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WJ Purchasing Division



CAMP DAWSON AIRFIELD SUPPORT FACILITIES

CEOI ADJ20000000007

www.cjlenengineering.com

original

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CEOI ADJ200000007

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

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

Addendum Numbers Received:

(Check the box next to each addendum received)

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

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

CJL Engineering

Company

Mark F. Sotisky

Authorized Signature

4/3/20

Date

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

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.

Mark F. Sotosky, Director | Business Development

(Name, Title)

Mark F. Sotosky, Director | Business Development

(Printed Name and Title)

232 Horner Street, Johnstown, PA 15902

(Address)

814.536.1651, ext. 102 / 814.536.5732

(Phone Number) / (Fax Number)

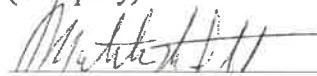
marksotosky@cjengineering.com

(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.

CJL Engineering

(Company)



(Authorized Signature) (Representative Name, Title)

Matthew R. Sotosky, P.E., LEED AP | Managing Partner

(Printed Name and Title of Authorized Representative)

April 8, 2020

(Date)

814.536.1651, ext. 110 / 814.536.5732

(Phone Number) (Fax Number)

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

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

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

DEFINITIONS:

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: CJL Engineering

Authorized Signature: *[Signature]* Date: April 9, 2020

State of Pennsylvania *MATTHEW R. SOTOSKY*

County of CAMBRIA, to-wit:

Taken, subscribed, and sworn to before me this 9 day of April, 2020

My Commission expires August 15, 2021

AFFIX SEAL HERE

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Brenda I. Szolong, Notary Public
Richland Twp., Cambria County
My Commission Expires Aug. 15, 2021
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

NOTARY PUBLIC

[Signature]

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FIRM OVERVIEW

Established in 1938, CJL Engineering is a full service, mechanical, electrical, plumbing, fire protection, and civil/structural consulting engineering firm known for mastering the most challenging projects in the region. With offices in western Pennsylvania, eastern Ohio, northern West Virginia and Maryland, our super-regional focus has enabled us to become one of the preeminent MEP firms in the industry, proudly serving a wide range of specializations and clients.



Range of services:

- Analysis and concept
- Construction budgeting
- Building information modeling (BIM)
- Energy modeling
- Detailed construction documents
- Construction phase services
- Building commissioning



More than 160 personnel, including:

- 32 Professional Engineers
- 28 LEED® Accredited Professionals
- A Certified Energy Manager (CEM)
- Commissioning Process
- Management Professionals (CPMP)
- Building Energy Assessment Professionals (BEAP)
- Healthcare Facility Design Professional (HFDP) and Certified Healthcare Constructor (CHC)



A broad range of clients

- Government and Secure Facilities
- High Tech Buildings/Mission Critical
- Data Centers
- Central Plants, Energy Facilities and Utility
- Distribution Centers
- Green Buildings, Science, Laboratory and Research Facilities
- Healthcare - Hospitals, Urgent Care, Medical Centers and Labs
- Education - Colleges, Universities, Trade Schools, K-12
- Corporate, Commercial, Office Buildings
- Industrial - Light and Heavy Manufacturing, Warehousing
- Performing Arts Centers, Museums, Theaters and Libraries
- Hotels, Ice Arenas and Sports Facilities
- Apartments, Dormitories and High Rise
- Historic and Adaptive Retrofit
- Master Planning and Design



