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

Header 1

List View

General Information | Contact | Default Values | Discount | Document Information | Clarification Request

Procurement Folder: 1017124
Procurement Type: Central Contract - Fixed Amt
Vendor ID: 000000160366
Legal Name: TOWER ENGINEERING INC
Alias/DBA:
Total Bid: $0.00
Response Date: 04/06/2022
Response Time: 13:05
Responded By User ID: Tower
First Name: Taylor
Last Name: Pieper
Email: tpieper@estower.com
Phone: 7249984106

SO Doc Code: CEOI
SO Dept: 0211
SO Doc ID: GSD2200000004
Published Date: 3/16/22
Close Date: 4/6/22
Close Time: 13:30
Status: Closed
Solicitation Description: EOI: Building 3 Hydronic Boiler System Upgrade Project
Total of Header Attachments: 1
Total of All Attachments: 1

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

State of West Virginia
Solicitation Response

Proc Folder:	1017124
Solicitation Description:	EOI: Building 3 Hydronic Boiler System Upgrade Project
Proc Type:	Central Contract - Fixed Amt

Solicitation Closes	Solicitation Response	Version
2022-04-06 13:30	SR 0211 ESR04062200000006134	1

VENDOR

000000160366
TOWER ENGINEERING INC

Solicitation Number: CEOI 0211 GSD2200000004

Total Bid: 0 **Response Date:** 2022-04-06 **Response Time:** 13:05:14

Comments:

FOR INFORMATION CONTACT THE BUYER
Melissa Pettrey
(304) 558-0094
melissa.k.pettrey@wv.gov

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

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

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	EOI: Building 3 Hydronic Boiler System Upgrade Project				

Comm Code	Manufacturer	Specification	Model #
81101600			

Commodity Line Comments: We entered "no bid" because we are responding to an Expression Of Interest (EOI), not a Request For Proposal (RFP). Our review of the EOI led to our understanding that we are not submitting a cost proposal, at this time. The contact amount entered ($160,000) is an estimate based upon a construction cost of $2,000,000 and a professional fee equivalent to 8% of the construction cost. Obviously, this needs to be further discussed and developed, and would need to be revisited further.

Extended Description:

EOI: Building 3 Hydronic Boiler System Upgrade Project

TOWER ENGINEERING, INC.

State of West Virginia Centralized EOI:

Building 3 Hydronic Boiler System Upgrade Project

Due: April 6, 2022

115 Evergreen Heights Drive, Suite 400,
Pittsburgh, Pennsylvania 15229
Phone: 412.931.8888
Fax: 412.939.2525

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.

James N. Kosinski, PRINCIPAL
(Name, Title)
James N. Kosinski, PE, Principal
(Printed Name and Title)
115 Evergreen Heights Dr., Suite 400, Pittsburgh, PA 15229
(Address)
412-931-8888 ; 412-959-2525
(Phone Number) / (Fax Number)
jkosinski@estower.com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

Tower Engineering, Inc.
(Company)
James N. Kosinski, PRINCIPAL
(Authorized Signature) (Representative Name, Title)
JAMES N. KOSINSKI, PRINCIPAL
(Printed Name and Title of Authorized Representative)
04/06/2022
(Date)
412-931-8888 ; 412-939-2525
(Phone Number) (Fax Number)

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

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

DEFINITIONS:

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: JAMES N. KOSINSKI

Authorized Signature: _____ Date: 4/6/22

State of Pennsylvania

County of Allegheny, to-wit:

Taken, subscribed, and sworn to before me this 6th day of April, 2022.

My Commission expires 07/22, 2024.

AFFIX SEAL HERE

Commonwealth of Pennsylvania - Notary Seal
Tyler M.L. Rietze, Notary Public
Allegheny County
My commission expires July 22, 2024
Commission number 1373092
Member, Pennsylvania Association of Notaries

NOTARY PUBLIC _____

Project Goals and Objectives

2.1 Goal/Objective 1: **For the project, Vendor shall survey the existing heating system then design a conversion from steam to water. Within their proposals, Vendors should demonstrate their past experiences with converting existing heating systems, preferably from steam to water.**

Answer:

Tower Engineering has constructed hundreds of hot water heating plants over the years. While each project is unique, current practice is to deploy variable water volume hot water heating plants consisting of multiple condensing style boilers that reset their discharge temperature in response to real-time measurements of outside air temperature. To maximized efficiency, systems are designed to operate with a maximum hot water temperature of 140°F, unless unique project circumstances dictate otherwise. A small sample of relevant experience is described below.

We converted two, 23,000 MBH cast iron steam boilers, and one, 2,500 MBH "summer" steam boiler serving the Chartiers Valley Middle and High School from steam to hot water in 2016. Additions and remodeled areas expanded the roughly 350,000 SF facility to about 500,000 SF. Construction occurred over a 30-month period without taking the school out of service.

To maximize efficiency, a low-temperature hot water heating plant consisting of (4) 2,500 MBH boilers distributes hot water between 100°F and 140°F, depending on outside air temperature, now serves new construction portions of the high school. Portions of the building that were not scheduled for remodel are served by a new high temperature hot water heating plant of (3) 2,000 MBH boilers that distributes hot water between 100°F and 180°F. A third, in this case low-temperature hot water heating plant of (4) 2,500 MBH boilers serves the middle school. In all, eleven condensing style boilers serve the facility via three independent, variable water volume hot water heating plants capable of operating with efficiencies up to 98%. Boiler modules serving each plant are sized to provide N+1 redundancy for superb reliability.

Tower Engineering converted Pittsburgh Theological Seminary's Barbour Library from steam to hot water as part of a renovation project that achieved LEED Silver Certification. A variable water volume hot water heating plant was constructed to distribute low temperature hot water between 100°F and 140°F as needed to meet demand via (3) 1,200 MBH boilers selected for N+1 redundancy.

Tower Engineering also developed construction documents for renovations to WV State Office Building #4 that include converting a steam heating plant to a new variable water volume hot water heating plant consisting of (3) 2,500 MBH condensing style boilers capable of operating at efficiencies up to 98%. Construction of this project is pending.

2.2 Goal/Objective 2: **One anticipated challenge is the selection of the new boiler plant location, observing appropriate location for boiler flue exhaust. Within their proposals, Vendors should demonstrate their experience with locating boiler plants on building campuses. Vendors should provide a basic project approach for how they would address selecting a location for a new Building 3 plant, and for locating discharge of boiler flue exhaust (i.e. so as to not contaminate air intakes for Building 3).**

Answer: On next page

Boilers may be installed indoors within dedicated mechanical equipment rooms or on the roof, within field or factory constructed mechanical equipment enclosures. Flue gas discharge must be located to prevent entrainment into air intakes, operable doors and windows. Care must also be taken to prevent flue gasses from being discharged onto plazas, where people may be walking from building to building.

Locating the boiler on the roof of Building #3 appears possible, but should be considered only if the new boiler plant cannot be installed within the basement mechanical equipment room B-M5. It appears from the building's mechanical plans that (6) 3,000 MBH Boilers will be required. Other quantity and capacity combinations are possible, but the reality is that substantial space will be needed to accommodate the installation. This space may only be available on the roof.

Whether the boilers are installed on the roof or in the basement will determine if one or more flues must be routed up and through the roof, or if hot water piping must be routed down from the roof to the basement mechanical equipment room. The flue will be physically large and no readily apparent path for the installation exists. Modifications to the space lay-out and general construction will likely be required. The same holds true for routing a pair of insulated 8" hot water supply and return pipes from the roof to the basement, but this strategy is likely to require less physical space, and be more tolerant of routing offsets that are likely to be required.

2.3 Goal/Objective 3: Vendor shall also be responsible for designing new natural gas utility supply to the building, to serve the new boiler plant. Agency's intent is to cause as little disruption to Capitol Complex activity or construction as possible. Within their proposals, Vendors should document their experience with designing construction of new utilities on existing building campuses.

