

Department of Enterprise Services
1500 Jefferson Street, Olympia, WA 98504-1476

Project No. 2024-035
Natural Resources Building - Replace Piping for Wet Fire Suppression

Statement of Qualifications
FSi Engineers
August 21, 2024



Whatcom County Civic Center Annex
Renovation & Fire Protection System Redesign



FSi Engineers
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Seattle, WA 98104
206.622.3321

II. Cover Letter



August 21, 2024

Kathy Yi, Project Manager
Washington Department of Enterprise Services, Facility Professional Services
1500 Jefferson Street
Olympia, WA 98504-1476

Subject: Project No. 2024-035, Natural Resources Building - Replace Piping for Wet Fire Suppression

Dear Ms. Yi and Selection Panel,

DES has a broad and critical role which includes supporting the State's workforce and ensuring the sustainable operation of government buildings. The fire protection piping upgrade in the Natural Resources Building falls at the intersection of these functions. The goals of keeping occupants safe and developing a solution that provides long term value to the State will guide our work on this project. We also understand your commitment to keeping the project within the schedule and budget. Our deep experience as prime consultant working on system replacements in public office buildings means we are well suited to help you reach your goals.

My team includes FSi Engineers, Rolluda Architects, and Sitts & Hill Engineers. We have all worked with the State of Washington and are adept at following your processes, designing to your standards, and holding your preferences at the center of our projects. The three firms have worked together on dozens of projects, and our strong relationship means we work together seamlessly.

Our approach to important projects like this one centers on communication. We will work to understand your concerns and the end results you want, and we will manage the project so that we meet your objectives and you are able to use your funds where they produce the greatest benefits. We will support your strict adherence to schedule, scope, and budget and will work to get your building back to normal as soon as possible while minimizing disruptions during construction. Our project management skills mean our projects stay on schedule, and we have deep experience in construction phasing to keep your building safely occupied.

Our team is committed to your success. We look forward to working with you to develop a long-term, cost-effective solution for the piping replacement, delivered on-time and within your budget.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ola Jarvegren', written over a light blue horizontal line.

Ola Jarvegren, Principal
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FSi Engineers

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III. Consultant Selection Contact Form



STATE OF WASHINGTON
DEPARTMENT OF ENTERPRISE SERVICES

1500 Jefferson St. SE, Olympia, WA 98501
PO Box 41476, Olympia, WA 98504-1476

Consultant Selection Contact Form

Designated Point of Contact for Statement of Qualifications
For Design Bid Build, Design Build, Progressive Design Build, GC/CM & Job Order Contracting
(JOC) Selections

Firm Name: FSi Engineers		
Point of Contact Name & Title: Ola Jarvegren, Principal		
Email: olaj@fsi-engineers.com	Telephone: 206.622.3321	
Address: 1001 Alaskan Way, Suite 200		
City: Seattle	State: WA	Zip: 98104

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IV. Executive Summary

We look forward to helping you replace the wet fire suppression system piping in the Natural Resources Building, helping to extend the life of the building and protect its occupants.

Throughout our qualifications, you will learn about our deep project management expertise, developed over decades serving as prime consultant on system replacement projects in public buildings. Our thorough communication with the project team, frequent check-ins on project progress, and dedication to meeting your needs means our projects stay on scope, schedule, and budget. We are experienced in public agency processes and procedures and incorporate them into our project management.

You are replacing the fire suppression piping to allow your building and its occupants to continue doing their critical work well into the future. So a disruption to their work to construct the piping replacement would get in the way of your goals. We will bring our project phasing expertise to allow your building to stay occupied during construction, and we will manage the project tightly to keep it on schedule, minimizing the overall impact of the project.

We are prepared to design a high-quality piping replacement that meets your needs. Our portfolio includes hundreds of fire protection designs, and we have a registered fire protection engineer on staff. We've designed wet and dry systems, pre-action systems, and more in facilities ranging from offices and schools to transit stations, airports, and manufacturing facilities. This wide experience means we are prepared to address any challenges that may arise on this project. We will also bring our deep experience in sustainable design to support your priority of excellence in sustainability.

V. Qualifications of Key Personnel



Fire Protection, Mechanical, & Electrical Engineering: FSi Engineers

FSi Engineers provides a wide range of fire protection, mechanical, and electrical engineering services. Clients seek us out for our design ability and stay with us for our responsive, client-centered service. FSi specializes in public infrastructure and amenity projects, including conference centers, civic centers, community centers, museums, libraries, and schools. FSi has provided fire protection engineering for a wide range of facilities and occupancies from airports to office buildings, and our staff includes a registered fire protection engineer. We provide pre-design studies, construction documents, hydraulic calculations, and designs for full NFPA-compliant fire protection. Our scope will include fire protection engineering, electrical engineering, and design for mechanical, HVAC, and plumbing as needed. We expect our scope will comprise 80% of the project.

Architectural Support: Rolluda Architects

Rolluda Architects, Inc. (RAI) has a staff of 40+ dedicated design professionals. The firm provides architecture, interior design, and planning services for both private and public sector clients. Their diversified and well-balanced team brings expertise in the design of public, educational, aviation, and transportation facilities. RAI has extensive knowledge and experience working with governmental clients such as WA DES, Port of Seattle, City of Seattle, and King County, in the planning and design of government administration buildings, both for new construction and renovations, including in occupied buildings. We expect Rolluda's scope to comprise 15% of the project.

Structural Engineering: Sitts & Hill Engineers

Sitts & Hill is a multidisciplinary firm located in Tacoma, providing civil, structural, architectural and survey services since 1955. Their portfolio includes work as prime and subconsultant ranging from equipment anchoring, utilidors, and foundations to multi-story building design efforts including LEED Platinum and Silver certifications. Sitts & Hill has continuously performed in these roles in 37 states in the last 15 years on projects ranging from \$3K to over \$250M. Sitts & Hill's responsibilities for this project may include design for structural supports of wet sprinkler including site/route evaluation and configuration design, construction administration, and construction phasing for remaining fully operational during construction. We expect Sitts & Hill's scope to comprise 5% of the project.





