



**LAKEVIEW PUBLIC SCHOOLS
2021 FACILITY UPGRADES
BUILDING COMMISSIONING SERVICES**

April 23, 2021
Proposal #9647

IEA PROPOSAL CONTACT

Garett Karalus, PE, CCP
Lead Commissioning Authority
garett.karalus@ieasafety.com 763.315.7900

**Providing
Trusted
Health and
Safety
Solutions**



April 23, 2021

Chris Fenske, Ed.D.
Superintendent
Lakeview Public Schools
875 Barstad Road North
Cottonwood, MN 56229

RE: Proposal for "2021 Facility Upgrades Building Commissioning Services"

Dear Dr. Fenske:

Thank you for the opportunity to submit our building commissioning services proposal for the 2021 Facility Upgrades. IEA is appreciative of the opportunity to work with the Lakeview Public Schools to provide support as part of the project team.

IEA's commissioning team and service culture is based upon implementing a project that focuses on maintaining clear communication and documentation. Our team strives to ensure project consistency, along with adhering to project timelines and closeout.

If you have any questions or concerns regarding our proposal, please contact Garrett Karalus at 763.315.7900 or at garett.karalus@ieasafety.com. Thank you for considering IEA's qualified commissioning services.

Regards,

A handwritten signature in blue ink, appearing to read "Garrett Karalus".

Garrett Karalus, P.E., CCP
Director of Engineering
IEA, Inc.

GK/khb 04222021



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**PROVIDING
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IEA HAS BEEN PROVIDING TRUSTED SERVICES FOR OVER 48 YEARS

IEA CLIENT BASE

Colleges/Universities
K-12 Education
Government Agencies
Hospitals & Medical
Insurance Companies
Property Management
Construction Companies
Architect/Design Firms
Attorneys

IEA QUALIFIED STAFF

Professional Engineers
Certified Cx Agents
Certified Safety Professionals
Certified Industrial Hygienists
Certified Asbestos Designers
Certified Lead Designers
Certified School Risk
Managers



The Institute for Environmental Assessment, Inc. (IEA) is a small business founded in 1984. With offices in Brooklyn Park, Rochester, Mankato, Brainerd, Marshall, and Virginia, Minnesota. IEA has a staff of over 60 professionals who provide consultation services in specialized areas. IEA's service areas include asbestos and lead, health and safety, indoor air quality, and ventilation commissioning/recommissioning.

IEA's commissioning team has been providing services to educational facilities throughout Minnesota for over 15 years. Through our expertise, experience, and reputation, IEA's team delivers the most practical, thorough, and up-to-date services in the ever-changing dynamics of commissioning services. IEA is a member of the AABC Commissioning Group (ACG), the Building Commissioning Association (BCxA), and ASHRAE. Our commissioning agent certifications include ACG Certified Commissioning Authority (CxA), BCxA Certified Commissioning Professional (CCP), and University of Wisconsin Qualified Commissioning Process Provider (QCxP).

IEA has provided commissioning services for over 150 education facility projects in the last 10 years. Our experience working with educational clients has resulted in a dedication to providing a commissioning project that focuses on adherence to design, installation and functionality requirements of the systems, and how the ventilation operation will impact the building operators, occupants, and curriculum. IEA's communication between the design engineer, installation contractors, and the building operators is key to a successful commissioning project.

The core of our company services is based upon investigation, consultation, and commissioning of facility challenges and IEA is dedicated to this mindset, regardless if the client needs are focused on hazardous materials, health and safety, indoor air quality or ventilation function. We are dedicated to identifying and minimizing risk for our clients.

**IEA MN Dept of
Administration Vendor
ID:
VN 207361**

Lead Commissioning Authority/System Inspector

Garett Karalus, P.E., CCP (*Key Individual*)

Garett has a Bachelor of Mechanical Engineering degree from the University of Minnesota. As IEA's Director of Engineering, he has been a commissioning agent/authority **for 8 years**. During this time, he has been directly involved in all aspects of the commissioning process, and has managed or actively worked on over 100 commissioning projects. Garett has extensive experience with HVAC equipment controls, including design and submittal reviews of sequences of operation, functional testing, and troubleshooting. In addition to commissioning, Garett conducts building assessments to resolve a variety of issues related to indoor air quality and temperature control. He manages energy efficiency projects and has worked on many recommissioning projects involving K-12 schools. He also has prior experience in the design of air-handling units and HVAC equipment. He is a BCxA Certified Commissioning Professional (CCP).

Lead Commissioning Agent

Mathew Mason

Mathew has a Bachelor of Mechanical Engineering Degree from the University of Minnesota. He has been assisting with IEA commissioning projects **for 4 years**. He has gained extensive experience with testing of building automation systems and writing the BAS functional tests. Mathew conducts commissioning site inspections and IAQ investigation services for IEA clients. He also has experience overseeing owner training and O&M documentation.

Commissioning Agent

Timothy Markoe

Tim has a master's degree in Architecture with an emphasis on Sustainable Design from the University of Minnesota. He has been assisting with IEA commissioning projects since 2020. In the 3 years prior to joining IEA, Tim's unique perspective and experience encompassed a variety of facility types from K-12 and higher education buildings to government and commercial facilities, where he performed commissioning and controls services for school districts and building owners.