Answer:

Tower Engineering is involved with hundreds of projects every year. Most of our projects include the use of natural gas as a heating source, and in most of these projects we are responsible for designing new utility services, including gas service. This includes our WV State Office Building #4 project. Furthermore, many of our projects are in West Virginia (see list below), making us familiar with the gas utility companies and their procedures. For all such projects it is critical that consideration be given to the routing of the new gas service to insure that any disruption to vehicular and pedestrian traffic is minimized AND anticipated. This was particularly important with the Pittsburgh Theological Seminary's Barbour Library project where the library is located in the middle of a campus.

2.4 Goal/Objective 4: **Vendor shall also be responsible for designing the project for bidding using the State of WV procurement procedures (incorporating AIA construction documents into the bidding documents) and then for performing construction administration services during the construction project. Within their proposals, Vendors should document their experience with designing mechanical repair construction projects using the procedures equal or similar to the State of WV's procurement procedures, and for administering projects for which the Owner is a government entity.**

Answer: On next page

Tower Engineering's team includes PWWG, an architectural firm that we have partnered with hundreds of times in the past. PWWG's responsibilities include the design of any general construction components that will be necessary as part of the installation of a standalone heating plant in Building 3. In addition, PWWG will also be responsible for the preparation of the front-end bidding documents that must strictly adhere to the State of West Virginia's requirements. PWWG has the experience to provide this service accurately and efficiently, having worked on many projects in the State of WV. This includes the current Building 4 renovation as well as the prior Building 3 renovation.

For construction administration, both PWWG and Tower Engineering have experience working with governmental entities. Obviously we have collaborated on the Building 4 project. Tower Engineering was involved with the Fairmont State Office Building Project. Both firms have provided services to many municipal clients in both WV and PA. This includes a current Tower Engineering project where the HVAC systems in the Crawford County Courthouse are being completely upgraded, and a recently completed comprehensive study of existing MEP systems for many buildings owned by the City of Bridgeportto collaborating on many Pennsylvania projects, we have also worked together on projects in WV.

For ongoing construction administration services, Tower Engineering intends to self-perform the routine site visits and meetings. Since the 1990's, Tower Engineering has worked on hundreds and hundreds of projects throughout West Virginia. We only have a single office, located in Pittsburgh. From this location, we have always been able to provide in-house construction administration that is timely and comprehensive.

Qualifications, Experience, and Past Performance

Tower Engineering, Inc. Overview & Services

Tower Engineering, Inc. has been providing innovative mechanical, electrical, plumbing, and fire protection solutions since 1931. While Tower is a generalist firm, it primarily serves the K-12 and higher education, healthcare, senior living, hospitality and recreation sectors in both renovations and new construction. The firm's highly-trained staff of project managers, designers, and technical support personnel is capable of providing consulting services for every type of project - from a small, single-family residence to a high tech research facility incorporating redundant mechanical and electrical systems, DDC energy management and thermal storage. Our engineers utilize state-of-the-art software programs for the design of lighting, electrical power and mechanical systems. Lighting analysis includes point-by-point calculations, ESI analysis, exterior lighting analysis, and life cycle cost comparisons. Electrical power analysis includes fault current and load flow analysis.

Mechanical design and analysis services include energy economic analysis, thermal storage analysis, heating and cooling load calculations, refrigerant piping design, water system designs, along with BIM modeling. Our professional staff utilizes computer selection of air handling units, coils, pumps, terminal devices, fans, cooling towers, chillers, heat exchangers, kitchen hoods, hydronic and steam specialties, humidification equipment and heat recovery equipment. Sustainability principles are considered at every design point, and firm principals personally lead every project. The firm has 23 employees, including 8 Registered Professional Engineers and 8 LEED Approved Professionals.

Sustainable & Energy Efficient

- 8 LEED Professionals
- Over 30 LEED Projects
- Green Building Design
- Ecological & Resource Efficient
- Reduce Energy Consumption
- Building System Analysis
- Energy Audit

HVAC

- Heating and cooling system design
- Ventilation system design
- Building automation systems
- Control systems and energy monitoring
- Geothermal system analysis and design
- Heat recovery systems
- Kitchen and laboratory exhaust systems
- Smoke evacuation systems
- Computer room environmental control systems

Electrical

- Interior and exterior lighting design and studies
- Lighting controls
- Primary Security systems
- Fire detection and alarm systems
- Computer data and power systems
- Uninterruptible power supply systems
- Reinforced and masking sound systems
- Lightning protection systems
- Fault current studies
- System over-current protection coordination
  Primary and secondary voltage power distribution systems

Plumbing

- Water resource efficiency analysis
- Sanitary drainage systems
- Storm water management
- Domestic water systems
- Waste water treatment systems
- Hospital and laboratory piping systems
- Fuel oil piping systems
  Irrigation systems

Fire Protection

- Standpipe and sprinkler systems
- Fire protection systems

Commissioning

- New Construction Commissioning
- Renovation Commissioning
- Retro-commissioning
- Recommissioning
- Value Recommissioning

Technology

- Voice communication systems
- Data network systems
- Audio/Visual Systems
- Surveillance
- Access Control
- Emergency Notification Systems
- Digital Signage
- And much much more

TOWER ENGINEERING, INC.
115 Evergreen Heights Drive, Suite 400, Pittsburgh, Pennsylvania 15229 | 412-931-8888 | Fax 412 939-2525 | www estower com

Sustainable Building Design

U.S. Buildings use about 1/3 of all U.S. energy for heating, cooling, lighting an operation. In addition they produce more than 35% of all greenhouse gases.

A sustainable building is a structure that designed, built, renovated, operated, or reused in an ecological and resource-efficient manner. Green buildings are designed to meet certain objectives such as protecting occupant health and wellness; reducing energy consumption, improving employee productivity and reducing a building or project's impact on the environment.

As technologies and systems have improved dramatically over the past decade, the up-front costs to sustainable design have been reduced significantly. And, smart design saves through lower operating costs over the life of the building. The sustainable building approach applies a project life cycle cost analysis for determining the appropriate up-front expenditure. This method calculates costs over the useful life of the asset.

From a business perspective, the biggest cost silo is salary and benefits. By creating healthier work environments with the inclusion of low/no VOC paints, no carpet adhesives, better air circulation, natural light and indirect lighting, ergonomic furniture and visually engaging work and breakout areas, employees are more productive and stay. So, green is really GREEN.

At Tower Engineering we believe it is our responsibility to offer architects and owners sustainable design alternatives in addition to conventional choices, and to help our clients make the most informed decisions.

Engineering Expertise

Our engineers consider preservation of site features, indoor air quality, natural lighting, energy efficiency and strategies to provide the best quality systems for project requirements. Focusing on whole systems, not isolated components, we work holistically to help determine whether system upgrades or system replacements would be the best solution. We have been involved with the design of numerous buildings which have implemented Green Building and Sustainable Design features..

Engineering Evaluation Services

- HVAC Systems Assessments & Audits
- Electrical Systems Assessments & Audits
- Mechanical and Electrical Systems Monitoring
- Building Commissioning
- Retro Commissioning
- Technology Systems Assessments

Equipment

- Director-Fired Double-Effect Absorption Chiller/Heater
- Desiccant Dehumidification Units
- Heat Recovery Wheel
- Geothermal Heat Pumps
- Underfloor Air Distribution Systems
- Building Automation Systems

Green Building Design Strategies - a few examples

- Install high-efficiency heating and cooling equipment, sealed-combustion appliances, well-designed systems including high-efficiency furnaces, boilers, and air conditioners; variable speed pumping; and premium motors. These systems not only save the building owners money, but also produce less pollution during operation.
- Install high-efficiency lighting systems with advanced lighting controls. Include motion sensors tied to dimmable lighting controls.
- Install water-efficient equipment. Water conserving toilets, shower heads,site stormwater management, and faucet aerators not only reduce water use, but also reduce demand on septic systems or sewage treatment plants.
- Green roofs & solar panels
- Mechanical ventilation is usually required to ensure safe, healthy indoor air. Heat recovery ventilators should be considered or less expensive exhaust only systems are sometimes indicated.