Ola Jarvegren LEED Green Associate **Principal-In-Charge**



Ola brings 24 years of professional experience focused on public projects in Washington. His expertise includes developing reliable and maintainable HVAC, controls, plumbing, and fire protection systems. He has 85+ public projects in his portfolio for clients including the State of Washington and dozens of Washington cities and counties. Ola is committed to cost-effective, energy-efficient design that makes a difference for his clients and the communities they serve. He will be assigned 5% of the project time.

Education

University of Washington,
BSME, 2000

Licenses & Registrations

LEED Green Associate

Key qualifications

24 years of experience

HVAC, plumbing, piping,
and fire protection system
expertise

Focus on energy and water-
efficient design

Mechanical systems for a
variety of multi-use, complex
facilities

Lynnwood Wastewater Office & Treatment Campus FP Addition

Mechanical Principal-in-Charge & PM for fire protection upgrades to the Lynnwood WWTP campus, including office/lab buildings. FSi added a new fire service and extended fire protection systems to areas not previously covered.

King County AFIS Lab & Office Relocation, LEED Gold

Mechanical Principal-in-Charge for relocation of Sheriff's Dept photography and Automated Fingerprint Identification System (AFIS) labs. The project renovated lab and office spaces and added a vehicle processing building. FSi redesigned the fire suppression system for the layout and change of use and extended the fire suppression system to the new vehicle processing building.

King County CFJC Fire Sprinklers & Pre-Action Retrofit

Mechanical Principal-in-Charge for fire sprinkler system upgrades to reduce activation due to tampering. FSi converted the wet sprinkler system to a dry system with four pre-action fire protection cabinets and confirmed the upgrades are compatible with the existing smoke detection system.

Sea-Tac Parks & Public Works Office & Maintenance Facility Reno

Mechanical and Fire Protection Principal-in-Charge for renovation and a new wet fire protection system for the administrative and office building and modifications to the dry fire protection systems at two maintenance buildings.



Art Stokes PE **Lead Electrical Engineer | Senior Associate**

Art Stokes will bring three decades of experience in electrical engineering to his role as Lead Electrical Engineer. Art has designed and supported construction of electrical, instrumentation, and control and ICS cyber security specifications and drawings. Art is experienced in performance-based specifications and recommendations for fire alarm systems. His unusual breadth of experience in industrial and community projects gives his clients the benefits of both. He will be assigned 5% of the project time.



Daimian Bingham PE LEED Green Associate Project Manager

Daimian has 15 years of engineering experience with public, community, and industrial projects, giving him an understanding of a wide range of codes and design standards. His expertise extends to HVAC, plumbing, and fire protection systems. He will be assigned 25% of the project time.

Education

Walla Walla University, WA,
BSME, 2013

Licenses & Registrations

PE, WA
LEED Green Associate

Key qualifications

15 years of experience

Civic facilities

HVAC, plumbing, and fire
protection system design

Higher education

King County 1010 E. Republican Building Conversion

Fire Protection & Mechanical Project Manager for a TI for King County-owned permanent supportive housing. FSi's scope includes a building-wide full revision to the fire protection system to support the change in occupancy.

Byrd Barr Place Renovation

Fire Protection & Mechanical Project Manager for the complete renovation of the historic fire station housing Byrd Barr's social services and food bank. FSi redesigned the building's fire protection piping and designed a wet pipe sprinkler system sized for Light Hazard Occupancy in office areas and a dry system for the receiving area, bringing the building fully up to code.

King County Harborview Hall 24/7 Homeless Shelter

Lead Fire Protection & Mechanical Engineer for a TI for an enhanced shelter for 100 guests and staff. The project added offices, sleeping areas, restrooms, and other support facilities. FSi redesigned the fire protection system to support the change in occupancy and to bring the system up to code. We changed piping and sprinkler layout to support added and moved walls, added new branch piping, and changed sprinkler heads.

King County AFIS Lab & Office Relocation

Mechanical Engineer for relocation of the Sheriff's Dept photography and Automated Fingerprint Identification System (AFIS) processing labs. The project renovated spaces for labs and offices and added a vehicle processing building. FSi redesigned fire suppression piping and sprinklering for the new space layout and change of use. FSi also designed a new fire suppression system for the vehicle processing building, tied to the existing system.

North Olympic Library System Sequim Branch Renovation

Mechanical Engineer for the renovation of 5k sf of and the addition of 4k sf to the existing Sequim library. FSi's scope includes mechanical, electrical, and fire protection engineering. FSi is designing a wet pipe sprinkler system for the library which will accommodate architectural modifications to the layout while ensuring required coverage.



Ben Roush

PE (FP & ME), LEED AP BD+C, BEMP, BEAP, CEPE, CCP

Fire Protection Engineer | Principal

Ben is a licensed mechanical and fire protection engineer and brings expertise in fire protection system assessment, sizing, and design as well design for sustainable facility operation. He has designed a wide range of fire protection systems for different building occupancies and consistently develops collaborative relationships with fire marshals and the project team. Ben has worked extensively in facilities with complex functions and requirements, such as airports, large manufacturing plants, and maintenance facilities. He will be assigned 15% of the project time.



Education

Ohio State University, BSME, 2003

Licenses & Registrations

PE (FP & ME): WA, AZ, CA, DC, MD, MI, NJ, PA, SC, VA

LEED AP BD+C

Certified Commissioning Professional (CCP)

ASHRAE Building Energy Modeling Professional (BEMP) & Building Energy Assessment Professional (BEAP)

Certified Energy Plans Examiner (CEPE)

Affiliations

NFPA Committee Member for developing regulations

Member, Society of Fire Protection Engineers

USGBC-MD Energy & Atmosphere Technical Advisory Group

AIA Maryland Legislative Committee Member

AIA Baltimore Committee on the Environment & Resiliency Co-chair

MD Clean Energy Center Advisory Council

King County CFJC Fire Sprinklers & Pre-Action Retrofit

Fire Protection Engineer for improvements and addition of pre-action cabinets to the fire sprinkler system at the CFJC to reduce the risk of sprinkler activation due to fire alarm tampering. FSi reviewed the existing system and designed the conversion of the wet sprinkler system to a dry system with four pre-action fire protection cabinets. FSi analyzed the existing smoke detection system to confirm its compatibility with the pre-action system.

