations Center HVAC

Beaver, West Virginia

Owner
Raleigh County Emergency Services Authority

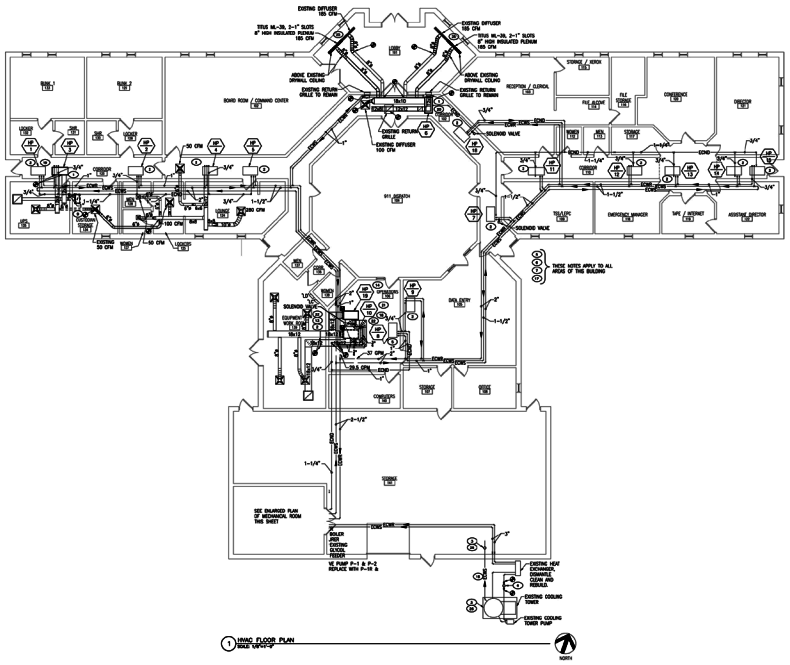
Size
12,855 SF

Construction Cost
$250,000

Project Architects-Engineers
McKinley Architecture and Engineering

Project Manager
Tim E. Mizer, PE, RA, QCxP

Contractor
Pennington Plumbing & Heating



McKinley Architecture and Engineering was commissioned to investigate and provide Construction Documents to repair the ill-functioning **HVAC system** in the Raleigh County Emergency Services Authority's office building (911 Center and Emergency Operations Center).

Upon investigation of this 13,000 SF facility, it was determined that many of the heat pumps were undersized within the 911 Center's most critical areas (such as the Dispatch Room). More importantly, it also was determined that the building was not constructed architecturally as designed and this deficiency greatly influenced the total building's HVAC system's performance.

The project included the replacement of 2 Water Source Heat Pump Units and adding 1 new Water Source Heat Pump Unit, relocating a Water Source Heat Pump Unit from above a critical computer area, installing a new main boiler and utilizing the existing boiler as back-up boiler, replacing 2 building loop circulating pumps, installing a new HVAC Control System, replacing the cooling tower filter, replacing the cooling tower water level control and adding a water hammer arrester on the line to prevent water line rattling, installing new heat pump flow control hose kits, and adding pitched **Roof Insulation** at R-25 thickness.

Since the facility is a 911 Center, it must remain in operation 24/7; therefore, the pumps were replaced one at a time so that the building could stay in operation, while the building remained occupied.

In addition to HVAC renovations, the project also includes associated **electric work,** miscellaneous interior renovations and insulation work.

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Harrison County Schools

Gore / Victory Elementary School

Clarksburg, West Virginia

Owner
Harrison County Schools

Size
61,300 SF

Construction Cost
$8 million

Project Architects-Engineers
McKinley Architecture and Engineering

Project Architect
Thomas R. Worlledge,
AIA, LEED AP BD+C, REFP

Contractor
City Construction Company

We have completed a few projects for **Harrison County Schools** over the past few years, including **additions**, **renovations/adaptive reuse**, and new construction. For one example, this **$8 million** project is to **adaptively reuse** and convert United High School to the new Gore / Victory Elementary School; combining Adamston Elementary School and Wilsonburg Elementary School. The project includes **55,200 SF of renovations,** along with **6,100 SF of new additions.**

A **2-story classroom wing addition** was designed to accommodate the number of students.