TOWER ENGINEERING, INC.
115 Evergreen Heights Drive, Suite 400, Pittsburgh, Pennsylvania 15229 | 412-931-8888 | Fax 412 939-2525 | www.estower.com

LEED Rated Design

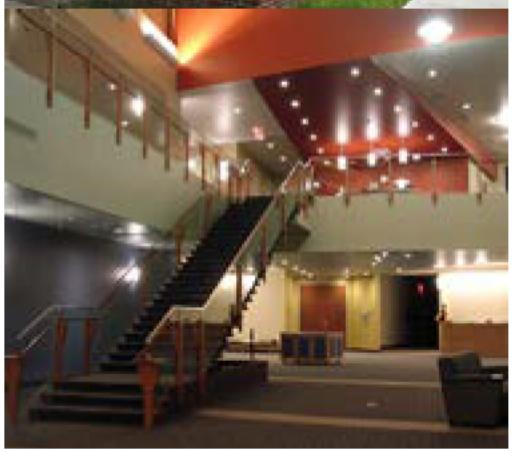
Working together with our clients,Tower Engineering takes great pride in implementing environmentally conscious solutions to building issues. To sustain our environment, we design building systems that use material, energy and water resources efficiently, minimize site impacts and address health issues relating to the indoor environment. Over the last decade, various groups have worked to develop strategies to promote and facilitate the design of sustainable, high performance buildings. One such organization, The U.S. Green Building Council, has created a nationally recognized certification process for evaluating sustainable and high performance buildings, a program called " Leadership in Energy and Environmental Design," commonly known by its acronym LEED. In addition to being a member of the U.S. Green Building Council (USGBC), Tower Engineering's staff includes LEED accredited professionals.

The LEED certification process rates the levels of sustainability achieved in a building:

LEED Certified, LEED Silver,LEED Gold, and the highest rating, LEED platinum. Awards are based upon achieving "sustainability points" in the areas of Site, Water, Energy & Atmosphere, Materials and Resources, Indoor Environmental Quality, and Innovation & Design Process.

Sustainable Design features commonly include:

- Conceptual Energy Model
- HVAC
- Geothermal
- Ice Storage
- Fan-Coil Units
- Rooftop Units
- Variable Refrigerant Flow
- Condensing Boilers
- Daylight Harvesting
- Insulated Concrete Forms
- Energy Recovery
- Carbon Dioxide Sensors
- DDC Controls
- LED Lighting
- High Efficiency Lighting
- Direct/Indirect Pendant Lighting
- Waterless Urinals
- Occupancy Sensors
- Rainwater Collection



TOWER ENGINEERING, INC.
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LEED Rated Design Continued

LEED-certified Project Experience Includes:

- Berkeley County Board of Education New Spring Mills Primary School (LEED Gold)
- Canaan Valley Institute New Headquarters/ Education Building (LEED Certified)
- Department of Energy Morgantown Record Storage (LEED Gold)
- Fairmont State Office Building (LEED Silver)
- Allegheny College Carr Hall (LEED Silver)
- Allegheny Energy Operations Center (LEED Certified)
- Kaufman Program Center (LEED Certified)
- Regional Learning Center (LEED Silver)
- Monongalia BOE, Eastwood Elementary School (LEED Gold)
- Three Rivers Rowing Association Boat Storage & Maintenance Building (LEED Certified)
- Carnegie Mellon University Henderson House (LEED Silver)
- Carnegie Mellon University Posner Conference Center Rare Books Room (LEED Certified)
- West Virginia Army National Guard - Buckhannon Readiness Center (LEED Certified)
- Carnegie Science Center (LEED Certified)

Pittsburgh Children's Museum (LEED Silver)
Tower Engineering recently provided mechanical and electrical engineering services for the 80,000 SF foot renovation/expansion of the Children's Museum of Pittsburgh. This project included the construction of a facility to link a 1897 Post Office building with a 1939 Art Deco Planetarium.

It was the goal of the Museum, as well as the design team to make this facility the first LEED Silver children's museum in the country, along with the priority of preserving two important historic buildings.

- Green features incorporated into the design of this project include:
- Occupancy light sensors
- Dual Flush Toilets
- "Fuzzy Logic" controlled low flow urinals
- Motion sensor faucets
- Heat recovery wheels
- Heat exchangers
- 3 Kwh photovoltaic system
- Carbon dioxide sensors
- Two week fresh air flush out prior to occupancy
- Humidity control
- DDC Controls

James N. Kosinski, PE, LEED AP

Principal, President
Senior Project manager, Mechanical Engineering

Mr. Kosinski is primarily responsible for the design of HVAC systems and their components for hospitals, schools, universities, laboratories, office buildings, and commercial and light industrial facilities. He has experience with the design of numerous types of HVAC systems, including constant and variable air volume air handling, geothermal heat pump and exhaust systems; chilled water and hot water; electric/electronic, pneumatic and DDC control systems.

Jim's design responsibilities include load calculations, equipment selection, system layout, project specifications, cost estimates, direction of project drafting efforts, coordination with other engineering disciplines, and construction administration. Additional responsibilities include system analysis and energy studies, client contact, and project management and scheduling. He has performed energy conservation analyses, evaluated HVAC system performance, and justified the installation of DDC control systems and other energy saving measures. As a Mechanical Engineering Group Leader, Mr. Kosinski coordinates the efforts of a team of staff engineers, designers and CAD operators.

REPRESENTATIVE EXPERIENCE

WV Capitol Complex Building - Charleston, WV
Building 4 Renovation

WVARNG Fairmont, Armed Forces Reserve Center - Fairmont, WV
New administration and maintenance facility

Allegheny Energy, Fairmont, WV
New administration, training and maintenance facility

Regional Learning Alliance, Cranberry Township, PA
Regional Learning Alliance at Cranberry Woods (LEED Silver)

Department of Energy, Morgantown, WV
New record storage facility

Hampton County Municipal Complex, Allison Park, PA
Evaluation of Building Systems

Cranberry Township, PA
Cranberry Wood Business Park; Regional Learning Alliance; Verizon Wireless Call Center

The Conair Group, Inc., Pittsburgh, PA
New Headquarters and Research & Development Center

Canaan Valley Institute, Davis, WV
New Headquarters and Educational Facility (LEED)
Wallman Hall Renovation

United States Army Reserve Center - Jane Lew, WV
Readiness Center and Organizational Maintenance Shop Building

West Virginia University, Morgantown, WV
Allen Hall Renovations; Bellefield Hall Renovations; Brooks Hall - Lab Renovation; Honors Hall; Law Building Phase I; Current Term Contract; WVU Tech Interior and Exterior Renovations; Recreation Center

EDUCATION
Bachelor Architectural Engineering
Penn State University 1989

REGISTRATION
PE, Pennsylvania
PE-[redacted]

PE, West Virginia
PE-[redacted]

PE, New York
PE, Maryland

NCEES Registered

LEED Accredited Professional 2009

AFFILIATION
American Society of Heating, Refrigeration & Air Conditioning Engineers (ASHRAE)

Your **ACTIVE PE** renewal fee has been received...

Your ACTIVE PE renewal fee has been received. Your pocket card indicating you are entitled to practice engineering in West Virginia until the noted expiration date may be detached and used unless invalidated as a result of Board audit of your renewal form or formal disciplinary action.

