Engineering/Design Services
Replacement of 25T RTU
City of Mequon, City Hall
November 15, 2023

STRANG

COVER LETTER

Tim Weyker
Deputy Director of Public Works
11333 N. Cedarburg Road
Mequon, WI 53092
Re: Engineering/Design Services for Replacement of 25T RTU

December 20, 2023

Tim Weyker and members of the evaluation team,

Following an informative pre-proposal meeting on-site, Strang is pleased to submit a revised proposal which will include additional design services to address a deeper scope of updates needed at City Hall. We understand the following for the success of this project:

HVAC systems are the backbone of any building, and we recognize the importance of investing in dependable and energy-efficient solutions. Outdated systems can compromise indoor air quality and operational reliability. Upgrading to state-of-the-art HVAC technology not only addresses these concerns but also positions City Hall as a model of sustainability, showcasing your commitment to the well-being of those who utilize the facility.

In evaluating the optimal location for the air handling unit, we have identified two promising options. The first option is installing the unit outdoors, in the same location as some of the existing equipment. This is a cost-effective solution, but it may impact your structures historical integrity. In addition, exposure to the elements shortens equipment life expectancy and results in a reduction of operational efficiency. The alternate solution is installing the unit indoors, like its current arrangement. This option may incur additional design and construction costs, but it offers the benefit of equipment accessibility. The accessibility of this type of equipment is essential for routine upkeep, ensuring the longevity and reliability. The inside unit will also maintain the facade of City Hall, which is imperative, being on the national historic register.

As an additional element of the project, we propose the possible replacement of ceiling removal, replacement, and modernization. This initiative is designed to not only enhance the overall aesthetics of City Hall but also contribute to improved acoustics, energy efficiency, and the modernization of the facility.

Recognizing the sensitivity to project costs and the absence of a specific long-term plan for the facility, we have tailored our proposals to align with fiscal responsibility. While addressing the aging HVAC system and outdated lighting solutions is crucial, we have taken a pragmatic approach to balance immediate needs with cost-effectiveness. Our proposals are designed to not only meet current needs but also offer options to lay a foundation for future adaptability, ensuring that any investments made now are strategically aligned with potential future developments.

Each solution is presented with a focus on cost-effectiveness, performance, safety, and long-term viability. Safety is paramount, and we advocate for improvements that go beyond mere compliance. This applies to all lighting solutions we would propose.

We are confident that your commitment to the well-being of our community, combined with your strategic vision for Mequon's future, will guide you in making the best decisions for the continued success and comfort Mequon City Hall staff and all your residents and partners who interact with this facility.

Thank you for your time and consideration.

Larry Barton, AIA, LEED AP, WELL AP
President | Principal in Charge
LBarton@strang-inc.com | 608.276.9203
W238N1610 Busse Road, Suite 102, Waukesha, WI 53188

OUR FIRM & APPROACH

W238N1610 BUSSE ROAD SUITE 102
WAUKESHA, WI 53188

STRANG For 86+ years, Strang as a multi-disciplinary design firm has provided a great level of reliability, knowledge, quality, and caring on every project. Strang's 69+ talented architectural, engineering, and interior design professionals add real, tangible value by becoming proactive catalysts for client growth, productivity, and champions of our clients' mission. As a growing firm we have been honored by Milwaukee Business Journal as a Large Milwaukee-Area Architectural Firm and a Business of the Year from Waukesha County Business Alliance.

DESIGN SYNCHRONICITY

One of our greatest values to clients is the unique ability to approach entire assignments with an in-house interdisciplinary team collectively dialed into each project. It all begins with a process called **Design Synchronicity.** This simply means having our team of architects, engineers, interior designers, and planners all under one roof working together.

Our entire team unifies to identify client input, explore opportunities or challenges and only then, consider design direction. We keep everyone – clients especially – involved from beginning to end. This cross-functional configuration ensures that the best thinking rises to the top. One project. One team. That is **Design Synchronicity.**

LISTEN | DISCOVER | DESIGN

Strang applies our proprietary Listen-Discover-Design project development process to ensure stakeholders actively participate in conceptualizing their project goals.

Listen. While it may appear obvious, taking the time to really listen to you, our end user is our first step. What is your mission? What are your goals? We want to hear you weigh in on these questions. Most importantly, we want to clarify your objectives. As stewards of your project vision, we begin by first listening to your needs.