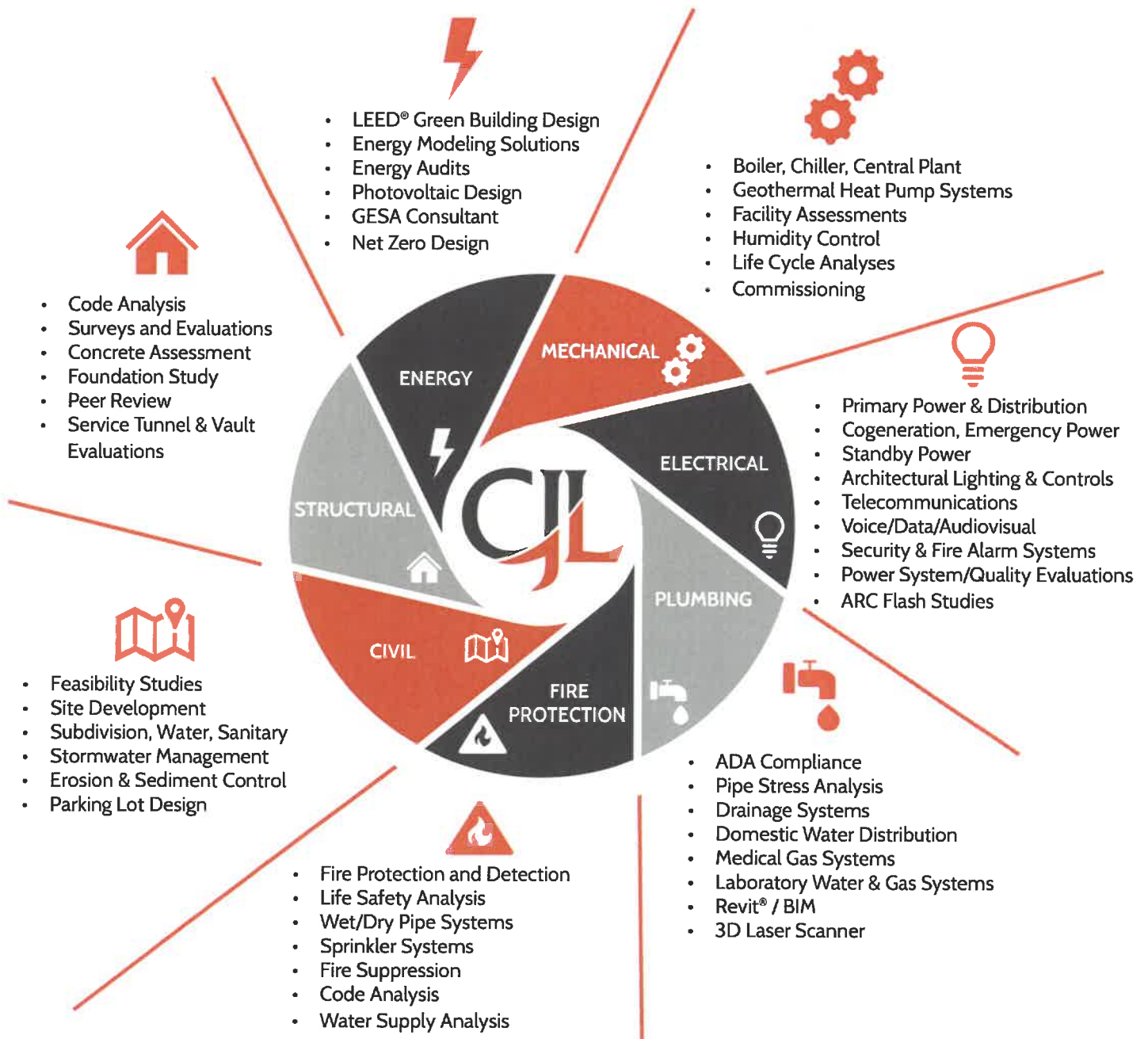
Specialization

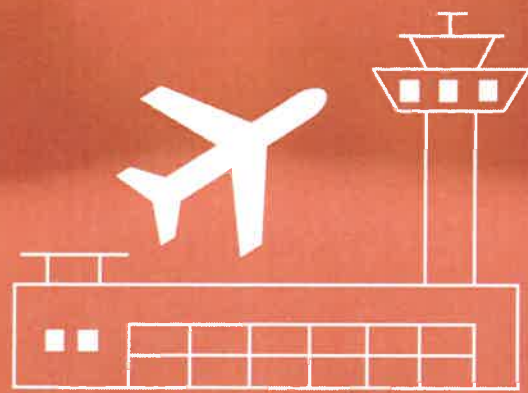
- HVAC Systems
- Electrical Systems
- Fire Detection and Protection
- Plumbing Design
- LEED® Green Building Design
- Commissioning
- Energy Modeling Solutions
- Civil / Structural Engineering
- Architectural Lighting and Controls
- Telecommunications
- Life Safety Systems
- Voice/Data/Audiovisual
- Security Systems
- Power System/Quality Evaluations
- Life Cycle Analyses
- Retrofit Evaluations
- REVIT® / BIM



WHAT WE DO

CJL Engineers roll up their sleeves and work alongside our clients, creating a trusted professional partnership based on strong collaboration and communication, engineering experience and quality technical documents.





COMPANY EXPERIENCE

GOVERNMENT EXPERIENCE

Naval Air Station (NAVAIR), Patuxent River, MD
Cairo West Air Base, Cairo Egypt
U.S. Air Force Base, Bagram, Afghanistan
Youngstown Air Reserve Station, Youngstown, OH
Dulles International Airport, Dulles, VA
Erie International Airport, Erie, PA
John P. Murtha, Johnstown-Cambria County Airport Terminal, and Pennsylvania Army National Guard Facility, Johnstown, PA
Hagerstown Regional Airport Terminal, Hagerstown, MD
Pittsburgh International Airport, Pittsburgh, PA
Afghanistan Border Police Battalion, Afghanistan
Ft. Detrick, Frederick National Laboratory for Cancer Research, Frederick, MD
Akron Thermal LP, Downtown District Chiller, Akron, OH
Allegheny City Department of Public Works, Pittsburgh, PA
Ashtabula County Jail, Jefferson, OH
Ashtabula County, Juvenile Detention Center, Ashtabula, OH
Belmont County Courthouse, St. Clairsville, OH
Beaver Falls Readiness Center, DGS 964-59, Ph. 1, Beaver County, PA
Butler Township Municipal Building, Butler, PA
Cambria County Central Park Complex & Academic Center, Johnstown, PA
Cambria County Courthouse, Ebensburg, PA
Cambria County War Memorial Arena, Johnstown, PA
Cambria County Prison, Ebensburg, PA
City of Chesapeake City Hall, Chesapeake, VA
Clarion County Courthouse, Clarion, PA
Clearfield County Courthouse, Clearfield, PA
Delaware County, County Building Assessments, OH
Erie Public Safety Building and 911 Center, Erie, PA
Frederick County Public Schools, Emmitsburg, MD
Ft. Worth International Airport, Dallas, TX
Greensburg Readiness Center, DGS 963-57, Greensburg, PA
Lehighon Readiness Center, DGS 961-27 Ph. 2, Lehighon, PA
Mahoning County Courthouse, Youngstown, OH
Mahoning County Jail, Youngstown, OH
Hamburg Readiness Center, DGS 961-31, Ph. 1, Berks County, PA
Marshall Township Municipal Building, Marshall Township, PA
Moon Township Municipal Complex, Moon Township, PA
Murrysville Public Service Complex, Murrysville, PA
National Geospatial Intelligence Agency, Arnold, MO
Naval Air Station Oceana, Virginia Beach, VA
Old Mifflin County Courthouse, Lewistown, PA
PennDOT Erie Roadside Rest Facilities Renovations, DGS 251-97 Ph.1, Erie, PA
PennDOT Mercer Welcome Center Facilities Renovation, DGS 251-98 Ph. 1, Mercer, PA
PennDOT Roadside Rest Sites #17 & #18, 1-79, DGS A251-685, Mercer County, PA
Pennsylvania Department of Transportation, Smithport, Tionesta, PA
Pennsylvania State Correctional Institute , DGS 1579-8, Ph. 1, Cambridge Springs, PA
Pennsylvania State Correctional Institute, DGS 377-3, Ph. 2, Forest County, PA
Pennsylvania State Correctional Institute, Houtzdale, DGS GES-2018-1, Clearfield County, PA
Pennsylvania State Correctional Institute, Muncy, DGS GES-2017-2, Lycoming County, PA
Pennsylvania State Correctional Institute , DGS 578-20, Dallas, PA
Pennsylvania State Correctional Institute, DGS 572-18, Huntingdon, PA
Pennsylvania State Correctional Institute , DGS 1570-6, Greensburg, PA
Pennsylvania State Correctional Institute , DGS 374-6 Ph. 1, Somerset, PA
Pennsylvania State Correctional Institute , DGS 32-04, Greene County, PA
Pennsylvania Turnpike Commission, Harrisburg, PA
Polk Center Kitchen HVAC, DGS 552-38 Ph.1, Venango County, PA
Polk Center, Fire Suppression Upgrade, DGS 552-39, Ph. 1, Venango County, PA
Portage County Prosecutor's Building, Ravenna, OH
Presque Isle State Park, Replace Beach/Shower House, DGS 163-36, Ph. 1, Erie County, PA
Richland Public Library, Richland Township, PA
Richland Township Municipal Building, Gibsonia, PA
Scott Township Municipal Building, Scott Township, PA
Southwestern Veterans Center, Emergency Generator, DGS A970-221, Pittsburgh, PA
Stryker Brigade Combat Team Readiness Center, DGS 962-15, Bradford, PA, DGS 963-16, Hermitage, PA, DGS A964-46, Punxsutawney, PA
Warren State Hospital, Renovate Fire Alarm & Suppression, DGS 514-28, Ph. 1, Warren County , PA
Washington County Courthouse, Washington, PA
Washington Co. Department of Public Works, Hagerstown, MD
West Virginia Capitol Complex, State Office Building #3, Charleston, WV
West Virginia University, NASA Katherine Johnson Independent Verification & Validation Center, Fairmont, WV

Bagram Air Field, Fighter Hangar

US Air Force, Afghanistan



THE PROJECT

Bagram Air Field is a US base within the Middle East District, located in Afghanistan. CJL Engineering was hired to produce a full design for a new three-bay fighter aircraft maintenance hangar facility for A-10, F-15, and F-16 fighter aircraft. The fighter hangar facility is a high-bay type with rolling hangar bay doors and is located on the flight line. It included a double bay phase maintenance hangar and one fuel cell maintenance bay, along with associated support spaces and tool rooms.