IMPORTANT REMINDERS:

1. Please include your WV ACTIVE PE license number on any correspondence to this office.
2. To use this license as a pocket card, please cut along the dotted line and laminate if desired.
3. You are required to immediately notify the Board, in writing, of the following: loss or theft of license or seal, any name change, any address change, or any employment change.

West Virginia State Board of Registration for Professional Engineers

300 Capitol Street, Suite 910
Charleston, West Virginia 25301
304-558-3554 Phone
800-324-6170 Toll Free
www.wvpebd.org

THIS IS ONE FORM OF YOUR RENEWAL RECEIPT

PLEASE SAVE THIS FOR YOUR RECORDS

Date of Renewal: December 29, 2020
Amount Paid: $70.00

West Virginia State Board of Registration for Professional Engineers

JAMES N. KOSINSKI
WV PE [redacted]

This is to certify that the above named PROFESSIONAL ENGINEER has met the requirements of the law, is duly registered and is entitled to practice engineering in the State of West Virginia.

EXPIRES December 31, 2022

JAMES N. KOSINSKI
TOWER ENGINEERING, INC
115 EVERGREEN HEIGHTS DRIVE

EDUCATION
BS, Mechanical Engineering
University of Pittsburgh 1982

REGISTRATION
Pennsylvania
PE-[redacted]

West Virginia
PE-[redacted]

AFFILIATIONS
LEED Accredited Professional 2008

US Green Building Council 2008

Certified Energy Manager (CEM) 2008

Thomas R. Valerio, PE, CEM

Associate; Project Manager
Department Head for HVAC

Tom Valerio manages and provides design and construction administration services for approximately $10 million of HVAC construction annually. His primary responsibilities include the design and analysis of HVAC systems for schools, universities, commercial and light industrial facilities, laboratories, health & science buildings, retail and municipal facilities. Tom draws from over 30 years of construction engineering experience to lead teams that provide cost effective, energy efficient solutions.

As a Certified Energy Manager, Tom improves facility energy performance by analyzing energy consumption, developing energy conservation measures, determining their probable construction cost, and calculating their return on investment.

REPRESENTATIVE EXPERIENCE

WV Capitol Complex Building - Charleston, WV
Building 4 Renovation

First United Methodist Church - Pittsburgh, PA
Heating Plant Assessment

WV Northern Community College - Wheeling, WV
HVAC Controls and Repairs

WVHTCF State Police HQ Building - Morgantown, WV

West Virginia University – Morgantown, WV
Mountainlair AHU 4 and 8 Replacement and 2, 6 & 7 Replacement; Law Building - Phase 2 Expansion/Addition and Phases III & IV Renovation; Parkersburg -Tech Wing Renovation; University Park

Peters Township Municipal Building – McMurray, PA
New HVAC System

Citizens Library – Washington, PA
Masterplan and HVAC Renovation

Ellwood City Forge - Ellwood City, PA
Office Renovation/Addition

Aerotech Industries – Pittsburgh, PA
60,000 SF Light Industrial Addition

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2. To use this license as a pocket card, please cut along the dotted line and laminate if desired.
3. You are required to immediately notify the Board, in writing, of the following: loss or theft of license or seal, any name change, any address change, or any employment change.

West Virginia State Board of Registration for Professional Engineers

300 Capitol Street, Suite 910
Charleston, West Virginia 25301
304-558-3554 Phone
800-324-6170 Toll Free
www.wvpebd.org

THIS IS ONE FORM OF YOUR RENEWAL RECEIPT

PLEASE SAVE THIS FOR YOUR RECORDS

Date of Renewal: December 21, 2020
Amount Paid: $70.00

West Virginia State Board of Registration for Professional Engineers

THOMAS R. VALERIO
[redacted]

This is to certify that the above named PROFESSIONAL ENGINEER has met the requirements of the law, is duly registered and is entitled to practice engineering in the State of West Virginia.

EXPIRES December 31, 2022

THOMAS R. VALERIO
14 GLADDEN ROAD
MCDONALD, PA 15057

T Steffanie Bako, PE

Principal, Department Head
Electrical Engineering Department

Ms. Bako is responsible for the design of electrical systems and their components for educational, commercial, and governmental facilities, with a significant amount of experience in the K-12 educational sector. In addition to her roles as Principal and Department Head, Steffanie continues to provide design and project management services on a number of projects.

Steffanie's design responsibilities include lighting layout, fixture selection, and lighting calculations; power distribution from service entrance to branch devices, including coordination with the appropriate utility company, coordination with the architect for owner-provided equipment, and coordination with other disciplines for equipment provided under other trades; emergency power distribution systems, including engine generators and various battery back-up systems; fire alarm detection and alarm systems; public address and emergency communications systems; telecommunications cabling infrastructure; and security systems.

Additional project responsibilities include preparation of engineering drawings, technical specifications, opinions of probable cost, review of submittals, and field observation.

EDUCATION
BS Electrical Engineering
Case Western Reserve University
1997

REGISTRATION
Professional Engineer
PA - PE-[redacted]
OH - PE-[redacted]
WV - PE[redacted]

AFFILIATION
Illuminating Engineering Society of North America (IES): Treasurer Pittsburgh Section

REPRESENTATIVE EXPERIENCE

WV Capitol Complex Building - Charleston, WV
Building 4 Renovation

General McLane School District - Edinboro, PA
James Parker Middle School Heating Plant Upgrade

Seneca Valley School District – Harmony, PA
High School Heating Plant (ACTIVE)

WVANG – Fairmont, WV

Army National Guard - Buckhannon and Fairmont, WV
New Readiness Centers

WVHTCF State Police HQ Building - Morgantown, WV

West Virginia University – Morgantown, WV
Clay Theater Dimming (ACTIVE); New Downtown Student Housing; University Park

Twin Falls State Park Resort - Mullens, West Virginia
Lodge Expansion

Your **ACTIVE PE** renewal fee has been received...

Your ACTIVE PE renewal fee has been received. Your pocket card indicating you are entitled to practice engineering in West Virginia until the noted expiration date may be detached and used unless invalidated as a result of Board audit of your renewal form or formal disciplinary action.

IMPORTANT REMINDERS:

1. Please include your WV ACTIVE PE license number on any correspondence to this office.
2. To use this license as a pocket card, please cut along the dotted line and laminate if desired.
3. You are required to immediately notify the Board, in writing, of the following: loss or theft of license or seal, any name change, any address change, or any employment change.

West Virginia State Board of Registration for Professional Engineers

300 Capitol Street, Suite 910
Charleston, West Virginia 25301
304-558-3554 Phone
800-324-6170 Toll Free
www.wvpebd.org

THIS IS ONE FORM OF YOUR RENEWAL RECEIPT

PLEASE SAVE THIS FOR YOUR RECORDS

Date of Renewal: December 15, 2020
Amount Paid: $70.00

West Virginia State Board of Registration
for Professional Engineers

T. STEFFANIE BAKO
WV PE [redacted]

This is to certify that the above named PROFESSIONAL ENGINEER has met the requirements of the law, is duly registered and is entitled to practice engineering in the State of West Virginia.

EXPIRES December 31, 2022

T. STEFFANIE BAKO
TOWER ENGINEERING
115 EVERGREEN HEIGHTS DRIVE
SUITE 400
PITTSBURGH, PA 15229

EDUCATION
BS, Mechanical Engineering
Penn State University 2007

REGISTRATION
PE, Pennsylvania
PE-[redacted]

Cory Weiland, PE
Project Manager
Mechanical & Plumbing Enginering Department

Cory's primary responsibilities are the design of plumbing and fire protection systems and their components for K-12, university, commercial, and laboratory buildings. Secondary responsibilities are the design of HVAC systems including constant and variable air volume, air handling and exhaust systems; chilled water and hot water systems.