Commissioning Agent

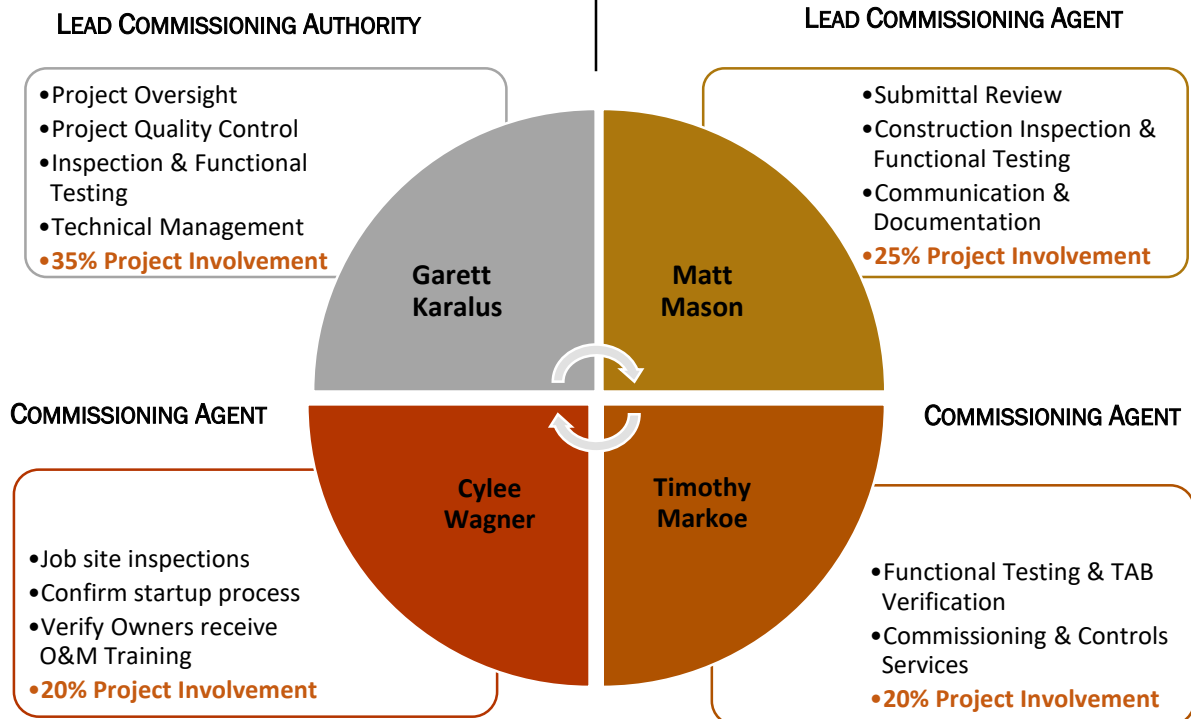
Cylee Wagner

Cylee has a Bachelor of Mechanical Engineering degree from Michigan Technological University, with a concentration on sustainability and energy management. With 8 years of prior experience, Cylee has become an integral part of IEA's Engineering Division since 2020, Cylee's responsibilities currently include performing job site inspections, verifying startup procedures, analysis of construction documents, and confirming building owners receive operations and maintenance training.



Dr. Chris Fenske, Superintendent of Schools
Chain of Command

Architect/Engineer Design Team Representatives
Owner Appointed Contractors/Representatives



PROJECT MANAGEMENT APPROACH

The primary role of commissioning is to represent the owner's best interest through providing expertise for independent inspections and testing of the building's heating, ventilation, and air conditioning equipment. By having an independent agent, the owner can ensure that the design and installation is not biased toward benefiting the designers or installers, rather than the owner.

The IEA commissioning staff are licensed and/or have the commissioning certification credentials needed to ensure a high level of expertise to fully understand complex building systems. IEA executes the testing and verification following a technical commissioning approach, as opposed to simply observing the contractors performing their own verification. The following outline provides a brief overview of the process IEA will follow in commissioning the 2021 Facility Upgrades building commissioning project.

Through the experience of our team, IEA has had the benefit of commissioning designs for a wide variety of mechanical engineering firms. Typically, engineering firms will repeat similar designs and details; however, IEA identifies which design pieces will best work and what might become potential design issues that may impact the operation of the facility. By involving IEA in the commissioning design process, we are able to assist with minimizing the risk of potential problems and unnecessary change orders can be prevented.

One of the most frustrating challenges with the commissioning process can be issue resolution. IEA has devised a system that has proven effective over the past ten years in expediting resolution of issues resulting in quicker closeout. Some keys to effective commissioning that IEA utilizes are:

- Issues logs are clear and concise making it easy to understand what the problem is, who is responsible, and exactly what needs to be done to resolve the issue.
- Issues are illustrated with pictures.
- Logs are maintained and well organized, with dates and history of resolution process.
- IEA will ensure that each issues log is communicated to each responsible party, along with follow-up to verify when the contractor will be handling the issue.
- IEA looks out for the owner's best interest.
- IEA gives the identified issues the proper expectation for priority, so minor issues are not overly focused on.