CJL DESIGN SOLUTIONS

- Complete design of all mechanical and electrical systems
- Heating, ventilation, and vapor exhaust systems suitable for the storage and maintenance of military aircraft and fuel cell maintenance
- Tie-in to the 13.8kV, 3-phase base electrical service distribution system
- In-floor grounding system for grounding of aircraft and equipment during service
- 400 Hertz frequency conversion system for connections to aircraft power systems
- Hazardous classifications in accordance with NEC Article 513
- Lowering devices for high bay lighting fixtures

Cairo West Air Base

Fuel Cell Maintenance Facility, Cairo, Egypt



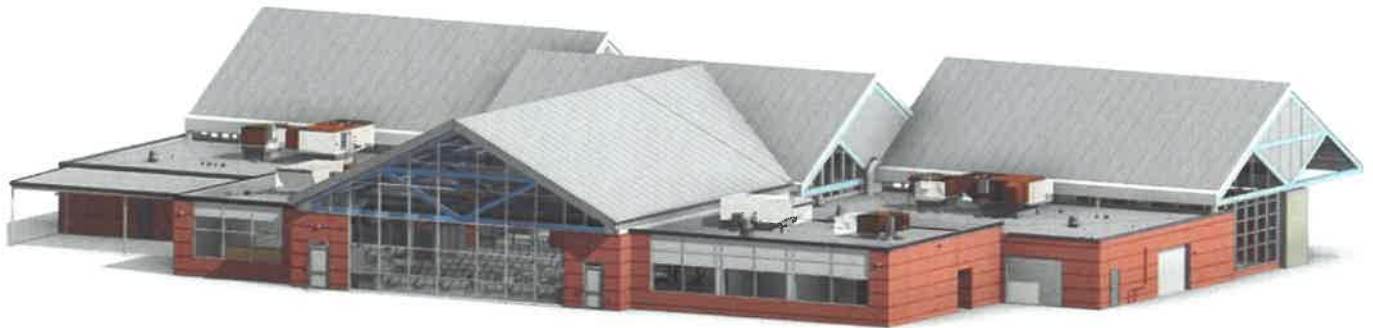
THE PROJECT

Cairo West Air Base (CWAB) consists of 5,615 hectares of desert land and is located approximately 20 kilometers west of Cairo. The existing CWAB aircraft operations include F-4 Phantoms, C-130 Hercules, and E2 C Hawkeye. Future plans for the base involve phasing out the F-4 operations and replacing them with a new squadron of F-16 Block 52 aircraft. As part of the F-16 program expansion master plan, CJL Engineering was hired to create written specifications for 20 design-build support buildings including unit training simulators, alert shelters, aircraft shelters, and other maintenance facilities, as well as to produce a full design for the new Fuel Cell Maintenance Facility.

CJL DESIGN SOLUTIONS

- Complete design of all mechanical, electrical and telecom systems
- Emergency operated purge exhaust systems for Fuel Cell, Drop Tank Maintenance, and Bladder Repair areas
- Direct exhaust system for Fuel Cell, incorporating a flexible hose with motorized retractable hose reel
- Vapor detection system
- 60 Hertz and 400 Hertz frequency conversion systems for aircraft maintenance
- Hazardous classifications in accordance with NEC Article 513

Hagerstown Regional Airport Terminal Addition and Renovation, Hagerstown, MD



THE PROJECT

The expansion has helped the airport accommodate more passengers coming and going on larger aircraft. The current passenger holding room capacity is 100 passengers, but some flights have about 166 to 180 passengers. The expansion project added about 5,500 SF and create an additional holding room to help serve two commercial passenger flights at once.

CJL DESIGN SOLUTIONS

- New energy efficient LED lighting was designed.
- HVAC equipment was modernized
- Designed the new emergency generator to power the entire building.
- New digital temperature control was designed.
- The building addition provides a larger Hold Room with a capacity of approximately 300 occupants
- The additional Hold Room area provides new amenities including new public restrooms, bar and service counters, video displays and convenient charging stations. An expanded TSA area of approximately 1,775 SF is relocated to provide space for passenger security processing within the expanded area.
- The entire remaining areas of over 16,000 SF will require complete renovation for new floor walls and ceiling finishes with upgrades to electrical, mechanical, plumbing and sprinkler systems.

Dulles International Airport

Concourse 'B' 4 Gate Expansion & APM Station, Dulles, VA



THE PROJECT

CJL was contracted to design the mechanical systems for a 4-gate expansion to Tier B, the new Midfield Concourse and lighting upgrades for the Automated People Mover (APM) Station at the Dulles International Airport. The Airport is located just outside Washington, D.C. and is one of the fastest growing international airports on the East Coast. Dulles serves over 15 million passengers per year with more than 4 million of those passengers on international flights.

CJL DESIGN SOLUTIONS

- Integral custom continuous fluorescent escalator lighting.
- Indirect concourse and platform level lighting.
- Custom luminous vertical panels at Mezzanine.
- Column grazing uplights.
- The existing chilled water and hot water supply systems were extended to four new VAV air-handling units in Concourse 'B' expansion, and added one new constant volume air-handling unit in the new Mobile Lounge Dock.
- Four VAV units deliver low temperature air throughout the building. By using a supply air temperature 13-degrees lower than normal, enabling the air supply to be reduced by approximately 40 percent.
- Existing plumbing and fire protection systems were extended.

John P. Murtha Johnstown-Cambria Co. Airport Terminal, Johnstown, PA



THE PROJECT

The 18,000 SF terminal at the John P. Murtha Johnstown-Cambria County Airport accommodates commercial and private aircraft. The terminal has an arrivals and departure area, airline counters, baggage claims area, a central concourse, car rentals and support facilities. CJL Engineering provided the full mechanical and electrical design, as well as construction management services.

