

REQUEST FOR QUOTE



pennsylvania
DEPARTMENT OF GENERAL SERVICES

**Commissioning Agent
Services**

**PLYMOUTH MEETING /
HORSHAM READINESS
CENTERS**

Project No.
DGS C-0961-0036 Phase 1

Technical Submission



**Aramark Engineering
Solutions**

2400 Market Street
Philadelphia, PA 19103

February 16, 2023

Re: Commissioning Agent Services for DGS C-0961-0036 Phase 1, Plymouth Meeting / Horsham Readiness Centers

To Steven Schloeder:

We are pleased to respond and provide a proposal and cost estimate for Commissioning Agent Services during the design review and construction phase stages of the Department of General Services Project No. DGS C-0961-0036 Phase 1, Plymouth Meeting / Horsham Readiness Centers.

Aramark is familiar with the DGS requirements for construction and has worked on many projects for DGS. Sean McCarty is slated as the project manager for this project and has also worked on several projects for DGS in the Eastern region. Sean is the project manager for the Wilkes-Barre Readiness Center and has also managed past DGS projects such as the Coatesville Readiness Center and Honesdale Readiness Center. Dave Bacco will be supporting electrical commissioning who has supported DGS on multiple projects throughout his career with Aramark.

Past performance and the ability to provide a cost proposal for design and construction services in the DGS format is meaningless unless the firm has a track record of completing projects within budget. Aramark is currently working on two projects that maintained our pricing throughout the design stage and we held our originally proposed pricing for the construction stage. Other firms see design stage pricing as a loss leader for an assumed construction stage engagement. Aramark will continue to hold its pricing after design and will perform our commissioning tasks to the hours that were initially proposed.

For the systems to be commissioned most of the HVAC systems utilized packaged equipment that will require integration with automatic temperature controls. We are familiar with the Automated Logic Controls system utilized on many of the Readiness Center sites. We will lead the team to successful completion by coordinating that all respective parties are on-site for equipment start-up concurrently with manufacturer start-up rep, ATC and TAB contractors as often in our experience systems are not accurately setup without all parties collaborating.

We look forward to continuing and strengthening our relationship with the Department of General Services. Should you have any questions, please do not hesitate to contact Matt Campise, Director of Commissioning Services, at (724) 689-9449.

Sincerely,



Brian Lee, P.E.
Vice President, Engineering Solutions
Authorized Signatory of Aramark Management Services
Limited Partnership



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A. CONTRACTOR PRIOR EXPERIENCE

For more than 40 years, Aramark Engineering Solutions has demonstrated proven expertise in developing and implementing energy management programs that promote sustainability and conserve energy. We bring a customized approach based on the individual drivers of each organization. As one of the largest third-party commissioning agents in the United States, our unique operational expertise distinguishes our service from our competitors.

Our commissioning philosophy is guided by the following three tenets:

1. Provide a facility that operates to support the program
2. Verify systems achieve peak efficiency
3. Confirm building infrastructure is readily maintainable by the operators

Our services will further facilitate a seamless transition to the operations group and provide a technical resource to support building operations.

Experience At A Glance

Total Projects Commissioned: **900+**

Total GSF Commissioned: **70+ Million**

Constructed Value of Commissioned Projects: **\$11.2 Billion**

Select Aramark Commissioning Clients

- | | | |
|--------------------------------|---|---------------------------------|
| ▪ Baylor University | ▪ Institute for Advanced Study | ▪ State of Pennsylvania (PADGS) |
| ▪ City University of New York | ▪ NYS Office of Mental Health | ▪ University of Pittsburgh |
| ▪ Centenary College | ▪ Ohio State University | ▪ University of Kentucky |
| ▪ Drew University | ▪ Penn State University | ▪ University of Pennsylvania |
| ▪ Edinboro University | ▪ Princeton University | ▪ Washington College |
| ▪ Franklin & Marshall College | ▪ Rutgers, State University of New Jersey | ▪ West Chester University |
| ▪ George Washington University | | ▪ West Virginia University |