Communication is Priority

The overall result of IEA's commissioning and communication approach is to ensure IEA represents as an advocate maintaining the best interests of the owner, and ultimately the people who will occupy the facility.

IEA's approach to effectively managing commissioning projects focuses on result-driven communication.

- IEA's Lead Commissioning Authority (CxA)/System Inspector handles aspects of commissioning process that include both management and correspondence. A single point of contact improves efficiency and accuracy of communication.
- In addition to documenting communications through the proper channels, IEA communicates directly with the engineer, general contractor, mechanical contractor, controls contractor, and test and balance contractor to resolve issues.
- Inspections, testing, and reporting are performed with the goal of helping the team members to provide the best system for the owner, as designed and specified.
- Issues are communicated with proposed solutions and the responsible party indicated.
- Based on extensive experience commissioning facilities, IEA is able to identify and thoroughly test potential problem areas. Areas of potential concern that are uncovered receive additional attention and extensive testing. Emphasis is given to issues that are most detrimental to proper function of the system, from the owner's perspective.
- Priority is given to working with the contractor's schedules to complete testing and inspections, without causing delays. IEA coordinates with contractors in order to be on site during critical installation and testing. Inspections are conducted during construction to catch and correct issues early.

IEA understands the Owner is committed to commissioning this facility to ensure that all HVAC systems are complete and functioning properly upon occupancy. Commissioning consists of systematically documenting that specified components and systems have been installed and started up properly, and then functionally tested to verify and document proper operation through all modes and conditions.

The primary role of the Lead Commissioning Agent/System Inspector is to review the design-intent and construction documents, observe that construction is performed according to the design documents, develop and coordinate the execution of a testing plan, and document testing results in order to be reasonably assured that the installed systems operate according to design-intent and in accordance with the contract documents.

Construction & Acceptance Phase

1. Coordinate and direct the system-inspection activities in a logical, sequential, and efficient manner using consistent protocols and forms, centralized documentation, clear and regular communications and consultations with all necessary parties, and frequently updated timelines and schedules and technical expertise.
2. Request and review additional information required to perform inspection tasks, including operations and maintenance (O&M) materials, contractor equipment start-up forms, and equipment check-out procedures.
3. Review and comment on the temperature controls submittals (shop drawings) for testability of ventilation equipment, sequences of operation and control devices.
4. Observe HVAC installation and its compliance with the plans, specifications and ASHRAE 62.1 (most recent version). Attend selected planning and job-site meetings to obtain information on construction progress. Review construction meeting minutes for revisions/substitutions relating to the system inspection process. Assist in resolving any discrepancies.
5. Before startup, gather and review the current control sequences and interlocks and work with contractors and design engineers until sufficient clarity has been obtained, in writing, to be able to write detailed testing procedures.
6. Approve systems startup by reviewing equipment start-up reports and by selected site observation.
7. Validate the test and balance report by randomly checking (with contractor assistance) 10% of the occupied rooms to determine that the air flow supplied to the rooms matches the test and balance report as well as the engineer's design intent and by checking (with contractor assistance) 100% of the ventilation equipment which supplies outdoor air to the occupants to determine that the quantities of outdoor air brought into the building match the test and balance report as well as the engineer's design intent.
8. Write the equipment sequence of operation verification tests sheets from design engineer approved control shop drawings.
9. Validate through witness testing and review of validated Test and Balance Reports, that the specified minimum outdoor air volumes are being provided for all ventilation equipment that introduces outdoor air into the building, throughout the full operational range of the equipment and during all seasonal modes of control. Verification shall occur through a validated test and balance report and equipment sequence of operation verification tests.

SCOPE OF WORK

10. Direct, witness and document the verification of the sequence of operation for all key pieces of equipment (Building Automation System, Rooftop Units (new and existing remodeled), powered roof ventilators, electric cabinet unit heaters and exhaust fans). Verification is performed by the contractor and witnessed by the System Inspector and shall be done for all operational and seasonal modes of control. Verification includes a visual determination that all components and systems respond as called for in the sequences and function in accordance with the design requirements. The System Inspector shall provide the contractors the necessary verification test sheets and procedures for these tests. The System Inspector shall personally witness these tests.
11. Provide to the project team written progress reports and test results with recommended actions.
12. Coordinate retesting as necessary until satisfactory performance is achieved.
13. Provide a final system inspections report to include System Inspector Acceptance Letter, field observation reports, contractor signed commissioning punchlists and Test and Balance report review comments.

One-Year Correction Period

1. Supervise the seasonal or deferred testing and deficiency corrections required by the specifications.
2. Return to the site during the one-year correction period and review with facility staff the current building operation and the condition of outstanding issues related to the original and seasonal system inspections. Also interview facility staff and identify problems or concerns they have with operating the building as originally intended. Make suggestions for improvements and for recording these changes in the O & M manuals. Identify areas that may come under warranty or under the original construction contract. Assist facility staff in developing reports and documents and requests for services to remedy outstanding problems.