His design tasks include heating and cooling calculations, fixture count calculations, fire service calculations, equipment selections and system layout, drafting, coordinating with architectural and other engineering disciplines, construction administration, preparing specifications, and review of mechanical, plumbing, and fire protection codes.

PROFESSIONAL EXPERIENCE

WV Capitol Complex Building - Charleston, WV
Building 4 Renovation

Army National Guard - Buckhannon and Fairmont, WV
New Readiness Centers

National Energy Technology Laboratory (NETL) - Pittsburgh, PA
Building 922 Hot Water Boiler Replacements

WVANG – Fairmont, WV

Peters Township, McMurray, PA
New High School

University of Pittsburgh, Pittsburgh, PA
Physics Classroom Renovation
Geology Sciences Renovation

La Roche University, Pittsburgh, PA
Science Center Renovation

Trinity School District, Washington, PA
Mechanical & Electrical Upgrades to North, South, East, & West Elementary Schools

Harbor Creek High School, Harborcreek, PA
Sports Complex Renovations

North Allegheny School District, Pittsburgh, PA
Franklin Elementary Renovations & Additions

The majority of Tower Engineering's projects involve buildings that utilize natural gas for heating. Many of these projects make use of natural gas as a heating source for a central hot water heating plant. We have identified several specific projects, as follows, as well as a partial listing of past projects where Tower Engineering's services included the design of a gas-fired hot water heating plant.

- Pittsburgh Theological Seminary, Barbour Library Renovation
  - Pittsburgh, PA
  - Tower Engineering Project Manager – Tom Valerio
    - Tower Engineering, Inc
    - 412 931 8888
  - Library Renovation

-Tower Engineering converted Pittsburgh Theological Seminary's Barbour Library from steam to hot water as part of a renovation project that achieved LEED Silver Certification. A variable water volume hot water heating plant was constructed to distribute low temperature hot water between 100°F and 140°F as needed to meet demand via (3) 1,200 MBH boilers selected for N+1 redundancy.

- Kanawha Valley Community and Technical College (Bridgevalley Community and Technical College)
  - South Charleston, WV
  - Tower Engineering Project Manager – Tom Valerio
    - Tower Engineering, Inc
    - 412 931 8888
  - Comprehensive renovation of an existing 160,000 SF office building. Half of the building houses the college and the other holds commercial offices for Dow Chemical Company. The project include the installation of a high efficiency heating plant with variable flow pumping.

- Chartiers Valley School District – New High School
  - Pittsburgh, PA
  - Tower Engineering Project Manager – Tom Valerio
    - Tower Engineering, Inc
    - 412 931 8888
  - We converted two, 23,000 MBH cast iron steam boilers, and one, 2,500 MBH "summer" steam boiler serving the Chartiers Valley Middle and High School from steam to hot water in 2016. Additions and remodeled areas expanded the roughly 350,000 SF facility to about 500,000 SF. Construction occurred over a 30-month period without taking the school out of service.

  - To maximize efficiency, a low-temperature hot water heating plant consisting of (4) 2,500 MBH boilers distributes hot water between 100°F and 140°F, depending on outside air temperature, now serves new construction portions of the high school. Portions of the building that were not scheduled for remodel are served by a new high temperature hot water heating plant of (3) 2,000 MBH boilers that distributes hot water between 100°F and 180°F. A third, in this case low-temperature hot water heating plant of (4) 2,500 MBH boilers serves the middle school. In all, eleven condensing style boilers serve the facility via three independent, variable water volume hot water heating plants capable of operating with efficiencies up to 98%. Boiler modules serving each plant are sized to provide N+1 redundancy for superb reliability.

Here is a list of relevant past experience:

- 2PNC Tower
- Allegheny College - Hulings Hall Heating System Upgrade
- Barbour County Board of Education - Belington Elementary School Renovations
- Barbour County Board of Education - Philippi Middle School Renovations
- Barbour County Board of Education Philippi Elementary
- Berkeley County Board of Education - Musselman High School
- Berkeley County Board of Education - Mussleman Middle School
- Bethal Park High School
- Chartiers Valley School District High School
- Doddridge County Board of Education - New High School
- Felician Sisters Motherhouse
- Fairmont State Office Building
- First United Methodist Church Heating Plant Assessment
- Fort LeBoeuf School District Middle School
- Frostburg State University Residence Hall
- Fairmont State University - Morrow Hall Heating Plant Upgrade
- Fairmont State University – Wallman Hall
- Fairmont State University Engineering Technology Building
- Fairmont State University Turkey Center
- Ft. LeBoeuf School District - Mill Village Elementary School
- General McLane School District - High School Boiler Replacement
- Gilmer County Board of Education - Cedar Creek Elementary School
- Hampshire County Board of Education - Capon Bridge Middle School
- Hampshire County Board of Education - Romney Middle School
- Hardy County Board of Education - East Hardy High School
- Hardy County Board of Education - Moorefield High School
- Hampton Township School District - Wyland Elementary School Boiler Replacement
- Jefferson County Board of Education - Blueridge Primary School
- Jefferson County Board of Education - Jefferson County Elementary School
- Lewis County Board of Education - Roanoke Elementary School - Boiler Replacement
- Lewis County Board of Education– Robert L Bland Middle School
- McKeesport Housing Authority - Boiler Replacement
- Mineral County WV - New High School
- Mingo County Board of Education- Mingo Central High School
- Mingo County Board of Education Gilbert Middle School
- Monongalia County Board of Education- Morgantown High School
- Monongalia County Board of Education- Westwood-Skyview Elementary
- Montessori School of Erie Boiler Replacement
- Montour School District New Elementary School
- Morgan County Board of Education- Berkeley Springs High School
- Morgan County WV Morgan Middle School
- Mt. Aloysius Ihmsen Hall
- North Allegheny School District Carson
- North Allegheny School District Intermediate High School
- NETL Building 922 Hot Water Boiler Replacements
- Penn Hills High School
- Penn State University Behrend Erie Hall
- Penn State University Shenango Sharon Hall
- Peters Township High School
- Pleasants County Board of Education - Pleasants County Middle School
- Quaker Valley School District New Middle School
- Regional Learning Alliance Conference & Learning Center

- Regional Learning Alliance Conference & Learning Center
- Seneca Valley School District - Heating Boiler Evaluations
- Taylor County Board of Education - West Taylor Elementary School
- The Children's Home of Pittsburgh
- Twin Falls Resort State Park (WV) – Addition
- ***West Virginia State Capitol Campus Office Building 4 Renovation (ACTIVE)***
- West Virginia University - New Downtown Student Housing
- University of Pittsburgh Greensburg Science Building
- University of Pittsburgh Upper Campus Housing
- Westmoreland County Community College (WCCC) Commissioners Hall Boiler Plant
- Westmoreland County Community College (WCCC) Founders Hall
- West Jefferson Hills High School
- West Virginia KVCTC Renovation
- West Virginia University - Steam Vault Repair
- West Virginia University Law Building
- West Virginia University Stalnaker Hall Entrance and Steam Vault Repairs
- West Virginia University Student Recreation Center
- Weston Arbors Heating Plant Study
- WLU Science Building

REFERENCES

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Crawford County, Pennsylvania 16335
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tkelley@co.crawford.pa.us

Paul Laver
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Township Manager
724.941.4180

Cliff Willis
Allegheny College
Director of Physical Plant
814.332.2865
cwillis@allegheny.edu

Scott Anderson
Pine Township
Township Manager
724.625.1591

Matthew Serakowski
Township of Upper St. Clair
Township Manager
412.831.9000

Robin Gomez
City of Fairmont WV
City Manager
304.366.6212

McKeesport Housing Authority
Mr. Stephen L. Bucklew
Deputy Executive Director
2901 Brownlee Street, 2nd Floor
McKeesport, PA 15132
Phone: (412) 673-3604