CJL DESIGN SOLUTIONS

- The HVAC design used variable volume air-handling units, DX coil variable volume boxes with reheat strip diffusers, and radiant ceiling panels.
- The terminal has a three-phase, 120 / 208 Volt electric service and indirect lighting in the main concourse. It also has an addressable fire alarm and security system.
- The plumbing design includes sanitary drainage, storm drainage, hot and cold water systems, natural gas, condensate drains and all fixtures.
- Fire protection consists of a wet sprinkler system, wall hydrants, hose bibs, and backflow protection. Restaurant connections and piping were provided.

Erie International Airport -Tom Ridge Field

Multiple Renovations, Erie, PA



THE PROJECT

Since 1990, CJL Engineering has provided consulting engineering services for a series of projects and infrastructure improvements at the Erie International Airport. These projects include an expansion of the terminal baggage area, lobby lighting upgrades, HVAC retrofit, and a new U.S. Customs building.

CJL DESIGN SOLUTIONS

- The terminal's electrical system was upgraded with a new 4160 volt service entrance, three new 4160 volt fused switches, a new 750 KVA transformer and a new 2500a 208Y/120, main distribution switchboard.
- Construct a new 2,200 SF U.S. Customs Building built as part of a campus-wide renovation and expansion plan.
- The Airport's existing 5 K. radially-distributed electrical system was extended to the new building. Provisions and considerations were made to accommodate the plans for future expansion.
- A 208-volt, three-phase system was designed for the building's lighting and power systems.
- Self-contained natural gas fired rooftop units provide the heating, ventilating and air-conditioning. The Airport Authority can now take advantage of an on site natural gas well to lower their annual operating costs.
- Plumbing systems improvements included new fixtures, dual domestic water / fire service, complete natural gas distribution system, sanitary and storm sewers and a wet pipe sprinkler system.

Kathryn W. Lumley Aviation Center

Pennsylvania College of Technology, Williamsport, PA



THE PROJECT

This 45,000 SF training facility was designed for the Aviation Technology degree program at the Pennsylvania College of Technology. It consists of faculty offices, classrooms, a hangar area and various shops including welding, paint and composite areas. Four external engine test cells with a central control room provide support operational testing of reciprocal and turbine engines. CJL Engineering was responsible for the design of the mechanical, electrical and plumbing systems.

CJL DESIGN SOLUTIONS

- Two combination gas / oil fired hot water boilers for heating.
- Central chilled water system and air-handling unit cool the office and classroom areas. Individual air-handling units used in the shop area.
- The hangar / shop area have electrical radiant heat slab that utilizes off peak electricity.
- A high capacity exhaust system quickly purges air in the event of a hazardous fume accident.
- Low-glare fluorescent fixtures are used in computer areas, and metal halide/ high pressure sodium clusters serve the shop floor. Explosion-proof fixtures are used in the hangar and paint areas.
- Specialized plumbing includes a central compressed air plant containing rotary screw air compressors, after-coolers, refrigerated air dryers, complete filtration and air distribution.
- A welding gas piping system has tank manifolds and individual station controls. An oil separation system keeps any discharge oil away from the sanitary sewer system. Jet fuel storage is included.

Pittsburgh International Airport, Airmall New Tenant Fit-outs and Upgrades, Pittsburgh, PA



THE PROJECT

CJL Engineering provided the mechanical, electrical and plumbing design for the renovations of Airmall at the Pittsburgh International Airport. The project consisted of the demolition of existing tenant spaces, modifications to existing concourse space to accommodate new stores/tenants and the tenant fit-out of many businesses including Armani Jeans, Bottega Deli, Metalsmith's Jewelry, Lacoste, FlyBy Sports, Food Court Upgrades, Airst Beauty/Deli, Rite Aid Lighting, Mayorga Coffee, Vila Italian Kitchen, Metalsmith Jewelry, Pittsburgh Popcorn Store, PIA Chocolates, Video Wall and LeCeil Martini Bar.

CJL DESIGN SOLUTIONS

- The existing Airport electrical distribution system was modified to accommodate the new tenant spaces being constructed each tenant space received a separate panelboard with a meter for local distribution in the space.
- The existing Fire Alarm system was updated and modified to include the new tenant spaces as well as the changes made to the existing concourse space.
- New lighting was provided in all new tenant spaces, with separate lighting control systems for each space.
- Existing HVAC system was modified to accommodate the changes made to the concourse space as well the new tenant spaces.
- New split system unit was added for supplementary cooling for several businesses.
- Existing plumbing and fire protection systems were modified to accommodate the changes made to the concourse space as well as the new tenants.
- New water heater was provided for cooking equipment for several deli tenants.

Hamburg Readiness Center

DGS 961-31, Systems Upgrade, Hamburg, PA



THE PROJECT

CJL Engineering provided the mechanical and electrical engineering upgrades to the 20,000 SF Hamburg Readiness Center. The facility is used by the Pennsylvania Army National Guard for troop training and housing military vehicles. The project was administered through the Pennsylvania Department of General Services; renovations were completed in 2014.

CJL DESIGN SOLUTIONS

- New hot water heating system with high efficiency condensing boilers
- New heating and ventilating units and split system DX cooler for office areas
- Electrical power distribution includes electric service entrance and power distribution equipment
- New lighting and branch circuit wiring
- Emergency Generator for backup power generation
- Technology Network includes new telephone service entrance and data infrastructures

Stryker Brigade Readiness Centers

Bradford, Hermitage and Punxsutawney, PA



THE PROJECT

The Pennsylvania National Guard's Stryker Brigade program includes 10 new readiness centers, along with extensive upgrades to their existing facilities. Each secure center is designed for use by the Pennsylvania Army National Guard for troop training and military vehicles. The projects are administered through the Pennsylvania Department of General Services.

CJL Engineering was selected to provide the mechanical and electrical engineering design for three facilities: Bradford (DGS 962-15), Hermitage (DGS 963-16) and Punxsutawney, (DGS A964-46). The projects were designed to achieve the National Guard Bureau's Sustainable Project Rating Tool (SPiRiT) Gold Rating

CJL DESIGN SOLUTIONS

- The HVAC design feature rooftop air-conditioning units with DX cooling, gas heat
- Electrical power distribution includes electric service entrance and power distribution equipment
- Security measures included securing entry doors, and camera monitoring system throughout each building
- Redundant Systems for backup power generation, automatic transfer switches and duct banks
- Secure Technology Network includes new telephone service entrance and data infrastructures

Katherine Johnson IV&V Facility

West Virginia University and NASA, Fairmont, WV

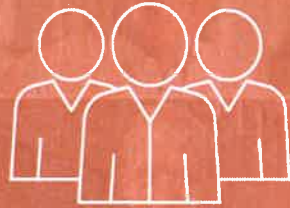


THE PROJECT

The Katherine Johnson Independent Verification and Validation Facility was built by West Virginia University for NASA. CJL Engineering was responsible for the facility's Mechanical and Electrical Engineering Design. Achieving total power redundancy was a priority for this 50,000 sf super computer center.