SYSTEMS TO COMMISSION

The following systems, including all components and controls, will be commissioned:

A. HVAC EQUIPMENT LIST – Base Bid

- Thirty-five (35) – Packaged rooftop HVAC units with gas heating, DX cooling, energy-recovery, and air purification systems (RTU-1 to 22 and RTU-24 to 36)
- Updates to existing Building Automation System (BAS) for new packaged rooftop units

B. HVAC EQUIPMENT LIST – Alternates

- Alternate 1: New air purification systems at nine (9) existing rooftop HVAC Units and associated BAS upgrades
- Alternate 2: Eleven (11) – Powered roof ventilators (PRV-1, 2, 4, 5, 6, 8, 12, 13, 14, 15, 16) and associated BAS upgrades
- Alternate 3: One (1) – Direct gas-fired Kitchen make-up air unit (DFU-1) and two (2) indirect fired units (IDFU-1 and 2) and associated BAS upgrades
- Alternate 4: Four (4) interior duct furnaces (DF-1A, 1B, 2A, 2B) and associated BAS upgrades
- Alternate 5: New BAS controllers at nine (9) existing package rooftop HVAC units (RTU-37 thru RTU-45)

REFERENCES & PROJECT EXPERIENCE

OSSEO AREA SCHOOLS – BROOKLYN PARK, MINNESOTA (2016-PRESENT)

IEA has provided commissioning services for 14 Osseo School district building projects. The total building areas commissioned is more than 2,374,000 square feet. Commissioning services included design phase reviews, construction meetings, design and submittal reviews, site inspections, functional testing and controls troubleshooting, TAB verification, and warranty phase follow-up testing and commissioning through warranty phase.

Northview Middle School Commissioning (2017-2020)

Northview Middle School commissioning began in the design phase and continued through the warranty phase. The overall project consisted of 2 phases of construction to upgrade the mechanical systems and interior of the 186,450 square foot building. Systems included new VAV AHUs, constant volume AHUs, and associated mechanical and controls work, an addition of a chiller to the cooling system, heating system upgrades, and other miscellaneous HVAC renovations. Garrett Karalus was the primary commissioning agent on this project and was assisted by Matt Mason.

Commissioning Authority: Garrett Karalus

Lead Commissioning Agent: Mathew Mason

Coordinator of Maintenance Services

Jeff Arthurs 763-391-7197

Arthursj@district279.org

Assistant Coordinator of Maintenance Services

Craig Wokson 763-391-7198

woksonc@district279.org

ROCHESTER PUBLIC SCHOOLS – ROCHESTER, MINNESOTA (2010-2019)

Provided commissioning or recommissioning services for 10 buildings totally more than 1,000,000 SF. Worked simultaneously on the projects with the district controls contractor to improve the school building automation systems.

Bamber Valley Elementary School Commissioning (2019)

Commissioned a \$16,500,000 renovation of 91,450 SF Bamber Valley Elementary School. Commissioned systems included DOAS AHUs and displacement ventilation units with VAV boxes, new chilled water-cooling system, and new hot water heating system with condensing boilers. Commissioning began during the construction documents phase.

Commissioning Authority: Garrett Karalus

Lead Commissioning Agent: Mathew Mason

Health and Safety Coordinator

Mike Stock 507-328-4507

mistock@rochester.k12.mn.us

Paape Energy Services (District Controls)

Joe Coffman 507-289-4874 et. 102

joec@paape.com

REFERENCES & PROJECT EXPERIENCE

TRI-CITY UNITED SCHOOLS – MONTGOMERY, MINNESOTA (2013-PRESENT)

IEA commissioned and recommissioned 8 schools for TCU Schools each ranging in project size from 34,769 SF to 593,357 SF, for a total of 1,294,300 SF. The projects involved subcontracting and managing TAB services in addition to commissioning. Key systems commissioned included AHUs (some VAV), VAV boxes and duct reheat coils, chilled beams, tertiary water system, and chilled water-cooling plant.

TCU High School Commissioning (2019-Present)

Matt Mason was the lead commissioning agent who managed the project from construction documents phase through warranty phase. All commissioning staff contributed to TCU projects with construction document review, controls testing and troubleshooting. Site inspections, meetings, writing functional tests, TAB subcontract management and TAB verification were primarily handled by Matt Mason.

Commissioning Authority: Garrett Karalus

Lead Commissioning Agent: Mathew Mason

Director of IT & Facilities:

Carl Menk 507-364-8415

cmenk@tcu2905.us

Limitations and Assumptions

It is assumed that the A/E will provide adequate written design intent, basis of design and full sequences of operation for all equipment and systems for the O & M manuals and for the System Inspector to use in writing functional tests. It is also assumed that the contractors will execute the functional testing of equipment, coordinated and documented by the System Inspector, using forms provide by the System Inspector.

It is assumed that IEA will have full access to the building automation system to execute functional testing.

IEA is not responsible for the construction schedule or the contractor's work.

If IEA's personnel or subconsultants change for this project, the owner must review and approve the replacement personnel. The replacement personnel shall have, at a minimum, equivalent qualifications as the original personnel.

General Liability Insurance

IEA shall provide the specified liability insurance as required. IEA's general liability insurance coverage is found in Appendix C.