University of Pittsburgh
Ms. Mary Rugh, P.E.
Director of Engineering
Phone: 412.624.2250
Mbr3@pitt.edu
3400 Forbes Avenue
Pittsburgh, PA 15260

Penn State University
Mr. Dave Zehngut
University Architect, Physical Plant
814.865.4402
207 Physical Plant Building
University Park, PA 16802

WEST LIBERTY UNIVERSITY
Mr. John Wright, Executive Vice President
304.336.8180
jewright@westliberty.edu
109 Campus Service Center
PO Box 295
West Liberty, WV 26074

Westmoreland County Community College
Stephen M. Lippiello
VP Administrative Services
Westmoreland College
145 Pavilion Lane
Youngwood, PA 15697
724.925.4071 – Office
724.237.2089 – Cell

HAMPTON TOWNSHIP SCHOOL DISTRICT
Mr. Rick Farino - Buildings & Grounds Supervisor
412.492.6310
4591 School Drive
Allison Park, PA 15101

NORTH ALLEGHENY SCHOOL DISTRICT
Mr. Bill Kirk - Director of Facilities
Phone: 412.369.5432
400 Hillvue Lane
Pittsburgh, PA 15237

NORTH HILLS SCHOOL DISTRICT
Mr. Kevin Swindell - Director of Facilities
412.318.1084
135 Sixth Avenue
Pittsburgh, PA 15229

PINE RICHLAND SCHOOL DISTRICT
Mr. Jeff Zimmerman - Director of Facilities Management
724.625.4444 X 6750
702 Warrendale Road
Gibsonia, PA 15044
for Athletics:
Joshua Shoop, Athletic Director
724.625.4444 X 6801

Subconsultants

TOWER
ENGINEERING, INC.

115 Evergreen Heights Drive, Suite 400, Pittsburgh, Pennsylvania 15229-1346
Phone: 412.931.8888, Fax: 412.939.2525, Email: tower@estower.com

As demonstrated in the Organizational Chart on the following page, Tower Engineering has proposed a team including these sub-consultants. The staffing and roles within in firm are as follow:

Tower Engineering (Prime Consultant - Mechanical, Electrical and Plumbing Engineering Services):

-James Kosinski, PE – Principal in Charge
-Tom Valerio, PE – Project Manager/Mechanical Engineer/Designer
-T Steffanie Bako, PE – Electrical Engineer/Designer
-Cory Weiland, PE – Plumbing/Fire Protection Engineer/Designer

Perfido Weiskopf Wagstaff & Goettel (PWWG) - (Architectural Services):

-Anthony Pitassi, AIA, NCARB, LEED AP – Managing Principal
-Joseph Filar, RA, LEED AP – Senior Associate

Moment Engineers (Structural Engineer):

-Douglas R. Richardson, PE, LEED AP – Firm President, Principal Engineer

Organizational Chart

Jim Kosinski
Tom Valerio
Steff Bako
Cory Weiland

Tower Enginnering, inc.
Prime- MEP Engineer

Anthony Pitassi
Joseph Filar

PWWG
Subconsultant - Architect

Douglas R. Richardson

Moment Engineers
Subconsultant - Structural Engineer

Subconsultant:
PWWG

about pwwg +

PERFIDO WEISKOPF WAGSTAFF + GOETTEL

PWWG practices architecture and planning in urban and campus environments. Forward-looking clients partner with us for excellence in design and detailing; our ability to develop their ideas into cost-effective, buildable projects; our meticulous, ethical approach to professional responsibilities; and the genuine connections and strong partnerships we nurture with clients and communities.

SUSTAINED GROWTH INTO OUR FIFTH DECADE

Since 1975, PWWG has served clients in the Ohio River Valley and beyond from our main office in downtown Pittsburgh. In 2016, our monumental revitalization of Cincinnati Music Hall and many other local commissions spurred establishing a second office in Cincinnati to serve and grow our client base in Ohio's tri-state area.

TURNKEY SERVICES TO PLAN AND EXECUTE YOUR PROJECTS

From day one, PWWG's practice has been interdisciplinary, blending the expertise of our team for: facilities and master planning, concept studies, code reviews, programming, forensic assessments, architectural and interior design, project management and construction administration, facilitating community engagement, support for sustainability goals (WELL, LEED, isUD, etc.) and support for marketing and fundraising.

OUR CLIENTS TRANSFORM URBAN, CAMPUS, AND HISTORIC ENVIRONMENTS

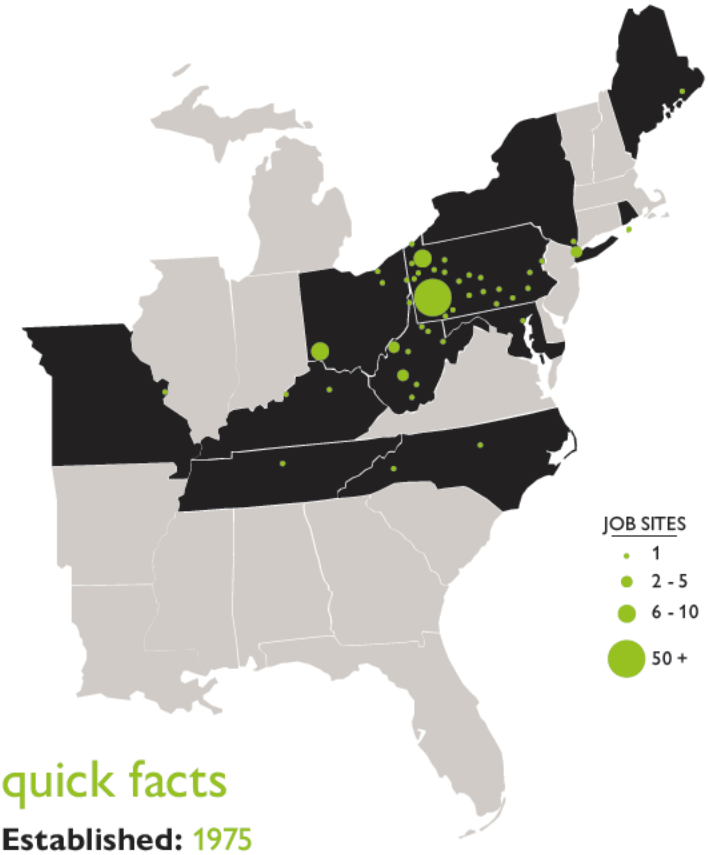
PWWG's portfolio is approximately 50% new construction and 50% renewal and reuse of existing buildings. The firm serves a variety of clients: cultural institutions, higher education, government, commercial businesses, and individuals. Project types include: adaptive reuse, historic preservation, multi-family housing, mixed-use commercial, campus buildings, performing arts, hospitality, civic buildings, and museums.

Our work in urban environments enhances connections between people and the places in which we live, work, and play; in campus environments, our designs integrate new and existing architecture where generations learn and grow; our work in historic contexts creates new value for original buildings to honor communities' history and culture.

PWWG'S VALUES DRIVE HOLISTIC DESIGN

We all have a stake in the work we design; and we approach each project, at every scale, as a collective, contextual, and values-driven exercise. PWWG finds creative solutions where context--physical, historic, cultural, and social conditions—create complex architectural challenges. Every project engages with the past, present, and future, so the buildings, spaces, and places we design with our clients enhance our shared environment. PWWG's holistic approach amounts to designs that respond to current needs, with durability and flexibility for change.

