



LAKEVIEW PUBLIC SCHOOLS

2021 FACILITY UPGRADES

PROPOSAL FOR COMMISSIONING SERVICES



PREPARED FOR

PRESTON EUERLE
RA MORTON

APRIL 23, 2021

PREPARED BY

MATTHEW L. JENSEN, PE, LEED AP BD+C
DUNHAM

50 SOUTH SIXTH STREET
SUITE 1100
MINNEAPOLIS, MINNESOTA 55402
(612) 465-7550
DUNHAMENG.COM

April 23, 2021

Preston Euerle
RA Morton
3315 Roosevelt Road, #100
St. Cloud, MN 56301

**SUBJECT: LAKEVIEW PUBLIC SCHOOLS 2021 FACILITY UPGRADES
PROPOSAL COMMISSIONING SERVICES**

Dear Mr. Euerle:

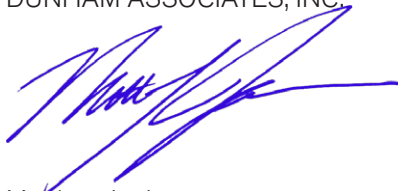
Thank you for the opportunity to present our proposal to provide commissioning services for Lakeview Public Schools 2021 Facility Upgrades.

As you will see in the attached proposal, Dunham offers a highly qualified team with extensive building commissioning experience. Chad Bolin, LEED AP BD+C BSC CA, CxA will serve as the Lead Commissioning Agent on the project. He brings over 30 years of experience in system controls and building commissioning to your team. Chad will draw from his experience to see that the services provided by Dunham exceed your expectations.

We believe in a collaborative approach to commissioning. We pride ourselves on our ability to work with the Owner, Engineer, and Contractors to lead a commissioning effort that results in systems that are correctly installed and operating per the design intent.

As Principal-in-Charge, I will be your primary contact and will be responsible for the overall quality of the project. If you have any questions, you can reach me directly at (612) 465-7626, or via email at matt.jensen@dunhameng.com.

Sincerely,
DUNHAM ASSOCIATES, INC.



Matthew L. Jensen, PE, LEED AP BD+C
Executive Vice President

DUNHAM

50 South Sixth Street / Suite 1100
Minneapolis, Minnesota 55402-1540

PHONE 612.465.7550

WEB dunhameng.com



DUNHAM ASSOCIATES

COMMISSIONING + DESIGN

Dunham's mission is to be the preferred partner of our clients, providing quality design and exceptional client service.

For 60 years, we have worked to build long-term partnerships. Today, Dunham has over 100 professionals providing mechanical and electrical engineering services across the US and Canada. We have dedicated teams that serve the commercial, commissioning + energy, education, healthcare, mission critical, retail, and science + technology markets.

We have specialists providing fire protection engineering, information + communications technology design, building commissioning, energy services, and sustainable design, nested within our core disciplines.

We believe great engineering starts with good people. Our staff includes 45 registered professional engineers, 35 LEED Accredited Professionals, a Fire Protection Engineer (FPE), two Registered Communications Distribution Designers (RCDDs), Accredited Tier Designers (ATD), and certified commissioning professionals.

Our dedicated team of commissioning professionals hold certifications with AABC (CxA), Tridium's NiagaraAX, NEBB (BSC CA), and University of Wisconsin (QCxP).

We are an employee-owned firm with offices in Minneapolis, Dallas, Duluth, and Rochester. Our core values of integrity, quality, teamwork, and commitment, guide every project we do.



Appendix A

Commissioning Agent Qualifications

Dunham Associates, Inc.	Matthew L. Jensen, PE, LEED AP BD+C	Executive Vice President	
Company Name	Contact Person	Title	
50 South Sixth Street, Suite 1100	Minneapolis	MN	55402
Address	City	State	Zip/Postal Code
612-465-7550	612-465-7551	matt.jensen@dunhameng.com	
Telephone	Fax	E-Mail	

Description of Business

Commissioning Activities

Percentage of overall business devoted to commissioning services. 8 (Eight) %

How long has the firm offered commissioning services? 20 (Twenty) Years

Average number of commissioning projects performed each year? 30 (Thirty) Projects

Systems (technologies) for which firm has provided 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 refriger |
| <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 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 type="checkbox"/> _____ |
| <input checked="" type="checkbox"/> Lighting Controls | <input checked="" type="checkbox"/> Plumbing | |

Number of qualified professionals on staff who have directed commissioning projects: 10 (Ten)

List Qualifications: 48 PEs, 41 LEED APs, 2 CPMP, 1 CxA, 1 CBCP, 1 NEBB BSC

Prior Projects of a similar nature

Building Name	Location	Type of Project (new, additions or remodeling)	Contact Name	Contact Phone Number
Examples of similar projects, as well as professional references, can be found in the Project Experience section of this proposal response.				

KEY INDIVIDUAL

LEAD CX AGENT: QUALIFICATIONS + EXPERIENCE

Chad Bolin, LEED AP BD+C, CxA

SENIOR ASSOCIATE | COMMISSIONING AGENT

CONTACT

Phone: 612.465.7678

Email: chad.bolin@dunhameng.com

PROFESSIONAL CERTIFICATIONS

NEBB: NEBB BSC Accreditation

AABC Commissioning Group: Certified Commissioning Authority (CxA)

ASHRAE: Commissioning Process Management Professional (CPMP)

USGBC: LEED AP, Building Design + Construction (LEED AP BD+C)

EDUCATION

Industrial Electronics - Northwestern Electronics Institute

BACKGROUND

Prior to joining the Dunham team, Chad worked for 26 years with a major controls company, He gained extensive experience in the technical field of the HVAC and Fire Alarm industry. Along with his broad experience in building controls, Chad has worked as a Measurement and Verification Specialist for performance contracts in educational and municipal facilities throughout the state of Minnesota. At Dunham he has been the Commissioning Authority on many significant projects.

ROLE/RESPONSIBILITY

Chad will be the Lead Commissioning Agent for this project and is committed to the project for both the design and construction phases. Chad will use his analytical and troubleshooting skills to evaluate system performance. His many years of experience in the HVAC industry have given him the ability to work on many different variations of building controls. His experience in the energy retrofit field has equipped him with knowledge of how to utilize building automation controls to maximize the functionality and energy usage of facilities.

KEY INDIVIDUALS

ROLES + RESPONSIBILITIES

Matthew L. Jensen, PE, LEED AP BD+C
PARTNER IN CHARGE | PROJECT MANAGER

As Partner-In-Charge, Matt will provide overall leadership of the entire commissioning effort for Dunham. He will review the design intent and provide the overall technical quality assurance for the project. In his role as Project Manager, Matt will be responsible for the daily management of the project, and the overall development of the building commissioning plan and schedule. He will also lead the technical review process and coordinate the development of the testing and inspection procedures.

Chad Bolin, LEED AP BD+C, CxA, BSC CA
LEAD CX AGENT

Chad will be the Lead Commissioning Agent for this project. He will work with his team to analyze the design intent and construction documents, and to develop the building commissioning plan and schedule. His 30+ years of experience have given him the ability to work on many different variations of building controls. His experience in the energy retrofit field has equipped him with knowledge of how to utilize building automation controls to maximize the functionality and energy usage.

Derick Podratz, QCxP, LEED AP BD+C
MECHANICAL CX AGENT

Derick will be a Mechanical Commissioning Agent for this project. He will use his extensive experience with HVAC controls of building systems to help ensure a successful project. This includes developing commissioning plans, and functional performance testing.

Wade Williams
MECHANICAL CX AGENT

Wade will be a Mechanical Commissioning Agent for this project. His role includes developing commissioning plans, field work, and assisting the team with functional performance testing.

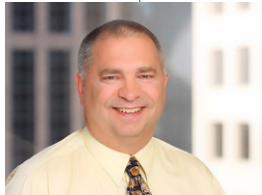




DESIGN TEAM



CONSTRUCTION TEAM



Chad Bolin,
LEED AP BD+C, BSC CA, CxA
**LEAD COMMISSIONING AGENT,
PROJECT MANAGER**



Matthew L. Jensen,
PE, LEED AP BD+C
PARTNER-IN-CHARGE



Derick A. Podratz,
QCxP, LEED AP BD+C
**MECHANICAL
COMMISSIONING AGENT**



Wade Williams
**MECHANICAL
COMMISSIONING AGENT**

WITH A STAFF OF OVER 100, WE HAVE THE DEPTH OF PROFESSIONALS NECESSARY TO ACCOMMODATE VIRTUALLY ANY SIZE PROJECT. IN ADDITION TO THE STAFF LISTED IN THIS PROPOSAL, WE HAVE HIGHLY QUALIFIED COMMISSIONING AND DESIGN PROFESSIONALS READY TO ASSIST OUR TEAM AS-NEEDED.



LEAD COMMISSIONING AGENT

Chad Bolin, LEED AP BD+C, BSC CA, CxA
SENIOR ASSOCIATE | COMMISSIONING + ENERGY SERVICES

EDUCATION

Industrial Electronics, Northwestern
Electronics Institute, 1990

BACKGROUND

Chad has over 35 years of experience in the building controls industry. Before joining the Dunham team, Chad worked for Honeywell International. With Honeywell, Chad gained extensive experience in the technical field of the HVAC and Fire Alarm industry. Along with his broad experience in building controls, Chad has worked as a Measurement and Verification Specialist for performance contracts in various facilities throughout the region. Over the past 12 years, Chad has been the lead Commissioning Authority on virtually all of Dunham's commissioning projects.

QUALIFICATIONS

NEBB BSC Accreditation (BSC CA)
AABC Commissioning Group: Certified Commissioning Authority (CxA)
LEED AP, Building Design + Construction (LEED AP BD+C)

PROJECT EXPERIENCE

Lakeville Public Schools LAKEVILLE, MN

Kenwood Trail Middle School
Cherry View Elementary School
Lake Marion Elementary School

Renville County West RENVILLE, MN

Classroom Addition
Gymnasium & Classroom Addition

Edina Public Schools EDINA, MN

Concord, Cornelia, + Countryside Elementary School Upgrades

Elk River Public Schools ISD 278 ELK RIVER, MN

Otsego Early Childhood Education Center
Rogers High School Upgrades
Zimmerman Elementary School, Early Childhood Education Center
Zimmerman Middle School/High School Additions + Renovations
Elk River High School Addition + Renovation
Prairie View Elementary-Middle School

Howard Lake-Waverly-Winstead Schools HOWARD LAKE, MN

New High School with Dedicated Outside Air System
Three-story Middle School Addition + Remodel

Pine Island Public Schools PINE ISLAND, MN

New Elementary School
High School + Middle School Additions + Remodels, Ph I + II

**MECHANICAL CX AGENT****Derick A. Podratz**, QCxP, LEED AP BD+C
ASSOCIATE | COMMISSIONING SPECIALIST**EDUCATION**

Bachelor of Science, Food Process Engineering, Purdue University, 1997

BACKGROUND

Derick is an experienced Commissioning Agent with 23 years of experience. He has served as a commissioning agent, project manager, and director. He is qualified to lead all aspects of the commissioning process, from reviewing design documents, specifications, O&M manuals, construction observation, checklists, test procedures, and testing of various HVAC, life safety, electrical, and renewable energy systems.

QUALIFICATIONS

LEED Accredited Professional BD+C
Qualified Commissioning Process Provider (QCxP), UW Madison
U.S. Green Building Council, MN Chapter
American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
Building Commissioning Association (BCA)

PROJECT EXPERIENCE

Sauk Rapids-Rice Public Schools SAUK RAPIDS, MN
Multiple School Upgrades

Hastings Public Schools HASTINGS, MN
High School BAS Replacement

Sartell-St. Stephen Public Schools SARTELL, MN
New Sartell High School

Anoka-Ramsey Community College COON RAPIDS, MN
Nursing + Business Center Renovation, B3

Cromwell-Wright Public Schools CROMWELL, MN
Industrial Technology Addition

Kingsland Public Schools SPRING VALLEY, MN
High School HVAC Upgrades

North Dakota State University FARGO, ND
Cater High-rise Residence Hall

University of Iowa IOWA CITY, IA
Psychological + Brain Sciences Addition

City of Austin AUSTIN, MN
Community Recreation Center

Summit Orthopedics WOODBURY, MN
Landmark Surgery Center

Memorial Medical Center ASHLAND, WI
Surgery Center Addition + Renovation

**MECHANICAL CX AGENT**

Wade Williams

ASSOCIATE | COMMISSIONING AGENT

EDUCATION

Bachelor of Science in Mechanical Engineering, University of Minnesota, Twin Cities, 2014

BACKGROUND

Wade is a graduate of the University of Minnesota with a degree in mechanical engineering. Since joining Dunham in 2014, Wade has provided commissioning services for corporate, educational, healthcare, government, and high-tech projects. His experience included the development of commissioning plans, and the verification and documentation of the functional performance testing of building HVAC systems.

PROJECT EXPERIENCE

Lakeville Public Schools LAKEVILLE, MN

Kenwood Trail Middle School
Cherry View Elementary School
Lake Marion Elementary School

Edina Public Schools EDINA, MN

Concord, Cornelia, + Countryside Elementary School Upgrades
Valley View Middle School

Elk River Public Schools ELK RIVER, MN

Elk River High School Addition + Renovation
Prairie View Elementary School
Salk Middle School
Zimmerman Early Childhood Addition
Zimmerman Elementary School
Zimmerman Middle School + High School Additions

Cambridge and Isanti Schools CAMBRIDGE ISANTI, MN

Middle, Primary, + Intermediate School Upgrades-Additions

Howard Lake-Waverly-Winstead Schools HOWARD LAKE, MN

Middle School Addition + Remodel

Pine Island Public Schools PINE ISLAND, MN

High School + Middle School Additions + Remodels, Ph I + II
New Elementary School

Janesville-Waldorf-Pemberton Schools JANESVILLE, MN

Kitchen + Cafeteria Renovation

City of Sartell SARTELL, MN

Community Center

Hastings Public Schools HASTINGS, MN

High School Building Automation System Replacement



PARTNER-IN-CHARGE

Matt Jensen, PE, LEED AP BD+C
EXECUTIVE VICE PRESIDENT | MECHANICAL

EDUCATION

Bachelor of Science in Mechanical Engineering, University of Wisconsin-Madison, 1994

BACKGROUND

Matt is a mechanical engineer, project manager, and principal with 25 years of experience providing design, construction administration, commissioning, and energy services. His experience includes corporate office, education, government, mixed-use, recreation, athletic, senior living, and community center projects. As Executive Vice President, Matt provides project management and technical oversight for his projects, and mentorship to our staff.

QUALIFICATIONS

Professional Engineer, Minnesota Registration No. 40475
Professional Engineer, 27 States, Canada, and Puerto Rico
LEED Accredited Professional, Building Design + Construction
American Society of Heating, Refrigerating & Air-conditioning Engineers (ASHRAE)
American Society of Plumbing Engineers (ASPE)

PROJECT EXPERIENCE

Lakeville Public Schools LAKEVILLE, MN

Kenwood Trail Middle School
Cherry View Elementary School
Lake Marion Elementary School

Renville County West RENVILLE, MN

Classroom Addition
Gymnasium & Classroom Addition

Edina Public Schools EDINA, MN

Concord, Cornelia, + Countryside Elementary School Upgrades

Elk River Public Schools ISD 278 ELK RIVER, MN

Elk River High School Addition + Renovation
Prairie View Elementary School
Salk Middle School
Zimmerman Early Childhood Addition
Zimmerman Middle School + High School Additions

Hastings Public Schools HASTINGS, MN

High School BAS Replacement

Pine Island Public Schools PINE ISLAND, MN

High School + Middle School Additions + Remodels, Ph I + II
New Elementary School

SYSTEMS COMMISSIONED

Boilers
Pumps
Heating Coils
Unit Heaters
Pool Water Heat Exchanger
VAV Terminal Unit
Fan Coil Unit
Domestic Hot Water Heaters

SCHEDULE

July 2019 thru December 2019

TEAM INVOLVEMENT

Matt Jensen, PIC
Chad Bolin, Lead Cx Agent
Wade Williams, Mechanical Cx Agent

OWNER CONTACT

Bobby J. LaBrec, Project Coordinator
Lakeville Public Schools
(952) 232-2450

ARCHITECT CONTACT

Vaughn Dierks
Wold Architects and Engineers
(651) 227-7773
vdierks@woldae.com

M+E ENGINEER CONTACT

Kyle Edsten, Mechanical Engineer
Wold Architects and Engineers
(651) 227-7773
kedsten@woldae.com

CONTRACTOR CONTACT

Cameron Dahlin
Loeffler Construction
(952) 955-9119

Lakeville Public Schools LAKEVILLE, MN KENWOOD TRAIL MIDDLE SCHOOL UPGRADES

This project consists of HVAC upgrades to Kenwood Train Middle School. The scope of this project includes the completed replacement of the boilers, pumps, and heating equipment serving the 168,280 SF school.

Dunham performed commissioning services during the acceptance and turnover/occupancy phases of the project. Our services included functional performance testing with 100% point-to-point verification of all HVAC component operations, and 100% verification of system sequences of control, control points, alarm, and graphic representation accuracy. Our team maintained a issues log, performed follow-up inspections to verify correction of action items, reviewed TAB reports and O&M Manuals, and developed a final commissioning report for the district.

ADDITIONAL EXPERIENCE

In addition to Kenwood Trail, Dunham has provided commissioning and retrocommissioning services at four other schools. These projects include retrocommissioning of Century Middle School and Lakeville North High School, Cherry View Elementary addition, and we are currently providing commissioning services for an addition to Lake Marion Elementary School. Our services included 100% testing of all HVAC equipment associated with each project.



SYSTEMS COMMISSIONED

Air Handling Units	Automatic
Rooftop Units	Temperature
Unit Ventilators	Controls
Variable Air Volume	Pumps
Terminal Units	Hot Water
Exhaust Fans	Boiler Plant
Unit Heaters	Chilled Water Plant
	Fan Coil

SCHEDULE

May 2017 thru July 2018

CONSTRUCTION COST

\$8,140,000 (Cornelia)

\$2,750,000 (Concord)

\$2,750,000 (Countryside)

TEAM INVOLVEMENT

Matt Jensen, PIC, PM

Chad Bolin, Lead Cx Agent

Wade Williams, Mechanical Cx Agent

OWNER CONTACT

Eric Hamilton

Edina Public Schools

(952) 848-3999

eric.hamilton@edinaschools.org

ARCHITECT CONTACT

Vaughn Dierks, Architects

Wold Architects + Engineers

(651) 227-7773

vdierks@woldae.com

M+E ENGINEER CONTACT

Kevin Marshall, Mechanical Engineer

Wold Architects + Engineers

(651) 227-7773

CONTRACTOR CONTACT

Brad Harvey, Project Manager

Kraus Anderson

(612) 721-7581

Edina Public Schools EDINA, MN

COUNTRYSIDE, CORNELIA, + CONCORD SCHOOLS

Dunham provided commissioning services for upgrades to three elementary schools within Edina Public Schools. These projects include additions, renovations, and infrastructure upgrades. The Cornelia project consisted of a 39,134 SF area, Concord included 72,301 SF of space, and Countryside totaled 73,780 SF of impacted space.

Dunham performed services during the construction, acceptance, and turnover/occupancy phases of the project. Our services included submittal review, prefunctional and functional performance testing, O&M manual review, and verification of training. The scope included 100% point-to-point verification of all HVAC Components, 100% of system sequences of control, fire alarm verification, and graphic representation accuracy. Dunham developed a final commissioning report for Owner use.



SYSTEMS COMMISSIONED

VAV RTU
DX Cooling and Hot Water Heating
VAV Boxes + Hot Water Heating Coils (6)
Powered Roof Ventilator
Ceiling Exhaust Fan
Cabinet Unit Heater
Fin Tube Radiation
BAS to Equipment, including linkages to remote monitoring and control sites.

CONSTRUCTION SCHEDULE

November 2019 to August 2020

CONSTRUCTION COST

\$1,900,000

TEAM INVOLVEMENT

Matt Jensen, PIC, PM
Chad Bolin, Lead Cx Agent

OWNER CONTACT

Michelle Mortensen, No longer at RCW

ARCHITECT CONTACT

Dan Goemann
Wendel Architecture
dgoemann@wendelcompanies.com
(612) 332-1401

M+E ENGINEER CONTACT

Mike Dolejs, Mechanical Engineer
Dolejs Associates, Inc.
mdolejs@dolejsinc.com
(507) 625-7869

CONSTRUCTION MANAGER

Paul Heinen, Project Manager
R.A. Morton
paulh@ramorton.com
(320) 251-0262 Ext. 152

Renville County West RENVILLE, MN

CLASSROOM ADDITION

This project is a single-story classroom addition that totals 7,000 SF. The space includes four classrooms, student restrooms, a private restroom, and storage space. Dunham provided commissioning services that included a review of the design intent and construction documents, and observed that construction was done according to design documents. We then developed and coordinated the testing plan and documented the results to ensure the systems were complete and functioning properly upon occupancy. Dunham came into the project during the construction phase and continued through post occupancy for seasonal and deferred testing and deficiency corrections.

ADDITIONAL EXPERIENCE

In 2016, Dunham commissioned a classroom and gymnasium addition with this same design team. This project was a single-story addition totaling 23,700 SF. The space includes six classrooms, student restrooms, gymnasium, locker rooms, fitness areas, and bus drop off zone. Dunham provided commissioning services that included a review of the design intent and construction documents, and observed that construction was done according to design documents. We then developed and coordinated the testing plan and documented the results to ensure the systems were complete and functioning properly upon occupancy. Dunham came into the project during the construction phase and continued through post occupancy for seasonal and deferred testing and deficiency corrections.



PROJECT MANAGEMENT APPROACH

MANAGING THE PROJECT

Dunham has developed a specialized team to assist our clients with their building commissioning needs. This team has the detailed knowledge of the systematic process of verifying, testing and documenting system performance to determine compliance with design intent and manufacturers' recommendations. In addition, we have the on-site leadership and the communication skills necessary to successfully deliver commissioning services to you.

Our process begins with an extensive discovery effort, resulting in the development of a customized commissioning plan for each client. This plan considers the client's history, priorities, in-house capabilities and the operational context over the life of the building.

CONSTRUCTION PHASE INTEGRATION

During construction, our Commissioning Team will facilitate an initial commissioning scoping meeting to develop a commissioning plan, and define the expectations of all the commissioning participants. Throughout the remainder of the project, the Commissioning Team will conduct regular Commissioning Team meetings to review progress, update the construction team on the ongoing commissioning process and resolve potential project delaying issues early in the construction process.

Equipment and systems shop drawing submittals will be reviewed by the commissioning agent in order to confirm the equipment characteristics and the physical parameters which may impact the commissioning process. This review also assists in the development of the Startup Checklists. Review and comments will be provided to the construction team on the temperature controls submittal to evaluate the testability, sequence of operations and controls devices of the ventilation equipment. The approved sequences of operations will be used as a basis for the functional performance testing.

Our commissioning staff will perform site observations to review construction progress and identify issues that may impact the ability for systems to be effectively commissioned. Additionally, our team takes note of issues that may impact overall Indoor Air Quality (IAQ) such as stored equipment not having appropriate weather-proofing or inadequate protection of installed systems prior to being placed into operation. We convey this information through site observation reports directed to the owner and owner's representative. To foster teamwork with the contractors, Dunham makes it a priority to discuss all observations directly with the contractor involved and in many instances, if any correction is required, the issue is resolved prior to the observation report being published.

As the building systems take shape, our Commissioning Team authors Startup Checklists for the contractors to execute. These checklists confirm that the equipment installed meets the intent of the project design. This checklist may include visual inspection to confirm that product damage has not occurred during shipping and installation. Other validation activities may confirm that fans and pumps are wired correctly such that they rotate in the appropriate direction.

SYSTEMS INSPECTIONS

Our team will create Functional Performance Tests (FPT) used to thoroughly validate system performance. Once created, our team requests that the design team review the tests to confirm that the design intent is fully understood. Once agreed upon, these tests will be issued to the respective trades and scheduled for completion. Dunham will witness the performance of these tests and document results. If performance-related issues arise, an Issue Resolution Log will be created and used as the method of tracking the resolution of the problem. Tests will be conducted again as needed until the expected outcome is achieved. Verification will be conducted for all operational seasonal modes of control. Hard copy and electronic files of the FPT's will be provided to the owner upon completion.

Dunham will work closely with the test and balance contractor to randomly validate 10% of the final TAB report and to check that 100% of the ventilation equipment is operating as intended and is in compliance with ASHRAE 62 standards.

A one-year walk-through of the facility will be provided in order to identify issues that require resolution. During this walk-through with facility staff members, Dunham will assist the owner in identifying problems and operational concerns. We will make recommendations for improvement and identify concerns that may be addressed under warranty or under the original construction contract.

TEAMWORK AND COOPERATION / MAINTAINING PROFESSIONAL RELATIONSHIPS

Dunham's approach to building commissioning focuses on being a strong owner-advocate, along with an effective and readily available design and construction team resource, intent on assisting in the delivery of a successful project. As designers, our engineers understand the thought processes and philosophies used by the design team to produce a successful project. We not only understand this relationships as commissioning agents, but we have been involved in design and construction projects where a third-party agent commissioned our designs. Thus, we are sensitive to the dynamics of the project team and know how to bring value to the project through effective communication and collaborative problem-solving.

SUMMARY

Dunham's approach to commissioning is tailored to the priorities of our clients. Our past experience ranges from the commissioning of complex facilities, such as mission-critical centers, to the simpler ones, such as an office building. We approach each project type with the same level of commitment to meeting the expectations of our clients. It is Dunham's intent to ensure that all HVAC systems are complete and functioning properly upon occupancy.

COST PROPOSAL

BASE SERVICES	\$ 36,000
ALTERNATE 1	\$ 1,800
ALTERNATE 2	\$ 1,600
ALTERNATE 3	\$ 2,400
ALTERNATE 4	\$ 1,300
ALTERNATE 5	\$ 2,500

REIMBURSABLE EXPENSES

The fees listed above are inclusive of all reimbursable expenses. Dunham will not be charging any reimbursable expenses to this project.

HOURLY RATES

THROUGH MARCH 31, 2022

EXECUTIVE PRINCIPAL	\$ 235
PRINCIPALS	\$ 200
ENGINEER IV	\$ 200
ENGINEER III	\$ 190
DESIGNER IV	\$ 190
COMMISSIONING SPECIALIST III	\$ 225
COMMISSIONING SPECIALIST II	\$ 200

*All other employees on an hourly basis of 2.5 times direct personnel expense (DPE).
Direct personnel expense is defined as the direct salaries of the employee and their mandatory and usual benefits such as taxes, vacation, sick leave, and insurance.*

ENGINEER II	\$ 115 - 180
ENGINEER I	\$ 110 - 145
DESIGNER III	\$ 125 - 199
DESIGNER II	\$ 90 - 155
DESIGNER I	\$ 70 - 115
COMMISSIONING SPECIALIST I	\$ 100 - 185
DRAFTER II	\$ 50 - 85
DRAFTER I	\$ 45 - 75
SUPPORT STAFF	\$ 50 - 75