Proposal Fee

Our proposed fixed/base bid fee for services identified in the above described Scope of Work **\$34,500**

This fee includes reimbursables, equipment costs, project coordination and management, and final report. Fees for investigative work outside the above scope of work will be additional. IEA will issue a change order and get approval from the owner before proceeding with additional work. Monthly invoices for services conducted during that billing period will be provided until project completion (partial billing). This price offering is valid 60 days from the date of this proposal.

The listed fees for the following HVAC equipment (as outlined under "Systems to Commission") are *in addition to* the fixed/base bid fee:

- Alternate 1: \$800
- Alternate 2: \$1,400
- Alternate 3: \$2,200
- Alternate 4: \$500
- Alternate 5: \$3,600

Total cost for all Alternates: **\$8,500**

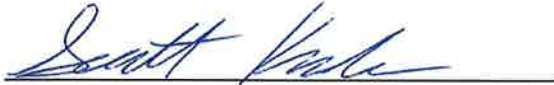
Hourly rates for key individuals working on the project are as follows:

- Lead Commissioning Authority \$149.00
- Lead Commissioning Agent \$134.00
- Commissioning Agent \$104.00
- Administrative Support\$ 80.00

AUTHORIZATION TO PROCEED

We appreciate the opportunity to present this proposal for building commissioning services. Please sign this authorization to proceed and e-mail garett.karalus@ieasafety.com. Retain the original for your records. We will begin the project at the time we receive this written documentation to proceed.

Regards,



Garett Karalus, P.E., CCP
Director of Engineering
IEA, Inc.



Jeff Athmann, CEO

* * *

Please check all authorizations that apply:

- Fixed/base bid for services **(\$34,500)**
 - Alternate 1 (\$800)
 - Alternate 2 (\$1,400)
 - Alternate 3 (\$2,200)
 - Alternate 4 (\$500)
 - Alternate 5 (\$3,600)
- All of the above services **(\$43,000)**

Please proceed according to the above stated fees, terms, attached General Conditions, and proposal #9647 dated April 23, 2021.

Printed Name

Authorized Signature

Date

UFARS code or PO number

APPENDIX A

Commissioning Firm Experience Form

Commissioning Agent Qualifications

<u>IEA</u> Company Name	<u>Garett Karalus</u> Contact Person	<u>Director of Engineering</u> Title	
<u>9201 West Broadway N., #600</u> Address	<u>Brooklyn Park</u> City	<u>MN</u> State	<u>55445</u> Zip/Postal Code
<u>763-315-7900</u> Telephone	<u>763-315-7920</u> Fax	<u>garett.karalus@ieasafety.com</u> E-mail	

Description of Business

Commissioning Activities

Percentage of overall business devoted to system inspections and/or commissioning services. 90% of ENG Division %

How long has the firm offered system inspections and/or commissioning services? 16 Years

Average number of system inspections and/or commissioning projects performed each year? 25

Systems (technologies) for which firm has provided system inspections or commissioning services (check all that apply):

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Pkg. or Split HVAC | <input checked="" type="checkbox"/> Day Lighting | <input checked="" type="checkbox"/> Commercial Refrigeration |
| <input checked="" type="checkbox"/> Chiller System | <input checked="" type="checkbox"/> Electrical, General | <input checked="" type="checkbox"/> Telecommunications |
| <input checked="" type="checkbox"/> Boiler System | <input checked="" type="checkbox"/> Electrical, Emerg. Power | <input checked="" type="checkbox"/> Thermal Energy Storage |
| <input checked="" type="checkbox"/> Energy Mgmt. System | <input checked="" type="checkbox"/> Envelope | <input checked="" type="checkbox"/> Labs & Clean Rooms |
| <input checked="" type="checkbox"/> Variable Freq. Drives | <input checked="" type="checkbox"/> Fire/Life Safety | |
| <input checked="" type="checkbox"/> Lighting Controls | <input checked="" type="checkbox"/> Plumbing | |

Number of qualified professionals on staff who have directed commissioning projects: 4

List qualifications: BME, PE, CCP, ASHRAE

Prior Projects:

Building Name	Location	Type of Project (new, addition, or remodeling)	Contact Name	Contact Phone Number
<i>Osseo Area Schools (Ongoing with multiple buildings)</i>	<i>Osseo, MN</i>	<i>New & Remodel</i>	<i>Jeff Arthurs Coordinator of Maintenance Services</i>	<i>(763) 391-7197</i>
<i>Austin Public Schools (3 buildings)</i>	<i>Austin, MN</i>	<i>Renovations/Additions</i>	<i>Brian Beasley Director of Buildings & Grounds</i>	<i>(507) 460-1929</i>
<i>Spring Lake Park Area Schools (3 buildings)</i>	<i>Spring Lake Park, MN</i>	<i>Renovations/Additions</i>	<i>Dough Stahl Facilities/Buildings & Grounds</i>	<i>(763) 360-1758</i>
<i>Minnesota West - Granite Falls Campus Commissioning</i>	<i>Granite Falls, MN</i>	<i>Renovations</i>	<i>Jim Morgan MN State Construction Project Manager</i>	<i>(651) 201-1781</i>

APPENDIX B

Key Staff Resumes

GARETT KARALUS PE, CCP

LEAD COMMISSIONING AGENT

Garett Karalus is a PE and CCP certified Commissioning Agent, with 8 years of experience. He is focused on educational and technical client commissioning field verification, project management, and documentation.