We are committed stewards of the natural and built environment, reflected in our approach to every project, at all scales—we plan and design for a sustainable, resilient future.



quick facts

Established: 1975

Total Employees: 22

Principals: 3

Registered Architects: 15

LEED Accredited Professionals: 8

WELL Accredited Professionals: 2

Administrative & Support: 3

Type of Business Ownership: LLC

Certified Small Business Entity in PA

MAIN OFFICE
PWWG Pittsburgh
408 Boulevard of the Allies
Pittsburgh, PA 15219

BRANCH OFFICE
PWWG Cincinnati
1432 Elm Street Unit 1A
Cincinnati, OH 45202


before, typical

morewood gardens phased MEP and bathroom upgrades, carnegie mellon university : pittsburgh, pa

Morewood Gardens, constructed in 1929 as luxury apartments, is on the National Register of Historic Places. Now one of the largest dorms on campus, the 7-story building houses 440+ students in single-, double- and triple-bed configurations. PWWG was selected to improve quality of life for students in Morewood Gardens by renovating all bathrooms, upgrading MEP systems, and adding air conditioning for the entire building. Phase 4 scope was expanded to include full renovation of an office suite in the A Tower.

HOLISTIC RENEWAL ENHANCED THE BUILDING & STUDENTS' EXPERIENCE

- Infrastructure improvements addressed Accessibility and upgrades to plumbing and supporting ventilation, electrical and structural systems.
- Early, thorough code review created an efficient approach for obtaining variances, and successful strategies for multi-phase delivery, avoiding "scope creep."
- Creative planning optimized construction during consecutive summers, sequenced in vertical stacks for efficiency.
- All new fixtures and finishes give the facility a fresh, sophisticated feel, part of the university's "REIMAGINE Morewood Gardens" initiative to market the dorm to incoming students.
- New FF&E are selected for ease of maintenance and durability under high, rough use.
- PWWG coordinates design documents in Revit for all disciplines, and line-item estimates by an independent consultant so project meets budgets for each phase.
- "Lessons Learned" are applied to subsequent phases for ongoing streamlining and to maintain tight QA/QC.
- Phase 4 in Summer 2021 will involve construction while part of the building is occupied by pre-school students and faculty at the Cyert Center for Early Education. PWWG is working with Campus Design and the GC on strategies for safety, noise control, material staging and delivery.

CLIENT: Carnegie Mellon University

SIZE: 91,000 sf; 154 single-use bathrooms serving 450+ students

COST:
$16M (Total for 4 phases, estim.)

Phase 1 – $2.06M
Phase 2 – $3.9M
Phase 3 – $4.7M
Phase 4 – $5.3M (estimated)

FULL RENOVATION COMPLETION:
Phases 1-3 complete; Phase 4 expected July 2021

FIRM RESPONSIBILITY FOR EACH PHASE:
Programming
Architectural Design
Interior Design/FF&E
Contract Documents
Contract Administration

wv state capitol building #3 renovation : charleston, wv

re-use / renewal of a landmark historic office building

The project breathed new life and purpose into one of the most prominent buildings on the WV Capitol campus, with preservation, restoration, and adaptive reuse of historic Building 3 as a modern, well-functioning and welcoming office space.

PWWG'S DESIGN BLENDS HISTORIC FEATURES WITH LATEST WORKPLACE AMENITIES

- Interior was taken back to its structural shell and core, maintaining historically important features and spaces. All new systems were installed, and the functional core of the building was reconfigured to provide new amenities to building occupants, and new utilities including security, data, and telecommunication systems.
- Office interior design and FF&E balanced different department needs for privacy and security. Common spaces are located around the core, including private huddle rooms, meeting spaces, kitchens, pantries, and storage spaces.
- Integrated design process with consultants facilitated complex MEP upgrades in the historic structure that gained approval from the West Virginia SHPO.
- PWWG engaged government administration, management, and facilities staff and helped define needs and evaluate options in everything from floor layout to amenities and phasing, using 3D models.

PWWG's 3D model, with furnishings, helped stakeholders study options for new floor layouts.

CLIENT: Dept of General Services, State of West Virginia

SIZE: 165,000 sf

COST: $37.5M

COMPLETION: 2017

FIRM RESPONSIBILITY:
Lead Architect coordinating large consultant team
Programming
Architectural and Interior Design
Contract Documents
Contract Administration

Design Award Winner

anthony pitassi +

aia, ncarb, leed ap

MANAGING PRINCIPAL

Tony has been with PWWG for 20+ years, and is a leader in the firm's practices in hospitality, adaptive reuse and renewal, and historic preservation for commercial, cultural, and non-profit clients. Tony leads every project—from concept studies to new construction--by aligning practical solutions, sound project management, and exemplary design and detailing, with the values of stakeholders and clients. He is recognized for clear communication and uncommon skill facilitating creative dialogue between clients, consultants, architectural partners, and contractors, throughout design and construction. Tony has managed many projects to successful completion with LEED, Universal and Inclusive Design, WELL, and 2030 standards of sustainability, and contributed to establishing the groundbreaking isUD standard for museums. His projects as Principal-in-Charge have won awards from local and national chapters of the AIA and major design entities, and been featured in regional and international publications covering architecture, interiors, and hotel design.

JOINED PWWG

1998

EDUCATION

Bachelor of Architecture, Kent State University, 1989

BA Architectural Studies, University of Pittsburgh, 1986

REGISTRATION

Architect in PA, OH, WV, KY & MO

PROFESSIONAL ASSOCIATIONS

American Institute of Architects (AIA) Member

LEED Accredited Professional

Green Building Council Institute

NCARB Certificate Holder

PROJECT EXPERIENCE

Steamfitters Local Union #449 Offices & Events Center, Jackson Township, PA—Phase 2 of PWWG's campus plan provides a new three-story signature building with 6,300 sf hall for meetings & event rental, with pre-function area, commercial kitchen, administrative offices, and "white box" tenant space; design-build project includes landscaped site. 65,000 sf. *Principal-In-Charge*

Operating Engineers Event Space & Dispatch Center, New Alexandria, PA—Design-Build project for hosting events and training; flexible layout offers capacity for 200-500, with pre-function gallery, catering kitchen, shaded loggia, and offices. 15,000 sf. *Principal-In-Charge*

Gwynn Building Renewal & Reuse, Cincinnati, OH—For a repeat client, rehab and transformation of a historic 13-story Beaux Arts office building for an upscale hotel with signature restaurant, meeting and event spaces; the project, in the downtown Main Street Historic District, will have historic tax credit funding and target LEED Certification. 154,000 sf. *Principal-In-Charge*

21c Museum Hotel St. Louis, St. Louis, MO—Rehab and transformation of the 10-story historic YMCA building in downtown for an innovative hybrid art museum and 170-room boutique hotel with galleries, a signature restaurant, and event spaces; earned Historic Tax Credit funding. 163,500 sf. *Principal-In-Charge / Project Manager*

National Aviary Garden Room, Pittsburgh, PA—New one-story structure in masonry, wood, and glass increases capacity for hosting events, and for educational programming and outreach; redesign of main entrance and catering prep, with new commercial kitchen and folding glass wall connecting to historic public garden; LEED Silver goal. 8,700 sf. *Principal-In-Charge / Project Manager*

MuseumLab at the Children's Museum of Pittsburgh and Manchester Academic Charter School, Pittsburgh, PA—Reincarnation of a 130 year old library for immersive learning for 8-14 yr. olds, with studios, maker labs, galleries, and cutting edge art and tech. Shared home for the middle school, community spaces, and non-profits. LEED Gold v4 and Universal Design Certified.; New Market tax credits. 52,000 sf. *Project Manager*

Steamfitters Local Union #449 Technology Center, Jackson Township, PA—Phase 1 provides high bay labs and classrooms for state-of-the-art workforce training. 75,000 sf. *Project Manager*

Operating Engineers Training Facility, Pittsburgh, PA—Uses green technologies in design of a high bay building for training on maintenance of large equipment; includes shop, offices, and classrooms. LEED certified. 32,600 sf. *Project Manager*

Attached is your wallet card, evidence of your current registration to practice architecture in West Virginia. You will receive a renewal notice prior to the expiration date indicated.

