

Bullitt County Public Schools

1040 Highway 44 East
Shepherdsville, Kentucky 40165

502-869-8000
Fax: 502-543-3608
www.bullittschools.org

MEMO

TO: Jesse Bacon, Superintendent *JB*

FROM: Bret Highley

DATE: November 11, 2020

RE: Commissioning Services New 800-Student Elementary School BG# 20-142

At this time, I am asking the Board to accept the Commissioning Services proposal from CMTA in the amount of \$64,250.00. Although CMTA does not have the lowest price, their fee falls below the estimated amount included on the Revised BG-1. In addition, they are providing services beyond the basic code requirements which include a seven-day trending analysis, scheduling assistance, energy usage analysis.

Three proposals were sent out with only two (2) received by the deadline regarding the Commissioning Services for the New 800 Student Elementary project:

Company	Price
CMTA Commissioning, Inc.	\$64,250.00
ZH Commissioning	\$50,375.00
SSR, Inc.	Nonresponsive

Board Attorney, Eric Farris, has reviewed the agreement as submitted by CMTA. I recommend the Board approve this request. If you have any questions, please call me at 502-921-3659.

Attachments:

- Commissioning Services Recommendation: Cate Ward, Studio Kremer Architects
- CMTA Commissioning agreement ready to sign

Equal Education and Employment Institution

B. Septon

November 10, 2020



Commissioning Services Recommendation

TO: Bullitt County Public Schools
Bret Highley, Construction Manager
1040 Highway 44 East
Shepherdsville, KY 40165

REFERENCE: Commissioning Services for:
New 800-Student Elementary School
New Construction | Mt Washington, Kentucky
BG# 20-142 | **ska#** 2019-50

Dear Mr. Highley:

We are recommending CMTA, Inc. to provide building commissioning services for the New 800-Student Elementary School project. CMTA is providing services beyond basic code requirements which include 7-day trending analysis, scheduling assistance, energy usage analysis, and occupancy phase operational analysis. CMTA achieved the high score of 58 based on the *Commissioning Services Selection Criteria Grading Sheet* (see attached). While ZH Commissioning did submit the lower lump sum fee, they did not score the highest, meet the high performance EUI requirements, and made note in the Terms and Conditions section of their proposal of hourly costs above the lump sum if additional efforts are required. CMTA's fee is inclusive of travel to the site, remote trending analysis, miscellaneous expenses and they do not expect to charge the District for additional hourly services. CMTA provides an added level of service by bringing an engineering approach to issue resolutions - most Cx agents just record issues - which will help to ensure the new facility will meet BCPS's ambitious energy performance goals.

Three (3) proposals were requested from the following companies:

- | | |
|-------------------------------|--------------------------------|
| 1.) CMTA Commissioning, Inc.: | \$64,250 (Lump Sum Fee) |
| 2.) ZH Commissioning | \$50,375 (Lump Sum Fee) |
| 3.) SSR, Inc.: | Nonresponsive |

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

Sincerely,
Studio Kremer Architects

Cate Noble Ward | AIA
Architect

enclosures – (1) Commissioning Services: Selection Criteria Grading Sheet
(2) CMTA Commissioning, Inc. Proposal

studio **kremer** architects

1231 S Shelby St, Louisville, KY 40203

TEL 502.499.1100 FAX 502.499.1101

Commissioning Services: *Selection Criteria Grading Sheet*

New 800-Student Elementary School
New Construction | Mt Washington, Kentucky
BG# 20-142 | ska# 2019-50

SELECTION CRITERIA (CMTA)

Proposers should be mindful that selection of a Commissioning Agent will be based on the following criteria:

Scale (1 – 10)

1. Previous relevant experience: Successful and proven track record of relevant projects of similar size, scope and scale in various markets. It is important that the Commissioning Agent has the past experience working with k12 clients.
[9] – Have done a good amount of k-12 work, including states outside of Kentucky.
2. Qualifications: The individuals leading the commissioning effort shall have the requested certifications and experience mentioned in this proposal.
[8] – Has a large number Professional Engineers (PE) and CxA's.
3. Quality: Quality of service working with and responsiveness to the owner and project team.
[9] – Puts emphasis on trending analysis in occupancy phase of project. Willing to work after hours as schedule allows. Some trending and or site visits due to Covid may require off hours work.
4. Sustainability: Demonstrated ability to commission similar projects incorporating strong principles of sustainability.
[9] – Has commissioned many schools with an EUI of lower than 25 EUI.
5. Competitiveness of fees
[6] – Pricing competitive for services provided.
6. Commissioning Approach/Process
[8] – No issues
7. Energy Performance: Energy performance criteria of previous projects commissioned.
[9] – Has commissioned many schools with an EUI of lower than 25 EUI.

TOTAL SCORE (Best out of 70 total points): **58**

Commissioning Services: *Selection Criteria Grading Sheet*

New 800-Student Elementary School

New Construction | Mt Washington, Kentucky

BG# 20-142 | ska# 2019-50

SELECTION CRITERIA (ZHCx)

Proposers should be mindful that selection of a Commissioning Agent will be based on the following criteria:

Scale (1 – 10)

1. Previous relevant experience: Successful and proven track record of relevant projects of similar size, scope and scale in various markets. It is important that the Commissioning Agent has the past experience working with k12 clients.
[8] – Appears to have done a good amount of k-12 work.
2. Qualifications: The individuals leading the commissioning effort shall have the requested certifications and experience mentioned in this proposal.
[6] – No Professional Engineers (PE) listed on team.
3. Quality: Quality of service working with and responsiveness to the owner and project team.
[6] – Appears to be no mention of trending analysis in occupancy phase of project. Also, excess verbiage of reserving right to additional compensation without identifying limits of work hours/visits being performed. Hours are based on 9am – 5pm. Some trending and or site visits due to Covid may require off hours work.
4. Sustainability: Demonstrated ability to commission similar projects incorporating strong principles of sustainability.
[7] – ZHCx has not commissioned a school with an EUI of lower than 25 EUI.
5. Competitiveness of fees
[9] – Pricing very competitive, however appears to be reduced scope. Also, excess verbiage of reserving right to additional compensation without identifying limits of work hours/visits being performed.
6. Commissioning Approach/Process
[6] – Trending analysis in occupancy phase of project not discussed.
7. Energy Performance: Energy performance criteria of previous projects commissioned.
[7] – ZHCx has not commissioned a school with an EUI of lower than 25 EUI.

TOTAL SCORE (Best out of 70 total points): **49**

Commissioning Services: *Selection Criteria Grading Sheet*

New 800-Student Elementary School
New Construction | Mt Washington, Kentucky
BG# 20-142 | **ska#** 2019-50

SELECTION CRITERIA (SSR, Inc.) - *NONRESPONSIVE*

1. Previous relevant experience: Successful and proven track record of relevant projects of similar size, scope and scale in various markets. It is important that the Commissioning Agent has the past experience working with k12 clients.
2. Qualifications: The individuals leading the commissioning effort shall have the requested certifications and experience mentioned in this proposal.
3. Quality: Quality of service working with and responsiveness to the owner and project team.
4. Sustainability: Demonstrated ability to commission similar projects incorporating strong principles of sustainability.
5. Competitiveness of fees
6. Commissioning Approach/Process
7. Energy Performance: Energy performance criteria of previous projects commissioned.

TOTAL SCORE (Best out of 70 total points):



Bullitt County Public Schools

Bullitt County Public Schools

New 800-Student Elementary School

Mt. Washington, Kentucky

RFP -v1

Commissioning Services



10411 Meeting Street
Prospect, KY 40059

Building Science Leadership | cmta.com



Contents

- A. Transmittal Letter
- B. Executive Summary
- C. Qualifications of Firm
- D. Qualifications of Project-Specific Commissioning Team
- E. Proposed Fee Letter
- F. Original RFP



Building Science Leadership



A. | Transmittal Letter



Building Science Leadership



November 9, 2020

Bullitt County Public Schools
New 800-Student Elementary School
Mt Washington, Kentucky

Attn: Bret Highley, Construction Manager
Bullitt County Schools

RE: Bullitt County Public Schools - Elementary School Commissioning, RFP-v1

Dear Mr. Bret Highley,

CMTA is a nationally recognized expert in high performance k-12 education design and commissioning, having delivered some of the most energy efficient projects in the nation. The ideas we bring to your team will be creative, proven and grounded on data from our years of performance-based success.

We feel CMTA is uniquely qualified to support Bullitt County Public Schools by commissioning the new elementary school project for the following reasons:

- Proven Past Performance – Our team brings over 20 years of commissioning experience and a record of 48 k-12 education projects performing at an EUI of less than 25 Kbtu/SF. While every project is unique, many of the challenges that have been identified on this project are challenges that we have solved on other projects.
- Successful Partnership – CMTA has been a dedicated long-term partner to various Kentucky Public School Systems for over 25 years. We understand District concerns and have a long history of working collaboratively to solve problems and deliver some of the best performing buildings in the state.
- Holistic Approach - Our team of experts will go beyond confirming operation to ensure that this elementary School delivers the high-performance and energy savings that are expected.

Our primary goal is to deliver high-performance buildings to Bullitt County Public Schools that reduces energy consumption and creates real cost savings so that more district resources can be used for students and education rather than operating buildings.