Discover. After listening, we collect, review, and analyze your input and evaluate existing operations. We use this stage to identify deficiencies and constraints as well as explore new opportunities for Good-Better-Best practices. During discovery, guiding principles are established, priorities are refined into design statements, and program requirements are documented.

Design. Our team will not be designing anything until we have completed the first two phases. At this stage, we implement your unique ideas and concepts into a single plan, measuring costs, and developing strategies that meet your goals while maintaining an efficient schedule and budget. As we steward your vision, you are continually engaged as co-creators.

ENGINEERING

Often, it's what you can't see that is most important. Our mechanical, electrical, and plumbing engineers are experts in **maximizing system and operational efficiencies** and **leading multi-disciplinary design** for these often unseen, yet complex systems. We understand the importance of engineered systems in protecting users, conserving energy, and providing safe, comfortable, and productive spaces. With the accurate sizing and selection of high-performance equipment, we provide sustainable solutions that

quantifiably reduce your energy consumption and operating cost. We collaborate across all disciplines in the collective effort to minimize your project's carbon footprint. Our team of engineers respond to each client's unique needs with **innovative cost and energy-efficient engineering solutions** that are more sustainable, resilient and, flexible for the life of your facility.

Our MEP and engineering services include:

- Mechanical engineering
- Electrical engineering
- Plumbing design
- Life safety system engineering
- Energy analysis and management studies
- HVAC system design
- Electrical system design
- Lighting design
- Commissioning
- Energy performance
- Modeling controls
- Mechanical systems analysis
- Safety and fire protection
- Maintenance programs
- Cost estimating
- Start-up assistance
- Long-range facility programming
- Voice, data, security, AV design
- Integrated control systems
- Building energy performance
- High-performance building analysis
- Integration of process/manufacturing systems
- Site analysis/quick fit
- Structural engineering
- Code compliance
- Proforma/financial budgeting

PROJECT MANAGEMENT

Strang has a strong reputation for managing and delivering projects for clients. It is from this knowledge that our successful approach to project management centers around these elements:

Established project-centric goals and priorities: Build consensus, establish, and document project goals and priorities which will inform design and budget decisions.

Consistent open team communication: Establish primary and secondary points of contact.

Schedule and budget adherence: Balance of design and review time necessary to ensure adherence to design standards, system protocols, and expectations.

Collaborative team mentality: Adopt a holistic team approach by allowing candid, respectful conversation, accountability to project goals, and decision making.

Our project management services include:

- Bidding assistance
- Construction phasing review
- Coordination of review boards/permits
- Field observations and reports
- Facilitate construction progress meetings
- Evaluate construction changes
- Field surveys
- Budgeting
- Scheduling
- Space planning
- Coordination with review boards / permits
- Move planning and implementation
- IT and network planning
- Bidding assistance

BUDGET

Successful budget management is an integral part of a successful design. Our team has a track record of meeting or beating budget expectations - which begins with candid conversations, realistic expectations, and continual monitoring.

Project scope, aesthetics, and quality must be balanced with budget realities. Because budgets are frequently fixed before the process begins, priorities for budget development will be established at the outset. We will explore costs and return on investments, along with alternate methods of achieving the same goal. Then together with you, we will prioritize how you want your resources to be spent.

VALUE ENGINEERING & COST ESTIMATING

With Strang's cost-conscious planning approach, your budgets remain at the forefront of your projects. We will prepare detailed cost estimates that provide you with realistic, historical costs to evaluate and prioritize systems, components, and designs.
After estimates are revised, and all parties agree that the estimates and scopes are synchronized, value engineering work sessions begin. The estimating team looks for areas of heavy costs and identify components where, with some creative rework, reductions may take place.

The total project budgets are itemized into categories. Every design discipline will have an itemized budget to work within. These "design-to" budgets help all team members focus on the budget and keep "best value" top of mind. Value engineering ideas are encouraged, but not at the sacrifice of performance/quality. The process is especially effective in finding additional value in streamlined construction techniques, simplified assembly and alternative phasing approaches. All this can lead to reduced labor costs and early completion.

PROJECT TEAM EXPERIENCE

LARRY BARTON, AIA, LEED AP ID+C, WELL AP

Principal-In-Charge

Larry has more than 30 years of expert experience in a variety of building types, including many governmental facilities, science and technology, corporate headquarters, office renovations, manufacturing and higher education buildings. His background includes master planning studies, extensive renovations, additions, and new building design. A passionate proponent of LEED/sustainable building practices, Larry is equally passionate about WELL Building standards, including it in our 2018 Strang workplace which has been awarded LEED Gold Certification. His leadership has guided many of Strang's most complex projects.