FACILITIES COMMISSIONED

- Recreation centers (athletic & aquatics)
- Campus & performing arts centers
- Large classroom, academic, and computer facilities
- Museums, libraries & cultural institutions
- Science, research, vivarium, BSL3 and laboratory
- Residential halls
- K-12 Schools and Campuses
- Heating, cooling plants and major electric infrastructure
- Retro-commissioning of existing buildings and systems



In 2005, Aramark was selected as a pre-qualified commissioning provider for various projects administered by PADGS and was selected to perform commissioning on the majority of the combined readiness center projects throughout the state. This first two projects are just two of more than 15 centers that Aramark provided commissioning services.

**NATIONAL GUARD READINESS CENTER AT COATESVILLE
PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES, COATSEVILLE, PA**

CONTACT: Craig Zimmerman czimmerman@pa.gov	CX SERVICES: Design Review Installation Inspections Performance Verification Operations Training
CONSTRUCTION COST: \$9.7 Million	COMPLETION DATE: May 2014
GROSS SQUARE FEET: 30,000	



The Readiness Center stands on approximately 3.22 acres and includes administrative offices, classrooms, unit and personnel storage, an arms vault, an assembly hall, vehicle maintenance bay, and a complete kitchen/food service area.

Energy Recovery Unit Performance: In May of 2014, Aramark completed commissioning services for the Coatesville, PA National Guard Readiness Center with a return on investment of 2.3 years or 27 months.

A good example of a high priority issue found during commissioning, which we feel provided a large amount of value to the client, is associated with the short cycling of an energy recovery unit. During MEP systems functional testing, it was discovered that the energy recovery unit serving the building air handling units was short cycling due to the fact that it was currently programmed to enable when any of the associated air handling units were commanded to operate in full economizer mode. This programming was in opposition to the design sequence of operations which states that the energy recovery unit is to energize and run continuously while its associated air handling units are operating in occupied mode regardless of economizer operation. Once brought to the attention of the respective contractor, the programming was adjusted, and the unit began to operate as designed.

**NATIONAL GUARD READINESS CENTER AT HONESDALE
PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES, HONESDALE, PA**

CONTACT: Craig Zimmerman czimmerman@pa.gov	CX SERVICES: Design Review Installation Inspections Performance Verification Operations Training	GROSS SQUARE FEET: 30,000
CONSTRUCTION COST: \$9.7 Million		COMPLETION DATE: May 2014

The center is the home of Company A, 1st Battalion, 109th Infantry Regiment. It was completed in 1977 and was expanded from 19,668 square to the current 29,534 square feet. The additional 9,866 square footage was designed to house offices, classroom, simulation centers, and miscellaneous multi-purpose spaces

Aramark completed commissioning services with a return on investment of 14 months. During a construction site inspection, it was observed that after the manufacturer’s start-up of the boilers, there was corrosion of the boiler flue ductwork. Upon investigation, it was discovered that the corrosion was due to leakage within the interior flue duct caused by fire gaskets which were not sealed properly. The contractor immediately corrected the issue, and no further corrosion was created.



**TOBYHANNA ARMY DEPOT
PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES, TOBYHANNA, PA**



CONTACT:

Brian Sharlow
201-912-2364,
brian.sharlow@honeywell.com

CONSTRUCTION COST:
\$45 Million

GROSS SQUARE FEET:
2,400,000

CX SERVICES:

Retro-commissioning of
existing HVAC and primary
systems
Review of control systems
replacement slated for
commissioning of new systems

SCHEDULE:

April 2018 – May 2018

Tobyhanna Army Depot is a recognized leader in providing World-Class Logistics Support for command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Systems across the Department of Defense. Tobyhanna's Corporate Philosophy, dedicated workforce and electronics expertise ensure the depot is the Joint C4ISR provider of choice for all branches of the Armed Forces and our industry partners. Tobyhanna's unparalleled capabilities include full-spectrum logistics support for sustainment, overhaul and repair, fabrication and manufacturing, engineering design and development, systems integration, Post Production Software Support, technology insertion, modification, Foreign Military Sales and Global Field support to our Joint Warfighters.