Pierce Transit Building 6 Fire Sprinkler & Alarm Design

Fire Protection Engineer for a fire protection and fire alarm system modification of the Pierce Transit Base Building 6, one of the base's four major buildings. The project modernized the office area in the 11,300 sf, pre-engineered metal building. FSi designed the new fire protection system, including coordinating the fire service and line from the street to the newly sprinklered building and the drivethrough awning with sprinklers. FSi also provided construction and permitting support.

Whatcom County Civic Center Annex

Fire Protection Engineer for the renovation of Whatcom County's Civic Center Annex, a 4-story, 24,000 sf office building. FSi designed a new fire protection system, sprinklers, and alarm system on all floors. The owner wanted the building to remain occupied, so FSi developed a phasing plan to construct the fire protection system floor by floor, minimizing disruptions to occupants.

Boeing Enterprise Help Desk Relocation

Fire Protection Engineer for the relocation of the Enterprise Help Desk in an office building on Boeing's Bellevue campus. To support the new occupancy, FSi provided fire protection upgrades, including design for sprinkler head relocation and hydronic calculations.



Gary Scott AIA

Architectural Lead



Gary has over 30 years of experience in the architectural industry. He has extensive experience in municipal facilities, office buildings (new and remodeled), K-12, and higher education design. Gary brings substantial government experience through his work with WA DES, Port of Seattle, King County Solid Waste, and City of Seattle. He has up-to-date code knowledge, effective communication skills, and excellent coordination skills. Gary is adept at balancing the artistic and creative goals of the project with the technical elements required to bring the project from concept to reality.

Education

Master of Architecture,
University of Washington,
1991

Bachelor of Architecture,
University of Washington,
1984

Licenses & Registrations

Registered Architect:
Washington, 1993

Key qualifications

30+ years of experience

Familiarity working with
WA DES

Experience working with
government tenant groups

Experience with phased
projects

WA DES Modular Building Predesign Study

Project Manager for a predesign study that presented a unique and cost-effective opportunity for DES to provide adequate and energy-efficient print and mail services to support all other state agencies, local and tribal governments, institutions, and non-profit organizations. This predesign identified the feasibility of consolidating the needs of Print and Mail Services into a single comprehensive facility designed to meet the needs of both programs. RAI's report contained the result of the space needs program, facilities options exploration, cost estimate for the preferred option, and the site options analysis.

WA DES Modular Building Design Phase

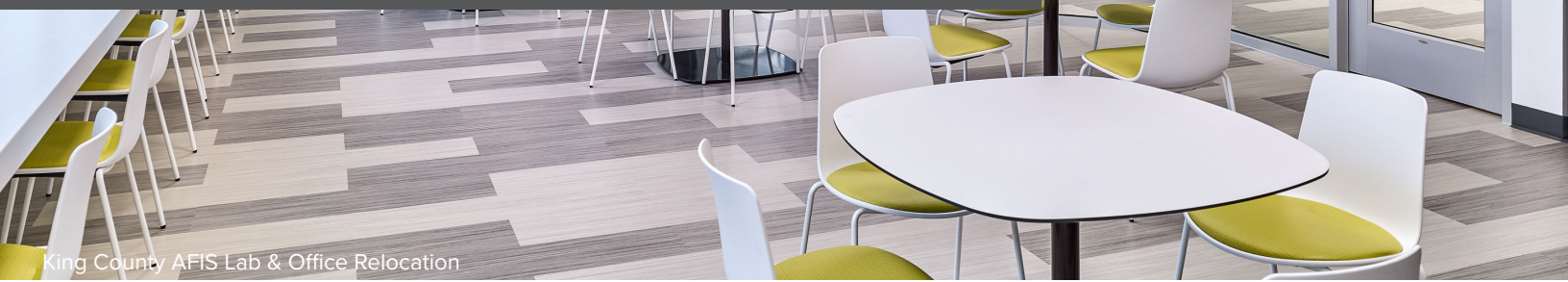
Project Manager for renovation and upgrades to building systems and interior reconfigurations to allow for the co-location of the state's print and mail operations. This benefits the client by reducing leased space, improving workflow design, reducing operating costs, increasing operating efficiencies for long-term savings, and also eliminating ongoing employee safety and security concerns. The project upgrades include site infrastructure, roof and envelope, mechanical/electrical systems, plumbing, seismic, and ADA compliance.

City of Seattle / Seattle Public Utilities S. Operations Center Hygiene Facility

Project Manager for investigation, design, and construction support. During feasibility, analysis, and design, Gary provided insight and expertise to further enhance and reinforce the signature space connections within the facilities and proposed ideas within the quality of the buildings' existing framework to dynamically improve interior building systems and comfort.

The quality of the exterior environment affords the improved perception and reality of cleanliness by providing outdoor wash down areas with direct access to the buildings service elements. The renovation expansion agenda of the building facility works in a broader sense to enrich the community, making the continued evolution of the SOC a gainfully contributing design for years to come.

VI. Relevant Experience



King County AFIS Lab & Office Relocation

Below, we describe a selection of our projects similar to the fire suppression piping replacement at the Natural Resources Building. With our focus on systems replacements in public buildings, we bring extensive experience analyzing design options, giving clients a full understanding of the impacts on operations, maintainability, construction cost, and life cycle cost for each. Our deep experience in construction phasing keeps buildings occupied and minimizes impacts to occupants. This means our projects stay on schedule and budget while addressing your scope needs.