CJL DESIGN SOLUTIONS

- Chilled water systems with redundant chillers and air-handling units with variable frequency drives.
- Under-floor chilled water loop.
- Redundant chilled water and hot water pumping systems with VFD.
- Energy management system with monitoring and alarm sensors.
- Two 4000-amp 480-volt independent primary power feeds from separate power companies for system redundancy.
- Two 1000 KVA generators, with provisions for a third, provide generator / utility paralleling.
- 1000 KVA uninterruptible power supply (UPS) and 15-minute wet battery backup.
- Emergency diesel generators with a redundant unit, and provisions for a fourth, supply the entire building with back-up power.
- Under-floor duct system for computer, communication, and power cable.



STAFF QUALIFICATIONS



Matthew R. Sotosky, P.E.
LEED® Accredited Professional
Managing Partner | Mechanical Engineer

Contact Information

☎ 814.536.1651, ext. 110

✉ msotosky@cjlengineering.com

PROFESSIONAL SUMMARY

Matt Sotosky is a Managing Partner of CJL Engineering. He started with the firm in 1990 and has extensive experience in Design and Commissioning of HVAC, Plumbing and Fire Protection for Healthcare, Educational, Industrial and Commercial projects, with over 30 years experience as a professional engineer.

Matt is responsible for designing and managing mechanical, electrical, plumbing and fire protection engineering projects for all types of buildings and applications. He has designed and / or managed over \$2.5 billion in construction projects.

REPRESENTATIVE PROJECTS

Bagram Air Field, Fighter Hangar, US Air Force, Afghanistan

Cairo West Air Base, Fuel Cell Maintenance Facility, Cairo, Egypt

Dover Air Force Base, Bathroom and Kitchen Renovation, Dover, DE

John P. Murtha Johnstown-Cambria County Airport Terminal and Pennsylvania Armory National Guard, Johnstown, PA

Erie International Airport -Tom Ridge Field, Multiple Renovations, Erie, PA

Pennsylvania College of Technology, Kathryn W. Lumley Aviation Center, Williamsport, PA

Hagerstown Regional Airport Terminal Addition and Renovation, Hagerstown, MD

WVU Medicine, Morgantown, WV

- Children's Hospital
- Clinical Pharmacy Clean Room

West Virginia Capitol Complex, Building #3, Tie into the Central Heating Plant, Charleston, WV

Bluefield Regional Medical Center, Obstetrics and OR Suites Upgrades, Bluefield, WV

West Virginia University, Oglebay Hall, LEED® Certified, Morgantown, WV

NASA Independent Verification and Validation Center, Fairmont, WV

Southwestern Veterans Center, Allegheny County Renovation Pittsburgh, PA

SCI Muncy, GESA Consultant, DGS GESA-2017-2, Lycoming County, PA

Stryker Brigade Readiness Center, Punxsutawney, PA and Bradford, PA

Hamburg Readiness Center, Pennsylvania National Guard, Hamburg, PA

Lehighon Readiness Center Renovation, Lehighon, PA

Greensburg Readiness Center, Renovation, Greensburg, PA

SCI Houtzdale, GESA Consultant, DGS GESA-2018-1, Clearfield County

Pennsylvania State Correctional Institutions Renovations

- SCI Dallas
- SCI Huntingdon
- SCI Frackville
- SCI Cambridge Springs, PA
- SCI Mercer

Saint Vincent, Allegheny Health Network, Erie PA

Meritus Health System, Hagerstown, MD

Wooster Community Hospital, Wooster, OH

Duke LifePoint, Conemaugh Health System, Johnstown, PA

UPMC, Numerous Locations, PA

EDUCATION

Bachelor of Science,
Mechanical Engineering,
University of Pittsburgh - 1989

SPECIALIZATIONS

Mechanical Engineering
Feasibility Study, Master Planning
Healthcare and Assisted Living
Central Plant, Boiler, Chiller Systems
Geothermal Systems
Commissioning

REGISTERED PROFESSIONAL ENGINEER

West Virginia, Pennsylvania, Maryland, Indiana, Missouri, Ohio, Illinois, Colorado, Oklahoma, Florida, New Mexico, Georgia, Texas, Michigan, Kentucky, Tennessee

MEMBERSHIPS/ACTIVITIES

International District Energy Association (IDEA)
American Society of Mechanical Engineers (ASME)
ASHRAE
American Society for Health Care Engineering (ASHE)
International Ground Source Heat Pump Association (IGSHPA)
Pennsylvania Society of Professional Engineers (PSPE)
National Society of Professional Engineers (NSPE)
U.S. Green Building Council (USGBC)

Adam B. Hale, P.E.
Associate Principal | Mechanical Engineer

Contact Information

814.536.1651, ext. 139

ahale@cjlengineering.com



PROFESSIONAL SUMMARY

Adam Hale is a Mechanical Engineer at CJL Engineering. He joined the firm in 2008 as an intern and became a full-time employee in 2010.

Adam is responsible for the design and specification of HVAC and other mechanical systems for educational, healthcare, commercial, and corporate clients. He surveys existing facilities and systems to confirm and evaluate their condition. He conducts engineering studies, establishes design criteria, and estimates project costs. He is also responsible for communicating project needs and requirements between owner, architect, engineer and client.