The interior **renovations** includes classroom upgrades, kitchen and dining areas, as well as a gym and other various interior renovations to the existing buildings. The interior also includes **upgrading the HVAC, electrical,** new fire alarm, **adding a fire sprinkler system,** etc. There are new safe school features including a new man-trap addition at the main entrance with a security vestibule.

On the exterior is a new building façade and **infilling and replacing the windows.** Furthermore, there will be parking and separate drop off loops for the buses and parents.

We also designed multiple "**High Performance School**" components and **energy efficient** features, such as **full MEP upgrades to create a high-efficiency HVAC system** as well as new ceilings with **LED lighting systems**, **window infills with high-performance glass**, **daylight windows for natural daylighting**, **added wall insulation for energy efficiency, ventilation and high-efficiency filters for good indoor air quality**, and more. The **HVAC system** was upgraded to a four-pipe system with the addition of a chiller and new unit ventilators capable of providing the ventilation air required by code.

McKINLEY
ARCHITECTURE + ENGINEERING

Marshall County Schools

Hilltop Elementary School

Sherrard, West Virginia

Owner
Marshall County Schools

Size
49,700 SF

Construction Cost
$8.4 million

Project Architects-Engineers
McKinley Architecture and Engineering

Project Architect
Thomas R. Worlledge,
AIA, LEED AP BD+C, REFP

Contractor
Grae-Con Construction

Commissioning Agent
Iams Consulting, LLC

The **49,700 SF Hilltop Elementary School** didn't start out as a **green** school but the design intent was to **incorporate good sustainable design practice.** It was not until after construction had commenced that the Owner decided to submit for LEED Certification. This required a great deal of coordination with the architects, engineers, subcontractors and suppliers. A lot of time was spent researching LEED-approved furnishings, finishes, etc. to make the indoor environmental quality conducive to learning, and to minimize maintenance. Since we incorporated good sustainable design practices **from the beginning of design**, this allowed for an easy transition, and for the project to be successfully completed. **Hilltop Elementary is the first LEED Certified school in the state of West Virginia!**

For the **LEED Certification**, we received points for the **HVAC system (*seen bottom left*) design and commissioning**, such as Thermal Comfort Controllability, Design, & Verification, as well as **Mold Prevention**. The HVAC System consists of 3 Single Zone Packaged Rooftop Units and a Series of Fan Coil Units, having ventilation air provided by a Dedicated Outside Air Unit. The Packaged Rooftop Units have Electric Heat, DX Cooling, Enthalpy Controlled Economizer with CO_2 Override (on the Cafeteria Unit) and Hot Gas Reheat for Dehumidification Control. Upon a space RH value above 60% the DX Cooling will be energized, and Hot Gas Reheat will be utilized to prevent overcooling of the space. We are also preventing elevated humidity by limiting the ventilation air in the seldom occupied spaces, with the use of CO_2 control. Upon a CO_2 level of 800 ppm, the outside air damper will modulate open. However, the majority of the time the ventilation air will be kept at a minimum, since the space is seldom used at full capacity, greatly limiting the humidity. The Maximum Calculated RH value for the Classrooms served by the Fan Coil Units is 60%. The ventilation air is delivered to the spaces through a Dedicated Outside Air Unit. The Dedicated Outside Air Unit includes a Total Energy Wheel. When the outside air humidity levels are elevated, the Energy Wheel will provide the first level of dehumidification. Based on the interior sensible loading, the reduced airflow and cooling supply air temperature, the resulting RH in the space will not exceed 60%.

We also received multiple other **LEED points** in areas such as: low-emitting materials, acoustical performance, windows / daylighting & views, **lighting system design**, light pollution reduction, optimized energy performance, recycled content, regional materials, innovation in design, and much more. The School Building Authority's 2009 Limit on New Elementary School Design is $217/SF, but Hilltop Elementary's final price is less than $170/SF. **This amount was well below the national average for elementary school construction, sustainable or not. Also, this project had less than 1% in non-elective change orders!**

Hilltop won a Gold Medal Green Building Award by Building of America, a Placemaker Award for Leadership of/for Place from the West Virginia GreenWorks, a West Virginia Department of Environmental Protection's Clean Energy Environmental Award, a Black Bear Award for the Highest Achievement for the West Virginia Department of Education's Green Ribbon Schools program, and the first-ever U.S. Department of Education Green Ribbon Schools!