King County AFIS Lab & Office Relocation

Team	Completed	Similar Attributes
FSi Engineers: Ola Jarvegren, Ben Roush, Daimian Bingham	2020	<ul style="list-style-type: none"> • Fire suppression system redesign in existing building • Public office building • Sustainable design • LEED Certification
Original Budget/Actual Cost	Delivery Method	
\$1.95M/\$2M	Design Bid Build	
<p>FSi was the mechanical and fire protection engineer for relocation of the King County Sheriff's Automated Fingerprint Identification System (AFIS) and photography labs to the Black River Office Building. The project renovated spaces for labs and offices and added a vehicle processing building. FSi's scope included a complete redesign of the fire suppression piping and sprinklering to accommodate the new space layout and building change of use. FSi also designed the fire suppression system for the new vehicle processing building with tie-ins to the existing system. The project was certified LEED Gold.</p>		
<p>Reference: Joe Hicker, King County Facilities Management Division, 206.277.9370, joe.hicker@kingcounty.gov</p>		

Pierce Transit Building 6 Fire Sprinkler & Alarm System Design

Team	Completed	Similar Attributes
FSi Engineers: Ola Jarvegren, Ben Roush	2019	<ul style="list-style-type: none"> • Fire suppression system redesign in existing building • Public office building
Original Budget/Actual Cost	Delivery Method	
\$95K/\$98K	Design Bid Build	
<p>FSi was the fire protection engineer for a fire protection system, fire alarm system, and HVAC/plumbing upgrades in the Pierce Transit Base Building 6. The project modernized the office area in the 11,300 sf building. FSi designed the new fire protection system. We coordinated the fire service and line from the street to the newly sprinklered building and the drivethrough awning. FSi also provided construction and permitting support. The project drastically increased life safety and building resiliency.</p>		
<p>Reference: NA. Pierce Transit project manager has retired</p>		

King County Harborview Hall 24/7 Homeless Shelter

Team	Completed	Similar Attributes
FSi Engineers: Ola Jarvegren, Ben Roush, Daimian Bingham	2019	<ul style="list-style-type: none"> • Fire protection system redesign in existing building • Piping replacement
Original Budget/Actual Cost	Delivery Method	
\$350K/\$375K	Design Bid Build	
<p>FSi was the fire protection and mechanical engineer for a TI in the historic Harborview Hall for a 100-bed enhanced shelter. The project added offices, sleeping areas, restrooms, and support facilities. FSi redesigned the fire protection system to support the change in occupancy and to bring the system up to code. We changed piping and sprinkler layout to support added and moved walls, added new branch piping, and changed sprinkler heads.</p>		
<p>Reference: Mark Batey, King County Facilities Management Division, 206.477.9351, mark.batey@kingcounty.gov</p>		

Whatcom County Civic Center Annex Remodel

Team	Completed	Similar Attributes
FSi Engineers: Ola Jarvegren, Ben Roush	2022	<ul style="list-style-type: none"> • Fire suppression system redesign in existing building • Public office building • LEED Silver Certified • Phased construction in occupied building
Original Budget/Actual Cost	Delivery Method	
\$1.7M/\$1M	Design Bid Build	
<p>FSi was the mechanical and fire protection engineer for renovation of the 4-story, 24,000 sf Civic Center Annex office building. Our scope included HVAC and plumbing upgrades, and a new fire protection system, sprinklers, and alarm system on all floors. FSi developed a floor-by-floor phasing plan for the fire protection systems to minimize impacts to occupants. The project was certified LEED Silver.</p>		
<p>Reference: Rob Ney, Whatcom County, 360.676.6746, rney@co.whatcom.wa.us</p>		

Lynnwood Wastewater Office & Treatment Campus FP Addition

Team	Completed	Similar Attributes
FSi Engineers: Ola Jarvegren, Ben Roush, Daimian Bingham	2020	<ul style="list-style-type: none"> • Evaluation of existing system • Facility assessment & upgrade • Fire sprinkler addition and replacement in facility with multiple tenant spaces
Original Budget/Actual Cost	Delivery Method	
\$340K/\$320K	Design Bid Build	
<p>FSi was the fire protection engineer for addition of fire protection to the Lynnwood WWTP as part of a campus-wide repair project. The site includes offices and labs, centrifuge building, main plant pump station, and totals 20,690 sf. FSi designed new fire protection systems for areas of the facility without it. To navigate space constraints on the fire protection system, FSi worked with the project team to add a new building to house risers. The existing fire service was far from the building, requiring a costly new pump to avoid pressure loss in the piping. FSi supported the Owner to bring in a new fire service to avoid the need for a fire pump.</p>		
<p>Reference: Ehsan Shirkhani, Lynnwood Public Works Department, 425.670.5218, eshirkhani@lynnwoodwa.gov</p>		

VII. Past Performance



King County Children & Family Justice Center Detention Center Fire Sprinklers & Pre-Action Retrofit

FSi is committed to developing a successful wet fire suppression piping replacement for the Natural Resources Building. We back our commitment with a track record of successfully leading projects through proactive communication and collaboration, thorough definition of project scope, and close adherence to project schedule and budget.

Achieving & Maintaining Project Scope, Schedule, and Budget

Over 35+ years of leading projects as the prime consultant, we have honed our project management skills and developed a proactive approach, structured to bring out the best in all project participants as we work together toward the owner's project goals. We communicate proactively with the project team and stakeholders, develop a clear project schedule and plan, and closely track the schedule and budget. With this approach, our projects consistently meet their goals and budgets.

Approach to achieve and maintain Owner's project scope, schedule, and budget // Your scope, schedule, and budget will form the basis of our approach. We will begin by building consensus within the team around your goals. In regular check-ins following each project submittal, we will track the scope, schedule, and budget so we can quickly rally the team to course correct as needed. For budget control, we will draw on our significant experience, which includes managing costs for standard construction sequencing as well as for phased construction for occupied facilities. We emphasize detail and clarity in our design documents, which results in more accurate bids during construction and minimizes RFIs and change orders. Throughout the project, we will regularly communicate with you to ensure we are meeting your scope, schedule, and budget to minimize surprises and work together to overcome project challenges.