REPRESENTATIVE PROJECTS

- WVU Medicine, Morgantown, WV
 - Children’s Hospital,
 - Central Sterile Renovation
- West Virginia University, New Business and Economics Building (In-Design), Morgantown, WV
- West Virginia Capitol Complex, Building #3, Tie into the Central Heating Plant, Charleston, WV
- Department of General Services, Southwestern Veterans Center, Allegheny County Renovation Pittsburgh, PA
- Duke LifePoint, Conemaugh Health Systems, Ebensburg Outpatient Care Center, Ebensburg, PA
- Duke LifePoint, Conemaugh Health Systems, Somerset Medical Office Building, Somerset, PA
- Duke LifePoint, Conemaugh Health Systems, Meyersdale Medical Center, Radiology Replacement, Meyersdale, PA
- Allegheny Health Network, St. Vincent Hospital, MRI Relocation Erie, PA
- Meadville Medical Center, Vernon Place, Medical Office Building, Meadville, PA
- Wooster Community Hospital, Wooster, OH
 - Outpatient Cancer Center
 - Central Sterile Processing

- Duke LifePoint, Conemaugh Health Systems, Johnstown, PA
 - East Hills Outpatient Care Center
 - Conemaugh ‘D’ Building / Main Campus Renovations
 - Conemaugh Good Sam Radiology Oncology Renovations
 - Conemaugh Molecular Lab Renovations
 - Conemaugh Wound Care Renovations
 - Education Center Renovations
 - Medical Park CPG Plastics
 - Pharmacy Renovation
 - Vascular OR#5 Renovation
- Meritus Health System, Frederick, MD
 - North End Outpatient Services
 - John R. Marsh Cancer Center
 - Executive Administrative Office Reno.
 - Family Medicine, Walnut Street Reno
 - Robinwood Suite 200 Residency
- UPMC, Multiple Locations
 - UPMC East LEED® Silver, New Medical Center, Monroeville, PA
 - UPMC Hamot, New Patient Care Tower, Erie, PA (In-Design)
 - UPMC Presbyterian, Deconstruction & Redesign, Pittsburgh, PA
 - UPMC Presbyterian, Hybrid O.R. Renovation, Pittsburgh, PA
 - UPMC Lemieux Sports Complex, Cranberry, PA

EDUCATION

Bachelor of Science
Mechanical Engineering Technology
University of Pittsburgh - 2010

SPECIALIZATIONS

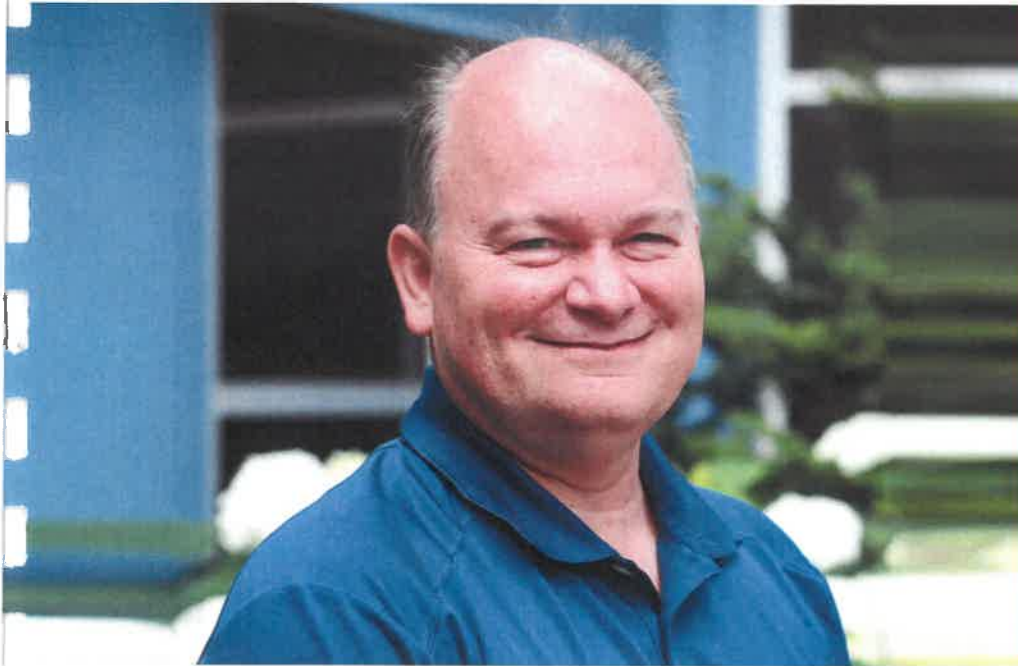
- Mechanical Engineering
- HVAC Design
- Facility Analysis
- Master Planning
- On-site Troubleshooting

REGISTERED PROFESSIONAL ENGINEER

West Virginia, Pennsylvania

MEMBERSHIPS / CERTIFICATES

- ASHRAE
- ASHRAE HFDP (Healthcare Facility Design Professional)
- ASHE



Rodney A. Wolfe, P.E.
Principal | Electrical Engineer

Contact Information

814.536.1651, ext 115

rwolfe@cjlengineering.com

PROFESSIONAL SUMMARY

Rodney Wolfe is an Electrical Engineer and Principal of CJL Engineering. He started with the firm in 1993 and he is responsible for overseeing the electrical drafting, design and specifications of projects to assure compliance with local, state and federal codes, regulations and standards, establish company electrical design criteria, and schedule electrical department personnel to complete project assignments.

Rodney is involved in the design and specification of low and medium voltage distribution systems, lighting systems, emergency power systems, local area networks, sound and communications systems and site utilities. His noteworthy projects, comprising new construction, expansions and adaptive retrofit include:

REPRESENTATIVE PROJECTS

WVU Medicine, Children's Hospital, Morgantown, WV

Kaley Center, Electrical Distribution, 10th Floor Lighting, Wheeling, WV

Lincoln Primary Care Center, 100 kW Generator, Charleston, WV

Wheeling Pittsburgh Steel Locker Room Renovation, Wheeling, WV

Harrison-Taylor County Emergency Call Center, Bridgeport, WV

John P. Murtha Johnstown-Cambria County Airport Terminal and Pennsylvania Armory National Guard, Johnstown, PA

Erie International Airport -Tom Ridge Field, Multiple Renovations, Erie, PA

Westmoreland County Juvenile Detention Facility, Greensburg, PA

GE Transportation Division, Erie, PA

Allegheny Health Network, St. Vincent Hospital, Multiple Projects, Erie, PA

Meritus Health System, North End Outpatient Services, Frederick, MD

Forum Health, Northside Medical Center, Youngstown, OH

Forum Health, Trumbull Memorial Hospital, Warren, OH

Shriner's Hospital for Children, Multiple Projects, Erie, PA

Department of General Services

- Lehighon Readiness Center, Rehabilitation, Lehighon, PA
- Stryker Brigade Readiness Center, Punxsutawney, PA
- Hamburg Readiness Center, 75 kW Generator, Hamburg, PA
- Warren State Hospital, Renovate Fire Alarm and Fire Suppression Systems, Warren County, PA
- Greensburg Readiness Center Rehabilitation, Greensburg, PA
- Southwestern Veterans' Center, Emergency Generator Installation, Pittsburgh, PA

Pennsylvania State Correctional Institutions Renovations

- SCI Dallas
- SCI Huntingdon
- SCI Frackville
- SCI Greensburg
- SCI Cambridge Springs

State Regional Correctional Facility Mercer, Mercer County, PA

UPMC Hamot Medical Center, Numerous Projects, Erie, PA

Meadville Medical Center, Vernon Place, Medical Office Building, Meadville, PA

Pittsburgh Zoo and PPG Aquarium, Water's Edge, Polar Bear Exhibit LEED® Compliant, Pittsburgh, PA

EDUCATION

Bachelor of Science
Electrical Engineering
University of Pittsburgh - 1988

SPECIALIZATIONS

Electrical Engineering
Primary Power
Industrial Power
Government and Healthcare
Schools K-12
Colleges and Universities
Building Evaluations
Feasibility Studies

REGISTERED PROFESSIONAL ENGINEER

West Virginia
Pennsylvania
Maryland
Ohio

MEMBERSHIPS/ACTIVITIES

Member of the Building Industry Consulting Service International (BICSI).