We would be honored to work with your team on this project and hope you will not hesitate to reach out should you have any questions or need any additional information about our approach.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeremy Lewis", is written over a light blue circular stamp.

Jeremy Lewis, PE, LEED AP
Partner
CMTA, Inc.

B. | Executive Summary



CMTA

Building Science Leadership

Executive Summary

CMTA is uniquely qualified and positioned to provide the most successful outcome of Commissioning Services of the new 800-Student Elementary School. We have provided within this proposal the requirements needed for successful commissioning and the differentiators which will raise the bar and provide Bullitt County Schools with the successful High-Performance Operation of your facility:

- Our Independent Expert Commissioning Team - First and foremost, Bullitt County has elected to proceed with High Performance Design for the facility. Our team of independent, licensed and experienced commissioning agents are experts in commissioning High Performance Designs.
- Our Holistic Approach to Commissioning is key for successful complex systems.
- Our Team Member method creates a better environment to better accomplish Bullitt County's goals.
- Our Expert Understanding of Building Automation Systems is crucial to optimized performance.
- CMTA has been in business for 52 years and with our location in Louisville we are local to the campus.

Our Independent Commissioning Team

As engineers who design systems, we know how they should operate. Our licensed professional engineers bring years of design experience and an engineer's point of view to each commissioning project. CMTA has a large group of Commissioning Agents with 18 Certified CxA's through the AABC Commissioning Group (ACG) and a Qualified Commissioning Process Provider as certified by the University of Wisconsin-Madison. Over the past 15 years, the firm has commissioned projects for a wide variety of clients in the K-12 and higher education, municipal, judicial, health care, commercial, athletic and military markets.

CMTA is the national leader in High Performance Buildings

CMTA is uniquely qualified to deliver a building optimized for performance, drastically reducing utility costs and maintenance issues. CMTA Commissioned projects perform better time and time again above and beyond those commissioned by others. CMTA also takes a different approach to design and often has to train other commissioning agents on commissioning our High-Performance designs, therefore; CMTA is THE MOST QUALIFIED to commission projects designed by CMTA Engineers. As a matter of fact, projects both designed AND commissioned by CMTA are optimized for high performance above and beyond other projects. The ACG (national commissioning entity) and USGBC both approve the owner, architect or engineer's qualified representative to commission the project.

CMTA has always followed the performance of our building designs to ensure that they are successful. This means we have real world knowledge of the engineering theory behind system operations. We have been benchmarking our buildings' performance for over 15 years, which has resulted in a comprehensive database of system effectiveness and return on investment of various high performance building features. This knowledge will allow our team to perform a thorough review of the Energy Model and verify the ability to meet the energy goals outlined for the project. This knowledge coupled with our implementation and management techniques arms us with the necessary tools to ensure the project is designed and constructed to meet your expectations.

CMTA takes a facilitators' approach to building commissioning

Commissioning should take a holistic approach reviewing how systems work together as opposed to running manufacturers' start-up programs on individual systems. Today's building owners demand management of complex building systems and having a consulting engineering and commissioning firm that understands these systems is crucial to successful commencement of building operations and energy management systems.

CMTA is a team member – not the commissioning police

We know the Cx role is sometimes perceived as one that polices a project, but we like to position ourselves as critical member of the team. Our management style fosters an environment where the goals of all team members are aligned and that a fully functioning and operational building is the only option for success.

Thorough understanding of the importance of controls

Controls are key to getting a building to operate per the specifications, engineering intent, controls industry best practice and Owner Preference all simultaneously and synergistically operating in unison.

Our experienced controls team has a thorough understanding of all aspects of controls from design and application engineering through installation and programming to verification, Owner operations, maintenance, and system evolution over time. Most importantly our controls team completely understands controls in an integrated building systems context - all building systems must be understood, accounted for, and functional and operational status factored where no detail can be ignored. The controls system is the binding agent to sustainable building system operation.

The controls leader of this project team has several accredited certifications, directly related engineering education and background, and years of high-level operations management of all aspects of turn-key product coupled with deep hands-on application experience which demonstrates his in-depth knowledge of this intricate part of the commissioning process.

Our proposal is outlined per the following and delineates CMTA's differentiations in High Performance Commissioning:

Qualifications - Firm/Entity

The integration and collaboration between CMTA as a design firm and CMTA's Commissioning team differentiates our group. CMTA Commissioning is the most experienced and knowledgeable in optimizing CMTA designs successfully.

Qualifications of Project-Specific Commissioning Team

Specific project team experience on similar projects - You will find our hand selected team of commissioning experts have experience on similar projects and bring this experience to Bullitt County's New Elementary School. Other k-12 facilities in Kentucky have experienced CMTA's successful commissioning of CMTA designed projects and seen how the integrated team provides a more optimized facility.

Specific project team experience with Bullitt County/Other K-12 Schools

CMTA is a partner and trusted advisor to Bullitt County and brings this experience and approach to this project. We value a long lasting relationship and look to further it on this project.

Commissioning Approach and Methodology

CMTA's Commissioning Methodology goes beyond typical "Check the Box" Commissioning and looks to successfully optimize the building and provide successful long lasting operations for the Facility.

Commissioning Plan

CMTA's Commissioning Plan builds off our team's knowledge of this project. CMTA Commissioning is integrated with CMTA Design and provides CMTA the opportunity to build on this knowledge and successfully hit the ground running on this project.

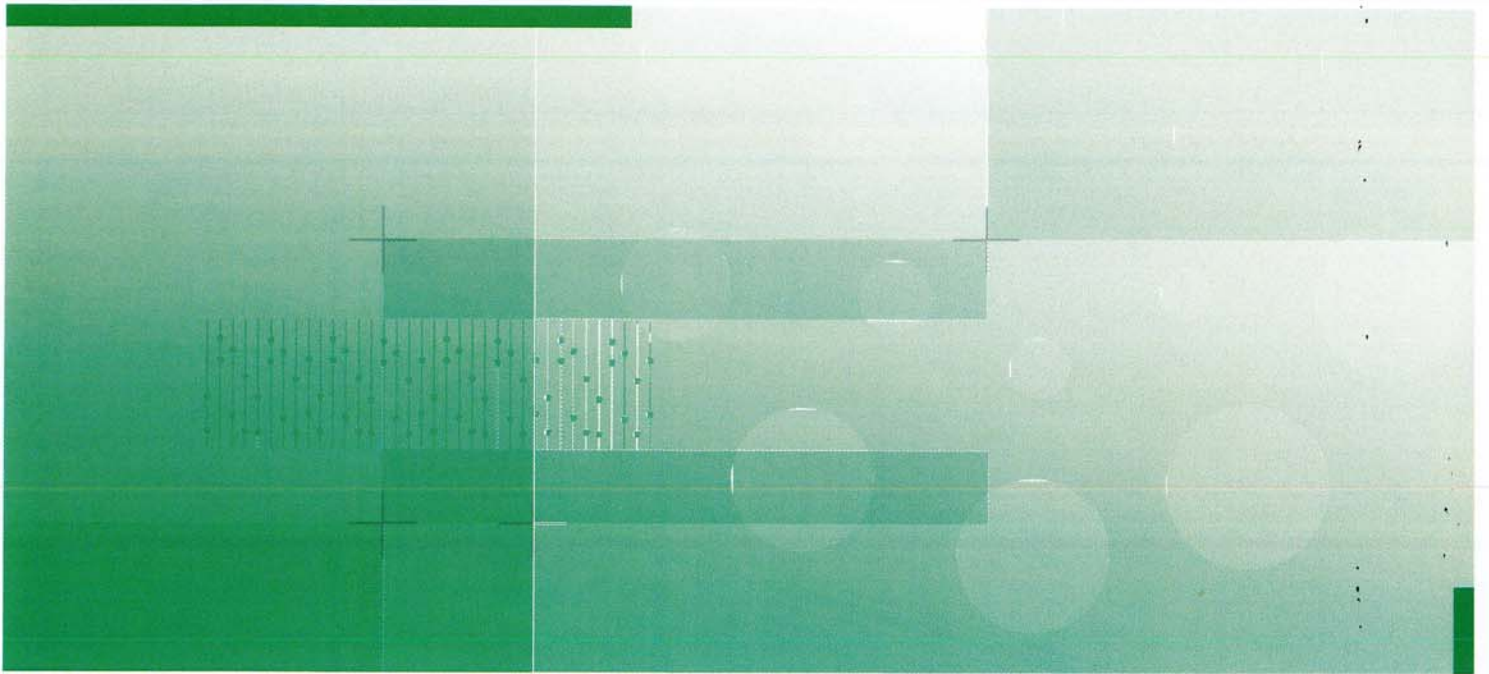
Proposed Project Cost and Fee Structure

CMTA doesn't look to be the cheapest but looks to provide the Best Value and differentiated Commissioning for the owner.

References

CMTA has a long list of past partners and can provide more references upon request.

We look forward to making this project a successful and rewarding experience for the University and thank you for the opportunity.



