STATEMENT OF QUALIFICATIONS
Produced for State of Washington, Department of Transportation Ferries Division
October 2024

moffatt & nichol

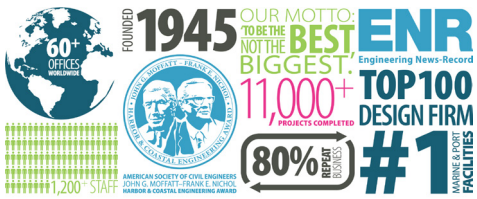
WSF Southworth Program General Engineering Consultant

SR160/SOUTHWORTH TERMINAL – TERMINAL BUILDING AND TRESTLE REPLACEMENT PROGRAM

Criteria 1 Qualifications/Expertise of Firms

To best meet the needs and program goals to deliver the projects, a highly qualified GEC team of local and national resources has been assembled and will be led by Moffatt & Nichol (M&N). Each firm has a deep bench of resources to devote to this program. Our staffing flexibility and resources benefit this program by providing available, Washington State Ferries (WSF) experts to meet the schedule and budget targets.

FIRM EXPERTISE - MOFFATT & NICHOL

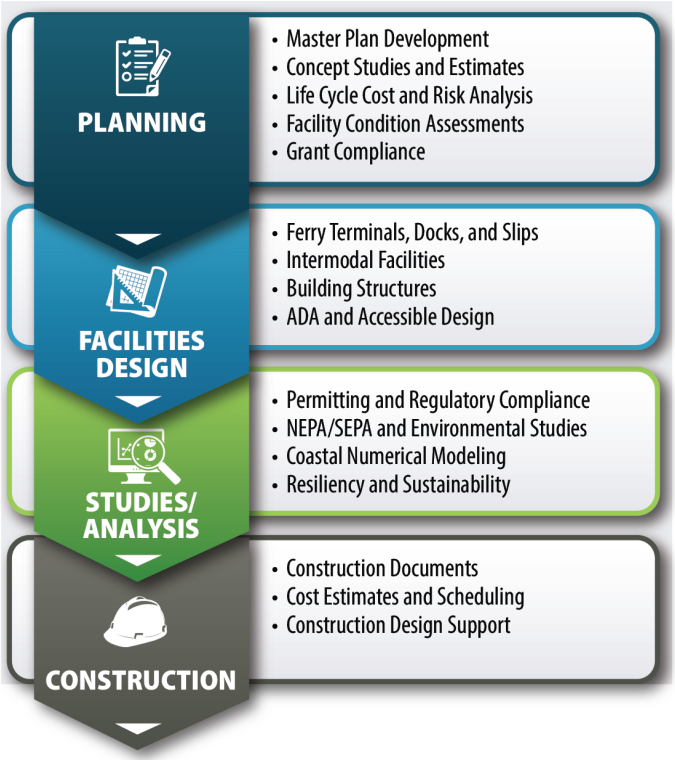


M&N brings nearly 80 years of experience developing practical solutions on inwater, waterfront, and marine facility projects across the nation and around the world. Founded to provide design engineering services to the growing U.S. commercial waterfront, we are one of the larger waterfront engineering firms in North America. We lead waterfront infrastructure projects and understand the technical services related to waterfront engineering.

Ferry Experience

- Key team members designed relevant WSF projects including Mukilteo and Colman Dock Multimodal Terminals; Southworth Terminal [for sea level rise (SLR) and tsunami wave forces]; and the Terminal Electrification Program.
- Key team members provided design and planning for the terminal buildings at the Mukilteo Multimodal Terminal and Port of Seattle Terminal 5, a GEC type project.
- M&N recently completed two projects for Kitsap Transit (KT) for facility upgrade planning and concept design. Those included facilities at Port Orchard, Bremerton, and Kingston. Work included modifications to improve operations and incorporate planned electrification programs.
- Forward thinking approach combined with experience in planning for electrification and slip expansion projects.
- Proposed project manager (PM), Dr. Azadeh Bozorgzadeh, PE, has been managing multidisciplinary USACE projects for more than 12 years.
- Proposed PM advisor, Colleen Fischer, was the consultant PM for development of WSF's Terminal Design Manual (TDM).

M&N has worked on ferry projects at more than 50 locations nationwide (and internationally), for a wide range of owners and operators (as shown on the map below). Our varied experience will bring a fresh perspective to WSF.



ORGANIZATION CHARTS

M&N has organized a GEC team with the right expertise, the right experience, and the right passion to deliver this program to WSF. The following organization charts, shown for the Terminal Building/Upland Improvements and the Trestle projects, illustrate this strength and deep bench of staff that will be available for the program. The subconsultant expertise on the following pages will illustrate the deep and varied bench of expertise.