Pennsylvania Society of Professional Engineers (PSPE)

National Society of Professional Engineers (NSPE)



Adam R. McKinley, E.I.T., CPD
Associate Principal | Plumbing Design

Contact Information

814.536.1651, ext. 113

amckinley@cjlengineering.com

PROFESSIONAL SUMMARY

Adam McKinley is the Plumbing Department Supervisor of CJL Engineering. He started at the firm in 2003 and serves as Project Manager for numerous projects, and is a Certified Plumbing Designer. His experience includes numerous utility extensions and/or relocations for universities, schools, office buildings, hospitals, restaurants, high-rise condominiums and personal care home projects.

REPRESENTATIVE PROJECTS

WVU Medicine, Children's Hospital,
Morgantown, WV

Bluefield Regional Medical Center,
Systems Retrofit, Bluefield, WV

West Virginia Capitol Complex, State
Office Building #3, Charleston, WV

West Virginia University, Morgantown, WV

- New Business and Economics Building (In-Design)
- Puskar Center Performance Dining Facility
- Oglebay Hall Renovation

UPMC East, LEED® Silver Hospital,
Monroeville, PA

UPMC Hamot, Regional Center for Mother
and Baby Health, Erie, PA

UPMC Hamot, Bayview Medical Office
Building, Erie, PA

Garrett County Memorial Hospital,
Oakland, MD

Wooster Community Hospital, Wooster, OH

Fulton County Medical Center,
McConnellsburg, PA

Allegheny Health Network, Saint Vincent
Hospital, Erie, PA

- OSI Building Renovation
- Hardner Building
- Nuclear Imaging Renovation
- Infill Building
- 5th Floor Women's Center
- Urology Expansion & Renovation

Department of General Services

- Stryker Brigade Readiness Center,
Punxsutawney, PA
- Hamburg Readiness Center, 75 kW
Generator, Hamburg, PA
- Greensburg Readiness Center
Rehabilitation, Greensburg, PA
- Additions/Renovations to Troop "D",
PA State Police, Butler, PA
- Presque Isle State Park, Beach and
Shower House Replacement

Meadville Medical Center, Vernon Place,
Medical Office Building, Meadville, PA

Leidos Biomedical Research, Inc., Fort
Detrick, Chiller Plant, Frederick, MD

Erie Public Safety Building, 911 Center,
Erie, PA

Union Trust Building, Historic Renovation/
Retrofit, Pittsburgh, PA

University of Pittsburgh, Cathedral of
Learning, Pittsburgh, PA

Greater Johnstown Community YMCA,
Johnstown, PA

Paris Healthcare Linen Services –
Processing Plant, DuBois, PA

Swann Biomass Ethanol Plant, Clearfield, PA

Punxsutawney Area Transit Authority,
Punxsutawney, PA

CamTran ATA Operations Center,
Johnstown, PA

EDUCATION

Bachelor of Science
Mechanical Engineering Technology
University of Pittsburgh - 2001

SPECIALIZATIONS

HVAC and Plumbing Design
Project Management

MEMBERSHIPS/ACTIVITIES

American Society for Plumbing
Engineering Member (ASPE)



Jaelyn A. Krawczyk, EIT
LEED® Accredited Professional
Senior Associate | Fire Protection

Contact Information

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✉ jkrawczyk@cjleengineering.com

PROFESSIONAL SUMMARY

Jackie Krawczyk is an Associate and Fire Protection Designer with CJL Engineering and has over 14 years of experience in the industry. She is responsible for surveying and evaluating the condition of existing facilities, designing new fire protection and fire alarm systems, International Building Code and NFPA code consultations, evaluating shop drawing submissions, and performing life safety analysis on new and existing building projects. Jackie also provides construction observation services, which requires her to visit the construction site to solve field problems and to provide punch lists for completion of the project.

REPRESENTATIVE PROJECTS

West Virginia Capitol Complex, Building #3, Tie into the Central Heating Plant, Charleston, WV

West Virginia University, Oglebay Hall, Forensic Science Lab, Historic Building Renovation, LEED® Certified, Morgantown, WV

Bluefield Regional Medical Center, Systems Retrofit, Bluefield, WV

Valley Hospice Personal Care Home, Wheeling, WV

Harrison-Taylor County Emergency Call Center, Bridgeport, WV

UPMC East, New Medical Center, LEED® Silver, Monroeville, PA

UPMC Hamot, Regional Center for Mother and Baby Health, Erie, PA

UPMC Hamot, Emergency Department Expansion and OR Upgrades, Erie, PA

Akron Children's Hospital, Beeghly Campus, Boardman, OH

Missouri Baptist Hospital, St. Louis, MO
Radiation Oncology Center at Lakewood Ranch Professional Center, Sarasota, FL

UPMC Lemieux Sports Complex – New Medical Offices, Dual Ice Rink and Training Facility, Cranberry, PA

Department of General Services

- Polk Center, Fire Suppression Upgrade
- Warren State Hospital, Renovate Fire Alarm and Fire Suppression Systems, Warren County, PA
- Additions/Renovations to Troop "D", PA State Police, Butler, PA

Duke LifePoint, Conemaugh Health Systems, Ebensburg Outpatient Care Center, Ebensburg, PA

Duke LifePoint, Conemaugh Health Systems, Somerset Medical Office Building, Somerset, PA

- Duke LifePoint, Conemaugh Health Systems, Johnstown, PA
- East Hills Outpatient Care Center
- 'D' Building / Main Campus Renovations
- Medical Park CPG Plastics
- Molecular Lab Renovations
- Memorial Medical Center, Fire Sprinkler

Wooster Community Hospital, Wooster, OH

DaVita Healthcare Partners (multiple locations Nationwide)

Garrett County Memorial Hospital, Oakland, MD

LECOM Health, Corry Memorial Hospital, Corry, PA

UPMC Altoona, Chartwell Pharmacy Clean Room (ISO Class 7), Altoona, PA

EDUCATION

Bachelor of Science
Mechanical Engineering,
The Pennsylvania State University - 2004