C. | Qualifications of Firm

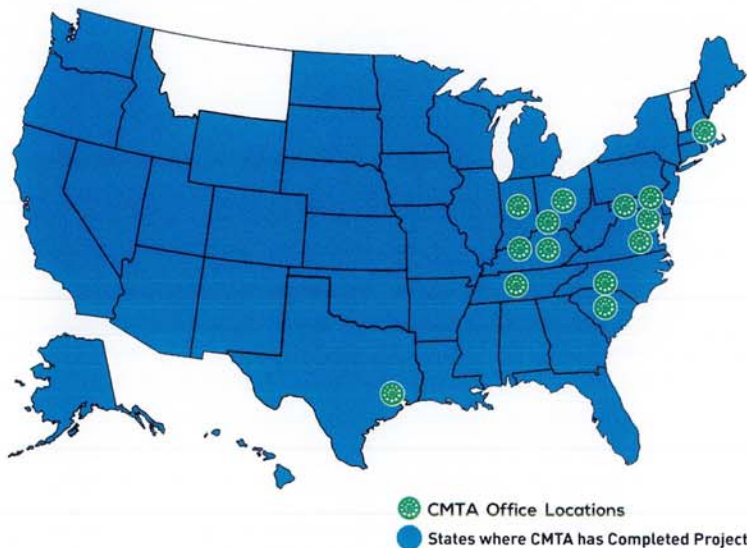
CMTA Overview

CMTA is a multi-specialty firm that focuses on building systems engineering that ensures cost effective, energy efficient, high performance buildings. We are true partners who are vested in the long-term success of our buildings, which is measured by exceeding the expectations of building owners and managers, and maintaining the health and comfort of the occupants. In addition to engineering great building systems, at CMTA, we invent products, set national goals, and work to transform the market to improve results for everyone. We define our innovative approach to engineering as ... **Building Science Leadership**.

Our consulting engineering expertise includes the following services:

- Mechanical Engineering
- Electrical Engineering
- Plumbing Engineering
- Fire Protection Engineering
- Zero Energy and Renewable Engineering
- Communications and Audio Visual Design
- Technology Infrastructure Design
- Security System Design
- Energy Modeling
- Lighting Design
- Geothermal Engineering
- Construction Administration
- Commissioning Services
- LEED Consulting
- WELL Building Consulting and Certification
- Energy Star Certification
- Sustainability Consulting

CMTA has over 385 employees in 15 offices located across the nation.



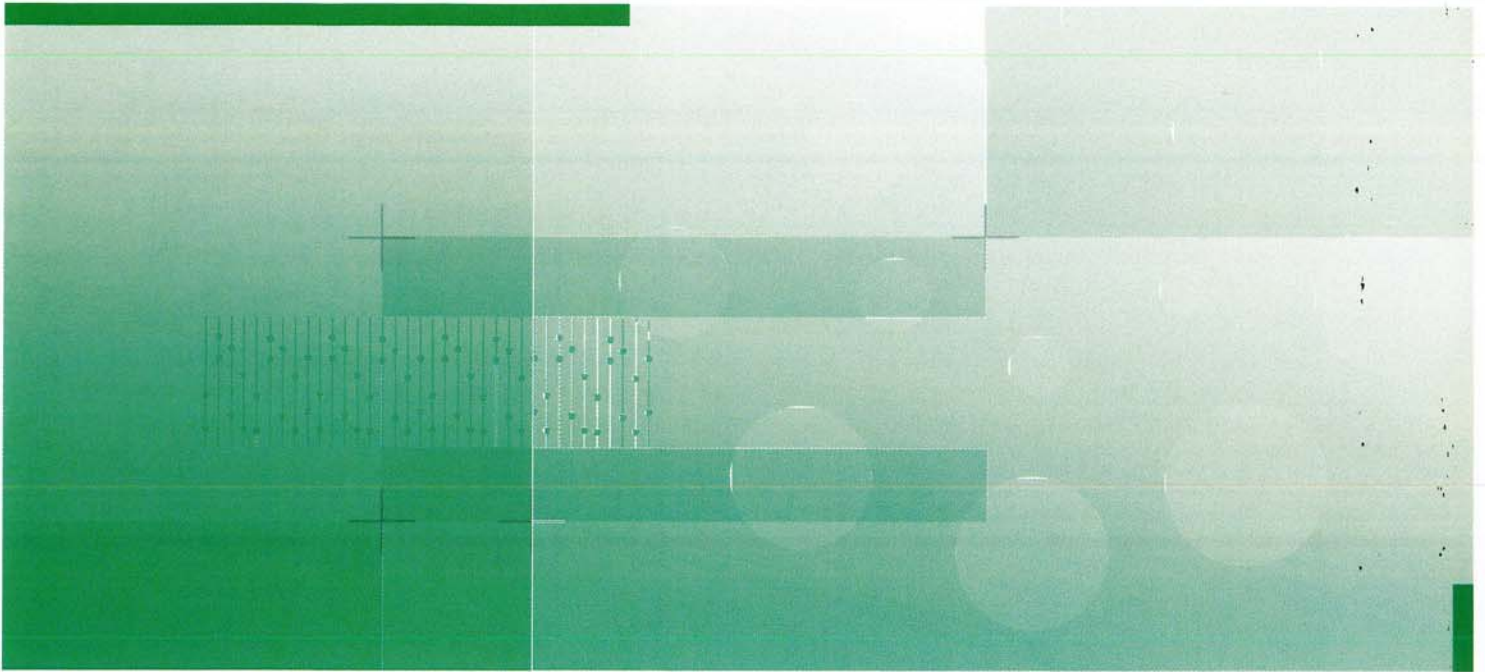
By the Numbers

- 400 Employees
- 15 Offices
- Licensed in 43 States, D.C., Puerto Rico, and Ontario, Canada
- 118 PEs
- 7 RCDDs
- 8 Certified GeoExchange Designers
- 15 Certified Energy Managers
- 18 Commissioning Agents
- 82 LEED APs
- 12 WELL APs

Rankings

CMTA is a top 25 MEP firm nationally as ranked by Consulting-Specifying Engineer magazine, listed in the ENR Top 500 for 2020 and in the Zweig Group's 2020 Hot Firms List, which recognizes the fastest growing AE firms in North America.





D. | Qualifications of Project-Specific Commissioning Team

- i.** Team Listing/Resumes
- ii.** Similar Project Experience
- iii.** Commissioning Approach



CMTA

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Team Members

The following listing of team roles and responsibilities clearly defines the role each team-member will play.

Jeremy Lewis PE, LEED AP | Principal In Charge

As the Principal-in-Charge, Mr. Lewis will coordinate with the Owner, the Architect and the Commissioning Team members to meet the expectations of this project. He will ensure that energy efficient design principles are incorporated into the MEP systems and their associated controls.

Brent Leinenbach | Lead Commissioning Engineer/Project Manager

As Lead Commissioning Engineer, Mr. Leinenbach will ensure that the systems operate as intended. He will monitor and troubleshoot HVAC systems with building automation and stand-alone data loggers to identify operational problems and find inefficient control sequences. Mr. Leinenbach will also focus on system controls. As the Project Manager he will lead the commissioning team and act as a single point of contact for the owner.

Daniel Chesser | TAB Commissioning Specialist

As the TAB Commissioning Specialist, Mr. Chesser will be responsible for monitoring the MEP construction installation progress and ensuring systems meet the construction document specification requirements and design intent. In addition, Mr. Chesser will work closely with mechanical test and balance contractors to ensure proper methodology and practices are followed.

Sam Gordon | Electrical Commissioning Specialist

As the Electrical Commissioning Specialist, Mr. Gordon will ensure that the systems operate as intended. He will monitor and troubleshoot electrical systems with building automation and stand-alone data loggers to identify operational problems.

Eric Blair | Mechanical Commissioning Specialist

As a Mechanical Commissioning Specialist, Mr. Blair will ensure that the systems operate as intended. He will monitor and troubleshoot HVAC systems with building automation and stand-alone data loggers to identify operational problems and find inefficient control sequences.

Ian Robertson | Data/Trend Specialist

As the Data/Trend Specialist, Mr. Robertson will be responsible for the analysis of trend data from energy management and control systems. He will conduct the testing and tuning of the control system.



BRENT LEINENBACH

PROJECT MANAGER/LEAD COMMISSIONING ENGINEER

EDUCATION

Bachelor of Science Degree, Electronic Engineering Technology - University of Dayton (2005)

Bachelor of Science Degree, Computer Engineering Technology - University of Dayton (2005)

Bachelor of Science Degree, Electrical Engineering - University of Louisville Speed Scientific School (2017)

RELATED PROJECTS

- Kentucky Community & Technical College System, Jefferson CTC Carrollton Campus Commissioning, Carrollton, Kentucky
- University of Louisville, Novak Center for Children's Health, Louisville, Kentucky
- Arlington County Parks and Recreation, Lubber Run Community Center, Arlington, Virginia
- Lexington Convention Center/Rupp Arena Redevelopment, Lexington, Kentucky
- Osceola County School District, NeoCity Academy, Kissimmee, Florida
- Warren County Public Schools, Geothermal and Energy Optimization, Bowling Green, Kentucky
 - Warren Central High School
 - Jennings Creek Elementary School
 - Cumberland Trace Elementary School
- Commonwealth of Kentucky, Kentucky International Convention Center, Louisville, Kentucky
- Baltimore Public Schools, Holabird Academy, Baltimore, Maryland
- Baltimore Public Schools, Graceland Park/O'Donnell Heights Elementary School, Baltimore, Maryland

EXPERIENCE

Mr. Leinenbach joined CMTA in 2018, bringing 14 years of experience as a project manager and senior electrical engineer.