Garett is proficient in all aspects of the commissioning process and is an asset to the IEA Service Team. He has extensive experience verifying test, adjust, and balancing in buildings, and troubleshooting HVAC control issues. He has managed numerous recommissioning projects in schools, worked with the building owner and maintenance staff to increase efficiency and temperature control through O&M practices, repairs, and optimized control sequences.

EXPERIENCE

District Building Commissioning & Recommissioning | Osseo Area Schools

Provided commissioning services for thirteen district HVAC renovation/addition projects and recommissioning services for ten district buildings. Projects included commissioning during the design phase for optimal control strategy and energy efficient design.

District Building Commissioning & Recommissioning | Austin Public Schools

Provided design and construction commissioning services for renovations and new construction projects for HVAC systems, including ice storage, chilled water, and chilled beam systems. Included troubleshooting controls issues for new and existing equipment. Provided recommissioning services for 3 buildings and commissioning services for 3 projects.

District Recommissioning | STMA Schools

Lead recommissioning services for 5 projects spanning 3 years which included HVAC controls troubleshooting and identifying energy savings opportunities.

District Commissioning & Recommissioning | Spring Lake Park Area Schools

Commissioned 2 school renovation and HVAC upgrade projects and recommissioned 2 other school buildings.



 8 Years with IEA

CERTIFICATIONS

- P.E. – MN Board of Engineering
- CCP – BCxA Certified Commissioning Professional

Personal Reference

Garett has provided project management, communication, meeting involvement, and field document correspondence for Osseo Area Schools Commissioning.

Jeff Arthurs-Coordinator of Maintenance Services

Contact:

763.391.7197/arthursj@district279.org

MATHEW MASON

COMMISSIONING AGENT

Matt Mason is a recent graduate in mechanical engineering, with a strong interest in building ventilation functionality and controls. Matt has assisted on over 40 commissioning and recommissioning projects at IEA.

His responsibilities include writing and performing functional tests, performing job site inspections, verifying air and water test and balancing, and verifying start-up procedures. He also has experience working to ensure proper O&M training is received by the building owners.



 **4 Years with IEA**

EXPERIENCE

District Building Renovations | Tri-City United Schools

Lead commissioning services at four district building renovations/additions. Helped manage TAB as a subcontractor and lead TAB verification, functional testing, and controls troubleshooting.

District Building Renovations | Fridley Public Schools

Matt was the primary field lead on many of the 7 school renovation commissioning projects. He assisted in all aspects of the commissioning process.

New Processing Facility | Faribault Foods

Involved with field verification of industrial systems and controls integrated to the building function. Worked in coordination with the mechanical contractor.

St. Michael High School Recommissioning | St. Michael-Albertville Public Schools

Provided recommissioning services to identify the overall ventilation system function, based upon original design and building usage, as well as identified energy saving opportunities. Worked to optimize control sequences for energy efficiency.

EDUCATION

- Bachelor of Engineering – University of Minnesota

Personal Reference

Matt has provided communication, meeting involvement and field document correspondence for Tri-City United Schools Commissioning.

Carl Menk-Director of IT and Facilities

Contact: 507.364.8415/cmenk@tcu2905.us

TIMOTHY MARKOE

COMMISSIONING AGENT

Timothy Markoe has a master's degree in Architecture with an emphasis on Sustainable Design.

In the 3 years prior to joining IEA, Tim's unique perspective and experience encompassed a variety of facility types from K-12 and higher education buildings to government and commercial facilities, where he performed commissioning and controls services for school districts and building owners.



 **With IEA since 2020**

EXPERIENCE

Commissioning | Hudson High School

Lead commissioning services at the newly renovated high school. Assisted with TAB verification, functional testing, and controls troubleshooting.

Commissioning | North Branch Public Schools

Assisted with commissioning and balancing efforts for four of the school district buildings. Managed controls troubleshooting and TAB verification for all four buildings.

Commissioning | Scheels All Sports

Assisted with commissioning of three store locations. Managed controls troubleshooting and field verification.

Recommissioning | Hennepin County Government Center

Assisted with recommissioning efforts and system evaluation studies. Provided recommendations for optimizing current equipment and temperature control improvements.

EDUCATION

- M.S. Architecture - Sustainable Design, from the University of Minnesota
- B.A Environmental Studies, from the St. John's University

CYLEE WAGNER

COMMISSIONING AGENT

Cylee Wagner graduated from Michigan Technological University as a Mechanical Engineer with a concentration on sustainability and energy management.

Cylee had 8 years of engineering experience prior to becoming an integral part of IEA's Engineering Division. Her responsibilities include performing job site inspections, verifying startup procedures, analysis of construction documents, and confirming building owners receive operations and maintenance training.



 With IEA since 2020

EXPERIENCE

COVID-19 HVAC Assessment | Madelia Public Schools

Conducted a visual assessment of ventilation equipment at the High School and Elementary school to provide operation recommendations during the COVID-19 pandemic and ensure equipment was functioning as designed to minimize risk to students as the new school year kicked off.

Addition & Renovation Commissioning | Richfield Schools

Managed construction commissioning of multi-phase HVAC renovations at 3 school buildings, ensuring proper ventilation function and installation through the process of verifying startup procedures and confirming equipment is implemented as designed.

