

Consolidated School District and The City of New Britain

Invitation to Submit Request for Qualifications /Proposal Building Systems Commissioning Services

For Proposed Addition, Renovate-as-New and Site Improvements to:

Holmes Elementary School
2150 Stanley Street, New Britain, CT 06053



MANDATORY PRE-PROPOSAL MEETING

September 26, 2023 at 10am
250 John Downey Dr. New Britain, CT 06052

SUBMISSION OF DOCUMENTS DUE

October 3, 2023 at 10am
250 John Downey Dr., New Britain, CT 06053
Please submit your documents in a sealed envelope labeled "Holmes Commissioning."

Questions:

Please email Smedley@cstdnb.org or Call 860-827-2217

BUILDING SYSTEMS COMMISSIONING RFP

Chamberlain School Additions, Renovate as New, and Site Improvements

Commissioning Services

The objective of commissioning is to provide documented confirmation that a facility fulfills the functional and performance requirements of the building owner, occupants, and operators. To reach this goal, it is necessary for the commissioning process to establish and document the owner's criteria for system function, performance, and maintainability; as well as, to verify and document compliance with these criteria throughout design, construction, start-up, and the initial period of operation.

Project Team/Update

The architect for this project is Kaestle Boos Associates of New Britain, Construction Manager is Newfield Construction of Hartford. Kaestle Boos Associates is using RZ Design Associates, Inc. of Rocky Hill for MEP design. Schematic design expected completion by September 30, 2023. The design team is in the DD phase. See the project schedule below.

Project Description

This project involves the renovations and additions to Holmes Elementary School, 2150 Stanley Street, New Britain, CT. This is a "Renovate as New" project as defined by the Office of School Construction and Grant Review.

Holmes Elementary School is located at 2150 Stanley St., New Britain, CT. The school when completed will have art and music rooms, gymnasium, cafeteria, multiple Kindergarten through fifth grade class rooms and ancillary spaces. When completed, existing space (65,900 sq ft) will be renovated and 18,340 Square feet will be added. The building total Square footage when completed will be 84,240 Square feet. Site work will include new driveways, parking areas storm water detention systems, fields and playgrounds.

The construction start and completion is anticipated as follows:

Schematic Design Phase	To be completed Sept. 30, 2023
Design Development Phase	To be completed December 2023
Construction Document Phase	To be completed April 2024
Approvals and Permitting	June 2024
Scope Reviews & Bid Award	August 2024
Start Construction	September 1, 2024
End Construction	20 Months (Substantial Completion)
Final Completion	August 2026

Qualifications

The Owner requires the following qualifications for the firm designated as the Commissioning Agent:

- He/she has acted as the Commissioning Agent for at least five (5) projects of over 90,000 square feet.
- He/she has a minimum of five (5) full years in this type of work.
- He/she can provide at least five (5) recommendations from completed commissioning projects.
- He/she has been certified (CCP) through the Building Commissioning Association.

The required expertise for this project will be based on the skill and experience of the full team making the proposal. A member of the prime firm will be the designated Commissioning Provider who is a member of the team that will coordinate the commissioning activities from the technical perspective. This member may not necessarily be the team's overall project or contract manager. The Commissioning Provider must have significant in-building commissioning experience, including technical and management expertise on projects of similar scope.

Selection Criteria

Because of the complexity and coordination requirements of this project, The Consolidated School District will select the Commissioning Service firm based on their ability and experience with similar projects. The selection will not be based solely on cost. The Consolidated School District of New Britain expressly reserves the right to select the firm that best qualifies for the project in the best interests of the project and school district.

Scope of Work

The Commissioning process shall be based on and follow ASHRAE Guideline 0-2005. The CxA (Commissioning Agent) is required to provide services during the design phase, the construction phase, the acceptance phase, and the post-occupancy phase, as required by the State of Connecticut Standard for High Performance Buildings.

An additional purpose of the commissioning process is to provide the Owner with assurance that the mechanical, electrical, plumbing, fire protection, controls, and other systems have been installed according to the contract documents and operate within the performance guidelines set out in the documents.

I. Perform a Review of the Construction Documents.

- A. The CxA shall review the Construction Documents.
- B. The CxA shall provide the design team (the architect of record and all its subconsultants), the Owner with review comments at each of the reviews. These comments will primarily be in regard to how well the proposed systems lend themselves to being user friendly, easily operated and maintained, and economical to operate.
- C. The CxA shall provide written comments and, as required, provide on-site discussion with the design team, the Owner, and Construction Administrator to review its comments.
- D. The CxA shall provide the above written comments within 45 days after receipt of written notification to proceed from the Construction Administrator.