With previous experience as an electrical engineer, Mr. Leinenbach has designed electrical systems for a broad range of projects, including, but not limited to, K-12 and higher education, healthcare & senior living, historic preservation, business complexes, and critical use facilities. He has worked on the full range of projects, including small complex renovations to campus distribution systems.

CMTA's commissioning approach Brent implements on all projects minimize energy consumption, reduces maintenance time, and increases occupant comfort. The employment of a commissioning engineer is a pro-active method of improving system performance before problems arise.

As Project Manager and Lead Commissioning Engineer, Mr. Leinenbach will ensure that the systems operate as intended. He will monitor and troubleshoot HVAC systems with building automation and stand-alone data loggers to identify operational problems and find inefficient control sequences. Data collection via trending from the commissioning process provides quality assurance and benchmarking data and documentation for assisting with recommissioning buildings in the future.



DANIEL CHESSER

TAB COMMISSIONING SPECIALIST

EDUCATION

High School Diploma - Nelson County High School, 2008.

REGISTRATIONS

- OSHA Construction Safety and Health

RELATED PROJECTS

- University of Louisville, Novak Center for Children's Health, Louisville, Kentucky
- Kentucky Community & Technical College System, Jefferson CTC Carrollton Campus Commissioning, Carrollton, Kentucky
- Commonwealth of Kentucky, Kentucky International Convention Center, Louisville, Kentucky
- Lexington Convention Center/Rupp Arena Redevelopment, Lexington, Kentucky
- Alvin Independent School District, Bob & Betty Nelson Elementary School, Alvin, Texas
- Sheldon Independent School District, Sheldon High School Stadium, Houston, Texas
- Alvin Independent School District, Robert E. McNair Junior High School, Pearland, Texas
- Alvin Independent School District, Alvin High School - Natatorium, Alvin, Texas
- Alvin Independent School District, Alvin High School Performing Arts Center & Central Plant, Alvin, Texas
- Louisville International Airport Renovation, Louisville, Kentucky

EXPERIENCE

Mr. Chesser joined CMTA in 2018 following his ten years of work at Thermal Balance INC. as a test and balance technician. Since joining CMTA, he has joined the Commissioning Team and worked on projects in the higher education, K-12 and health care markets.

His responsibilities include coordination and implementation of the commission process by working as a commissioning agent and ensuring resources and systems are working in accordance to construction documents so that projects are finished in a timely manner, within budget and meet critical quality criteria.

Mr. Chesser is experienced in coordinating the commissioning process for multi-discipline projects, has strong communication and interpersonal skills, knowledge of MEP systems and thorough knowledge of the construction process. He is an expert in detecting and fixing system and equipment problems, as well as the ability to coordinate with building owners, construction professional, architects and consultants.

As the TAB Commissioning Specialist, Mr. Chesser will be responsible for monitoring the MEP construction installation progress and ensuring systems meet the construction document specification requirements and design intent. In addition, Mr. Chesser will work closely with mechanical test and balance contractors to ensure proper methodology and practices are followed.



SAM GORDON

ELECTRICAL COMMISSIONING SPECIALIST

EDUCATION

Associate of Applied Science, Computer Science - Sullivan University, 1992

RELATED PROJECTS

- Kentucky Community & Technical College System, Jefferson CTC Carrollton Campus Commissioning, Carrollton, Kentucky
- Alvin Independent School District, Bob & Betty Nelson Elementary School, Alvin, Texas
- Sheldon Independent School District, Sheldon High School Stadium, Houston, Texas
- Alvin Independent School District, Robert E. McNair Junior High School, Pearland, Texas
- Alvin Independent School District, Alvin High School - Natatorium, Alvin, Texas
- Alvin Independent School District, Alvin High School Performing Arts Center & Central Plant, Alvin, Texas
- Warren County Public Schools, Geothermal and Energy Optimization, Bowling Green, Kentucky
 - Warren Central High School
 - Jennings Creek Elementary School
 - Cumberland Trace Elementary School
- The Arlington of Naples, Six-Floor Independent Living Facility and Skilled Nursing, Naples, Florida*
- Cypress Cove Senior Living, Independent Living Facility, Ft. Myers, Florida*
- Marjorie P. Lee Retirement Community, Cincinnati, Ohio*
- Masonic Homes New York, Utica, New York*

*with prior employer

EXPERIENCE

Mr. Gordon joined CMTA in 2020. For the past 29 years he has performed electrical design, site survey and Construction Administration experience in the electrical and mechanical fields. As an amateur machinist and wood worker he is comfortable around industrial machinery.

For eight years Mr. Gordon has performed project manager and electrical engineering functions, training new designers in the field sharing experience in lighting, communications, power, lightning protection, surveying site conditions, arc flash analysis, short circuit calculation, electrical branch circuit coordination and upgrades to electrostatic precipitators. Mr. Gordon is accustomed to industrial regulations, safety procedure requirements and certifications.

Utilizing his experience in residential, senior living, K-12, industrial, government, and financial facilities Mr. Gordon will be responsible for electrical commissioning functions on this project. He will ensure that the systems operate as intended. He will monitor and troubleshoot electrical systems with building automation and stand-alone data loggers to identify operational problems.



DAVID LANE

MECHANICAL COMMISSIONING SPECIALIST

EDUCATION

Bachelor of Science, Mechanical Engineering Technology
(concentration in Energy Systems) - University of Cincinnati
1999

PROFESSIONAL ACTIVITIES

- Board Member, Treasurer - Tri-State Society of Healthcare Engineers (TSHE)
- American Society of Healthcare Engineers (ASHE)
- Member of American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)

RELATED PROJECTS

- University of Dayton, Roesch Library Chiller Plant Renovation, Dayton, Ohio*
- University of Dayton, Kettering Engineering & Research Building Chilled Water Study/Utility Reduction, Dayton, Ohio*
- University of Cincinnati, Medical Office Building Plant and Chiller Upgrade, Cincinnati, Ohio*
- Warren County Public Schools, Geothermal and Energy Optimization, Bowling Green, Kentucky
 - Warren Central High School
 - Jennings Creek Elementary School
 - Cumberland Trace Elementary School
- Norton Health, Brownsboro Hospital - Tower Addition, Louisville, Kentucky
- The Christ Hospital - Chiller Water Plant Expansion, Cincinnati, Ohio*
- Deaconess Hospital - Surgery Suite HVAC & Chiller Renovation, Cincinnati, Ohio*
- Mercy St. Clare - Emergency Chiller Project & HVAC Plant Upgrade, Cincinnati, Ohio*
- The Christ Hospital - CWP Energy Study & VFD Retrofit/Upgrade, Cincinnati, Ohio*

*with prior firm

EXPERIENCE

With over 30 years of mechanical engineering experience, Mr. Lane joined CMTA's Cincinnati, OH office in 2020 to provide commissioning services.

A seasoned project manager and commissioning engineer, he has a proven track record of improving project and program management processes in multiple organizations. He has a complete understanding of mechanical and electrical scopes of work, including HVAC, refrigeration, compressed air, medical gas, cold storage systems, low voltage, energy management systems, and building automation controls.

Mr. Lane has over 25 years of experience with diverse projects, including design build, negotiated, plan and specification construction, maintenance, energy, and facility retrofit projects. Building types include medical facilities, hospitals, restaurants, industrial, manufacturing and retail.

Specific clients he had the honor of serving as a project engineer before joining CMTA include, but aren't limited to Johnson Controls, Inc., Honeywell International, and Carrier Corporation. Responsibilities for these projects included managing multiple energy management projects, develop relationships with clients and owners, plan and manage several HVAC construction projects, and establish accountability throughout all project phases.

As Mechanical Commissioning Specialist for the project, Mr. Lane will ensure that the systems operate as intended. He will monitor and troubleshoot HVAC systems with building automation and stand-alone data loggers to identify operational problems and find inefficient control sequences. Data collection via trending from the commissioning process provides quality assurance and benchmarking data and documentation for assisting with recommissioning buildings in the future.



ERIC BLAIR

MECHANICAL COMMISSIONING SPECIALIST

EDUCATION

Bachelor of Science, Mechanical Engineering - Western Kentucky University, 2016

REGISTRATIONS

- OSHA Construction Safety and Health
- Retrotec Certification for Single Blower Door Operation

RELATED PROJECTS

- University of Louisville, Novak Center for Children's Health, Louisville, Kentucky
- Kentucky Community & Technical College System, Georgetown Advanced Manufacturing Facility Commissioning, Georgetown, Kentucky
- University of Louisville, Thorntons Academic Center of Excellence, Louisville, Kentucky
- Commonwealth of Kentucky, The 300 Office Building, Louisville, Kentucky
- Howard County Public Schools, Wilde Lake Middle School Commissioning, Columbia, Maryland
- Berkeley County Schools, District Commissioning, Berkeley County, West Virginia
- Lexington Convention Center/Rupp Arena Redevelopment, Lexington, Kentucky
- Warren County Public Schools, Geothermal and Energy Optimization, Bowling Green, Kentucky
 - Warren Central High School
 - Jennings Creek Elementary School
 - Cumberland Trace Elementary School
- Clark Regional Medical Center, Medical Office Building Addition Commissioning, Winchester, Kentucky

EXPERIENCE

Mr. Blair joined CMTA in 2016 following his graduation from WKU. Since joining CMTA he has joined the Commissioning Team and worked on projects in the higher education, K-12 and health care markets.