SPECIALIZATIONS

- Sprinkler System Design
- Fire Alarm System Design
- Code Consultation
- Life Safety Analysis

MEMBERSHIPS/ACTIVITIES:

- Society of Fire Protection Engineers Member
- National Fire Protection Association Member
- AutoCAD
- REVIT BIM
- HASS Hydraulic Analysis



Chris Polacek
Architectural Designer

Contact Information

814.536.1651, ext. 165

cpolacek@cjlengineering.com

PROFESSIONAL SUMMARY

Chris Polacek is an Architectural Designer at CJL Engineering, joining the firm in 2016. He has over 22 years of experience in the Architectural planning and design. Chris is responsible for architectural planning, design, documentation, project management, and construction administration. His experience includes healthcare, industrial, educational, correctional, municipal, sports, and commercial facility projects. These project types encompass new construction, renovations and additions to existing facilities.

REPRESENTATIVE PROJECTS

Dover Air Force Base, Bathroom and Kitchen Renovation, Dover, DE

Department of General Services, Polk State Center Kitchen HVAC Upgrades, Venango County, PA

Department of General Services, Southwestern Veterans' Center, Emergency Generator Upgrade, Pittsburgh, PA

Frederick National Laboratory for Cancer Research, Frederick, MD

- Chilled Water Plant Expansion
- Building 560 - Lab Renovations
- Building 325 - Animal Housing Facility Renovations

Elliott Group, Research and Development Facility, Jeannette, PA

Acosta Mine Maintenance Shop/Bath House, Friedens, PA

Greater Johnstown YMCA, Addition and Alterations, Johnstown, PA

Dale Oxygen Expansion and Renovation, Johnstown, PA

Autodesk® Bakery Square 2.0, Fit-Out, Pittsburgh, PA

White Township Recreation Complex, S&T Bank Arena Evaluation and Renovation, Indiana, PA

Meritus Health System, North End Outpatient Services, Frederick, MD

Bottle Works Green Roof, Johnstown, PA

The Pennsylvania State University, Various Locations

- Pattee Paterno Library HVAC Upgrades, University Park Campus
- Laboratory Classroom Building Renovations, Beaver Campus
- Frable & Ostermayer Building, Greater Allegheny Campus

St. Francis University, Chilled Water Plant Upgrades, Loretto, PA

University of Pittsburgh, Various Locations

- College Park Apartments Renovation, Johnstown, PA
- Buckhorn and Sunset Lodge Renovations, Johnstown, PA
- McGowan Center HVAC Upgrades, Pittsburgh, PA
- GPSH Condensate Pump Vault Vent, Pittsburgh, PA
- Benedum Hall Nanotech Phase II, Pittsburgh, PA

Stoneham Arena, Rink Floor and Refrigeration Systems, Stoneham, MA

Holy Name Church, New Elevator, Ebensburg, PA

Punxsutawney Area Hospital, Medical Gas Upgrade, Punxsutawney, PA

Duke LifePoint, Conemaugh Health Systems, Memorial Medical Center, Fire Sprinkler, Johnstown, PA

EDUCATION

Bachelor of Architecture
(five year program)

Minor in Architectural History

The Pennsylvania State University – 1997

SPECIALIZATION

Architectural planning and design



PROJECT AND GOALS

APPROACH AND METHODOLOGY

Project Goal 4.1: Planning

The proper balance between design and cost is integral to CJL's approach to accurate engineering. As your engineer, it is our responsibility to develop a comprehensive, efficient, and reliable design for the MEP/FP systems at a cost that is both reasonable and in line with the project budget. We accomplish this through substantial involvement by our most experienced engineers, including those who participate in the QA process.

Project Goal 4.2: Designing

CJL has extensive experience in MEP/FP building design, including state-of-the-art technology, design programs, specialized equipment and facilities. This experience enables us to help clients in incorporating best practices, anticipating future requirements, establishing priorities, evaluating technical issues and avoiding MEP/FP system problems. Our experience enables us to get right to the heart of issues early on in the project design process, when decisions can be made most cost effectively. Our engineering team members plan, develop, evaluate and analyze throughout each phase of the project, while coordinating with the client, the project team, appropriate agencies, and utilities at each step. Through this process, project changes are minimized, allowing our clients to make informed decisions during each stage of the design process, while the opportunity to influence or modify project direction remains available.

Project Goal 4.3: Researching and Investigation

Existing condition documentation is the critical first step. The early understanding of the type of proposed utilities as well as their physical size is required to determine the optimal path of these utilities. Quite often various pathways are required to be reviewed and studied prior to the final pathway being selected. Collaboration and very open communication amongst all members of the project team are required for this pathway process. One of CJL's fundamental working philosophies is a strong emphasis on interaction with the Owner, Construction Manager and other professionals on the design team from the onset of the project. This helps to integrate the MEP design into the beginning phases of the project design.

Project Goal 4.4: Quality Documents

The high quality and accuracy of our documents result in fewer problems during the construction process, minimal change orders and more effective communication and relationship with

contractors. CJL Engineering as our standard operating process, focuses on accurate documentation and written communications throughout the project, including MEP minutes of meetings to supplement those of the Architect. Project documentation is rigorously maintained in a project manual, including reports, calculations, correspondence, punch lists, and utility coordination. This process ensures maximum clarity of engineering concepts and design decisions.

Project Goal 4.5: Completion

The same engineers that developed the design will remain involved through the completion of the project, insuring continuity and the benefits of experience in the construction of the project. The Senior Engineers spend time in the field working with the construction team to resolve any issues, thereby creating a better understanding of the design intent and a less adversarial relationship between the engineers and the contractors. This will enable CJL to identify and resolve problems encountered during construction more effectively. The ongoing design coordination done effectively and in collaboration with the construction team results in a much better understanding of the design intent on the part of the construction team. This further reduces misunderstandings and construction problems in the field.

Utilize Tools of Technology

BIM 360: Efficient Data Collection; Accessibility for All Team Members, such as, owners and subcontractors; Less Administrative Activities, more attention to quality in the field and Customized Reporting Capabilities. **3D Laser Scanner:** Time and Cost Saving - minimizes down time, remote measurements and less change orders; Accurate Documentation - takes real field conditions and imports them into BIM models and Plan for Future Improvements - routing for clash detection and space optimization. **Digital Virtual Reality:** Experience - more realistic sequencing requirement and space constraints; Animate Complex System Equipment - helps ensure smoother implementation in the field and Resolve - constructability concerns with a higher level of confidence.