COMMISSIONING SUCCESS: As part of a Honeywell performance contract, Aramark was contracted to retro commission all existing air handlers, chilled water systems, and hot water systems that were scheduled for replacement and control system upgrades throughout the facility. This included over 64 roof top and air handling units throughout the campus. The intent of this effort was three fold including:

- Establishing a baseline of the existing unit performance and capabilities to verify that replacement units and control systems meet or exceed the performance of the replaced/upgraded units
- Developing a sequence of operations of all of the existing equipment to ensure that the new control systems match the existing control schemes
- Developing a deficiency list of all components that were not operational that were slated for reuse in the controls upgrade

Aramark also subcontracted a testing and balancing agency to provide a certified air balance report of all supply airflows of the existing units. This was to verify that the new units provide at least the same airflow.

The greatest challenge to this project was the timeframe of the effort. Honeywell contacted Aramark in March, 2018 and only contracted with us in early April, 2018. The effort had to be completed prior to mid-May of 2018 leaving only a month of time to complete the project. Aramark dispatched two teams of two commissioning agents and a team of two certified balancers that spent close to a month onsite completing the effort. In addition to the timeframe, the logistics of site access, locations of the units (spread out over 2.4M GSF) and the weather in the Poconos (several feet of rooftop snow) made completing this task monumental. Only Aramark had the expertise and manpower to get this completed in the timeframe necessary.

B. PROJECT UNDERSTANDING AND APPROACH

PROJECT UNDERSTANDING

Aramark understands that the Department of General Services wishes to renovate the Plymouth Meeting Readiness Center and Plymouth Meeting Annex and Building 350 at the Biddle Air Guard Base in Horsham, PA. This project consists of three existing buildings to be renovated on two separate campuses approximately 12 miles apart: Plymouth Meeting Readiness Center (PMRC) and Plymouth Meeting Annex (PMA) at 1046 Belvoir Road Plymouth Meeting, PA 19428, and Building 350 on Langley Street at the Biddle Air Guard Base in Horsham, PA 19090. The project has been in development since 2019, with design and permitted documents completed in August 2022. The contracts are still pending final award for CG, HVAC, Plumbing, and Electrical, anticipated for February – March 2023, with anticipated Construction start in May 2023. We have experience coordinating with DGS and Prime contractors on change order development to incorporate commissioning in the construction phase.



PROJECT APPROACH

It is evident that in order to truly assist in the short- and long-term success of this project, our commissioning plan requires a unique and varied blend of technical, operational, and engineering expertise. The challenges involved in the construction of this project focus around:

1. Project schedule
2. Complex building systems
3. Increased integration of systems and components
4. MEP technical expertise
5. Project turnover and operations expectations

We are familiar with these significant challenges through our extensive commissioning, operations backgrounds, and experience with capital and operation teams. Our focus is to “bridge the gap” between the construction teams, design teams, project management, and operations groups. Our solution to these challenges is to develop and integrate a unique commissioning program that will provide collaboration between teams, verify that the design intent (installation and performance) is met, establish parameters for acceptance of the construction/end users, and integrate turnover/operations smoothly and effectively.

A summary of the solutions are outlined in the following bullets.

- Creating partnerships and leading collaboration within the project and construction teams
- Providing “on-site” representation to focus and coordinate the commissioning efforts
- Coordinating and integrating teams of professionals in supporting corrective actions
- Establishing parameters and testing requirements for system acceptance as opposed to component acceptance
- Exercising the systems throughout operating ranges, safety, and emergency conditions

Aramark will develop a program specifically geared towards the Plymouth Meeting / Horsham Readiness Centers project. Aramark will work directly for the PADGS and provide an unbiased, objective view of the systems installation, operation, and performance. As part of the owner’s building systems commissioning

process, Aramark will cooperate with and coordinate all commissioning activities with the project manager, design professionals, construction manager, and contractors. This process is not to take away or reduce the responsibility of the design team or installing contractors, but to provide a finished and fully operational product in accordance with design intent.

Our scope of services consists of the following focused efforts:

PROFESSIONAL COMMISSIONING SERVICES – PHASE APPROACH

DESIGN REVIEW PHASE

With permitted documents completed in August 2022 and contracts pending final award anticipated for February – March 2023, design phase tasks are limited to compiling documentation as noted. Since Commissioning was not part of the Design Phase, this project will require a Change Order to incorporate the Commissioning Agent into the Construction phase. The commissioning team leader will develop, organize, implement, observe, document, and lead the commissioning effort in a manner that furthers the success of the project. This effort will not only minimize the impact on project schedule, but also promote efficient system startup and turnover. A summary of activities in this phase consists of:

- A. **Owner's Project Requirements (OPR)** – Review of established OPR to develop the commissioning plan to ensure system optimization and satisfy project goals regarding:
 1. Measurable performance criteria
 2. Cost considerations
 3. Benchmarks,
 4. Success criteria
 5. Supporting information
 6. Provide a retrospective OPR document for review with Client Agency and Design Prescriptions of the following:
 - a) energy efficiency goals
 - b) indoor environmental quality requirements
 - c) equipment/system quality, reliability, and maintenance requirements
 - d) facility operation and maintenance requirements including requisite personnel training and orientation.
- B. **Commissioning Plan (Cx Plan)** – Provide written document that outlines the overall process, organization, responsibilities, schedule, allocation of resources, and documentation requirements of the Commissioning Process to verify and document that the design, construction, and operation of the facility meet the Owner's Project Requirements (OPR).
- C. **Commissioning Specifications** – Provide Commissioning Specifications for all systems/assemblies being commissioned for inclusion within the Project Construction Documents.
- D. **Change Order** – Assist DGS in development and evaluation of Construction Change Order instructing the prime contractors to coordinate efforts with the Commissioning Agent throughout the Construction Phase.

CONSTRUCTION PHASE

A pivotal aspect of our commissioning program is enabling team reviews and inspections of the systems in their area of expertise (i.e., mechanical, electrical, and plumbing). Deficiencies and outstanding issues are documented in the commissioning database. The intent of the database is to generate a comprehensive list for the project manager to distribute to the design and construction teams for response and action. Subsequent to each focused inspection, a progress report will be issued detailing the deficiencies, resolution actions, and status of each item. We will maintain a current status for each item on Aramark Engineering Solutions

the deficiency list as well as document the resolution actions in the final report. The commissioning team leader will act as the point person and bring up issues to the construction and design teams. The focus of the construction installation phase will include the following:

- a. **Submittal Review** - Identify and review Contractor (CxA firm) submittals applicable to systems/assemblies being commissioned. Identify issues that might result in rework or change orders. Verify the following: a) conformance with Owner's Project Requirements (OPR) and Basis of Design (BoD), b) achievement of operations and maintenance requirements, c) enablement of performance testing. All submittal reviews and correspondence must take place in eBuilder.
- b. **Job Construction Meetings** - CxA shall attend regular job construction meetings as necessary to ensure the systems are properly installed, operated, and tested, and are functioning correctly to meet the design intent.
- c. **Commissioning Meetings** - CxA shall hold regularly scheduled jobsite Commissioning Meetings with all project stakeholders to review important aspects of equipment, HVAC system, and Controls System installation. Review and document necessary installation details, system testing procedures, and documentation requirements. Keep meeting minutes and include in the Cx Report.
- d. **Construction Observation and Testing** - Verify that the performance of the systems/assemblies being commissioned, as installed, meet the Owner's Project Requirements (OPR), Sustainability Criteria, Basis of Design (BoD), and Contract Documents. Furnish test procedures and checklists prior to equipment installation. Produce a Pre-functional test procedure for each test. Test procedures shall list the entities responsible for executing each test. Provide installation inspections. Direct, witness, and document tests. Evaluate test results and verify that installed systems/assemblies meet the criteria for the Project.
- e. **Issues and Resolution Log** - Develop Issues Log containing open and continuing items, status, and name of person/organization responsible for resolution.
- f. **Systems Manual** - During the design and construction of the Project, the design and construction documents should be assembled into the systems manual. This assembly of documents provides the details and history of the design and construction of the building and information needed to properly operate the building. The systems manual includes the Project final OPR, BOD, construction record documents, submittals, completed startup, verification checklists, functional and performance checklists, verified sequence of operation, facility guide, training records, and commissioning report. The systems manual should be used in the initial and subsequent training of the building operations staff and occupants. The systems manual should be updated throughout the life of the building.
- g. **Pre-Functional and Functional Performance Testing** - Confirm (but not necessarily witness) manufacturer's startup of individual equipment components (Pre-Functional Performance Testing). Write, direct completion of, witness, and document full Functional Performance Testing of each system and system component. Confirm proper operation of all control sequences for each season operation. Document in Cx Report.
- h. **Training Plans and Records** - Review, pre-approve, and verify training of the Client Agency personnel by the Contractor (CxA firm), to operate and maintain systems/assemblies being commissioned. Include training plan, training materials, and records in final Systems Manual.
- i. **End of Warranty Cx Report** - Provide post-occupancy operation commissioning, including incomplete, delayed, and seasonal testing, as well as warranty issues. Post-occupancy operations shall begin at Substantial Completion and shall continue through to the end of the warranty period.
- j. **Preliminary and Final Cx Report** - A preliminary commissioning report should be prepared that shows the commissioning progress and equipment performance to date at the time the Certificate of Occupancy is issued. At the completion of the project the final commissioning report should be assembled and provided to the owner and others as required by the OPR and local jurisdiction

requirements. This report includes the final commissioning plan, copy of design and submittal review reports, all startup, inspection, verification, functional and performance test forms and reports, the verified sequence of operation, the final Issues and Resolutions log, and summary of the performance of commissioned systems.

SYSTEMS TO BE COMMISSIONED

Plymouth Meeting Readiness Center

- Emergency Generator and Automatic Transfer Switch
- Make up Air Heater
- Energy Recovery Ventilator
- Makeup Air Unit Schedule AHU-3-1
- HVAC controls

Plymouth Meeting Annex

- Energy Recovery Ventilator
- Air Handling Units
- HVAC controls

Horsham Air Guard Building 350

- Energy Recovery Ventilator
- Air Handling Units
- HVAC controls

C. GEOGRAPHIC LOCATION

Sean McCarty is located in Harleysville, PA which is only 19 miles from Plymouth Meeting and 16 miles from Horsham. Travel time will not be required for reimbursement as travel will be performed on the employee's time. Most of the other supporting team members are located within 20 miles of the sites.

D. PROJECT WORK PLAN

I. Schedule of Milestones

DESIGN REVIEW PHASE - PERMITTED COMPLETE, CONTRACTORS AWARDS PENDING BY MARCH 2023

- Review Owner's Project Requirements (OPR); provide retrospective OPR
- Develop and provide the Cx Plan
- Develop and provide Cx specs for all systems/assemblies being commissioned.
- Assist with Change Order process for Cx

CONSTRUCTION PHASE - MAY 2023 THROUGH NOVEMBER 2024

- Perform submittals review
- Conduct Cx kick-off meeting with contractors
- Attend construction meetings as needed
- Hold regular commissioning meetings
- Develop pre-functional test forms and provide to contractors
- Conduct construction observation and testing

- Develop and maintain issues and resolution log
- Witness start-up of Cx systems
- Perform functional performance testing of Cx systems
- Conduct Cx meetings as needed
- Develop and deliver Systems Manual
- Review, pre-approve and verify training of personnel
- Develop Preliminary Cx Report

ACCEPTANCE PHASE - DECEMBER 2024 THROUGH OCTOBER 2025

- Develop End of Warranty Cx report
- Develop Final Cx report

II. **Indicate all resources need to complete the assignment including staff assignments, consultants, and reimbursements.**

Aramark will perform all commissioning activities with its own personnel. Staff assignments are indicated in the organizational chart. Reimbursements will be submitted for mileage only which is detailed in Section C above.

III. **Note inefficiencies or risks to successful implementation, and any planning efforts to mitigate issues such as travel distance, schedule conflicts and required coordination.**

Aramark has no scheduling conflicts associated with performing the commissioning requirements of this project.

IV. **Indicate the anticipated number of hours required for completion of the work described in the Scope of Work (Attachment A).**

Design Phase: 20
 Construction Phase: 260



E. PROJECT PERSONNEL AND QUALIFICATIONS

All of Aramark’s engagements rely on our experienced professional staff to function as the catalyst for the success of the overall program. Our staffing strategy for managing this relationship expertly and efficiently is straightforward:

- Provide PADGS with a qualified commissioning agent to lead the overall program and serve as the primary contact person.
- Support PADGS with a core technical team comprised of individuals with the requisite technical experience and skill sets.
- Provide experienced “quality assurance” resources to verify that the highest level of quality services is provided.



The success of our approach has always been the quality and consistency of our senior leadership as well as the professionals that comprise the core technical team. The organizational chart illustrates the proposed team for this engagement. Biographies including experience with similar projects as well as overall expertise are included on the next pages.

Although the proposed staff will have primary responsibility for the proposed engagement, any of the more than 100 technical professionals within the Engineering Solutions group will be made available to PADGS if their skills, expertise, and/or availability will add incremental value to this engagement.

Aramark’s Engineering Solutions group consists of more than 100 technical professionals including: Professional Engineers (PE) Certified Commissioning Professionals (CCP), LEED Accredited Professionals (LEED AP) and other technical designations. We verify that each facility’s operating, maintenance, and program support requirements are met during construction and renovation.

- | | |
|---|---|
| (19) Professional Engineers (PE) | (12) LEED Accredited Professionals (LEED AP) |
| (19) Certified Energy Managers (CEM) | (4) LEED Green Associates |
| (2) Commissioning Process Management Professionals (CPMP) | (2) Registered Architects/NCARB |
| (4) Certified Measurement Verification Professionals (CMVP) | (3) Certified Building Commissioning Professionals (CBCP) |

**SEAN MCCARTY, M.S.M.E.,
E.B.C.P., LEED AP BD+C**

Cx Manager

- 7.0 Million GSF Commissioned
- 35 Projects
- University of Alabama Master of Science Mechanical Engineering
- University of Alabama Bachelor of Science Mechanical Engineering

CHRIS SKALSKI, P.E., LEED AP, C.P.M.P.

Cx Senior Manager

- 8.0 Million GSF Commissioned
- 60 Commissioning Projects (Project Manager)
- 20 Commissioning Projects (Cx Agent)
- University of Pennsylvania Bachelor of Science Mechanical Engineering
- Bloomsburg University Bachelor of Arts Physics

MATTHEW CAMPISE

Associate Director

- 30 Million GSF Commissioned
- 70 Commissioning Projects (Project Manager)
- Washington and Jefferson College Bachelor of Arts Chemistry

Mr. McCarty has 14 years of energy management and building commissioning experience. Currently working in the North Atlantic region as a Project Manager, he has been involved in all aspects of commissioning from new building commissioning MEP design review to retro-commissioning energy analysis. As a preferred project manager for some of our top clientele, he is capable of providing the services needed to present a result that exceeds expectations.

Sean is slated as the Project Manager for this project. His primary responsibility as project manager is to ensure that all of the commissioning tasks as described within this response are completed. Sean will lead the design team as well as provide mechanical input.