Certificate No: [redacted]

SECRETARY

STATE OF WEST VIRGINIA
BOARD OF ARCHITECTS

This Certifies that:

ANTHONY PITASSI

is duly Registered and entititled to practice as a
REGISTERED ARCHITECT
until and including 06/30/2022

Attest

President

joseph filar +

ra, leed ap

SENIOR ASSOCIATE

Over 20+ years at PWWG, Joe has developed a broad skill set in forensics, design, and project management in all of the firm's key markets--higher education, market rate and affordable housing, hospitality, mixed-use developments, and renewal/re-use of historic buildings. Joe is a natural project leader--organized, results-driven, and skilled at engaging A/E teams and contractors to resolve technical problems and programmatic change during design and construction. His passions for detailing and documentation are assets to every project, many of which have won local and national awards for architecture, interiors, and preservation. Joe is also a passionate cyclist, thriving on the mental clarity that comes from tackling new trails and being in nature.

JOINED PWWG
1999

EDUCATION
Bachelor of Architecture, Pennsylvania State University, 1995

Sede di Roma Foreign Studies Program, 1993

REGISTRATION
Architect in PA

PROFESSIONAL ASSOCIATIONS
LEED Accredited Professional

National Historic Trust
Pittsburgh History & Landmarks Foundation

PROJECT EXPERIENCE

WV State Capitol Complex Building 3 Restoration and Reuse, Charleston, WV—Comprehensive masonry envelope and tile roof restoration and interior redesign of a historic building for contemporary office space, with flexible layouts, updated systems and AV/IT, new amenities and FF&E. 165,000 sf. *Project Manager*

Union Trust Building Transformation, Pittsburgh, PA—Comprehensive interior rehab and transformation of a historic 11-story shopping arcade in downtown for new Class-A office space, co-working space, ground floor commercial, and new underground parking; LEED Certifications—BD+C, Core and Shell-v3, O+M, Existing Buildings-v2. 517,000 sf. *Project Manager*

West Virginia State Capitol Office Building Four Renovation, Charleston, WV—third project on the capitol campus renovates site, exterior, and interior of a 1950s office building; updates to layout, systems and finishes address life safety and accessibility, and preserve mid-century architectural character. 96,000 sf. *Project Manager*

Garden Theater Block Apartments, Pittsburgh, PA—New five-story building anchoring a prominent corner in a historic neighborhood; 50 market rate apartments with parking nearby, and first floor commercial space. Includes renovation of two historic townhouses into nine apartments. 50,000 sf. *Project Manager*

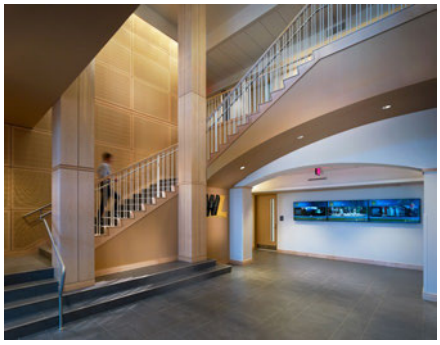
Kopchick Hall Science Building, Indiana University of PA, Indiana, PA—New facility gives IUP a competitive STEM offering in Natural Sciences and Math; teaching and research labs, flexible classrooms, breakout collaboration spaces, and planetarium; LEED Silver goal. 181,000 sf. *Project Architect*

Old Economy Village, Multiple Historic Renovation Projects, Ambridge, PA—A wide variety of improvements and preservation for site features and 20 structures at a national historic site; envelope, accessibility and finish upgrades, and new public amenities. *Project Manager*

Oglebay Hall Rehab & Transformation and Ming Hsieh Hall Addition, West Virginia University, Morgantown, WV —Salvage and transformation of a vacant historic classroom building for labs, classrooms and offices, and addition with tech intensive lecture halls; the ensemble supports interdisciplinary STEM learning; Oglebay masonry envelope and roof rehab, new pedestrian bridge, outdoor terrace, and rooftop parking at Ming Hsieh; both buildings are LEED Certified. Oglebay Hall Reuse– 50,000 sf; Ming Hsieh Hall Addition – 16,000 sf. *Project Architect*

Pennsylvania State Capitol Peristyle Envelope Restoration, Harrisburg, PA—Investigation, analysis, and design for waterproofing the deck surrounding the 52M ton granite peristyle and dome of the 1906 state capitol building on the National Register; pilot project confirmed proposed design improvements; building remained fully operational. *Project Manager*

Subconsultant: Moment Engineers



Sample Project Experience

Moment Engineers staff experience includes a wide variety of new building design and existing structure evaluation and renovation. The list below is a small sample of the projects for which our staff has had responsible charge of the structural engineering design and contract document production. All projects listed were or are being constructed in West Virginia. A more extensive list is available upon request.

Project	*Sq. Ft.*
Logan State Office Building	53,200
Lewis County Judicial Annex	28,000
West Liberty University Health Sciences Bldg	70,500
Summit Bechtel Reserve Bathhouses (358 units)	646 ea.
Mountaineer Challenge Academy	47,790
Kappa Alpha Fraternity House, WVU	14,000
Greenbrier East H.S. Renovations & Additions	205,060
Lincoln Co. High School	216,500
Wayne Co. Spring Valley High School	175,000
Cabell West Elementary School	55,790
Judge Donald F. Black Courthouse Annex	37,000
WV Hospital Association Office Building	29,710
Glen Jean - AFRC	107,090
Elkins - AFRC	60,570
Robert C. Byrd Regional Training Institute	143,000
Alderson Federal Prison Dormitory	60,620
Western Juvenile Detention Center	29,020
Lewisburg United Methodist Church	12,800
Cacapon State Park Addition	9,840
Goodwill Industries Renovation and Addition	15,460
NGK-NTK Production Facility	78,000
Advantage Valley Advance Technology Center	55,040

MOMENT engineers, inc.

Resume

Douglas R. Richardson, PE, LEED AP

Firm President, Principal Engineer

Education

North Carolina State University, (8/87-5/89).

Masters of Science in Civil Engineering, major in structures and minor in construction.

GPA 4.0/4.0.

West Virginia University, (8/83-8/87)

Bachelors of Science in Civil Engineering.

Ranking: 1st out of approximately 450 College of Engineering graduates. GPA 3.98/4.0.

Professional Registration

Professional Engineer

WV #[redacted] VA #[redacted]

KY #[redacted] FL #[redacted]

OH #[redacted]

LEED Accredited Professional

Professional Affiliations

American Society of Civil Engineers

American Concrete Institute

American Institute of Architects, Professional Affiliate

Structural Engineering Institute

Engineers Without Borders-USA

MOMENT engineers, inc.

Search: Details

Name:	DOUGLAS R. RICHARDSON
WV Professional Engineer:	**PE License Number:** [redacted]
	PE License Status: Active
	PE Issue Date: 06/29/1992
	PE Expiration Date: 12/31/2022
Continuing Education Claim:	**Qualifying Hours from Last Renewal or Reinstatement:** 39.50
	Carryover Hours for Next Renewal: 9.50
	Last Renewal or Reinstatement Date*: 12/28/2020
WV Engineer Intern:	**EI Certification Number:**
	EI Issue Date:
Primary Address of Record:	2301 WINDHAM ROAD SOUTH CHARLESTON, WV 25303
Primary Employer of Record:	OMENT ENGINEERS, INC. 2301 WINDHAM ROAD SOUTH CHARLESTON, WV 25303
	* This date reflects the most recent license renewal (or reinstatement) date for this licensee. Continuing education hours earned prior to this date may **not** be used for future renewals.

This data was retrieved on 4/6/2022.


DOUGLAS R. RICHARDSON
REGISTERED
[redacted]
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER