



Commissioning Services Proposal for:

Altru Sports Complex

JLG Architects

April 4, 2025





4/4/2025

Adam Davidson, AIA, LEED AP
Principal Architect
JLG Architects
124 3rd Street North
Grand Forks, North Dakota 58203

via email: ADavidson@jlgarchitects.com

RE: Proposal for Commissioning Services – Altru Sports Complex

Dear Mr. Davidson and Team,

KFI Engineers is excited about the opportunity to provide commissioning services for the Altru Sports Complex project. At KFI, we understand that well-optimized systems enhance equipment longevity, energy efficiency, and occupant comfort. Our experienced team is committed to ensuring that your new facility operates at peak performance from day one and for years to come.

With deep expertise in commissioning and a collaborative approach, we excel in delivering successful results for complex sports and wellness facilities across North Dakota. We anticipate and address challenges proactively, ensuring seamless integration of all building systems.

What Sets KFI Apart:

1. **Unmatched Experience:** Over 20 years of industry leadership in commissioning, system optimization, and Owner representation.
2. **Certifications & Expertise:** NEBB-certified in commissioning and test & balance (TAB) for air and hydronic systems, plus ASHRAE commissioning certification.
3. **Skilled Field Team:** Licensed engineers, former TAB and controls technicians, and sheet metal workers—all hands-on professionals who operate and test systems daily.
4. **Advanced Testing Capabilities:** A comprehensive inventory of equipment for air, water, noise, vibration, air quality, and psychrometric analysis ensures precise system evaluations.

At KFI, we believe technical commissioning should be hands-on, with a focus on field inspections and direct equipment testing. This approach guarantees quality performance and long-term operational success.

We appreciate the opportunity to submit our proposal and look forward to collaborating on this important project. Please feel free to contact me at srdunnwald@kfi-eng.com or 651-262-8589.

Best regards,
KFI ENGINEERS

A handwritten signature in black ink, appearing to read 'Scott Dunnwald'.

Scott Dunnwald
Project Executive



FIRM OVERVIEW

KFI Engineers (KFI) is an engineering and commissioning firm that provides services for government, educational, industrial, commercial, institutional, retail, and healthcare organizations.

KFI has been providing services since 1998 and continues to be at the forefront of commissioning work in recreation and wellness environments. We have successfully executed numerous high value retrofits and new constructions. Adhering to a diligent standard of care for our clients, we get involved during the design stage to establish the quality level expected on every project. We understand the difference between a proper installation and a marginal one and establish the required quality level early in construction. There is no substitute for measurement and testing. Our NEBB certified commissioning staff utilizes KFI's calibrated testing equipment that's necessary to provide real-time information on system performance.

Our philosophy is simple, whether commissioning our own designs or the designs of others: ***treat contractors with respect while remaining firm, fair and timely with complex field situations.*** We believe in structured test protocols, point-to-point testing of control systems, the engagement of the Owner's operations staff, and the pursuit of punch list completion.

EXPERTISE:

- Commissioning and recommissioning
- Mechanical and electrical engineering
- Central systems
- Energy audits
- Voice and data systems
- Budgets and detailed cost estimates
- Critical-path scheduling
- Control system design
- Preventative maintenance manuals
- Client training

SERVICES WE OFFER:

- Commissioning, recommissioning, and retrocommissioning
- Controls system design
- Building infrastructure
- Utility systems design
- Process and chemical engineering
- Integrated energy modeling

"You sent an outstanding team down that prevailed through the chaos and somehow effortlessly regrouped and redirected efforts as needed to keep the effort on track and conclude with success. My expectations are always very high and once again you guys exceeded them. Your staff proved to be a perfect combination of design, commissioning, and field experience to turn a situation that I believe under other commissioning contractors would have been a complete failure, into one of the most successful and rewarding experiences one could ask for."

Gary Sorlie, Engineering Director – Abbott Labs

UNIQUE QUALIFICATIONS

KFI understands the level of effort required to meet project goals. Our staff has experience building HVAC and control systems, holds both ASHRAE and NEBB certifications, and has extensive design experience from renovations to new constructions.

Dedicated Commissioning Team

At KFI, we have a dedicated commissioning department with full-time engineers and technicians who understand all aspects of the commissioning process. This is an advantage over other firms whose commissioning team members only intermittently oversee projects. KFI's commissioning staff is in the field daily testing and troubleshooting systems. This allows us to quickly look for and address issues that can be pitfalls for installing contractors.



KFI uses commissioning software for documentation management. Some of the features of these platforms include:

- The Owner and project management team have the ability to see stat-tracking dashboards to identify the active percentage of tests and checklists completed, number of active open issues (and whose responsibility they are), rate of issues identified and completed, as well as other performance metrics.
- Allows contractors to utilize a web interface to execute construction checklists and pre-functional and functional test procedures. Multiple users can access their portions of checklists at once to keep pace in the field instead of handing off completed lists between parties.
- Issues are logged and tracked in real-time as test forms are executed. All parties can see and respond to the issues lists via the web interface to have constant access to the most up-to-date issues log.

Commissioning Certification

KFI's commissioning staff is knowledgeable of industry standards for delivering a quality, successful commissioning project to the Owner. Staff members hold several certifications, including NEBB - Building Systems Commissioning (BSC), AABC ACG Certified Commissioning Authority (CxA), and the University of Wisconsin Qualified Commissioning Process Provider (QCXP). Active within the NEBB BSC certification program and committee, KFI's staff provides technical updates and instructing at seminars, including two individuals who have served as president of the organization. Dedicated to the pursuit of continued education, our certifications and NEBB BSC leadership ensure that we are leading the industry rather than following it.

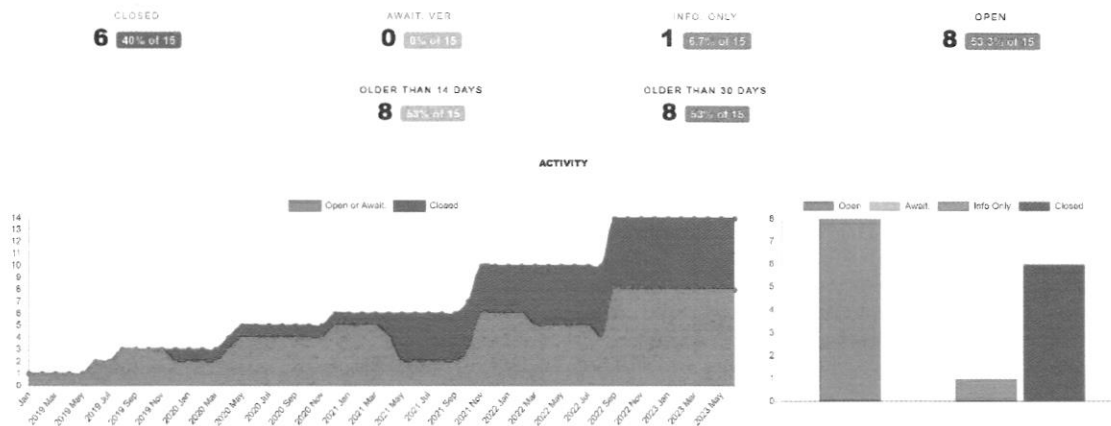
Test & Balance Certification

KFI is a NEBB test and balance (TAB) certified firm for both air and hydronic systems. Our staff is proficient in industry-standard TAB procedures, required reporting, and the application of TAB instrumentation. KFI has the background to identify deficiencies and perform necessary independent investigation into air-side or hydronic issues to assist with identifying solutions.

Controls Design

The experienced programmers on staff at KFI understand the details necessary to control a building. We regularly write the programming code alongside system designers to ensure that nothing is lost in translation. Over a dozen of our staff members hold Niagara AX/N4 certifications. An expanded controls design allows us to deliver what is needed for equipment to perform in concert. Controls strategies are simulated and tested in our controls lab prior to release. We excel at creating well-defined, industry-standard, written sequences of operation and basic schematics. In addition, we offer documents beyond these to include schematics enhanced with control arcs, function block diagrams, graphical user interface layouts, and installation drawings.

BlueRithm Tracking Dashboard Example



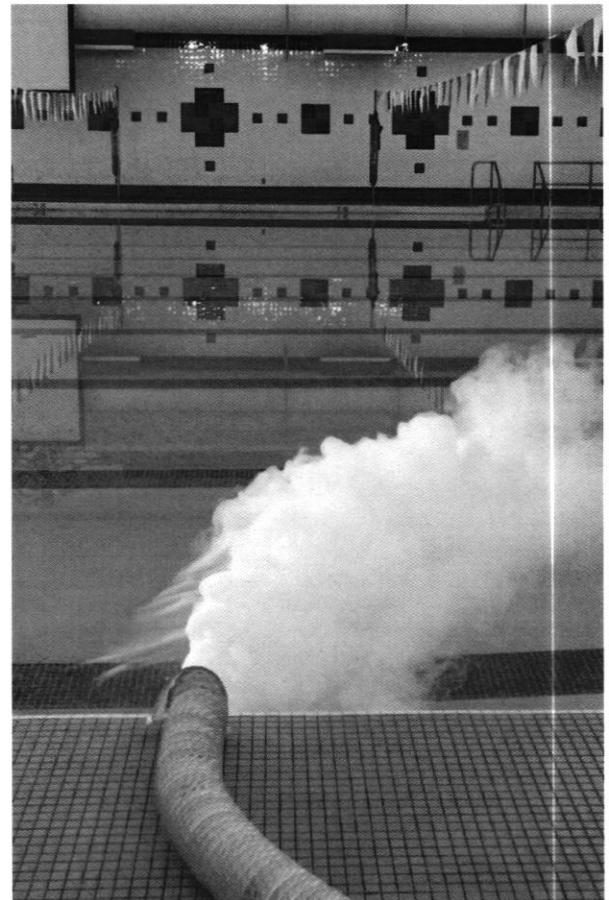
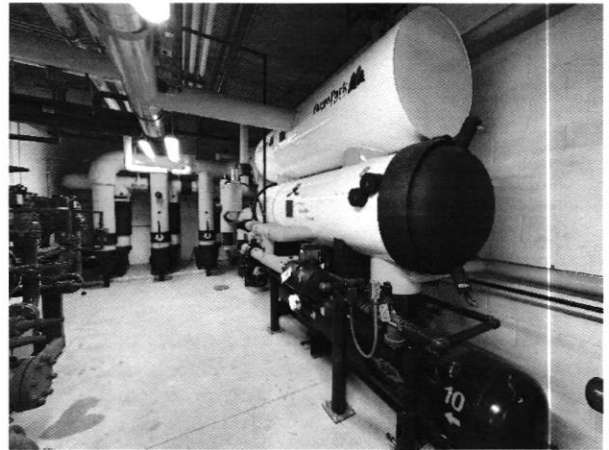
WHY COMMISSIONING?

For a high-use public facility like the Altru Sports Complex, where systems run up to 18 hours a day, ensuring your mechanical, electrical, and plumbing (MEP) systems function correctly from day one is critical. Without proper commissioning, owners can face **years of troubleshooting, repeated contractor callbacks, excessive energy costs, and increased maintenance expenses**, all of which add up to operational inefficiencies and frustration.

Even a well-designed system can **waste significant energy** if not properly commissioned. Issues like **building pressure imbalances, inconsistent heating and cooling, and simultaneous heating and cooling** can result in excessive energy consumption and occupant discomfort. Studies from the **Lawrence Berkeley National Laboratory (LBNL)** show that commissioning can reduce energy use by **5–16% in new buildings** and **10–20% in existing buildings**, with a typical payback period of **less than five years**. Our internal calculations revealed that KFI's typical payback period was closer to 2.5 years.

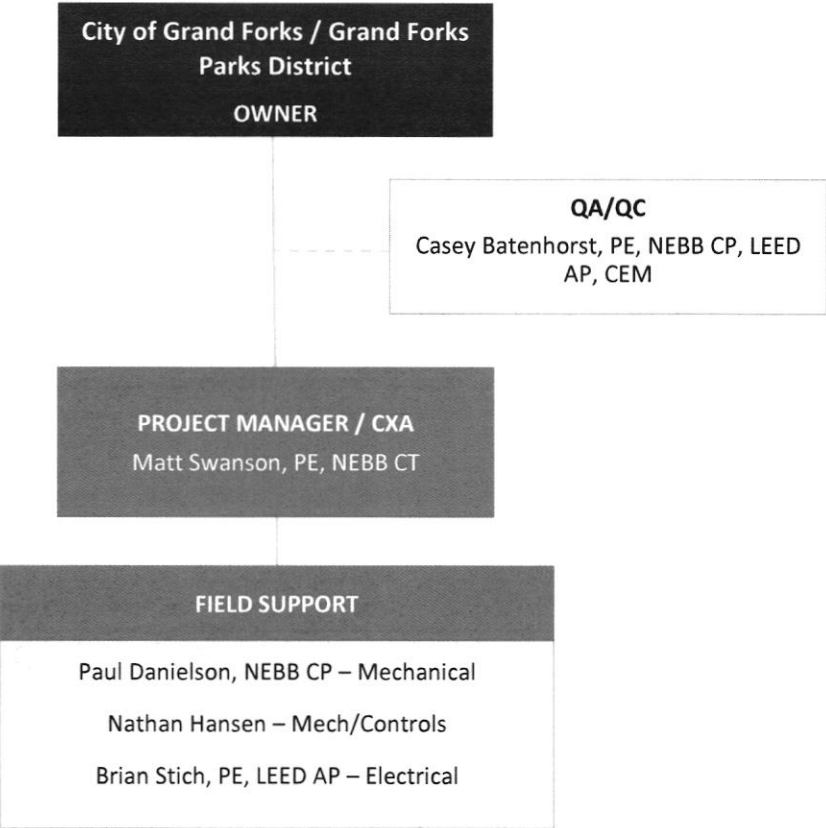
In addition to commissioning athletic facilities, our team is frequently called upon to correct issues retroactively—particularly in complex environments like natatoriums and pool-adjacent spaces. Systems in these areas must interact precisely to manage humidity, air quality, and temperature, both within the pool area and in adjacent zones. If these issues are not identified during commissioning—or ideally in the design phase—they can be **extremely costly and disruptive** to correct later.

Beyond energy savings, commissioning ensures that facility operators receive **comprehensive training, full system documentation, and a clear understanding of how to optimize performance**. This investment not only enhances occupant comfort and safety but also protects the owner's financial investment, allowing the facility to run at peak efficiency for years to come.



PROJECT TEAM

Below is an organizational chart outlining our proposed team and structure. Resumes, including team member credentials and relevant experience, are provided in Attachment A.



PROJECT APPROACH

KFI has practiced technical commissioning methodology since our company's inception. Technical commissioning places an emphasis on the commissioning authority and technicians taking active part in the construction, installation, and operational tests in the field in lieu of creating checklists for contractors to complete themselves. This style of commissioning provides an unbiased, independent review of the commissioned systems, and delivers true value to the project. Included below are several key aspects of our commissioning approach which will be implemented on your project.

KFI benefits the project by proactively identifying issues as early as possible. To implement this practice, a commissioning team needs expertise in all areas of design and construction. Our team has unique industry diversity and experience that other firms cannot match:

- A unique blend of commissioning engineers, controls technicians, former design engineers, facility engineers, and tradesmen experienced in sheet-metal and pipefitting.
- TAB certified commissioning personnel
- Routine performance of retro-commissioning and system troubleshooting in existing facilities, which requires our team to diagnose the root cause of issues and either correct them ourselves or design the solution to the issue.

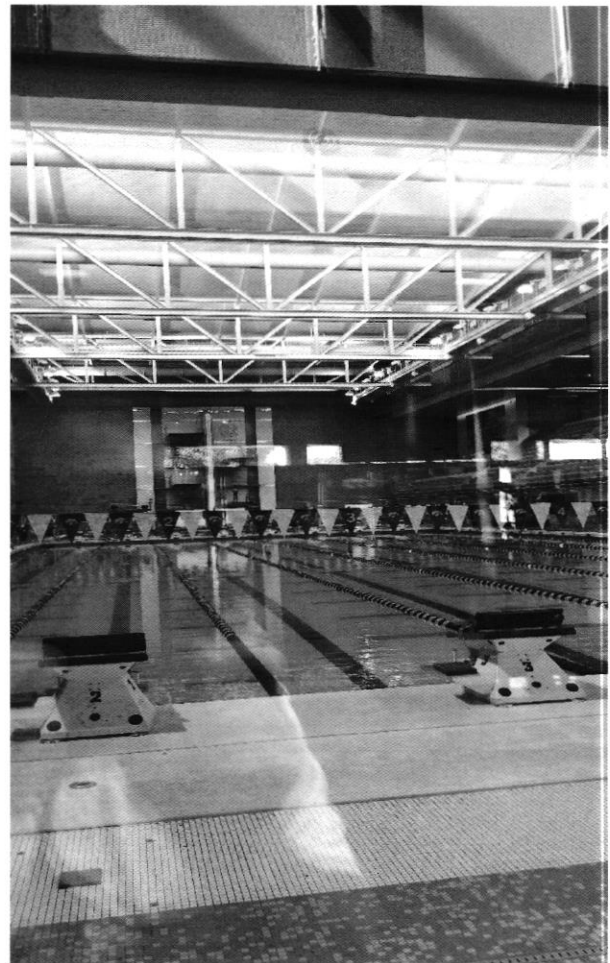
A thorough construction phase installation review is paramount to prevent turnover delays during testing. KFI's commissioning agents actively inspect systems to identify installation deficiencies while they are still easy to correct. We also perform the following in addition to ensuring construction details and specifications are met:

- Ensure manufacturer requirements are maintained. The ever-evolving technology in building systems requires continued research by our personnel, ensuring equipment is installed properly to allow optimal performance.
- Use our experience as installation professionals to ensure quality workmanship is maintained.
- Verify equipment access is maintained. This is critical not only for future Owner maintenance needs, but to ensure that all equipment can be accessed during TAB and start-up processes.

A poorly executed TAB process can be as devastating to facility operations as a bad controls installation. KFI will review the final TAB report for both completion and accuracy to the project documents, as well as conformance

to the plan, process, and demonstration results. We will also ensure that critical data such as calibration factors and system differential setpoints are documented in the report for future Owner reference. This has proven critical in the past if a controls system suffers a component failure and loses all existing setpoints.

The heart of the commissioning process is functional performance testing. KFI implements a testing process beyond setpoint adjustments to test sequences and review automation trend logs. 'Real' commissioning is a technical, comprehensive process involving hands-on inspection and technical knowledge of the controlled systems, devices, and applications. We utilize our troubleshooting proficiency to identify issues the contractors themselves did not recognize.





KFI can identify the root cause of a problem rather than merely documenting the failure.

Our multi-step testing process includes:

- Contractor performance of a preliminary self-check prior to functional performance testing with our team. This shakes out minor issues by the contractor, so our personnel can focus on optimizing the system.
- Physical verification of the controlled devices and sensors to confirm installation compliance with manufacturer requirements for optimal performance.
- Review of Building Automation System (BAS) graphics to ensure the animated graphical displays match the physical locations of sensors and devices in the systems or equipment.
- Alarm devices are tripped to verify that alarms are properly displayed and that the appropriate shutdown sequences are followed.
- Sequence verification includes initial setpoint adjustments and overrides to prove immediate functions. Reviewing sequence trends after the facility is occupied is a critical follow-up step to ensure the automation system properly controls the functions under load, without significant overshoot or hunting problems. Testing includes normal mode, alarm sequences, and applicable emergency modes of operation.

After the above tests have concluded and issues are corrected, integrated systems testing is conducted to ensure the facility functions properly as a whole.

We will utilize key trend reviews and point verifications at the terminal level to provide the best value to the Owners while identifying issues prior to turnover.

All issues are tracked on KFI's standard forms and issued at the end of each testing session. KFI does not accept corrections until they are verified by our team.

Our commissioning personnel are used to collaborating with engineers and contractors on any issues that may arise. This is important because a unified project team that collaborates to resolve issues in a timely manner leads to a successful project. We encourage contractors to be present and to assist with the functional performance testing. This leads to the understanding and acceptance of issues discovered.

KFI understands that we are not the engineer of record, nor do we try to be. There may be instances in which we find solutions that differ from the project documents. In these cases, we will provide suggestions to the design architect or engineer for consideration. In the end, we ensure all direction related to our issue logs come from the architect, engineer, or the Owner, not the commissioning authority.

KFI's technical commissioning approach works, resulting in the delivery of a quality project. Our thorough post-construction efforts ensure these results continue to be achieved.

PROJECT UNDERSTANDING

The Altru Sports Complex is set to rise just south of the Alerus Center in Grand Forks, nestled between South 42nd Street, 17th Avenue South, and Interstate 29. Spanning approximately 223,500 square feet, the state-of-the-art facility will feature a 50-meter indoor competition pool, a 25-yard instructional pool, and a deep diving well. Additional amenities include an indoor turf field with a sprint track, eight pickleball courts, multi-use program rooms, concessions, a prep kitchen, administrative offices, and essential support spaces. With a budget of \$110 million, the project is nearing completion of its design development phase.

SCOPE OF WORK

KFI will commission the following systems:

1. HVAC Systems and Associated Controls
 - Boilers (4)
 - Chillers (2)
 - AHU (7)
 - HRU (1)
 - PDU (3)
 - VAV and associated heating valves (40)
 - Test & Balance Review
2. Electrical Systems
 - Normal Power Distribution
 - Lighting Controls

The commissioning tasks to be performed are in alignment with IECC Section C408 and include:

Design Phase

1. Review Owner's Project Requirements and the design team's Basis of Design (if applicable) to become familiar with the project. Provide written comments for consideration.
2. Perform one (1) design reviews. Our review will be performed at 95% CD phase when control sequences have been developed. Written comments will be provided to the design team for consideration for each design review.
3. Attend one (1) design review meetings. We anticipate one meeting at the formal design review document phase.
4. Develop a Commissioning (Cx) Plan. Update the Cx Plan throughout the project. The Cx Plan will identify members of the Cx team, roles and responsibilities of each team member, the Cx schedule, and provide a narrative of Cx tasks.
5. Develop a project-specific Cx specification for inclusion in the construction documents. Provide specifications to the design team and owner for review.

Construction & Acceptance Phases

6. Review the project schedule and provide the construction team Cx milestones and task durations for inclusion in the official project schedule.
7. Attend and lead Cx kickoff meeting to assist with Cx coordination.
8. Review initial equipment submittals for the commissioned systems concurrent with the design team. Submittal review comments will be forwarded to the design team for consideration and official inclusion in their submittal review comments.
 - Participate in a temperature controls workshop with the design team, owner, and contractors to review the controls submittal.
9. Develop custom construction checklists after all submittals have been approved by the design team. KFI will review the checklists' information in the field to verify accuracy. Checklists include:
 - Delivery acceptance criteria to confirm supplied equipment matches submittals.

- Verification checks to observe if installation correlates with the details, specifications, and manufacturer requirements.
 - Contractors will complete any contract document requirements for pre-functional verifications that verify equipment startups, BAS point-to-point verifications, and preliminary sequence checks.
10. Perform six (6) construction site visits during the project; approximately one (1) per month during the construction phase. Increase construction site visits to weekly meetings in the months leading up to functional testing. During the site visits, we anticipate the following tasks:
- Review contractor progress on the construction checklists.
 - Review equipment and system installations for conformance to the construction documents, industry standards, manufacturer recommendations, and KFI experience. Document deficiencies on observation reports and forward them to the project team for review and action.
 - Conduct commissioning meetings to review progress on Cx tasks (and provide agendas, minutes, etc.). We will coordinate site visits to coincide with regular construction meetings whenever possible to make best use of everyone's time. When we cannot attend construction meetings, we will review meeting minutes and provide comments where necessary.

Site visits are anticipated around the following milestones:

- Cx kickoff (near the beginning of MEP rough-in)
 - General MEP rough-in progress
 - Final installation review
 - Review hydronic flush and fill plan developed by the contractor
 - Witness select start-ups (Boilers, Chillers, AHUs, Generator)
 - Witness TAB processes
11. Review start-up plan from contractors (and provide comments), review start-up documentation for completeness and accuracy (and provide comments).
12. After reviewing and accepting the controls contractor self-testing (pre-functional testing) documents, KFI will execute functional performance testing at the sampling rates identified above. HVAC testing includes the following tasks:
- Point-to-point verification including sensor calibrations and input/output verification.
 - Review graphics for accuracy to systems, menu operability, links, and schematic accuracy.
 - Perform sequence testing through a combination of setpoint adjustments, trend reviews, and manual overrides.
 - Perform integrated systems testing.

Electrical testing includes

- Lighting controls testing – verification of user wall control stations, occupancy sensors, and any daylighting/dimming sequences.
- Review contractor-executed pre-functional forms for switchboards, panelboards, and transformers.
- Write test script for facility 'blackout' test, and witness contractor-led test to observe systems switch from normal to generator and back to normal power.
- Verify any adjustable breakers were set to required settings of coordination drawings.

KFI anticipates approximately nine (9) trips during this phase to perform functional testing and retesting.

13. Provide one seasonal testing trip of HVAC systems to review sequence testing of equipment under appropriate loads in all seasons.
14. Document functional test deficiencies on the Master Issue Tracking List and assist the project team in verifying corrective actions are performed. After written notification of correction, KFI will retest deficiencies. KFI considers one retest part of the normal scope of work. Additional retests will be at the contractor's expense.
15. Execute a TAB review. KFI's review includes the following tasks:
- Conduct a TAB coordination meeting to review the TAB Plan with the project team.
 - Witness contractor procedures in the field.
 - Randomly sample up to 10% of TAB values in the field at the conclusion of TAB work.
 - Review the completed TAB report.
16. Review O&M manuals and provide comments to the project team. Review equipment warranty information provided in O&Ms.

17. Review contractor training plan for the owner including reviewing and approving training agendas, verifying the execution of the training, and ensuring the training sessions meet the owner's needs. In addition, we will encourage the facility operators to participate in the testing process with KFI.

Closeout Phase

18. Provide a final commissioning report in PDF format at the conclusion of the project:
 - Provide a summary of the commissioning process (including a summary of any open issues and associated documentation), a building/system description, a review of the tasks executed, and a summary of the testing methods executed for future reference by the owner.
 - Include all commissioning documentation from the tasks identified above.
 - Provide a summary of equipment deficiencies with regard to performance/efficiency, executed documentation, and training.
 - Provide recommendations for any of the systems.
19. Provide a warranty review walk-through with the owner’s staff at the 11-month point of occupancy.

CLARIFICATIONS

1. KFI is not responsible for the schedule of documents submission by the design team or Owner to KFI for review.
2. KFI reserves the right to copy the Owner on all commissioning correspondence.
3. We have included one (1) review of equipment and controls submittals in our base fee. Review of resubmittals will be considered an additional service.
4. Distribution of commissioning-related review comments, issues logs, and checklists will be through KFI’s forms or web tools. We have not included time for reformatting our documents into other software platforms.
5. Preliminary Cx Report - As commissioning agent, KFI is not responsible for managing contractors to meet substantial completion schedule or occupancy deadlines. If construction schedule or delays does not provide adequate time for all commissioning activities prior to substantial completion, KFI will provide a status letter to code officials on current state of system operations and anticipate schedule to complete all functional tests.
6. Building envelope/enclosure commissioning tasks have not been included in this proposal. We can provide this service for an additional service if necessary.

PROPOSED FEE

KFI will provide commissioning services described in the scope of work section for the base fee provided below. Direct and reimbursable costs are included in our base fee.

Task	Proposed Fee
Base Commissioning	\$64,800.00

- Attachments:
 KFI Resumes
 KFI Project Highlights



Matthew V. Swanson, PE, NEBB CT

Commissioning Engineer

Matt is a licensed and highly skilled mechanical engineer with over 20 years of industry experience. He has extensive knowledge of Class A high-rise and low-rise building systems design and infrastructure. He has managed a range of system types and building automation systems, including full chiller plants, district-fed systems, and heat pump operated buildings, which allows him to excel at commissioning and recommissioning services. His variety of experience and proficiency in control systems make him an exceptional choice for any project.

Relevant Experience

University of North Dakota Pollard Athletic Center Addition Commissioning - Grand Forks, ND

Fargo Park District Sports Complex - Fargo, ND

Orono Public Schools High School Activity Center Addition - Long Lake, MN

American Dream Entertainment and Retail Complex - East Rutherford, NJ

Bethel University Science Building Remodel - St. Paul, MN

Century College

- Air Handling Unit Replacement - St. Paul, MN
- Engineering and Applied Technology Center - White Bear Lake, MN

Cincinnati State Technical and Community College Main Building Recovery - Cincinnati, OH

Minnesota State University Moorhead Weld Hall - Moorhead, MN

North Dakota State University Sugihara Hall Laboratory Building - Fargo, ND

South Central College Boiler Commissioning - Mankato, MN

South Dakota State University Southeast University Neighborhood Redevelopment Commissioning - Brookings, SD

Winona State University Education Village - Winona, MN

University of Iowa Bowen Science Building Third Floor Renovation Commissioning - Iowa City, IA

University of North Dakota - Grand Forks, ND

- Merrifield Hall Commissioning
- O'Kelly Hall Commissioning

University of South Dakota, South Dakota Union Building Renovation - Vermillion, SD

City of Detroit Lakes - Detroit Lakes, MN

- City Hall Commissioning
- Police Station

City of Elk River Fire Station - Elk River

City of Woodbury - Woodbury, MN

- Central Park Renovation Commissioning and Test and Balance
- City Hall Lobby Commissioning and TAB
- Public Works Parks Maintenance Facility Expansion

City of Victoria City Hall and Library HVAC Assessment - Victoria, MN

Dakota County - Multiple Locations, MN

- Administration Center Boiler and Chiller Commissioning
- Crisis and Recovery Center Commissioning -

YEARS OF EXPERIENCE

21

EDUCATION

B.S. Mechanical Engineering
North Dakota State University

LICENSURE

Minnesota #57119, KY

AFFILIATIONS/CREDENTIALS

NEBB

- Certified Technician for Testing, Adjusting, and Balancing (TAB)

Niagara AX/N4 Technical Certification

Universal Refrigeration License

Minnesota State Special Boilers License

OSHA 10 Card



Paul F. Danielson, NEBB CP

Commissioning Technician

Paul is a commissioning technician within KFI's performance group where he provides commissioning, recommissioning, and controls assistance services. Paul brings over 29 years of industry experience encompassing commissioning, controls design, project management, test and balance, and mechanical systems installation. This extensive expertise gives Paul unique comprehension of all phases of the commissioning process from performing installation reviews to completing final functional testing, and controls troubleshooting.

Relevant Experience

Fargo Park District Sports Complex - Fargo, ND

South Dakota State University - Brookings, SD

- Southeast University Neighborhood Redevelopment
- Student Wellness Center Building Addition

University of North Dakota - Grand Forks, ND

- Merrifield Hall
- O'Kelly Hall
- Pollard Athletic Center Addition Commissioning

Westonka Public Schools Mound-Westonka High School Auditorium and Field House Additions - Minnetrista, MN

Orono Public Schools High School Activity Center Addition - Orono, MN

Sanford Health Systems Sanford Wellness Center - Fargo, ND*

American Dream Entertainment and Retail Complex - East Rutherford, NJ

*City of Detroit Lakes - Detroit Lakes, MN

- City Hall
- Police Station

City of Otsego New Biosolids Facility Design - Otsego, MN

Clay County Juvenile Center Hydronic Water System Investigation - Moorhead, MN

Dakota County Empire Additions and Renovations - Rosemount, MN

Davis-Monthan Air Force Base Aerospace Ground Equipment (AGE) Complex - Tucson, AZ

Eagle River Water and Sanitation District Avon Waste Water Treatment Facility Lab HVAC Review and Recommendations - Vail, CO

Federal Reserve Bank of Cleveland HVAC Analysis and Redesign - Cincinnati, OH

North Dakota Heritage Center HVAC Implementation - Bismarck, ND

Ramsey County - St. Paul, MN

- Courthouse
 - Commissioning and Special Inspections
 - Variable Air Volume (VAV) Controls Commissioning
- District Energy Meter Validation

State of Minnesota, Minnesota Veterans Home Building B16 HVAC System Replacement Study - Minneapolis, MN

Town of Avon Waste Water Treatment Facility HVAC Evaluation - Avon, CO

**Project work completed prior to joining KFI*

YEARS OF EXPERIENCE

29

AFFILIATIONS/CREDENTIALS

NEBB

- Building Systems Commissioning - New Construction
- Retrocommissioning
- Air and Water Systems Testing Adjusting and Balancing

Niagara AX/N4 Technical Certification

OSHA 10 Card

Sheet Metal Workers Local 10 JATC

Graduate Licensed Sheet Metal Journeyman