Describe and provide examples of developing Owner's project scope, staying within the proposed budget // To develop the project scope within your budget, we will begin with an early meeting and site walkthrough with your project team, maintenance staff, and other stakeholders to develop an understanding of the scope and budget. We will learn about your desired scope and develop an engineering estimate to verify the cost for each item. We provide accurate estimates, drawing on our large portfolio of piping and sprinkler replacement projects. We also have a variety of tested additive factors for night work, difficult access, different ceiling types, etc. This knowledge will help us understand whether the project budget will be sufficient for the scope.

Should our engineering estimate exceed the project budget, we can help you bring the scope into alignment with the budget. We can identify options for scope reduction, including keeping the existing building service and backflow prevention, testing main piping for reuse, or omitting a portion of the building to be done at a future date. To ensure maximum benefit within the budget, we can develop both additive and deductive bid alternates. Spending the necessary time early to find alignment between scope and budget is critical to ensure they align throughout the project, minimizing scope and budget overrun surprises later on during design or construction.

As prime consultant, we often work with the Owner to develop the project scope before proceeding to design. For two recent system replacement projects at Whatcom County facilities, we began the project by touring the facility, talking with stakeholders and maintenance staff, learning about their planned budget, and reviewing potential system options. For these projects, we developed project alternates, including items added by the Owner after the budget was set, so that we could include as much scope as the budget allowed. We aligned on scope and budget before design. Both projects are on track to achieve the Owner's project goals within budget and on schedule.

Tools and methods for scheduling projects for both design and construction // Over the course of 1,000+ projects as prime consultant, we have developed tools and methods to keep projects on schedule during both design and construction. We communicate clearly and directly to ensure that the full project team understands and is aligned with the project goals and scope. We create project task lists for designers, as well as design and decision logs for the design team, and we regularly check in on these lists and logs to review our progress and lead the team in meeting project goals. At each project milestone, we check in on project cost and schedule to make sure we're on track. Our continuous monitoring of project scope, schedule, and budget means our projects go as planned, minimizing unpleasant surprises and making the process smooth and stress-free for our clients.

Successful management of scope, schedule, and budget creates successful projects // In our decades of experience as a prime consultant, we have seen projects are consistently successful when the design team, Owner, and project stakeholders are aligned and on target to meet scope, schedule, and budget. Communication and good management are critical to building this alignment.

At FSi, our communication is clear and direct, whether we are making requests or sharing information. Our staff are trained in a proactive communication protocol that closes the loop on all requests we make and receive. When we make requests or assign tasks to both internal and external team members, we define the conditions of satisfaction so that both parties understand the request, and we ask for a report back upon completion and check in to close out the request. We follow the same protocol when communicating with our clients – we track every request we receive, assign tasks to our team, and follow through to make sure you are satisfied with the outcome. Following these steps even on small requests and tasks adds up, ensuring large deliverables are executed thoroughly and promptly and that the overall project goes according to plan.

We have principal-level involvement in every project. FSi's principals take responsibility for meeting your needs and expectations throughout the project. They lead QA/QC and maintain close oversight of the project.

When projects aren't on track, thorough management and communication mean we catch potential slips early, and we can minimize their impact. When we successfully manage scope, schedule, and budget, we can focus on meeting the project goals, and our projects ultimately run smoothly and end in results that meet the Owner's needs.

Phasing and Minimizing Occupant Impact

For the Natural Resources Building, it's critical to phase, schedule, and manage the project to minimize its impact to building occupants. We will work with your project team to understand the building systems, schedules, and functions, then develop a phasing plan and coordinate with you to develop an implementation plan to install these critical life safety improvements while minimizing disruption.

Information gathering // We will begin by learning about the building and project needs, to quickly develop a full understanding of the building, occupancy, programming, systems, and potential design challenges and efficiencies. We will perform a detailed review of existing documents, conduct a thorough site investigation, and talk with building staff and the project team. More than 90% of FSi's work is in existing buildings, so we have seen time and again that investing time early in a project pays dividends to our clients in both cost and schedule savings.

Phasing plan & coordination to minimize occupant impact // Once we have developed a full understanding of the building and functions, we will develop a design and phasing plan for the project. As part of this process, we will coordinate with project stakeholders to find the best way to minimize impacts during construction. Drawing on strategies developed over 1,000+ projects as prime consultant, we will work with you to choose the right phasing methods and to meet the unique needs of the building and occupants. In the past, we've successfully phased projects through weekend and off-hours construction, leaving portions of the system in place if they are in good condition, implementing fire watch systems for areas without functional sprinklers, and temporarily relocating building occupants as their work areas are constructed so they are not actively working in areas under construction. Where we find a condition that can't be installed in an occupied building, we work with the Owner to schedule that work at a time that provides the installation conditions we need and limits disruptions to the building users' work.

FSi is experienced in phasing fire suppression installation work. We have developed full sprinkler and alarm replacements in fully occupied buildings, including highly technical medical office and lab spaces at the University of Washington. For those projects, we minimized disruption to building occupants by requiring the contractor limit work to night shift, coordinating cleanup each morning, and working with the Owner and occupants to remove breakable or valuable items. Our phasing plan allowed us to meet the conditions needed for installation while keeping the building fully occupied. Occupants could work at their desks each day, just like they were used to, minimizing disruption to their work.

Piping Replacement Design

FSi is experienced in innovative design of fire protection systems, and we will provide a design that leads to a smooth and accurate bid process and maintains the critical function of the fire suppression system at the Natural Resources Building. To extend the life of the new piping, we will perform corrosion testing and consider preventative measures in our design. We will also incorporate sustainable design techniques to support DES's goal of excellence in sustainability.