His responsibilities have included new project setup, creating CX plans, PFC/SVC creation and execution and submittal review log management. He has also been involved with basic FPT creation/execution, site observations, executing point verification testing, building pressurization tests and managing project closeouts.

Mr. Blair takes pride in working closely with owners to ensure quality, energy efficient buildings. Each project is an opportunity to provide an exceptional end product that is expected from CMTA.

As Mechanical Commissioning Specialist, Mr. Blair will ensure that the systems operate as intended. He will monitor and troubleshoot HVAC systems with building automation and stand-alone data loggers to identify operational problems, and find inefficient control sequences. This minimizes energy consumption, reduces maintenance time and increases occupant comfort. The employment of a commissioning engineer is a pro-active method of improving system performance before problems arise.



IAN ROBERTSON

PMP

DATA/TREND SPECIALIST

EDUCATION

Bachelor of Science, Telecommunications - Michigan State University, 2007

REGISTRATIONS

Project Management Professional (#1957212)

RELATED PROJECTS

- University of Louisville, Novak Center for Children's Health, Louisville, Kentucky
- Warren County Public Schools, Geothermal and Energy Optimization, Bowling Green, Kentucky
 - Warren Central High School
 - Jennings Creek Elementary School
 - Cumberland Trace Elementary School
- Baltimore Public Schools, Holabird Academy, Baltimore, Maryland
- Baltimore Public Schools, Graceland Park/O'Donnell Heights Elementary School, Baltimore, Maryland
- Arlington County Parks and Recreation, Lubber Run Community Center, Arlington, Virginia
- Gunston Middle School Commissioning, Arlington, Virginia
- Harrisonburg City Public Schools, Elon W. Rhodes Early Learning Center, Harrisonburg, Virginia
- Harrisonburg City Public Schools, Bluestone Early Learning Center, Harrisonburg, Virginia

EXPERIENCE

Mr. Robertson joined CMTA in 2017 bringing almost ten years of experience in the design and commissioning of K-12, higher education, arenas and health care projects.

One of many notable projects he got to work on includes the Jennings Creek Elementary School Project for Warren County Public Schools. While the project was under construction, Mr. Robertson demonstrated his excellent communication, management and knowledge of the commissioning field by staying on top of deadlines, budgets and the contentment of the client.

Mr. Robertson's previous experience as commissioning project manager led him to join his new home at CMTA. He has been involved with several multi-million-dollar new construction projects as a Commissioning Authority as well as led several EMR Implementation/Optimization rollout projects.

As the Data/Trend Specialist, Mr. Robertson will be responsible for the analysis of trend data from energy management and control systems. He will conduct the testing and tuning of the control system.

CMTA K-12 Commissioning Projects

The table below provides the verified statistics on our zero energy project experience.

Project Name	City	State
Alvin Bel Nafegar Sanchez Elementary School	Houston	Texas
Alvin Bob & Betty Nelson Elementary School	Houston	Texas
Alvin ISD - Alvin High School Performing Arts Center CX (Auditorium)	Manvel	Texas
Alvin ISD - Bel Nafegar Sanchez Elementary School CX	Iowa Colony	Texas
Alvin ISD - Bob & Betty Nelson Elementary School CX	Alvin	Texas
Alvin ISD - Dr. Ronald E. McNair Junior High School CX	Pearland	Texas
Alvin ISD High School #4	Manvel	Texas
Alvin ISD Junior High School #8 - Commissioning	Iowa Colony	Texas
Alvin ISD Shadow Creek HS HVAC System Verification	Pearland	Texas
Alvin Robert E McNair Junior High School	Houston	Tennessee
APS - Discovery Elementary Energy Dashboard	Arlington	Virginia
APS - Gunston Middle School	Arlington	Virginia
APS - Walter Reed Elementary Schools Building Pressure Test	Arlington	Virginia
Camden Station Elementary School - Commissioning Services	Crestwood	Kentucky
Delalio Elementary-Commissioning	Jacksonville	North Carolina
Elon Rhodes Elementary - Building Pressure Test	Harrisonburg	Virginia
Forest Middle School - Commissioning Services	Forest	Virginia
Fort Bend Independent School District - Retro Commissioning	Houston	Texas
Fort Bend MS #16 Through Design Phase	Fort Bend	Texas
Harrisonburg VA - Bluestone Elementary CX	Harrisonburg	Virginia
Harrisonburg VA Elon Rhodes Preschool CX	Harrisonburg	Virginia
HCPSS - Howard County Public Schools High School / HS13	Columbia	Maryland
HCPSS - Pointers Run Elementary School	Columbia	Maryland
HCPSS - Talbott Springs Elementary School	Columbia	Maryland
Holabird - Add Service	Baltimore	Maryland
Holabird BPT	Baltimore	Maryland
Holabird Commissioning	Baltimore	Maryland
Howard County Public Schools - Mount View Middle School	Columbia	Maryland
Jennings Creek Elementary School	Warren County	Kentucky
Osceola County - Poinciana High School Commissioning	Kissimmee	Florida
Santa Fe Elementary School CX	Santa Fe	Texas
Santa Fe ISD New Elementary School - Pressure Test	Santa Fe	Texas
Sheldon ISD New Stadium Commissioning	Houston	Texas
Splendora Elementary School	Splendora	Texas
Temple Elementary School - Sphere Program	Temple	Texas
Thomas Jefferson Elementary Energy Dashboard	Falls Church	Virginia
Warren County Central High School Commissioning	Bowling Green	Kentucky
Warren County Sphere - Jennings Creek	Bowling Green	Kentucky



WILDE LAKE MIDDLE SCHOOL

CMTA Services: Zero Energy Consultant, Enhanced Commissioning

New Facility

LEED Platinum

NBI - Zero Energy/ ILFI - Certified Zero Energy

OWNER

Howard County Public Schools
Columbia, Maryland

COST

\$26,000,000

CONTACT

Scott Washington
(410) 313-6807
scott_washington@hcpss.org

COMPLETED

2017

CMTA served as Zero Energy Consultant and the Enhanced Commissioning Agent for this LEED Platinum school, Maryland's first Zero Energy School. Wilde Lake is a 106,221 square foot replacement Middle School, designed to accommodate 752 students and sits on a 15-acre lot directly behind the existing school.

The school will realize significant energy savings through the use of multiple strategies, including: optimum solar orientation, a tight building envelope, appropriate use of glazing, occupancy sensors and high performance HVAC systems. To achieve Zero Energy, the school installed solar photovoltaic panels totaling 635 kW PV array comprised of 1450 rooftop and 450 ground mounted panels that produce approximately 829,000 kWh of electricity per year.

CMTA also performed the commissioning for this project including enhanced commissioning.

Commissioning services included:

- Design Commissioning
- Building Envelope
- HVAC & Controls
- Geothermal Systems
- Lighting & Controls
- Solar Photovoltaic Systems
- Emergency Power System
- Air Handling & Outside Air Controls
- Kitchen Makeup Air & Exhaust

Construction Commissioning

- Building Envelope
- HVAC & Controls
- Geothermal Systems
- Lighting & Controls
- Solar Photovoltaic Systems
- Emergency Power System
- Air Handling & Outside Air Controls
- Kitchen Makeup Air & Exhaust
- Owner Training
- Systems Manual
- Warranty Manual



JENNINGS CREEK ELEMENTARY SCHOOL

CMTA Services: Engineer of Record, Energy Savings Performance Contract, Enhanced Commissioning Services

New Facility

NBI - Zero Energy

OWNER

Warren County Public Schools
Bowling Green, Kentucky

COST

\$18,400,000

CONTACT

Jay Wilson - Energy Manager
270-781-5150

COMPLETED

2018

Jennings Creek Elementary is a new, zero energy, 86,000 square foot public school located in a rural area of Warren County, KY. The facility holds up to 750 students.

Warren County Public Schools' goals were established in 2010 with WCPS' Richardsville Elementary - the first zero energy public school in the nation. Jennings Creek Elementary is the school district's third zero energy building, with a fourth to follow soon. The building is now operating as a net zero educational facility, making it the most energy-efficient school in the State of Kentucky.

To meet the client's project goals, CMTA designed and commissioned Jennings Creek Elementary, and implemented an energy savings performance contract for the state-of-the-art zero energy building.

During the design process, high-efficient heat geo-exchange heat pumps and dedicated outdoor air systems (DOAS) were designed to exceed code requirements for energy and indoor air pollutants. This included an order to enhance cognitive performance in addition to occupant wellness.

The building envelope is comprised of Insulated Concrete Forms (ICF), super insulated roof (R-32), and passive improved windows. In addition to the above strategies, a green kitchen and ultra-efficient LED lighting design, the renewable energy system could be drastically reduced. The building's renewable energy systems consist of a roof mounted 350 kW photovoltaic system.