II. Commissioning Plan

- A. The CxA shall prepare a detailed construction phase, acceptance phase, and post-occupancy phase commissioning plan for this project. The plan will be an informational document and will include, but not be limited to, the following:
 1. Outline the commissioning responsibilities of the CxA, the Owner, Construction Administrator, design team, and general contractor (the "Contractor").
 2. The plan will identify what systems are to be commissioned.
 3. The plan will provide an overview of the method of verification and documentation that will be used during the commissioning process.
 4. The plan will contain preliminary schedules for the commissioning of systems.
- B. The plan will be reviewed with Owner, Construction Manager, and the design team. As required, the plan will be modified and approved by the aforementioned parties. Upon approval, the CxA will issue the final plan.
- C. The CxA shall issue four (4) copies of the final commissioning plan within 14 days following the written approval of the above parties.

III. Review Mechanical and Electrical Contractors' Submittals

- A. The CxA shall provide a review of the mechanical and electrical submittals and shop drawings provided by the Contractors.
- B. This review will be done to determine adherence to the design intent and to familiarize the CxA with the specific equipment that the Contractor will be installing on the project. This will allow the CxA to tailor its pre-functional test check-off sheets and functional test procedures to the specific pieces of equipment.
- C. Any discrepancies with the design documents that the CxA finds will be brought to the attention of the design team, the Owner and Construction Manager. The resolution of these problems will be the responsibility of the Owner and the design team, with input provided by the CxA.

IV. Review of Controls Software

- A. The CxA shall review the controls contractor's shop drawings, sequence of operations, and control logic. The review will familiarize the CxA with the control logic and specific types of instruments that the contractor will use to meet the design criteria.
- B. The CxA shall also review the lines of software code that the contractor is intending to use in the Direct Digital Control (DDC) system.
- C. The CxA shall also confirm the integration of the DDC system with other systems. (i.e. Fire alarm, security, etc.)

V. Develop Contractor Commissioning Log Books, Including Pre-functional Test Check-off Sheets and Verification of Completion Forms

- A. After a review of the Contractor submittals and control software, the CxA shall develop pre-functional test check-off sheets and Verification of Completion forms for all equipment to be commissioned.
- B. These forms will be provided to the Contractor in the form of commissioning log books for their further distribution to the appropriate subcontractors. The forms will be utilized by the subcontractors in documenting the completion of the installation.
- C. The Contractor shall verify the accuracy and completeness of the subcontractors' documentation and notify the CxA that systems are prepared for testing, balancing, and functional testing.

VI. On-site Construction Observation and Construction Meeting Attendance

- A. The CxA shall attend all commissioning meetings and attend periodic Owner, Construction Administrator, Agency, design team, Contractor meetings.
- B. The CxA shall provide on-site construction observation visits during the construction phase of the project.
- C. The frequency of the site visits shall be based on the stage of construction. As a minimum, they shall be on a monthly basis and, as the project moves closer to completion, may become weekly or daily as the commissioning testing gets underway.
- D. The purpose of the visits will primarily be to acquaint the CxA with the progress of the construction, and become familiar with the systems that the CxA will be testing and commissioning. Any discrepancies the CxA might observe with regard to the actual construction and the design documents will be brought to the immediate attention of The Owner, the Construction Administrator, the design team, and the Contractor.
- E. The site visits will be scheduled in order that the CxA can witness an adequate amount of heating, ventilation, and air conditioning (HVAC) piping testing and flushing to ensure that the Contractor is following proper procedures. The CxA shall also witness an adequate amount of duct pressure testing and cleaning to ensure that the Contractor is following proper procedures.
- F. The on-site visits will also allow the CxA to more accurately schedule the commissioning process so that it can easily interface with the completion of the construction.
- G. Each site visit shall be documented with a written report that will be distributed to THE OWNER, the Construction Administrator, the design team, and the Contractor. The report will include a discrepancy/recommendation log, which will be updated after each site visit.

VII. Development of Functional Test Procedures

- A. Based on the information obtained from its review of design criteria and construction documentation, the CxA shall develop functional test procedures for those systems to be commissioned.
- B. These functional test procedures shall provide a detailed procedure of how the system shall be tested and a record sheet for recording the test results.