TERMINAL BUILDING / UPLAND IMPROVEMENTS

PROJECT DIRECTOR
Ron Byres, MASc, P.Eng., PE *
QA/QC
Scott Branlund, PE, SE
PM ADVISORY PANEL
Colleen Fischer, PE *
Aaron Porter, PE *

WASHINGTON STATE FERRIES
PROJECT MANAGER (PM)
Azadeh Bozorgzadeh, PhD, PE 🔑

KITSAP TRANSIT/KEY PARTNERS
Michael Hornvedt *PAR*
GRANT SUPPORT/FTA COORDINATION
Margaret Schwertner 🔑
Linda Gerke *PAR*

ENVIRONMENTAL PERMITTING MANAGER
Margaret Schwertner 🔑

NEPA/SEPA REVIEW
Jenifer Young *PAR* *
PERMITTING/MITIGATION
Margaret Schwertner 🔑
Amy Summe, PWS *S&W*
HEAL ACT COMPLIANCE/ SOCIAL JUSTICE
Eddie Montejo *PAR* *
ESA/WILDLIFE/HABITAT
Taylor Meyers

TERMINAL BUILDING DESIGN MANAGER
Susan Neaton *RAI* 🔑

ARCHITECTURE/LEED
Susan Neaton, AIA, LEED AP BD+C *RAI* 🔑
BUILDING STRUCTURAL
Ignasious Seille, PE, SE, F SEI *IDE* *
Miroslav Doytchev, PE *IDE*
BUILDING MECHANICAL
Marc Derenburger, PE *AA*
BUILDING ELECTRICAL
Michael Loboda, PE *AA*
LANDSCAPE ARCHITECTURE
Dean Koonts, ASLA, CPD *HBB* *
COASTAL ENGINEERING
Aaron Porter, PE *
BUILDING PERMIT
Susan Neaton, AIA, LEED AP BD+C *RAI* 🔑

UPLAND SITE DESIGN MANAGER
Sandy Glover, PE, PMP *PAR* 🔑

LANDSIDE CIVIL/MAINTENANCE OF TRAFFIC
Mallory Wilde, PE *PAR* *
Chris Johnson, PE *PAR*
SITE CIRCULATION DESIGN
Alex Atchison, PE, PTOE *PAR*
SITE SAFETY
Jason Ceralde, PLA *PAR*
MULTIMODAL DESIGN/ COMPLETE STREETS
Fred Young, PLA *PAR*
STORMWATER & UTILITIES
Marcus Vassey, PE *PAR*
SITE ELECTRICAL
Pablo Faria, PE
Robert Rohler, PE *PAR*

SCHEDULE/COST/ PROJECT DELIVERY
Jack Fink, PE 🔑

SCHEDULE
Kyle Donnelly
Bruce Patterson *KMC* *
PROJECT DELIVERY DETERMINATION
Howard Hillinger, CCM DBIA *PAR* *
COST ESTIMATING
Jordan Dutoi
Bruce Patterson *KMC* *
CRA/CEVP/VE
Mike McIntyre
Bruce Patterson *KMC* *
CONSTRUCTABILITY REVIEWS
Kevin Salaoutis
Bruce Patterson *KMC* *