Relevant Project Experience

- Alliant Energy Center Exhibition Hall, Madison, WI
- Iowa County Health & Human Services, Dodgeville, WI
- City of Madison, Department of Public Health, East Washington Office, Madison, WI
- Madison VA Surgical Suite, Madison, WI
- Tomah VA Medical Center, Tomah, WI
- Pleasant View Nursing Home, Madison, WI
- Dane County Detoxification Center, Madison, WI
- Meriter Community-Based Residential Facility, Madison, WI
- Fairhaven Assisted Living, Whitewater, WI
- UW Health Medical Foundation, Madison, WI
- UW Health Clinic, Mt. Horeb, WI
- UW Health, Odana Rd Ambulatory Care, Madison, WI
- Restoring Hope Transplant House, Madison, WI
- Wisconsin Physicians Service (WPS), Monona, WI

JOHN KOLODZINSKI, DE

Mechanical Engineer & HVAC Specialist

John is the mechanical engineering director and senior mechanical engineer. He is a proud resident of Mequon and has over 25 years of experience leading multidisciplinary design for a wide range of projects. One of his specialties is the replacement of mechanical systems within existing facilities. He has designed and retrofitted facilities with air handling systems, boiler plants, chilled water plants, VRF, geothermal, and the conversion of old and outdated control systems to DDC. The complexity and planning of these types of system replacements is critical and John has a proven track record of continued success. John strives to maximize system efficiency, maintain budget costs, and engages the entire team to see that the design stays on track and meets expectations.

Relevant Project Experience

- Ozaukee County Administration Building, Port Washington, WI
- Waukesha County Expo Center Furnace & Mechanical System Upgrades, Waukesha, WI
- WEC Facility Site Analysis, WI
- WEC Chiller Replacement, Milwaukee, WI
- Attic Angel Place Senior Living Facility, Middleton, WI
- Newcastle Place Senior Living Facility, Mequon, WI
- Ad-Tech Medical, Oak Creek, WI
- Dodge County Public Health, Juneau, WI
- Quad-Med, Multiple Locations
- Dermatology Specialists Clinic & Treatment Facilities, Multiple Locations
- Medford Clinic, Medford, WI
- Medical Education Resource Center, Wausau, WI
- Meriter Health Center Remodel, Madison, WI

STRANG PROJECTS

WAUKESHA COUNTY EXPO CENTER FURNACE & MECHANICAL SYSTEM UPGRADES
Waukesha, WI

THE PROJECT

Retrofit projects and remodels generate a particular set of challenges when compared to new construction. In these types of projects, design centers around the constraints of the space, and it is essential that you work within its limits. These design challenges were especially apparent when Strang tackled the outdated mechanical systems of the Waukesha County Exposition Center.

Built in 1972, the Waukesha County Exposition Center complex features 21,000 SF of year-round heated and air-conditioned meeting and exhibit space. It includes a domed roof, stage, three meeting rooms, kitchen, two balconies, staff offices, and box office. The primary heating and cooling systems were original to the building and at 48 years of service life, was in dire need of replacement.

Strang partnered with Waukesha County to upgrade and replace the facility's overall HVAC and mechanical systems, the replacement of these systems resulted in increased energy efficiency and cost savings.

THE CHALLENGES

The previous gas-fired equipment was not only inefficient but included parts that were on the verge of obsolescence, replacement parts were no longer available and needed to be custom fabricated due to the challenges of outdated mechanical systems. Strang provided Good-Better-Best solutions. To aid in bringing the project to fruition, our team helped set a budget and was there to provide solutions to the surprises that inevitably arise when working with old systems.

The Waukesha Expo Center is a taxpayer-funded, public entity, so it was crucial that we kept the budget on track. Any mechanical solutions had to be carefully managed and tracked.

The shape of the building itself also offered a unique obstacle. The Expo Center is a round building that required large gluelams (glued laminated timbers) for the structure supported by concrete walls. This meant that the existing mechanical systems were kept in a pie-shaped room with gluelams running down at steep angles. It was up to the Strang team to find a system that would both fit into the space and meet the needs of Waukesha County. This called for a perfectly sized hot water boiler plant and pinpointing a custom air handling unit that would fit into the space.

THE SOLUTIONS

Ultimately, Strang replaced the existing heating and air conditioning equipment that served the main arena building with a new, automated, and energy efficient system. This included a new boiler plant, air handling units, and air-cooled condensing units. The budget, existing facility systems, and unique shape of the building were all kept at the forefront of the design while efficiency and temperature control were maximized.

Reference

Nicki Jensen, Senior
Landscape Architect
njensen@waukeshacounty.gov

ALLIANT ENERGY CENTER (AEC) CAMPUS
Madison, WI

Strang's projects on the AEC campus include master planning of the entire campus, design and construction of the current exposition center and constructed the New Holland Pavilions, a world class multi-purpose facility of over 290,000 SF. Most recently we are helping AEC with their Electrical Lighting Upgrades Report and their HVAC and Controls Upgrades Report. These projects will verify all existing systems and provide guidance on new infrastructure needs. Of special focus will be opportunities for expandable system enhancements. Additionally the Campus Lighting Report will identify areas of improvement to improve lighting throughout the facilities with a concentration on sustainable new lighting.

EXHIBITION HALL & EXPANSION

This world-class, award-winning 255,000 SF Exhibition Hall is part of a full-service, multi-building exposition facility. The new Exhibition Hall hosts more than 300 exhibits, meetings, conventions, banquets, and trade and consumer shows annually.

This versatile space accommodates up to 900 10-by-10-foot exhibits simultaneously, with meeting and dining services for the diverse needs of groups ranging from 12 to 2,000 participants.

The design solution includes three components: remodel of an existing facility, a new exhibit hall, and a new lobby. More than 218,000 SF was added to the 37,000 SF facility. The new building includes 13 conference rooms, food service areas, 100,000 SF of unobstructed exhibit space, support offices, storage, and 45,000 SF of lobby and pre-function space. The expansion complements the existing architectural details with a contemporary design.

Reference

Eric Urtes, Project Manager, Urtes.eric@countyofdane.com
608.266.4798

WEC CHILLER REPLACEMENT
Milwaukee, WI

Due to our extensive experience, Strang was asked to team with WEC to evaluate their existing facilities and operations. These ongoing facility conditions assessments, focused primarily on renovating their mechanical and electrical systems. This included existing operational conditions, inspecting code compliance, health, safety, and life cycle stages. The recommendations from the assessments are to be used for long-term planning, maintenance, and replacement of systems and facilities.

Specific focus for WEC has been placed on the following: assessing existing engineered system conditions and maintainability for major utility facilities; assessing monitoring and controllability of mechanical systems; identifying recommendations for life-cycle performance retrofit opportunities; and prioritizing deficiencies and estimated repair costs. Lastly, due to an aging and inefficient chilled water plant serving WEC's 428,000+ SF headquarters office building, Strang identified their cooling equipment was in desperate need of replacement.

Strang engineered a solution to replace the chilled water plant which included two, 300-ton, water-cooled centrifugal chillers and an indoor cooling tower. A primary/secondary piping arrangement was modified to maximize energy efficiency.

The building automation system was also upgraded to allow for complete owner control. Control valves on the indoor air handling units provide for the minimum flow requirements of the chillers. The integration of two air-cooled chillers for the colder months (when the cooling demand is not as significant) reduced overall energy consumption for WEC. This also allowed for better temperature control and equipment life expectancy by more closely matching the required cooling loads.

Reference

Ryan Lee, PE, Facilities Area Manager
ryan.lee@wecenergygroup.com
414.221.3473

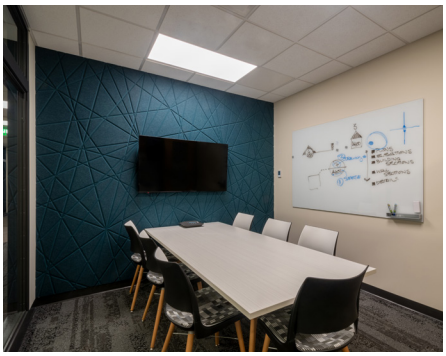
MADISON COLLEGE PROJECTS

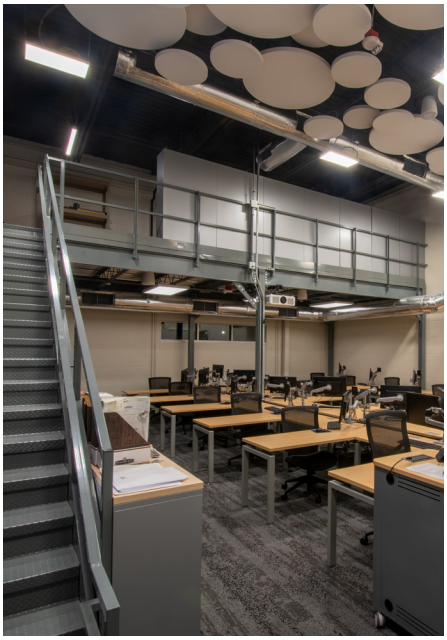
Madison, WI

Strang has been a long trusted advisor to Madison College for decades. With three Madison campuses and locations in Fort Atkinson, Portage, Reedsburg and Watertown, Madison College aims to make it convenient for students to succeed. Their facilities offer state-of-the-art classrooms and hands-on learning experiences for the more than 30,000 students enrolled across our region. Each campus has a different mix of program offerings and on-site services but all serve the College's mission of providing open access to quality higher education.

Our following Madison College IDIQ projects further demonstrate our relationship.

Madison College Projects	Date	Description
North Lot Parking	2009	Study of circulation
Transportation Center Pre-Design	2010	Study with site design concepts
Truax Campus HVAC Upgrades	2010	Mechanical system upgrades
Advanced Manufacturing Pre-Design	2010	Study with site design concepts
Wright St-Building Condition Report Update	2010	Evaluation of existing conditions
Downtown Campus Site Planning	2012	Study with site design concepts
Baking Hospitality Education Center	2012	Full design for proposed new center
Cosmetology Lab Remodel	2010	Renovation of existing site
Data Center & Misc Remodeling	2008	Data/AV upgrades
Truax Expansions	2020	Expansion of existing site
Animal Barn Addition and Remodeling	2016	Expansion and remodeling of existing site
Reedsburg HVAC Modifications	2017	Mechanical system upgrades
Truax VAV Box Replacement	2016	Mechanical system upgrades
Truax Chiller Replacement	2011	Mechanical system upgrades
Truax Large Animal Facility Addition	2016	Expansion of existing site
Truax Faculty Office Addition and Remodel	2020	Remodel of existing site
Commercial Avenue Pre-Design	2019	Study with site design concepts
Downtown Chiller Replacement	2012	Mechanical system upgrades
Facilities Master Plan	2012	Study with site design concepts
MATC-at the Villager	2008	Remodel for classroom space
Villager TelePresence Room	2009	Data/AV Integration
Campus Design Guidelines	2012	Guiding principles for future designs
Boiler and System Pump Replacements	2011	Mechanical system upgrades
Ingenuity Center and Advanced Sustainable Manufacturing	2010	Remodel of existing site
Parking Lot Remodeling	2011	Parking renovation
Truax West Storage	2017	Remodel of existing site
Arch & Interiors Remodeling	2020	Remodel of existing site in classroom space





ADDITIONAL STRANG HVAC PROJECTS

NORD GEAR

COMAR PLASTICS

EUROFINS FOOD SOLUTIONS

Often, it's what you can't see that is most important. Behind the walls and below the floors are the HVAC systems that allow your building to function comfortably.

ADDITIONAL STRANG INTERIOR UPGRADES

OFFICE SPACES

ENTRY SEQUENCE

MEETING ROOMS

First impressions are important, and when used correctly ambient light can make ceilings seem higher and walls wider--creating that impactful first impression. Then comes the fun part! Accent lighting it used to highlight architectural elements, while decorative or effect lightings is what makes your environment truly unique to you.

FEE CALCULATION

BASE BID

We are pleased to offer you engineering and design services for the Mequon City Hall Facility. Our understanding of the scope of services is broken into 3 bids:

SUMMARY

The Base Bid involves the replacement of the existing indoor air handling units. This scope of work will include the removal of (2) indoor air handling units, associated piping, ductwork and ground mounted condensing units. A new packaged air handling unit will be placed on grade on the west side of the facility. The ductwork is to be installed on the exterior wall where it will enter the existing air handling room on the upper level mezzanine.

OUR APPROACH

The existing air handling units contain hot water and DX coils with multi-zone dampers and pneumatic controls. At the time of design, these components will be evaluated and considered for upgrade along with the equipment replacement. Some of these considerations will include the removal of the multi-zone dampers and controls and installation of variable air volume (VAV) boxes with hot water reheat. New direct digital controls (DDC) would be installed on the VAV boxes and extended to the existing building automation system (BAS). The BAS would also be evaluated for compatibility and capacity. Strang has an in-house integrated control systems engineer who will work in conjunction with the team to fully investigate all system control options. Finally, we will review the electrical impact of the system upgrade. Working with our in-house electrical engineers, we will coordinate all modifications in the most cost-effective way possible.

The aesthetics of a mechanical system is an important consideration for facilities. With this building being constructed in 1936, it is even more critical to investigate all options for installation. Whether a facility is officially registered with the historical society or not, the impact on the architecture is paramount. Strang has an in-house architect that specializes in historical facilities and the integration of modern mechanical systems. During design we will investigate options for routing the ductwork within the facility in lieu of up the exterior wall.

ALTERNATE BASE BID

SUMMARY

The Alternate Base Bid involves the replacement of the existing indoor air handling units. This scope of work will include the removal of (2) indoor air handling units, associated piping, ductwork and ground mounted condensing units. New indoor air handling units will be installed, along with ground mounted condensing units, associated piping and controls.

OUR APPROACH

The existing air handling units contain hot water and DX coils with multi-zone dampers and pneumatic controls. At the time of design, these components will be evaluated and considered for upgrade along with equipment replacement. One of these considerations will include the removal of the hot water booster coils and the installation of variable air volume (VAV) boxes with hot water reheat. New direct digital controls (DDC) would be installed on the VAV boxes and extended to the existing building automation system (BAS). The BAS would be evaluated for compatibility and capacity. Strang has an in-house integrated control systems engineer who will work in conjunction with the team to fully investigate all system control options. We will also review the electrical impact of the system upgrade. Working with our in-house electrical engineers, we will coordinate all modifications in the most cost-effective way possible. Finally, we will evaluate all options for the installation of the new air handling equipment on the mezzanine. At the time of the site visit it was observed that the existing condition of the mezzanine will not meet the requirements for proper equipment access for maintenance and may pose safety concerns. We will work side by side with our in-house architects to offer the best solutions available to meet the long-term goals of both the end user and the facility.

BASE BID

Mequon City Hall - Air Handling Unit Upgrade - Base Project

Fee Calculation

TASK DESCRIPTION	Total Hours
Schematic Design	
Review of Owner Provided Building Drawings	0
Site Visits to Evaluate/Photograph Existing Conditions	2
Prepare Base Drawings *(when not available from Owner)*	8
Meetings with Owner	2
Coordination Meetings with Consultants/Design Team	5
Develop Design Concepts	12
Schematic Design Drawings	20
Schematic Design Totals ---------->>	**49**
	7,058
Design Development	
Meetings with Owner	4
Coordination Meetings with Consultants/Design Team	6
General Design Development	36
Finalize Material and Systems Selections	4
Final Design Research and/or Calculations	8
Preliminay Specifications	2
Design Development Drawings	28
Design Development Totals ---------->>	**88**
	13,316
Construction Documents	
Meetings with Owner *(Includes Final Review before Bidding)*	4
Coordination Meetings with Consultants/Design Team	6
Finalize Construction Details	26
Final Engineering Calculations for Regulatory Submission	10
Construction Document Drawings	48
Construction Documents Totals ---------->>	**94**
	12,684
Construction Administration	
Pre-Construction Meeting	1
Construction Field Visits	2
Construction Progress Meetings	2
Respond to RFI's	2
Review/Stamp Submittals	1
Prepare Supplemental Instructions	1
Review Final Punchlist	1
Review O&M Manuals	1
Construction Administration Totals---------->>	**11**
	1,586
Project Totals	
Total Project Hours ---------->:	**242**
Total Project Design Fees ---------->:	**$34,644**

ALTERNATE BASE BID

Mequon City Hall Air Handing Unit Upgrade

Fee Calculation

TASK DESCRIPTION	Total Hours
Schematic Design	
Review of Owner Provided Building Drawings	0
Site Visits to Evaluate/Photograph Existing Conditions	2
Prepare Base Drawings *(when not available from Owner)*	8
Meetings with Owner	2
Coordination Meetings with Consultants/Design Team	5
Develop Design Concepts	12
Schematic Design Drawings	20
Schematic Design Totals ---------->>	**49**
	7,058
Design Development	
Meetings with Owner	4
Coordination Meetings with Consultants/Design Team	6
General Design Development	40
Finalize Material and Systems Selections	8
Final Design Research and/or Calculations	8
Preliminay Specifications	4
Design Development Drawings	28
Design Development Totals ---------->>	**98**
	15,368
Construction Documents	
Meetings with Owner *(Includes Final Review before Bidding)*	4
Coordination Meetings with Consultants/Design Team	6
Finalize Construction Details	34
Final Engineering Calculations for Regulatory Submission	10
Construction Document Drawings	48
Construction Documents Totals ---------->>	**102**
	14,396
Construction Administration	
Pre-Construction Meeting	1
Construction Field Visits	2
Construction Progress Meetings	2
Respond to RFI's	2
Review/Stamp Submittals	1
Prepare Supplemental Instructions	1
Review Final Punchlist	2
Review O&M Manuals	2
Construction Administration Totals---------->>	**13**
	2,014
Project Totals	
Total Project Hours ---------->>	**262**
Total Project Design Fees ---------->>	**$38,836**

FEE CALCULATION

OPTION #1 - CEILING

CEILING REMOVAL AND MODERNIZATION

This option involves the removal of the existing ceiling within the Common Council Chambers. The historical significance within this space must be considered when evaluating options for alterations. Strang has a full staff of architects and interior designers that will evaluate the existing architecture and work with you to develop the optimal design approach.

Several aspects of design aesthetics and user experience will be considered including ceiling height and volume of space in relation to the floor area, acoustical qualities, material selection to control reverberation, air flow direction, velocity, and sound reduction from the mechanical system, and proper distribution and control of lighting to accommodate a variety of room functions.

From our visit, we find the council chambers to be a rather large room which benefits from the added height of the existing vaulted ceiling. We will explore modernization options using a good-better-best approach which will include exploring a full removal of the existing ceiling compared with options to maintain the height and form via new material selections. We will demonstrate a range of design approaches using virtual 3D models of the room which may include the addition of dropped ceiling clouds within the space, perimeter soffits, and a range of material, color, and lighting options. These strategies will work in unison with the HVAC upgrades to create an optimal user experience.

OPTION #2 - LIGHTING

LIGHTING REPLACEMENT

This option involves the removal and upgrading of the existing lighting within the Common Council Chambers. Strang has in-house electrical and low voltage engineers that will work in sync with the architects and interior designers. We will present options for discussion on the lighting design and lighting controls. Our design will meet or exceed the adopted energy codes. These options may include integration of the lighting into the building automation system (BAS), if desired. We will also investigate the existing sound system and present options for integrating it into the new ceiling design.

OPTION #1 - CEILING REMOVAL & MODERNIZATION

Mequon City Hall Air Handing Unit Upgrade

Fee Calculation

TASK DESCRIPTION	Total Hours
Schematic Design	
Review of Owner Provided Building Drawings	1
Site Visits to Evaluate/Photograph Existing Conditions	2
Prepare Base Drawings *(when not available from Owner)*	4
Meetings with Owner	4
Coordination Meetings with Consultants/Design Team	2
Develop Design Concepts	10
Schematic Design Drawings	12
Schematic Design Totals ---------->>	**35**
	4,992
Design Development	
Meetings with Owner	5
Coordination Meetings with Consultants/Design Team	2
General Design Development	4
Finalize Material and Systems Selections	4
Final Design Research and/or Calculations	0
Preliminay Specifications	4
Design Development Drawings	16
Design Development Totals ---------->>	**35**
	4,978
Construction Documents	
Meetings with Owner *(Includes Final Review before Bidding)*	4
Coordination Meetings with Consultants/Design Team	4
Finalize Construction Details	4
Final Engineering Calculations for Regulatory Submission	0
Construction Document Drawings	24
Construction Documents Totals ---------->>	**36**
	4,714
Construction Administration	
Pre-Construction Meeting	3
Construction Field Visits	4
Construction Progress Meetings	4
Respond to RFI's	6
Review/Stamp Submittals	4
Prepare Supplemental Instructions	8
Review Final Punchlist	5
Review O&M Manuals	1
Construction Administration Totals---------->>	**35**
	4,778
Project Totals	
Total Project Hours ---------->>	**141**
Total Project Design Fees ---------->>	**$19,462**

OPTION #2 - LIGHTING REPLACEMENT

Mequon City Hall Air Handing Unit Upgrade

Fee Calculation

TASK DESCRIPTION	Total Hours
Schematic Design	
Review of Owner Provided Building Drawings	2
Site Visits to Evaluate/Photograph Existing Conditions	2
Prepare Base Drawings *(when not available from Owner)*	4
Meetings with Owner	1
Coordination Meetings with Consultants/Design Team	2
Develop Design Concepts	3
Schematic Design Drawings	4
Schematic Design Totals ---------->>	**18**
	2,634
Design Development	
Meetings with Owner	1
Coordination Meetings with Consultants/Design Team	2
General Design Development	4
Finalize Material and Systems Selections	1
Final Design Research and/or Calculations	1
Preliminay Specifications	4
Design Development Drawings	10
Design Development Totals ---------->>	**23**
	3,575
Construction Documents	
Meetings with Owner *(Includes Final Review before Bidding)*	1
Coordination Meetings with Consultants/Design Team	3
Finalize Construction Details	4
Final Engineering Calculations for Regulatory Submission	0
Construction Document Drawings	13
Construction Documents Totals ---------->>	**21**
	3,084
Construction Administration	
Pre-Construction Meeting	0
Construction Field Visits	0
Construction Progress Meetings	0
Respond to RFI's	2
Review/Stamp Submittals	2
Prepare Supplemental Instructions	2
Review Final Punchlist	2
Review O&M Manuals	0
Construction Administration Totals---------->>	**8**
	1,199
Project Totals	
Total Project Hours ---------->>	**70**
Total Project Design Fees ---------->>	**$10,492**

Mequon City Hall Air Handing Unit Upgrade

Fee Calculation - Window Replacement - Additive 3

TASK DESCRIPTION	Total Hours
Schematic Design	
Review of Owner Provided Building Drawings	1
Site Visits to Evaluate/Photograph Existing Conditions	2
Prepare Base Drawings *(when not available from Owner)*	4
Meetings with Owner	4
Coordination Meetings with Consultants/Design Team	2
Develop Design Concepts	8
Schematic Design Drawings	12
Schematic Design Totals ---------->>	**33**
	4,402
Design Development	
Meetings with Owner	3
Coordination Meetings with Consultants/Design Team	2
General Design Development	6
Finalize Material and Systems Selections	4
Final Design Research and/or Calculations	4
Preliminay Specifications	4
Design Development Drawings	16
Design Development Totals ---------->>	**39**
	5,236
Construction Documents	
Meetings with Owner *(Includes Final Review before Bidding)*	2
Coordination Meetings with Consultants/Design Team	4
Finalize Construction Details	6
Final Engineering Calculations for Regulatory Submission	8
Construction Document Drawings	24
Construction Documents Totals ---------->>	**44**
	5,770
Construction Administration	
Pre-Construction Meeting	2
Construction Field Visits	4
Construction Progress Meetings	4
Respond to RFI's	6
Review/Stamp Submittals	4
Prepare Supplemental Instructions	8
Review Final Punchlist	5
Review O&M Manuals	1
Construction Administration Totals---------->>	**34**
	4,483
Project Totals	
Total Project Hours ---------->>	**150**
Total Project Design Fees ---------->>	**$19,891**

ADDITIVE - FLOORING OPTIONS

Mequon City Hall Air Handing Unit Upgrade

Fee Calculation - Flooring Options - Additive 4a and 4b

TASK DESCRIPTION	Total Hours
Schematic Design	
Review of Owner Provided Building Drawings	1
Site Visits to Evaluate/Photograph Existing Conditions	2
Prepare Base Drawings *(when not available from Owner)*	2
Meetings with Owner	2
Coordination Meetings with Consultants/Design Team	2
Develop Design Concepts	6
Schematic Design Drawings	6
Schematic Design Totals ---------->>	**21**
	2,604
Design Development	
Meetings with Owner	2
Coordination Meetings with Consultants/Design Team	1
General Design Development	2
Finalize Material and Systems Selections	2
Final Design Research and/or Calculations	2
Preliminay Specifications	2
Design Development Drawings	12
Design Development Totals ---------->>	**23**
	2,770
Construction Documents	
Meetings with Owner *(Includes Final Review before Bidding)*	2
Coordination Meetings with Consultants/Design Team	1
Finalize Construction Details	4
Final Engineering Calculations for Regulatory Submission	0
Construction Document Drawings	16
Construction Documents Totals ---------->>	**23**
	2,416
Construction Administration	
Pre-Construction Meeting	2
Construction Field Visits	2
Construction Progress Meetings	2
Respond to RFI's	2
Review/Stamp Submittals	2
Prepare Supplemental Instructions	4
Review Final Punchlist	2
Review O&M Manuals	1
Construction Administration Totals---------->>	**17**
	2,188
Project Totals	
Total Project Hours ---------->>	**84**
Total Project Design Fees ---------->>	**$9,978**

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