Mr. Skalski is a Professional Engineer and LEED Accredited Professional with 18 years of experience as a building commissioning agent, including extensive experience in HVAC and plumbing systems design, building automation, and DDC systems.

On behalf of Aramark, Mr. Skalski is the commissioning team leader for several of Aramark's higher education clients. His responsibilities include engineering design reviews, installation quality assurance, pre-functional/performance testing, initiation of corrective actions, and operator training.

Chris is proposed in a support role and will create the functional test forms, perform mechanical static inspections, and assist with functional testing of the mechanical systems.

Mr. Campise possesses more than 31 years of experience in building automation controls and commissioning and has been with Aramark for 14 years. Mr. Campise is the Director of Commissioning and oversees the commissioning program. He has been with Aramark for nearly 19 years.

Matt serves as the Relationship Manager to our larger clients within the state including Penn State University, University of Pennsylvania, UPMC, and Allegheny Health Network. He also serves directly as project manager for several projects at Penn State Health and has completed commissioning for over 10 projects for this client in the past four years.

Matt will be primarily responsible for quality control as well as major issue resolution on this project.

DAVID BACCO, E.I.T.

Cx Manager

- 5.3 Million GSF Commissioned
- 250 Commissioning Projects (Electrical Lead)
- University of Pittsburgh Bachelor of Science Electrical Engineering

Mr. Bacco possesses more than 27 years of electrical building design, project management, evaluations, and engineering experience. Currently, Dave supports all electrical commissioning programs throughout the region and has performed the same duties on all of the reference projects listed within this proposal. Many of the issues he presents in design review comments and static inspections are of the highest return on investments for our clients.

Dave is proposed in a support role for the project. He will conduct design reviews of electrical systems, design the pre-functional and functional test forms for electrical systems, conduct electrical static inspections, and perform the electrical systems functional testing. Dave will also witness the emergency generator and automatic transfer switch testing.

ALLISON BAILEY, P.E.

Cx Senior Manager

- 10 Million GSF Commissioned
- 55 Commissioning Projects (Project Manager)
- Ohio State University Bachelor of Science Mechanical Engineering
- Professional Engineer (KY, OH, and WV)

Ms. Bailey possesses more than 24 years of experience in HVAC design, DDC control programming, HVAC system troubleshooting, project management, and project coordination.

Currently, Allison supports commissioning programs throughout the region and is involved in all design reviews as the design lead and mechanical systems reviewer. She is also project manager for several projects at Baylor University and has recently completed, as project manager, our largest commissioning project at the South Halls Residence Facilities for Ohio State University.

Allison is proposed in a support role and will lead the design review team, provide design reviews of HVAC systems, review mechanical submittals, and design the pre-functional test forms for HVAC systems.

MACKENZIE AILES

Cx Manager

- 1.8 Million GSF Commissioned
- 37 Commissioning Projects
- Penn State University Bachelor of Science Mechanical Engineering

Mr. Ailes is a Commissioning Manager, providing building commissioning services to various projects and clients in the Northeast Region.

Current projects include the DGS Kutztown University DeFrancesco Education Building Renovation, Penn State University Hazleton Campus Library Renewal, several projects on the campus of University of Pennsylvania, and projects with the Allegheny Health Network.

Mackenzie is proposed in a support role for the project and will conduct static inspections and perform functional testing for mechanical systems.

REILLY FINEGAN

Cx Manager

- 6 Commissioning Projects
- Drexel University Bachelor of Science Mechanical Engineering Concentrations in Aerospace and Energy

Ms. Finegan is a mechanical engineer and a Commissioning Manager for Aramark Engineering Solutions where she provides building commissioning services to various projects and clients in the Northeast Region. Currently, she is providing support at the University of Pennsylvania on multiple projects and Nemours Children’s Hospital.

Reilly is proposed in a support role for the project and will assist with functional testing for mechanical systems.