COVID-19 HVAC Assessment | Ely Public Schools

Provided a ventilation assessment regarding COVID-19 guidelines to ensure proper operation of ventilation equipment. Recommendations were provided to the school district to better inform them of needed renovations as they considered major improvements for their campus.

EDUCATION

- B.S. Mechanical Engineering, from the Michigan Technological University

Additional Technical Experience:

Energy Study Assessments - Michigan retail facilities, manufacturing facilities, public schools, and grocers

Experience with OEM Projects ranging from dust collection to grain drying systems

APPENDIX C

General Liability Insurance



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

12/30/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER AssuredPartners of Minnesota LLC 2361 Hwy 36 W St. Paul MN 55113		CONTACT NAME: Kim Rowe PHONE (A/C, No, Ext): (651) 287-1161 FAX (A/C, No): (651) 644-9137 E-MAIL ADDRESS: krowe@apminnesota.com	
		INSURER(S) AFFORDING COVERAGE	
		INSURER A: Colony Insurance Company	NAIC # 39993
		INSURER B: Accident Fund Insurance Co of America	10166*
		INSURER C:	
		INSURER D:	
		INSURER E:	
		INSURER F:	
INSURED Institute for Environmental Assessment Inc 9201 West Broadway No #600 Brooklyn Park MN 55445			

COVERAGES

CERTIFICATE NUMBER: 2021-22 Master

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Professional Liability GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC OTHER:			PACE4223626	01/01/2021	01/01/2022	EACH OCCURRENCE	\$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 100,000
							MED EXP (Any one person)	\$ 10,000
							PERSONAL & ADV INJURY	\$ 1,000,000
							GENERAL AGGREGATE	\$ 2,000,000
							PRODUCTS - COMP/OP AGG	\$ 2,000,000
							Professional Liability	\$ 1,000,000
A	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY			PACE4223626	01/01/2021	01/01/2022	COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
							BODILY INJURY (Per person)	\$
							BODILY INJURY (Per accident)	\$
							PROPERTY DAMAGE (Per accident)	\$
								\$
A	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$			EXC306555	01/01/2021	01/01/2022	EACH OCCURRENCE	\$ 5,000,000
							AGGREGATE	\$ 5,000,000
								\$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	WCV8012893	01/01/2021	01/01/2022	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER	
							E.L. EACH ACCIDENT	\$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	\$ 1,000,000
A	Pollution Liability			PACE4223626	01/01/2021	01/01/2022	Aggregate	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

FOR INFORMATION ONLY

CERTIFICATE HOLDER**CANCELLATION**

FOR INFORMATION ONLY

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



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APPENDIX D

General Conditions

General Conditions

The word "Consultant" refers to the Institute for Environmental Assessment ("IEA"), the contracting company is referred to as the "Client". Client agrees to be bound by these General Conditions by accepting the Proposal and engaging Consultant.

The Agreement with you, the Client, is comprised of this Agreement and accompanying written proposal.

1. Scope of Work

Consultant will furnish and perform the professional services specified in Consultant's proposal (the "Proposal"). The services as set forth in the Proposal (the "Services") will be provided by Consultant's personnel at the location of the Client (the "Site") (hereinafter referred to as the "Project"). If any portion of the Proposal is inconsistent with this Agreement, the terms of this Agreement shall control:

Consultant's obligation to perform the Services shall terminate upon delivery of a final report within 45 days of Project completion.

In addition to the Proposal, Consultant and Client agree as follows:

A. Right of Access

Unless otherwise agreed in writing, Client will furnish Consultant with right-of-access to the Site and accurate information necessary to conduct the Services, as requested by Consultant.

B. Confidential & Proprietary Information

The Consultant and Client agree not to disclose to others or use any confidential or proprietary information or trade secrets of the other, which may become known to each prior to, during or after the performance of this Agreement without the prior written consent of the other. "Confidential or proprietary information" and "trade secrets" shall mean any information about the other which is neither publicly known nor legally accessible to the other parties from third parties. Prior to the disclosure of any such confidential or proprietary information or trade secrets, each shall obtain the written approval of the other.

C. General

Consultant warrants that the Services it performs under this Agreement will be performed with the care and skill ordinarily exercised by reputable members of its profession practicing under similar conditions during the period of this Agreement and in the same or similar locality. The AIHA-certified IEA laboratory will perform PCM analysis if specified. Other field PCM analysis will be completed by laboratory-approved field technicians, generally under AAR Guidelines.

2. Payment for Services

A. Fee Schedule & Maximum Costs

The fee schedule in the Proposal specifies the amounts due to Consultant from Client for its Services performed under this Agreement.

B. Schedule of Payment

Invoices will be submitted to Client once a month for services performed during the prior month. Payment to Consultant is due upon presentation to Client, and past due after thirty (30) days of receipt of the invoice, in which case a service fee of 1.5% monthly shall be added to the invoice, unless specifically arranged otherwise by Consultant and communicated in writing. Client reserves the right to question any item on any invoice and Consultant agrees, upon Client's request, to supply such documentation as is necessary to reasonably justify such invoice amount to Client's reasonable satisfaction. Client agrees to pay Consultant any costs of collection including reasonable attorneys' fees and costs if payment for Services are not made when due.