Warren County Public Schools takes pride in being a progressive school district, especially in the areas of energy-efficiency and zero energy buildings. According to Jennings Creek's first annual measurement and verification report, provided on December 20, 2019, the guaranteed energy savings results were substantial. Before the project, the energy usage index (EUI), which is the total energy use over the total building square footage of the district, was 40.4. During the first year of operation, the EUI dropped to 15.5 - representing an energy usage drop of 72%.

During the first project year, WCPS saved \$1,105,528 - resulting in \$237,708 in excess savings beyond guarantee, all of which was retained by the district.

Jennings Creek Elementary has also been equipped with CMTA's occupant engagement dashboard, called Sphere. The technology assists in informing students and integrate curriculum on a daily basis. The learning spaces included a "Maker Space" and group work stations to promote collaborative learning. Flexible seating options were also used to cater to different student learning styles.



Sherman Carter Barnhart Architects

RICHARDSVILLE ELEMENTARY SCHOOL

CMTA Services: Engineer of Record, Enhanced Commissioning

New Facility

Zero Energy School

2012 National Green Ribbon School

OWNER

Warren County Schools
Bowling Green, Kentucky

COST

\$14,700,000

CONTACT

Jay Wilson
(270) 781-5150

COMPLETED

2010

The 72,300 square foot Richardsville Elementary School located in Bowling Green, Kentucky, is two floors and built to accommodate 500 elementary school students. This school is the first Zero Energy Public School in the United States. In order to make Zero Energy affordable, the design strategy for this project focused on sweeping energy conservation measures. The goal was to design a school that annually consumes 18 kBtu/sf/year. The project utilizes 208 kw of roof mounted thin film solar photovoltaics and 140 kw of mono-crystalline photovoltaic panels to obtain the Zero Energy goal.

The attractive two-story, rectangular design was chosen to provide an efficient shape that would minimize exterior surfaces without any sacrifice to the educational program. ICF (insulated concrete forms) wall construction was chosen to improve the thermal envelope's performance and minimize infiltration rates.

The enhanced geothermal HVAC system designed for this school includes distributed pumping and dual compressor heat pump units. The outside air ventilation system consists of a single 100 percent outside air heat recovery air handling unit with variable volume and demand control features. CO₂ levels are measured through the use of a pneumatic air tubing system. This allows centralized testing of air quality

in each classroom with a lab-grade quality CO₂ sensor. Based on the measured air quality, ventilation air is either increased or decreased directly to the occupied spaces through the use of variable air volume boxes to satisfy room conditions.

The classrooms are daylit through the use of exterior glazing and roof-mounted Solatubes®. The lighting systems are dimmable based on the measured light levels. A priority was to design and operate an efficient lighting and controls system at 0.7 w/sf.

Only Type II hoods are installed in the school's kitchen, which reduces exhaust air and makeup air requirements. Also, more efficient cooking equipment, along with efficient cooking techniques is being used.

District research indicated 8 percent of an elementary school's power was being used by the computer/data systems. The Kentucky Department of Education allowed this school to be a prototype wireless school utilizing all laptop computers. This also allowed the design team to eliminate two computer labs.

Commissioning services included:

Design Commissioning

- HVAC & Controls
- Lighting & Controls
- Air Handling & Outside Air Controls
- Kitchen Makeup Air & Exhaust

Construction Commissioning

- HVAC & Controls
- Lighting & Controls
- Air Handling & Outside Air Controls
- Kitchen Makeup Air & Exhaust
- Owner Training
- Systems Manual
- Warranty Manual



CINCINNATI PUBLIC SCHOOLS

CMTA Services: Enhanced Commissioning
District Wide Renovations
2,920,000 Total Square Feet
Cincinnati, Ohio

OWNER

Cincinnati Public Schools
Cincinnati, Ohio

COST

\$48,000,000 - 2 phase

CONTACT

Bill Moehring
Project Coordinator
513.207.9200

COMPLETED

2015

CMTA completed Phase I and Phase II Energy Renovation Projects for Cincinnati Public Schools to replace failing HVAC Systems, provide updated automated control and lighting systems, and to retro-commission existing facilities not performing as desired. The Phase I project included complete HVAC renovations of five buildings totaling 400,000 square feet. These buildings were commissioned to ensure the project success in reducing energy consumption with an estimated energy savings of \$1.5M annually. The upgrades and improvements for Phase I included:

- HVAC System Upgrades/Replacements
- Building Automation System Upgrades
- Energy Management
- Kitchen Upgrades
- Exterior Lighting Improvements
- Interior Lighting Replacements
- Gym Lighting Improvements
- Lighting Controls

Phase I projects were completed successfully and the district elected to fund a Phase II project for even more district energy savings. The Phase II project included complete HVAC renovations of three buildings and implementation of HVAC energy improvement strategies in 26 schools.

The commissioning of 220,000 square feet of renovated space and retro-commissioning of 2,300,000 square feet was performed to ensure the project was successful in reducing energy consumption with an estimated savings of \$1.2M annually. The upgrades and improvements for Phase II included:

- HVAC System Upgrades/Replacements
- Building Automation System Upgrades
- Energy Management
- Kitchen Upgrades
- Demand Control Ventilation
- Exterior Lighting Improvements
- Interior Lighting Replacements
- Gym Lighting Improvements
- Lighting Controls

A total of 2.9M square feet was commissioned and retro-commissioned for the client. The projects are being monitored on a regular basis and are on track to reach the annual savings goal of \$2.7M.

Design Commissioning

- HVAC & Controls
- Lighting & Controls
- Air Handling & Outside Air Controls
- Kitchen Makeup Air & Exhaust

Construction Commissioning

- HVAC & Controls
- Lighting & Controls
- Air Handling & Outside Air Controls
- Kitchen Makeup Air & Exhaust
- Owner Training
- Systems Manual
- Warranty Manual

Commissioning Approach

CMTA has been commissioning buildings for over 20 years. We prefer to commission the buildings that we design because we have learned that it is the best way to ensure that a building operates as it was intended and reaches peak efficiency in order to deliver energy cost savings to the owner. We established our full-service approach when we began collecting data on buildings and benchmarking their energy usage. We believed based upon energy modeling that we were designing energy efficient buildings. However, the data that we collected following occupancy indicated that these building were not performing according to the design parameters. As we went through a forensic analysis on prior projects, we began to understand the built-environment more clearly and identified issues that were obstructing the results we expected.

- **Envelope** – Our design teams began focusing on the performance of the building exterior envelope. It was clear that many envelopes were not constructed according to design specification and the result was that the building leaked air. In order to keep occupants comfortable much more energy was required than intended.
- **Building Controls** - We also realized that the building controls system is always the last to be installed and many times contractors were more focused on getting the systems online rather than operating efficiently.
- **Optimization** - Lastly, we understand that each building is unique and its operation is unique on how the building is used and there is an optimization of the building that needs to occur after the building is occupied to really get the building to perform.

Our team's unique understanding of building science allows us to better commission buildings. Our ability to troubleshoot known trouble points means that the owners that we work for can feel confident that their building is operating at optimal levels and reducing utility costs. Based on our past experience, we firmly support the International Energy Code requirement for commissioning.

Anticipated Challenges and Solutions

With over 20 years of commissioning experience CMTA engineers can anticipate as resolve many potential issues before they effect project schedules or budgets. The following challenges are problems that our team has faced and resolved many times in the past.

- **Ease of Maintenance** - A building cannot perform and support education if it is not easily maintainable. When we design buildings, we intentionally develop designs and specify systems that are easy to maintain. We will help the contractor with system installation and watch and make sure that this important process is successful. Our team will set clear expectations for the contractor early in the process and ensure that they are met on behalf of the owner.
- **System Controls** – Our team will be an advocate for the controls contractor by helping them get ahead of the schedule with different activities that will allow them the opportunity to install the complete system and get it operational before substantial completion rather than after. We often work with controls contractors to develop control systems early and virtually test them through their programming rather than waiting for the system to be installed in the field. This allows us to identify any issues early and reduce the potential expensive corrections late in the installation process.
- **Flexibility and Responsiveness** - Lastly, we understand that each building is unique and that operations should respond to support the education process. Following occupancy our team will closely watch trends on the control system and make adjustments as needed to optimize the building so that energy savings can be realized.

CMTA Goals for Commissioning

Our goal is simple; we want this facility to be the best constructed and most efficiently operating project in the district. We want to anticipate and eliminate and start up issues. We want the building to operate so that the teachers and administrations can solely focus on education and not building issues. We want the system installed so that it easy to maintain for the long run. We want the facility staff to be thoroughly trained and confident in the building systems. Lastly, we want this to be as energy efficient as possible so that owner resources can be used on education rather than building operation. **To us commissioning is much more than confirming operation; it is truly a wholistic approach.**



E. | Proposed Fee Letter



Building Science Leadership



November 9, 2020

**Re: Commissioning Proposal
Bullitt County Public Schools
New Elementary School
CMTA Project No.: CBCE20**

Dear Mr. Bret Highley,

CMTA is pleased to submit this proposal for providing Commissioning (Cx) Services for the new elementary school Project. This proposal includes commissioning process (CxP) activities for MEP systems and assemblies in accordance with IECC Code Required Commissioning. Properly tuning the building systems are critical components to ensuring the building is operating in compliance with construction documents and design intention. We are excited to partner with you to offer this service. Please refer to the scope of services below for our detailed involvement.