Innovative design of fire protection systems // FSi has provided fire protection engineering for facilities and occupancies ranging from airports and aircraft hangars to schools and offices. Our staff includes a licensed fire protection engineer, and we have a deep understanding of fire protection design for high-level fire suppression in a variety of facilities. We provide pre-design studies, construction documents, hydraulic calculations, and designs for full NFPA-compliant fire protection. We design wet and dry sprinkler systems, pre-action systems, deluge/AFFF systems for aircraft areas, and “clean agent” gaseous systems. Our portfolio includes thousands of projects in existing buildings, like our current work designing a fire sprinkler system replacement on a multi-story King County building changing occupancy from market rate housing to permanent supportive housing. On that project, we’re coordinating with other disciplines to ensure our piping and sprinkler design fits the project’s needs without conflicting with their work. Because of this deep experience in existing buildings, we know the potential impacts of our work on other building systems and functions. We consider these impacts in our holistic approach to design, resulting in cohesive building systems that smoothly support their occupants’ needs. Our goal is for the Owner and their staff to be able to spend time on the critical work they do rather than worrying about their building.

Designing a quality bid set // While the contractor will develop final shop drawings for the fire protection replacement as required by state law, it’s critical that we deliver a high-quality set of bid documents to ensure a successful bid process and smooth interdisciplinary coordination. Our work includes scoping the project to understand what replacement will look like – for example, what are the architectural, mechanical, plumbing, electrical, and structural implications? Are any other building systems impacted? Does the existing piping meet current code requirements? We will investigate the condition of existing piping to understand the scope of replacement and understand where existing piping could remain. Our final set of bid documents will give contractors all the information they need to accurately price their work, meaning you can evaluate and compare their proposals confident that the price you see is an accurate reflection of the work. And while final design for fire protection will be provided by the contractor, other disciplines including architecture, mechanical, plumbing, electrical and structural engineering will provide a final design before the bid process. And because our design informs theirs, we will provide a high-quality fire protection piping replacement design that gives other disciplines all the information they need to produce an accurate final design rather than needing to revise their design after contractor award. Our thorough investigation of system condition and accurate piping replacement design will minimize surprises during final design and construction, eliminating many change orders and delays that could lead to budget or schedule overrun.

Pre-action systems // To replace the seven pre-action fire suppression systems, we will begin by evaluating the condition of existing pre-action cabinets to determine if anything can be reused to reduce costs. We will also evaluate the system and discuss with you whether pre-action systems are necessary; while they are critical in certain occupancies, they are more expensive to replace and maintain. If pre-action systems are unnecessary, they can easily be converted into wet systems by removing a valve.

At the King County Children and Family Justice Center Detention Center, we are retrofitting pre-action systems into an existing wet fire suppression system to mitigate fire sprinkler activation due to fire alarm tampering. We evaluated the existing smoke detection system to confirm it would successfully detect a fire and trigger exhaust fans, which would in turn trigger the sprinklers. We then developed a design that added four pre-action fire protection cabinets to serve the system. We will bring this experience working with pre-action systems in a large, occupied building to this project.

Corrosion testing and preventative measures // Reusing piping in some areas of the building could reduce costs. Using corrosion testing to determine current condition of piping allows us to identify parts of the system with remaining useful life. These components could be incorporated into the upgraded system for cost savings. In past fire protection piping replacement studies, we have tested a several samples in each pipe size across the building or site. Different pipe production runs have slightly different metallurgy, so some piping sizes could be failing due to corrosion, while others might be intact. We start with ultrasonic testing of all pipe sizes to find what remains of the pipe wall. This is a safe and non-destructive test. If we do find significant wall thinning across all sizes, we will design a full system replacement. If only a specific pipe size requires replacement, retaining acceptable components could reduce cost, schedule, and disruptions to occupants. We will also discuss with you sending a sample of failed pipe to the lab to identify metallurgy and any microbiologically influenced corrosion (MIC). In systems impacted by MIC, we recommend both chemical treatment on incoming water for the first fill, as well as ultrasonic MIC mitigation systems. Knowing corrosion has already been a problem in this system, we would also consider automatic air vents and corrosion test coupons, which are removable pipe plugs with intentionally thinned wall sections to show pipe corrosion before the rest of the system. Both automatic air vents and corrosion test coupons require maintenance, and we would discuss them with you so you can determine whether their benefits outweigh maintenance requirements.

Sustainable design // FSi is deeply experienced in and committed to sustainable design, and we will incorporate this experience where possible on this project. As mechanical engineers focused on renovations, we advocate for and develop sustainable design that enhances the environment while supporting long-term efficiency in the buildings we design and upgrade. FSi has signed on to the MEP 2040 challenge to "advocate for and achieve net zero carbon in (our) projects: operational carbon by 2030 and embodied carbon by 2040." Starting in 2020, FSi staff and leadership committed to making every one of our projects as close as possible to net-zero energy and carbon. Our history of sustainable projects includes 200+ LEED projects along with ILFI Living Building and Petal projects and design for Passive House USA certification. This experience means we have deep expertise in sustainable design, and are always watching for opportunities to reduce environmental impacts of our projects. For this project, we will avoid ILFI Red List or otherwise problematic materials in our specifications. We will also identify existing piping and equipment that can be reused, reducing both carbon footprint and costs to DES.

An Efficient, Cost-Effective Wet Fire Suppression System Piping Replacement

The piping replacement for the wet fire suppression system at the Natural Resources Building is a critical project to maintain the building and keep staff safe. We will provide a high-quality sprinkler system replacement that adheres to your scope, schedule, and budget, while minimizing disruption to building occupants. We look forward to working with DES on a project that will allow State staff in the five departments housed in the building to continue to perform important government duties well into the future.

VIII. Diverse Business Inclusion Strategies



As a small firm ourselves, FSi appreciates the value that other small, diverse, and WMBE firms bring to our projects. Because on-call work has been the core of our practice for nearly four decades, we have a network of diverse firms of many disciplines we work with frequently. Our strategy for inclusion on WMBE firms in this contract is as follows:

Include diverse firms with whom we have strong, existing relationships. // Our architectural subconsultant, Rolluda Architects, is a certified MBE, SBE, and DBE. Our structural subconsultant, Sitts & Hill Engineers, is a certified SBE. We have worked on over 200 projects with Rolluda and over 150 projects with Sitts & Hill, and we work together well with both firms. Our relationships with our consultants are based on mutual trust, respect, and follow-through, and we take this commitment seriously.

If we need consultants in disciplines not included in our original plan, we will work with the State to identify the best fit. // We commit to working with DES and using both our network of small and diverse firms as well as the OMWBE directory to identify qualified firms for any scope that arises for disciplines outside our original plan.

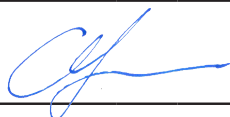
Support diverse firms for successful work. // We will give diverse firms the mentoring and support they need to succeed. Our process allows us to proactively address challenges before they become problems. We check in frequently with the owner and our consultants throughout the project, rather than waiting until milestones. This keeps our consultants apprised of our expectations for the project, gives us the opportunity to relay any information we've received from the owner, and allows us to course-correct quickly when needed. If problems occur during the project, we will work with the State and the consultant to resolve issues early, and to develop a clear path to completing the project and the contract to the State's satisfaction.

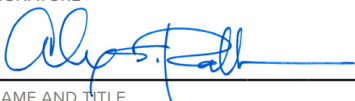
Prompt subconsultant payment. // Prompt payment to small and diverse subconsultants is important, since they may not have the financial cushion of a larger firm. We work extensively with King County, and due to their subconsultant payment requirements, we have processes in place to pay consultants within 10 days of receiving owner payments. We have seen the success of this system: King County audits every one of their contracts, and we consistently meet their goals for subconsultant payment speed. We will bring this system to this project.


It is part of our culture to be open to new teammates. // Staff at all levels are encouraged to network and be active in professional organizations. When any staff member identifies a firm who might make a good teammate for FSi, we encourage them to organize an introduction with FSi's principals, so we can evaluate whether our cultures and areas of expertise align. This encouragement to reach out to new firms, and especially WMBE firms, happens both formally at all-staff meetings and business development work groups, and informally as part of the day-to-day interactions between staff and management.

FSi employees at all levels attend diverse business outreach events to meet new partners. // At these events, we meet both large prime consultants and other small and diverse firms. We attend over a dozen such events each year. Staff are encouraged to follow up with contacts they make at these events, and to let the firm's principals know when they have met potential teammates. We find great value in these events and are committed to continuing to attend them.

IX. Federal SF330 Form Part II

ARCHITECT – ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (IF ANY)		
PART II – GENERAL QUALIFICATIONS (IF A FIRM HAS BRANCH OFFICES, COMPLETE FOR EACH BRANCH OFFICE SEEKING WORK.)						
2A. FIRM (OR BRANCH OFFICE) NAME Facility Support Inc. dba FSi Engineers			3. YEAR ESTABLISHED 1985		4. UNIQUE ENTRY ID DUNS #5-372-2103	
2B. STREET PO Box 4219			5. OWNERSHIP			
2C. CITY Seattle		2D. STATE WA	2E. ZIP CODE 98194		A. TYPE S-Corporation	
6A. POINT OF CONTACT NAME AND TITLE Ola Jarvegren, LEED Green Associate, Principal			B. SMALL BUSINESS STATUS Federal SBE #S000024739; King County SCS #288			
6B. TELEPHONE NUMBER 206.622.3321		6C. E-MAIL ADDRESS OlaJ@fsi-engineers.com		7. NAME OF FIRM (IF BLOCK 2A IS A BRANCH OFFICE) NA		
8A. FORMER FIRM NAME(S) (IF ANY)			8B. YEAR ESTABLISHED		8C. UNIQUE ENTRY ID	
9. EMPLOYEES BY DISCIPLINE			10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS			
A. FUNCTION CODE	B. DISCIPLINE	C. NUMBER OF EMPLOYEES		A. PROFILE CODE	B. EXPERIENCE	C. REVENUE INDEX # (SEE BELOW)
		(1) FIRM	(2) BRANCH			
				A06	Airports; Terminals and Hangars	5
02	Administrative	8		C11	Community Facilities	3
08	CAD Technician	4		E02	Educational Facilities; Classrooms	3
25	Fire Protection Engineer	1		F03	Fire Protection	2
42	Mechanical Engineer	29		G02	Gas Systems (Propane; Natural)	2
48	Project Manager	2		H04	Heat, Ventilation, Air Conditioning	6
21	Electrical Engineer	3		H09	Hospitals and Medical Facilities	3
				I01	Industrial Buildings; Manufacturing	6
				L01	Laboratories; Medical Research	3
				P07	Plumbing and Piping Design	4
				P08	Prisons and Correctional Facilities	2
				P11	Postal Facilities	2
				R06	Rehabilitation	6
Total		47		S11	Sustainable Design	5
11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (Insert revenue index number shown at right)		PROFESSIONAL SERVICES REVENUE INDEX NUMBER				
a. Federal Work	2	1. Less than \$100,000		6. \$2 million - <\$5 million		
b. Non-Federal Work	7	2. \$100,00 - < \$250,000		7. \$5 million- <\$10 million		
c. Total Work	7	3. \$250,000 - <\$500,000		8. \$10 million - <\$25 million		
		4. \$500,000 - <\$1 million		9. \$25 million - <\$50 million		
		5. \$1 million - <\$2 million		10. \$50 million or greater		
12. AUTHORIZED REPRESENTATIVE: THE FOREGOING IS A STATEMENT OF FACTS.						
A. SIGNATURE 				B. DATE August 8, 2024		
C. NAME AND TITLE Ola Jarvegren, LEED Green Associate, Principal						

ARCHITECT – ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (IF ANY) 2024-035		
PART II – GENERAL QUALIFICATIONS <small>(IF A FIRM HAS BRANCH OFFICES, COMPLETE FOR EACH BRANCH OFFICE SEEKING WORK.)</small>						
2A. FIRM (OR BRANCH OFFICE) NAME Rolluda Architects, Inc.			3. YEAR ESTABLISHED 2002		4. UNIQUE ENTRY ID DUNS #04-4080302	
2B. STREET 105 South Main Street, Suite 4S			5. OWNERSHIP			
2C. CITY Seattle		2D. STATE WA	2E. ZIP CODE 98104		A. TYPE Corporation	
6A. POINT OF CONTACT NAME AND TITLE Alex Rolluda, President/Principal			B. SMALL BUSINESS STATUS MBE, Certification #M4M0018356 DBE/SBE/UDBE Certification #D4M0018356			
6B. TELEPHONE NUMBER 206.624.4222		6C. E-MAIL ADDRESS alex@rolludaarchitects.com		7. NAME OF FIRM (IF BLOCK 2A IS A BRANCH OFFICE) N/A		
8A. FORMER FIRM NAME(S) (IF ANY) Rolluda + Scott Architects			8B. YEAR ESTABLISHED 1996		8C. UNIQUE ENTRY ID	
9. EMPLOYEES BY DISCIPLINE			10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS			
A. FUNCTION CODE	B. DISCIPLINE	C. NUMBER OF EMPLOYEES		A. PROFILE CODE	B. EXPERIENCE	C. REVENUE INDEX # (SEE BELOW)
		(1) FIRM	(2) BRANCH			
				E02	Educational Facilities	6
06	Architects	17		C06	Churches, Mosques	2
	Designers	18		C08	Codes, Standards	1
	Space Planning/ Interior Design	1		C11	Community Centers	2
02	Administrative	6		D07	Dining Halls, Restaurants	1
				H09	Hospitals, Medical Facilities	1
				H11	Housing	4
				I01	Industrial, Manufacturing	5
				I05	Interiors, TIs	3
				R01	Roofing	3
				S01	Soils, Seismic	1
Total		42				
11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS <i>(Insert revenue index number shown at right)</i>		PROFESSIONAL SERVICES REVENUE INDEX NUMBER				
a. Federal Work	4	1. Less than \$100,000		6. \$2 million - <\$5 million		
b. Non-Federal Work	6	2. \$100,00 - < \$250,000		7. \$5 million- <\$10 million		
c. Total Work	7	3. \$250,000 - <\$500,000		8. \$10 million - <\$25 million		
		4. \$500,000 - <\$1 million		9. \$25 million - <\$50 million		
		5. \$1 million - <\$2 million		10. \$50 million or greater		
12. AUTHORIZED REPRESENTATIVE: THE FOREGOING IS A STATEMENT OF FACTS.						
A. SIGNATURE 				B. DATE August 14, 2024		
C. NAME AND TITLE Alex Rolluda, AIA, NCARB - President/Principal						

ARCHITECT – ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (IF ANY)		
PART II – GENERAL QUALIFICATIONS (IF A FIRM HAS BRANCH OFFICES, COMPLETE FOR EACH BRANCH OFFICE SEEKING WORK.)						
2A. FIRM (OR BRANCH OFFICE) NAME Sitts & Hill Engineers, Inc.			3. YEAR ESTABLISHED 1955		4. UNIQUE ENTRY ID DUNS #047489976	
2B. STREET 4815 Center Street			5. OWNERSHIP			
2C. CITY Tacoma		2D. STATE WA	2E. ZIP CODE 98409	A. TYPE S-Corporation		
6A. POINT OF CONTACT NAME AND TITLE Andrew Boileau, PE, SE, Structural Principal			B. SMALL BUSINESS STATUS Federal SBE			
6B. TELEPHONE NUMBER (253) 474-9449		6C. E-MAIL ADDRESS AndrewB@sittshill.com				
8A. FORMER FIRM NAME(S) (IF ANY)			8B. YEAR ESTABLISHED		8C. UNIQUE ENTRY ID	
9. EMPLOYEES BY DISCIPLINE			10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS			
A. FUNCTION CODE	B. DISCIPLINE	C. NUMBER OF EMPLOYEES		A. PROFILE CODE	B. EXPERIENCE	C. REVENUE INDEX # (SEE BELOW)
		(1) FIRM	(2) BRANCH			
				C10	Commercial Bldg (low rise)	4
02	Administrative	3		C18	Cost Est. Engineer, Etc.	2
06	Architect	3		E09	Environmental Impact	2
08	CAD Technician	7		H01	Harbors; Jetties; Piers; Etc.	5
12	Civil Engineers	10		H07	Highways; St's; Airfield Paving	3
57	Structural Engineers	9		I01	Industrial Buildings; Manufac. Plants	5
58	Land Surveyors	15		L02	Land Surveying	3
				L03	Landscape Architecture	2
				M05	Military Design Standards	2
				P07	Planning (site, inspection & project)	4
				R04	Rec Facilities (park, marinas)	3
				S04	Sewage Collection, Etc.	2
				S09	Structural Design, Spec Structural	4
				S10	Survey, Platting, Plan Studies	2
				S13	Storm Water Handling & Facility	3
Total		46		W03	Water Supply Treatment & Distribution	2
11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (Insert revenue index number shown at right)		PROFESSIONAL SERVICES REVENUE INDEX NUMBER				
a. Federal Work	2	1. Less than \$100,000		6. \$2 million - <\$5 million		
b. Non-Federal Work	7	2. \$100,000 - < \$250,000		7. \$5 million- <\$10 million		
c. Total Work	7	3. \$250,000 - <\$500,000		8. \$10 million - <\$25 million		
		4. \$500,000 - <\$1 million		9. \$25 million - <\$50 million		
		5. \$1 million - <\$2 million		10. \$50 million or greater		
12. AUTHORIZED REPRESENTATIVE: THE FOREGOING IS A STATEMENT OF FACTS.						
A. SIGNATURE 					B. DATE August 12, 2024	
C. NAME AND TITLE Andrew Boileau, PE, SE, Principal						