- C. The test procedures shall be as explicit and exact as possible to ensure that the test can be easily repeated by more than one tester and the same results obtained.
- D. The CxA shall review the test procedures with the Owner, the Construction Administrator, the design team, and the Contractor. If required, the test procedures will be modified and then approved by the aforementioned parties.
- E. The CxA shall issue the final functional test procedures to the Owner agency, the design team, and the general contractor.
- F. Functional test procedures shall be provided for all systems including, but not limited to, the following systems. Failure to include an item in this list shall not alleviate the CxA's obligation to test all systems included in the building, assumed to require testing under commissioning systems criteria established throughout the design of the project.
 - All air handling units and their associated heating and cooling coils, etc.
 - All exhaust fans
 - All return fans
 - All variable air volume (VAV) terminal units and associated reheat coils
 - Boiler, boiler combustion air fan, and all associated pumps, tanks, condensate pumps, etc.
 - Hot water heating system
 - Computer room air conditioning units and associated split system condensers
 - All unit heaters, cabinet heaters, etc.
 - Building automation system
 - Direct Digital Controls and system interlocks
 - Fire protection systems and equipment; fire alarm system interfaces with HVAC systems
 - Security Systems
 - Telecommunications Systems
 - Emergency Generator
 - Photovoltaic System

VIII. Develop Commissioning Schedule

- A. The CxA shall develop a commissioning schedule for all required systems of the project.
- B. The schedule will be developed through a review and coordination with the construction completion schedule. It will include Contractor and manufacturer start-up tests of major equipment.
- C. The schedule will be submitted to the Owner, the CA, the design team, and the Contractor for their review and approval.
- D. Upon approval of the schedule, the CxA shall monitor and update it on a periodic basis.
- E. Coordinate the Commissioning Schedule with the balancing.

IX. Preparation for and Review of Testing, Adjusting, and Balancing (TAB) of the Project's HVAC Systems

- A. Prior to the balancing contractor starting its work, the CxA shall review the duct installation for readiness and verify that the functionality of the systems' controls is at a state that the balancing can commence.
- B. The CxA shall review the completed balance report and independently spot check balancing readings to verify compliance with the submitted report.
- C. Any discrepancies identified during the CxA's review will be brought to the attention of the Owner, the design team, and the Contractor for their review. As required, the CxA shall facilitate discussions with the Owner, Agency, the Construction Administrator, the design team, and the Contractor to resolve any discrepancies identified during its review.
- D. A copy of the final balancing report will be included in the final commissioning report.

- E. Any smoke control testing by other agencies having authority will be witnessed and documented by the CxA.
- F. Coordinate and witness start-up of hydronic systems to verify cleaning, flushing and chemical treatment have been completed prior to the start of water balancing.

X. Perform Functional Test Procedures and Document Results

- A. The CxA shall commission those systems as outlined in the commissioning plan through the performance of the functional test procedures.
- B. Testing will be scheduled based on the commissioning schedule, the completion of the work, and the system testing and balancing. The CxA reviews the test results/reports, including, but not limited to, the efficiency test reports for heating, hot water systems, and cooling systems.
- C. During the testing, a weekly report of progress and results will be provided to the Owner, the Construction Administrator, the design team, and the Contractor. Additionally, a running discrepancy/recommendation log will be provided and updated weekly. The CxA shall retest after corrections have been made and track all corrections.
- D. As required, if systems do not comply with the testing standards the CxA shall provide recommended solutions to be reviewed by the Owner, the CA, the design team, and the Contractor. The CxA shall facilitate discussions with this group in order for a workable solution to be obtained.
- E. All test results will be documented for inclusion in the final commissioning report.
- F. Any testing requiring seasonal peak testing will be performed in the peak season.

XI. Review Contractor's Operation and Maintenance (O&M) Manuals, Warranties, and As-built Documentation

- A. Upon receipt of the O&M manuals from the Contractor via the design team, the CxA shall review the manuals for, but not limited to, completeness, accuracy, and for compliance with the construction contract. The CxA shall provide comments to the Contractor and to the Owner within 15 days following receipt of the O & M manuals.
- B. The CxA shall verify completeness from an operational point of view and include commissioning information.
- C. On an ongoing basis during construction and at the completion of the project, the CxA shall observe that the construction documents are being properly updated by the Contractor and the design team in order to provide accurate as-built documentation.
- D. The CxA shall review all HVAC system and electrical equipment warranties to verify that client agency's responsibilities are clearly defined.