Commissioning:

High Performance Integration and Verification Commissioning - Approach

We propose that the systems to be commissioned at a minimum are:

1. Approx. 90,000 sf new construction Project:
 - a. HVAC System
 - Geothermal Heat Pumps
 - Compressors
 - Dx Split System Units
 - Hydronic Pumps and Valves
 - Dedicated Outside Air Handling Units
 - Air Terminal Units (CAV's, VAV's)
 - Exhaust Fans
 - Kitchen Hoods
 - Variable frequency Drives
 - Kitchen Refrigeration Monitoring
 - b. Plumbing
 - Domestic HW System
 - c. Electrical
 - Emergency Power
 - Lighting Controls
 - Metering System
 - d. DDC Controls
 - DDC System Integration
 - DDC System GUI Compliance

Project Commissioning Deliverables:

The following deliverables are required to satisfy Commissioning requirements:

- Development of a Commissioning Plan.
- Development functional test plans.
- Development and maintenance of a Commissioning Issues and Benefits Log.
- Conduct functional testing of the base building systems and equipment.
- Regular Commissioning Meetings to coincide with Owner Progress Meetings
- Development of a Commissioning Report.
- The controls contractor shall manipulate the building controls system under the direction of the Owner & CxA to collect data and to demonstrate functionality of the systems per the designed functional test sequences.

Fee Breakdown as follows:

- CX Plan, CX Specifications, CX Kickoff Meeting – 20%
- CX Form Preparation, Functional Test Creation, Site Visits, Issue Logs, CX Meetings – 40%
- Functional Testing and System Verification – 30%
- CX Report, CX Closeout Documentation – 10%

Summary of Services:

Given the systems described above and the complexity in scheduling and testing these systems, we shall perform the above scope of work for a not to exceed fee of **\$64,250**. Expenses for trips to the site are included in the fee. We will work with you to schedule and prioritize work in an effort to maximize results. This fee takes into consideration that efficient travel in conjunction with remote trend verification will be utilized for system and performance optimization.

Please contact us if you have any questions or would like to make any modifications to this proposal. Again, thank you for the opportunity.

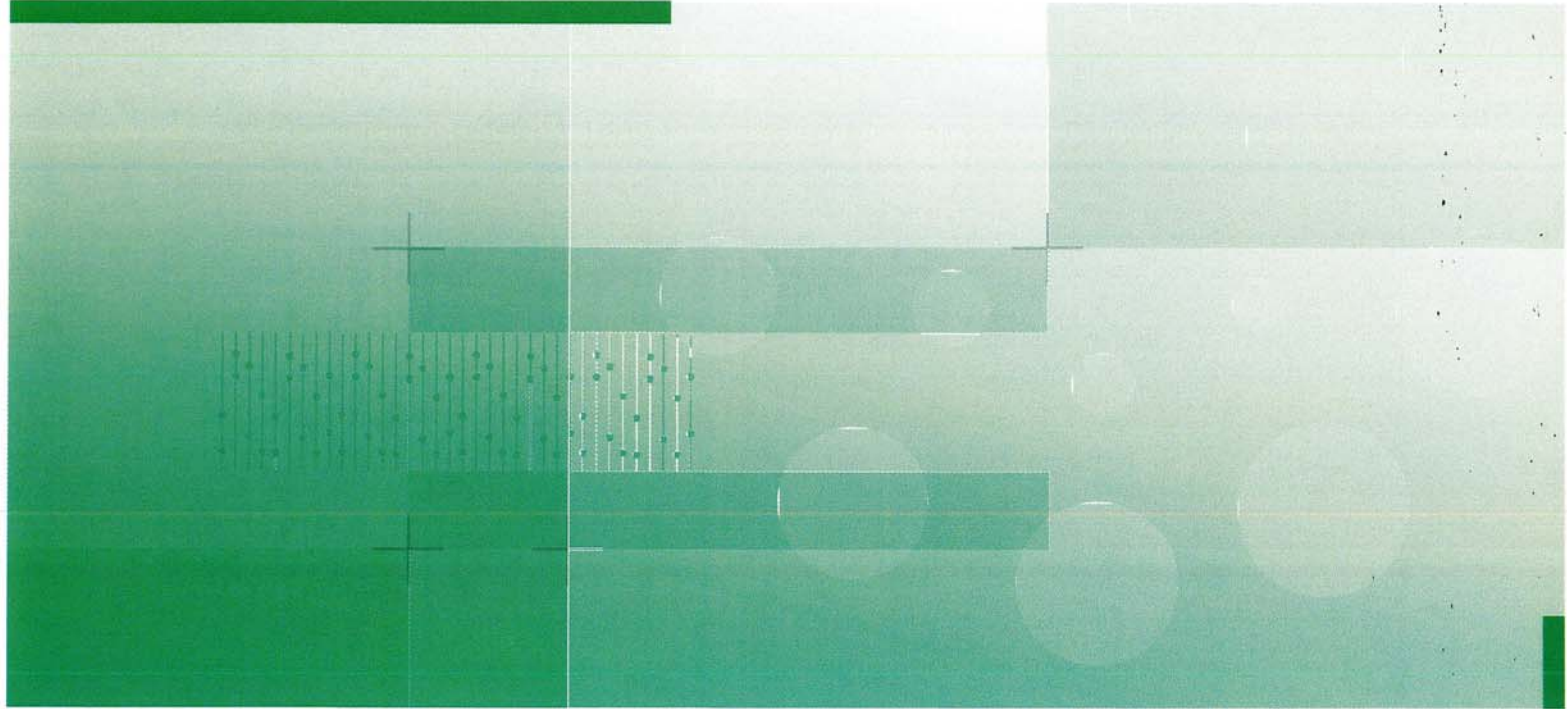
Sincerely,



Brent Leinenbach
Commissioning Accounts Manager
bleinenbach@cmta.com, 502-216-3668

Owner Representative

Date



F. | Original RFP



Building Science Leadership

Building Commissioning Services RFP
New 800-Student Elementary School
Bullitt County Public Schools
New Construction | Mt Washington, Ky.
BG# 20-142 | ska# 2019-50



Bullitt County Public Schools

Commissioning Services RFP for

New 800-Student Elementary School

New Construction | Mt Washington, Kentucky

BG# 20-142 | ska# 2019-507/15/20

November 2, 2020

RFP-v1

studio kremer architects

1231 S Shelby St, Louisville, KY 40203

TEL 502.499.1100 FAX 502.499.1101

Building Commissioning Services RFP Summary Sheet

New 800-Student Elementary School
Bullitt County Public Schools
New Construction | Mt Washington, Ky.
BG# 20-142 | ska# 2019-50
RFP-v1

Professional Services:	Building Commissioning Services
Project Name and Location:	New 800-Student Elementary School Twin Eagles Development Mt Washington, Ky. 40047
Project Description:	In general, the project includes the construction of a new 88,967 S.F. elementary school that will be divided between two levels – the upper level is 57,754 S.F. and the lower level is partially below grade and be 31,213 S.F. The building will be provided with a complete HVAC system including air handling units (AHU's), terminal heating units, exhaust fans, ductwork systems, temperature control systems, etc.
RFP Attachments:	The MEP construction drawings and specification sections are included as an attachment to this RFP. The entire construction document package is linked in the email containing the RFP. Reference specification sections 230800 & 265995 for the written explanation of the requirements for the commissioning scope of work.
Project Construction Schedule:	Project construction is anticipated to start date on November 10, 2020 and Substantial Completion is projected to be June 1, 2022.
Response Deadline (Proposals Due):	Proposals shall be submitted via email on or before Nov. 9, 2020 12:00pm , Please note, firms will be notified electronically regarding selection results.

Proposed Lump Sum Fee:**\$64,250**

The commissioning service fee proposal is

\$

Note: All expenses for trips to the site and other items shall be included in the fee.

Proposals shall be submitted via email to:

Bret Highley
Construction Manager
Bullitt County Schools
bret.highley@bullitt.kyschools.us

Cate Noble Ward, AIA
Architect
Studio Kremer Architects
cate@studiokremer.com

REQUEST FOR PROPOSAL

Bullitt County Public Schools, is inviting pre-selected Commissioning Firms (referred to as CxA throughout this document) to submit a proposal for commissioning services of a new 800-student Elementary School. The responses to this proposal will be used to negotiate the contract with the selected firm.

PROJECT SCOPE INFORMATION

The Owner is committed to commissioning this facility to systematically optimize the building and Mechanical, Electrical & Plumbing systems so that they operate efficiently and effectively in accordance with the owner's project requirements, and that the facility staff has adequate system documentation and training.

It is the intent of the Owner to ensure that these fundamental systems are calibrated and operating as required to deliver functional and efficient performance.

The Owner reserves the right to request clarification of any proposal after all proposals have been received. This request can be in the form of oral presentation or personal meetings.