C. Expert Fee Expenses

If Client requests Consultant to participate on behalf of Client in litigation regarding the subject matter of this Agreement, Client agrees to pay all of Consultant's expenses arising therefrom at the prevailing rate for Consultant's time plus out-of-pocket costs and expenses, including reasonable attorney fees incurred by Consultant in conjunction with the participation.

3. Indemnity & Insurance

A. Indemnity

Consultant shall indemnify and hold harmless Client against losses, damages and claims, demands, actions, costs (including reasonable attorney fees), and fines of any kind resulting from any breach of this Agreement by Consultant, its employees, agents, subcontractors or licensees, of their obligation under this Agreement, or from any negligence or misconduct by Consultant, its employees, agents, subcontractors or licensees, but only for the proportion of damages which is equal to Consultant's proportion of the total fault which directly caused the damages. Client shall indemnify and hold harmless Consultant against losses, damages and claims, demands, actions, costs (including reasonable attorney fees), and fines of any kind resulting from any breach of this Agreement by Client, its employees, agents, subcontractors or licensees, of their obligation under this Agreement, or from any negligence or misconduct by Client, its employees, agents, subcontractors or licensees, but only for the proportion of damages which is equal to Client's proportion of the total fault which directly caused the damages.

B. Limitation of Liability

EXCEPT AS EXPRESSLY SET FORTH IN SECTION 1(C) HEREOF, CONSULTANT DISCLAIMS ALL WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL EITHER CONSULTANT OR CLIENT BE LIABLE TO THE OTHER PARTY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND WHETHER FOR BREACH OF ANY WARRANTY, FOR BREACH OR REPUDIATION OF ANY OTHER TERM OR CONDITION OF THIS AGREEMENT, FOR NEGLIGENCE ON THE BASIS OF STRICT LIABILITY OR OTHERWISE.

General Conditions

C. Insurance

- (1) Consultant carries coverage and limits of liability insurance as follows:
 - (a) Workers Compensation with statutory limits.
 - (b) Employers' Liability with a minimum policy limit of \$1,000,000.00.
 - (c) Comprehensive General Liability with the following coverage:
 - I. Limit \$1,000,000.00 per occurrence
 - II. \$2,000,000.00 general aggregate
 - III. \$2,000,000.00 products completed/operations aggregate
 - IV. \$1,000,000.00 personal and advertising injury
 - V. \$300,000.00 fire Damage (any one fire)
 - VI. \$25,000.00 medical expenses (any one person)
 - (d) Automobile insurance covering all owned, non-owned or hired automobiles used in connection with the work covering bodily injury and property damage with a minimum combined occurrence limit of \$1,000,000.00
 - (e) Professional Liability (claims made) with the following coverage:
\$1,000,000.00 per occurrence
 - (f) Contractor Pollution Liability (claims made):
\$1,000,000.00 each occurrence
 - (g) Umbrella Liability.
\$5,000,000.00 each occurrence
- (2) Client (or Owner if applicable), Subcontractors and Agents agree to provide Consultant, upon request, Certificate(s) of Insurance signed by the insurer evidencing insurance for premise liability, general liability, auto and workers comp. equal or greater than those limits carried by the Consultant.

- (3) Consultant shall promptly deliver to Client (or Owner if applicable), upon request, certificate(s) of insurance signed by the insurer for the policies described in (3) (C) above, or certified copies of such insurance policies indicating the existence of such coverage. IEA must be listed as both certificate holder and insured, or additional insured on each certificate of insurance.

4. Assignment

This Agreement shall not be assigned by Consultant without prior written consent of the Client.

5. Independent Contractor

Consultant is an independent Contractor and shall not be considered an employee, partner or joint venturer of the Client for any purpose.

6. Restriction to hire employees of Consultant

Client agrees to refrain from hiring, contracting, or retaining the services of Consultant's employees during or within 12 months after the termination of Consultant's services. If Client hires an employee of Consultant in violation of this Section 6 without Consultant's written consent, Client shall pay Consultant a placement fee equal to twenty-five percent (25%) of such employee's annual wages.

7. Notices

Any notice under this Agreement shall be in writing and shall be deemed to be properly given when delivered to an officer of Client or the Consultant's Chief Financial Officer, as the case may be, at their addresses as set forth in the Proposal. The courts located in the State of Minnesota shall have exclusive jurisdiction in any actions commenced by Consultant or Client in connection with this Agreement, the Project or the Services.

8. Applicable Law

This Agreement shall be governed by and construed under the laws of the State of Minnesota. Parties agree to participate in pre-suit mediation prior to commencement of an action.

9. Extent of Agreement

This Agreement, together with the Proposal, represents the entire Agreement between Client and Consultant, and supersedes all prior obligations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument, dated and executed by both Client and Consultant.

10. Termination

Upon completion of the Project, Consultant will, at Client's request, deliver to Client or its designee all records, documents or materials in its possession or control of Consultant which are owned by Client. The obligations and provisions of Sections 1B, 2, 3, 5, 6 and 10 shall survive completion of the Project or termination of this Agreement.