McKINLEY
ARCHITECTURE + ENGINEERING

Ohio County Schools

J.B. Chambers Performing Arts Center

Wheeling, West Virginia

Owner
Ohio County Schools

Size
34,000 SF

Construction Cost
$11 million

Project Architects-Engineers
McKinley Architecture and Engineering

Project Architect
Ray Winovich, RA

Contractor
Jarvis, Downing & Emch, Inc.

Since the 1980s, we have completed **several projects** for Ohio County Schools, totaling over **$100 million**.

One project is the **new $11 million J.B. Chambers Performing Arts Center that was built on to the front of Wheeling Park High School. More than 100 local workers were involved in the construction of the facility.** The **34,000 SF** facility was created to support the long-standing robust Performing Arts Program. It provides a **professional grade** theater to showcase both musical and theater performances, and is used as a **workshop** for classes in production and performance. For these students, standing onstage in this unique venue is the first step of a dream-come-true. The PAC is not only a state of the art facility available to all OCS students; it is also available to local community groups, colleges, universities as well as performances by the Wheeling Symphony.

The 1,200 seat **theater** was designed as a Gallery configuration with 2 levels. The Galleries are shallow, and wrap around in a crescent form, thus providing the audience with optimal proximity to the stage. In response to WPHS's unusual concentration on performing arts and theater technology, the project showcases various components not typically found in public school facilities, such as a professional equipment, lighting catwalk, multi-layer engineered stage floor system, structural steel grid-iron with professional-grade motorized rigging equipment and smoke control vents, open-view lighting and audio booth, mid-house mix workstation, back stage area with touch-screen computers that operate 350 lighting and rigging circuits and audio, demountable orchestra shell, suspended walk-able tension grid, Scene Shop high-bay studio, 20' high door which allows access and mobility for the tallest stage equipment and set assemblies, and more. All of these systems are utilized as **hands-on training** for the Theater Arts students.

The Theater is linked to the existing school with a compact but dynamic 2-Story Lobby space. The Lobby features a central monumental stair, connecting the open balcony of the upper Lobby to the curtainwall-glazed angular geometry of the ground floor. Here, they **showcase artwork** created by the students. The oversized mid-point landing on this stair looks out onto the entry plaza on one side, and into the dramatic cascading hillside of the park on the other. In addition to the theater, we also completed **6,000 SF of renovations** to the existing WPHS.

Architectural PORTFOLIO 2013 Outstanding Design

This project was selected as an Outstanding Design by the American School & University Magazine's 2013 Architectural Portfolio; the premier showcase celebrating the best in education design!

McKINLEY
ARCHITECTURE + ENGINEERING

References

We feel that the best way to demonstrate our strengths and leadership in **roof replacements, HVACs, sprinkler systems, and electrical design** is by referring to our clients. We have an ever-growing list of repeat clients. We are able to respond to their needs, and we are certain that we are able to respond to all of your needs as well. So that you don't only have to take our word for it; we encourage you to call our references:

(*HVAC Projects*)
Mr. Joshua Smith, PE
WVDOT Division of Highways
1900 Kanawha Boulevard, East
Building 5, Room 350
Charleston, WV 25305
304 / 887-2325

(*Several Projects County-Wide, including HVACs, roofs, etc.*)
Mr. Thomas Gentile
Jefferson County Commissioners
301 Market Street
Steubenville, OH 43952
740 / 283-8500

(*Open-Ended IDIQ Contracts, including multiple HVACs, roofs, electrical, sprinklers, etc.*)
Mr. Michael Douglass
United States Postal Service
27497 Albert Pick Road
Greensboro, NC 27498
336 / 665-2875

(*Several Projects County-Wide, including HVACs, roofs, electrical, sprinklers, etc.*)
Dr. Kim Miller
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304 / 243-0300