SYSTEMS TO BE COMMISSIONED

Systems to be commissioned will include:

1. HVAC System
 - a. Geothermal Heat Pumps
 - b. Compressors
 - c. Dx Split System Units
 - d. Hydronic Pumps and Valves
 - e. Dedicated Outside Air Handling Units
 - f. Air Terminal Units (CAV's, VAV's)
 - g. Exhaust Fans
 - h. Kitchen Hoods
 - i. Variable frequency Drives
 - j. Kitchen Refrigeration Monitoring
 - k. Test & Balance Witness and Review
2. Plumbing
 - a. Domestic Hot Water System
3. Electrical
 - a. Emergency and Standby Power Systems

- b. Lighting Controls
- c. Power Monitoring & Metering System
- 4. DDC Controls
 - a. DDC System Integration
 - b. DDC System GUI Compliance

Note, 100% of equipment/systems shall be Functionally Tested. No sampling allowed.

SCOPE OF SERVICES

Commissioning Agent shall provide the following services, but may not be limited to:

Construction Phase Services

1. CxA will conduct commissioning meetings and distribute minutes to the commissioning team.
 - a. Conduct a Kick-off or pre (early) construction meeting where the commissioning process requirements are reviewed with the commissioning team (A/E, CM/GC, Owner).
 - b. Conduct monthly construction phase commissioning meetings. These meetings will support the commissioning process for determining schedule, checklist completion, issues log management, and functional test scheduling.
 - c. CxA will issue a Field Observation (FO) Reports after each meeting or site visit during the construction phase of the project.
2. CxA will coordinate the commissioning work with the Construction Manager to ensure that commissioning activities are included in their master schedule. Coordinate and direct commissioning activities in a logical and efficient manner using regular communications and collaboration with all necessary parties.
3. CxA to witness and document Domestic Water Piping testing prior to Contractor placing systems into operation. Coordinate with CM and provide report on testing compliance in closeout documents.
4. Conduct monthly site visits, concurrent with monthly commissioning meetings, to observe component and system installation during construction.
5. CxA to maintain an Action Items Log utilizing an online commissioning software for real-time review and response.
6. CxA will review and comment on construction documentation. The purpose of this activity is to understand any modifications to the Commissioning Scope of Work.
 - a. Review RFIs, ASIs, and Change Requests relevant to the equipment/systems being commissioned.
 - b. Review shop drawings and equipment submittals for information affecting the commissioning process.
 - c. Update the commissioning plan to reflect equipment and controls data from the submittals.
 - d. Review and comment on air and water test and balance reports with the Engineer of Record
 - e. Review and comment on Operations and Maintenance Manual with the Engineer of Record
7. CxA will develop project and equipment specific Pre-Functional Checklists (PFCs) based on the project documents, submittals, and lessons learned. These documents will be managed and completed by the contractors, and then accepted by the Commissioning Authority (CxA).

- a. Verify completion of construction checklists on a periodic basis to verify the contractor's progress.
 - b. PFCs to be managed electronically.
8. CxA will develop project and equipment specific Functional Performance Test (FPT) procedures based on the project documents, submittals, and lessons learned.
 - a. FPTs will be submitted to the design and construction team for review.
 - b. These documents will be executed by the vendors, subcontractors, and the CxA. The CxA will manage and document.
 - c. The CxA will defer the acceptance of the related systems and equipment on the behalf of the Owner until after the successful completion of the FPTs.
9. CxA will perform Functional Procedures during both the heating and cooling season; however, some overwriting of control values to simulate conditions may be used if appropriate.
 - a. Identify all seasonal testing required and identify in Action Items Log.
10. CxA will conduct 7-Day performance trending of all systems commissioned and include in Final Cx Report.

Occupancy Phase Services

1. CxA will schedule and verify any deferred seasonal testing by the contractor.
2. CxA to review contractor training agendas and provide verification of system training by the contractors.
3. CxA will develop a Final Commissioning Report. This report will be made available to the Owner for issuance to the code official, as required. The final deliverable will encompass all the commissioning project documentation which includes, but is not limited to the following:
 - a. Commissioning Plan
 - b. Commissioning meeting minutes
 - c. Site Observation Reports
 - d. Completed PFCs
 - e. Completed FPTs
 - f. Verification of Air testing of water systems
4. A copy of the final report must be made available for the Engineer of Record to submit to the Authority Having Jurisdiction, upon request.
5. CxA to Return to the site ten (10) months after occupancy to review current building operation and any open issues with the facility management staff, related to the original and seasonal commissioning. Document open issues on an updated issues log and distribute to relevant parties for resolution.

QUALIFICATIONS

1. The CxA must have substantial and proven in-building commissioning experience, including technical and management expertise on commissioning projects of similar scope.
2. If a subcontractor is needed, provide qualifications and clearly designate in the response to this RFP.
3. It is the desire of the Owner that the CxA satisfy as many of the following conditions and requirements as possible:
 - a. Acted as the principal commissioning agent for at least three projects of comparable size, type and scope.
 - b. Commissioning activities must be performed by full time commissioning agents.

- c. Firm must have a dedicated full-time commissioning staff of greater than 5 commissioning agents.
- d. Extensive experience in the operation and troubleshooting of HVAC systems and energy management control systems.
- e. Extensive field experience for all key team members, including project managers, team leaders and field engineers.
- f. Knowledge and experience in the following:
 - i. Writing commissioning plans.
 - ii. Writing commissioning specifications
 - iii. Testing and balancing of air and water systems.
 - iv. Energy-efficient equipment design and control strategy optimization.
 - v. Monitoring and analyzing system operation using energy management control system trending and stand-alone data logging equipment.
- g. Excellent verbal and written communication skills.
- h. A bachelor's degree from an accredited institution in mechanical/Electrical engineering and professional licenses and certifications.
- i. Certification as a Certified Commissioning Professional with the Building Commissioning Association, or hold other equal certification. These certifications shall be listed in the firm's proposal.

PROPOSAL REQUIREMENTS

Please provide the following as a minimum in the order indicated:

1. CxA's INFORMATION & TEAM
 - a. Name, address, telephone number and e-mail of one individual point of contact during RFP process.
 - b. Key leadership and employees who will likely be responsible for providing the Cx services for this project and their specific roles, including an organizational chart for the project, and projected commitment/availability of each to the project.
2. CxA's PREVIOUS EXPERIENCE
 - a. Descriptions of three to five relevant projects similar in total project cost. For each, include:
 - i. Project name, project team, project type, location and date opened
 - ii. Summary description with project size (total SF), system type(s), etc.
 - iii. Contact information of owner references
 - iv. Energy Performance Criteria
 1. On the bid form below, the prospective commissioning agent shall list and briefly describe 5 completed K- 12 School projects where the EUI (Energy Usage Intensity) upon completion of commissioning is 25 kbtu/SF or less:
 - a. Include description of HVAC system type
 - b. Include total building square footage
 2. On the bid form below, the prospective commissioning agent shall briefly describe their overall approach to the commissioning of the New 800-Student Elementary School for Bullitt County. List any prospective challenges and outline your firm's goals for the project.

Following are five (5) K-12 school projects where EUI upon completion of commissioning was 25 Kbtu/SF or less:

1. School Name: Wilde Lake Middle School, Columbia, MD. -- EUI: 13.8
 - a. HVAC System Type: Geothermal WSHP
 - b. Total Building Square Footage: 106,000 sf
2. School Name: Discovery Elementary, Arlington, VA. -- EUI: 15.8
 - a. HVAC System Type: Geothermal WSHP
 - b. Total Building Square Footage: 98,000 sf
3. School Name: NeoCity Academy, Kissimmee, FL. -- EUI: 20.3
 - a. HVAC System Type: Geothermal WSHP
 - b. Total Building Square Footage: 44,600 sf
4. School Name: Morgan County High School, Morgan Cty., KY. -- EUI: 19.0
 - a. HVAC System Type: Geothermal WSHP
 - b. Total Building Square Footage: 102,000 sf
5. School Name: Frederick Douglas High School, Lexington, KY. -- EUI: 18.0
 - a. HVAC System Type: Geothermal WSHP
 - b. Total Building Square Footage: 287,000 sf

Briefly describe the Approach/Process your firm will take in commissioning this facility. List challenges and thoughts to overcome. List your firm's commissioning goals for the project:

See attached Cx Process information.

3. PROPOSAL

- a. Fee Proposal. Cost for all services associated with Commissioning as outlined above.
- b. An estimated total of reimbursable expenses.

4. ADDITIONAL INFORMATION

- a. Provide any other relevant information and/or experience.

SELECTION CRITERIA

Proposers should be mindful that selection of a Commissioning Agent will be based on the following criteria:

1. Previous relevant experience: Successful and proven track record of relevant projects of similar size, scope and scale in various markets. It is important that the Commissioning Agent has the past experience working with k12 clients.
2. Qualifications: The individuals leading the commissioning effort shall have the requested certifications and experience mentioned in this proposal.
3. Quality: Quality of service working with and responsiveness to the owner and project team.
4. Sustainability: Demonstrated ability to commission similar projects incorporating strong principles of sustainability.
5. Competitiveness of fees
6. Commissioning Approach/Process
7. Energy Performance: Energy performance criteria of previous projects commissioned.