XII. Provide Operation Staff Training

- A. The CxA shall coordinate the training of the maintenance personnel in a review of the following:
 - 1. System configuration
 - 2. Control sequences
 - 3. Special systems
 - 4. Safety
- C. The training will be conducted after the O&M manuals have been distributed to the maintenance personnel.
- D. The CxA shall coordinate/supervise with the Construction Administrator and Contractor to ensure that all training specified in the project construction documents is properly carried out by the Contractor.

XIII. Provide the following Building Envelope Services

- A. The CxA shall review the Construction Documents with focuses on roof, windows, doors (including weather striping) and exterior wall materials and "R" rating.
- B. The CxA shall provide the design team (the architect of record and all its subconsultants), the Owner with review comments at each of the reviews for SD, DD and CD. These comments will primarily be in regard to how well the proposed systems lend themselves to being user friendly, easily operated and maintained, and economical to operate.
- C. The CxA shall provide written comments and, as required, provide on-site discussion with the design team, the Owner, and Construction Administrator to review its comments.
- D. The CxA shall provide the above written comments within 45 days after receipt of written notification to proceed from the Construction Administrator.
- E. The CxA shall witness water tests on 10% of installed windows. The actual tests are the responsibility of the installing contractor. Include up to four (4) site visits to witness the water testing.
- F. The CxA shall perform four (4) site visits to review the building envelope installation.

XIV. Final Commissioning Report

- A. The CxA shall provide a final commissioning report. This report will include the following:
 - 1. Summary of commissioning process.
 - 2. A final review of how well the systems meet the design intent, including any noted discrepancies and any recommendations for modifications.
 - 3. All functional test procedures and their final record sheets.
 - 4. Final discrepancy/recommendation log listing final status of each item.
 - 5. Final TAB report.
- B. The CxA shall submit four (4) copies of the final commissioning report within 60 days after completion of the services itemized in subsections I through XIII above.

XV. Warranty Period Review

- A. As required, during the warranty period the CxA shall retest any systems that had their testing deferred during the initial functional testing and shall provide any seasonal testing that had been deferred due to the lack of peak season conditions. This testing will ensure that all system sequences of operations have been verified.
- B. The CxA shall provide a site visit at the 10-month interval of the project warranty.
- C. The CxA shall review with the operations staff of the client agency how well the commissioned systems have been performing and identify any problems that may require review or correction.
- D. The CxA shall provide a written report outlining the findings of its warranty reviews and recommendations with regard to any corrective action that may be required.
- E. The CxA shall complete the warranty period review and submit four (4) copies of the written report within 12 months after completing the final commissioning report.

MANDATORY PRE-PROPOSAL MEETING

September 26, 2023 at 10am
250 John Downey Dr.
New Britain, CT 06052

SUBMISSION OF DOCUMENTS

Tuesday October 3, 2023 by 10am
250 John Downey Dr.
New Britain, CT 06052

Fee Schedule

**Holmes Elementary School
Building Systems Commissioning Services**

The undersigned agrees to provide Building Systems Commissioning Services as detailed in the specifications above for the lump sum cost below.

Fee for Services	
Building Systems Commissioning total cost (Lump Sum):	\$

Legal Company Name:	
Address of Company:	
Phone Number:	
Email:	
Printed Name of Authorized Person signing for the company:	
Title:	

The requests for payment shall be submitted on properly prepared invoice forms with attachments from the sub-consultant. The Contractor shall certify that the amount invoiced is both accurate and commensurate with the work performed for the Owner under this contract. The Owner reserves the right to audit the Contractor's records at any reasonable time.

Authorized Signature

Date

Appendix #1

Building Envelope Services:

The commissioning agent shall perform the following "building envelope services:"

1. The CxA shall review the Construction Documents with focuses on roof, windows, doors (including weather striping) and exterior wall materials and "R" rating.
2. The CxA shall provide the design team (the architect of record and all its subconsultants), the Owner with review comments at each of the reviews for SD, DD and CD. These comments will primarily be in regard to how well the proposed systems lend themselves to being user friendly, easily operated and maintained, and economical to operate.
3. The CxA shall provide written comments and, as required, provide on-site discussion with the design team, the Owner, and Construction Administrator to review its comments.
4. The CxA shall provide the above written comments within 45 days after receipt of written notification to proceed from the Construction Administrator.
5. The CxA shall witness water tests on 10% of installed windows. The actual tests are the responsibility of the installing contractor. Include up to four (4) site visits to witness the water testing.
6. The CxA shall perform four (4) site visits to review the building envelope installation.