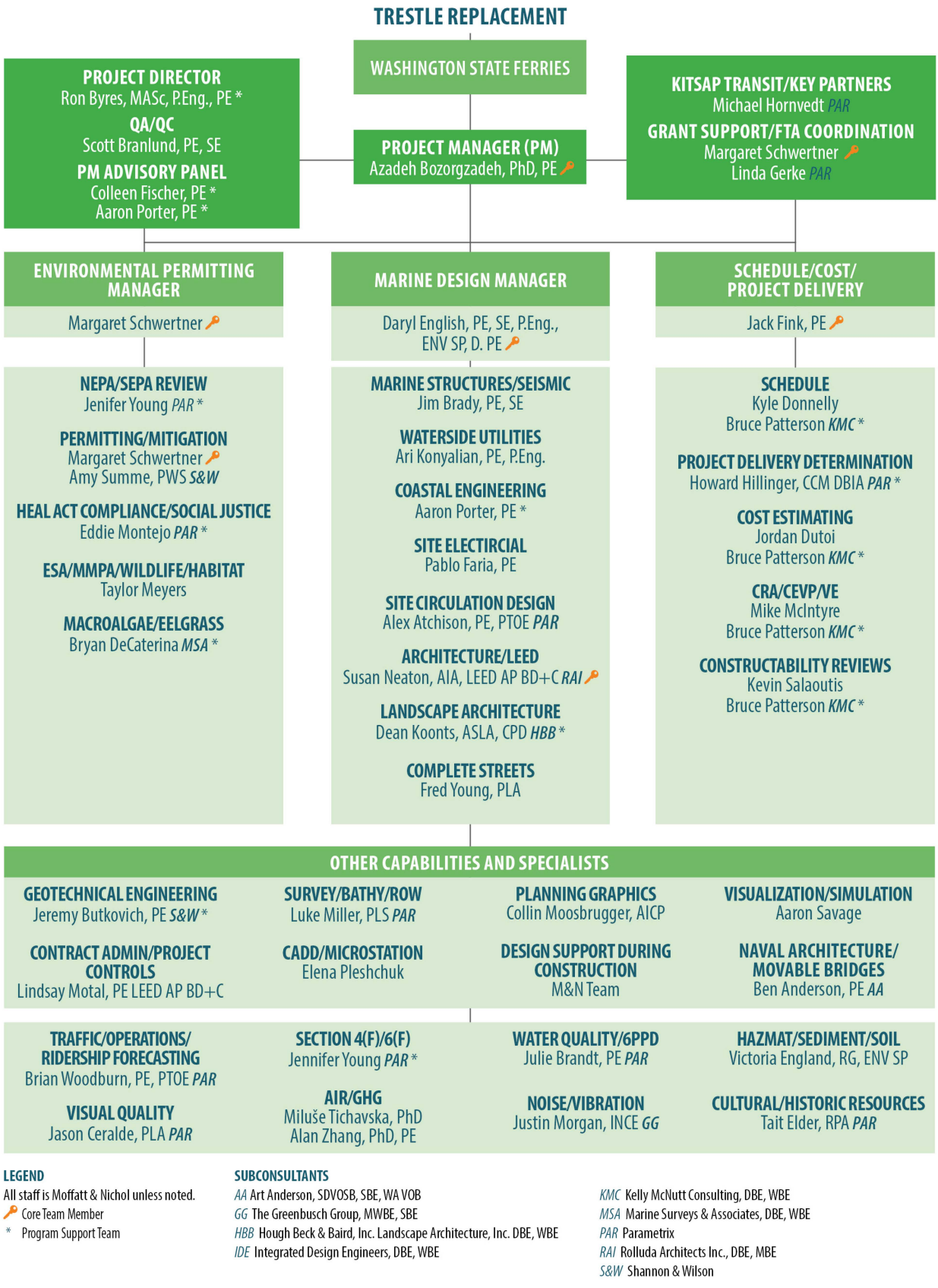
OTHER CAPABILITIES AND SPECIALISTS

GEOTECHNICAL ENGINEERING
Jeremy Butkovich, PE *S&W* *
CONTRACT ADMIN/PROJECT CONTROLS
Lindsay Motal, PE LEED AP BD+C
SURVEY/BATHY/ROW
Luke Miller, PLS *PAR*
CADD/MICROSTATION
Elena Pleshchuk
PLANNING GRAPHICS
Collin Moosbrugger, AICP
DESIGN SUPPORT DURING CONSTRUCTION
M&N Team
VISUALIZATION/SIMULATION
Aaron Savage
SUSTAINABILITY/RESILIENCY PLANNING
Andy Sternad, AIA, AICP, LEED AP BD+C

TRAFFIC/OPERATIONS/ RIDERSHIP FORECASTING
Brian Woodburn, PE, PTOE *PAR*
VISUAL QUALITY
Jason Ceralde, PLA *PAR*
SECTION 4(F)/6(F)
Jennifer Young *PAR* *
AIR/GHG
Miluše Tichavska, PhD
Alan Zhang, Phd, PE
WATER QUALITY/6PPD
Julie Brandt, PE *PAR*
NOISE/VIBRATION
Justin Morgan, INCE *GG*
HAZMAT/SEDIMENT/SOIL
Victoria England, RG, ENV SP
CULTURAL/HISTORIC RESOURCES
Tait Elder, RPA *PAR*

LEGEND
All staff is Moffatt & Nichol unless noted.
🔑 Core Team Member
* Program Support Team

SUBCONSULTANTS
AA Art Anderson, SDVOSB, SBE, WA VOB
GG The Greenbusch Group, MWBE, SBE
HBB Hough Beck & Baird, Inc. Landscape Architecture, Inc. DBE, WBE
IDE Integrated Design Engineers, DBE, WBE
KMC Kelly McNutt Consulting, DBE, WBE
MSA Marine Surveys & Associates, DBE, WBE
PAR Parametrix
RAI Rolluda Architects Inc., DBE, MBE
S&W Shannon & Wilson



LEGEND

All staff is Moffatt & Nichol unless noted.

Core Team Member

* Program Support Team

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MSA Marine Surveys & Associates, DBE, WBE
PAR Parametrix
RAI Rolluda Architects Inc., DBE, MBE
S&W Shannon & Wilson

OUR KEY PARTNERS: SUBCONSULTANT TEAM

M&N has assembled a GEC team of local and international subject matter expert (SME) firms who are committed to delivering this program. Our team will blend local design, community understanding, and expertise with international experience delivering similar projects. The M&N Team includes experts with the qualifications to provide services in planning, environmental permitting, and design of ferry terminals (landside and waterside).

DBE Representation

The M&N Team includes a group of DBE firms and intends to meet or exceed the 13% WSF goal. M&N goes farther than this, maintaining long-term relations with many of our DBE partners and encouraging new DBE relationships (we are already supporting new DBE firms in the WSDOT pre certification process).

Our DBE partners are an integral part of our team. M&N implements a subconsultant performance evaluation register, further bolstered by our supplier diversity database, maintained to promote DBE firm involvement. We employ ongoing outreach initiatives to identify and engage with new diverse suppliers and maintain existing relationships, especially those with local DBE firms. The goal is to drive positive change by promoting greater inclusivity in our teaming arrangements. By raising awareness, being intentional with our teaming strategies at the local level, and implementing these changes across all offices, we aim to strengthen equitable and inclusive practices throughout the firm.

The M&N team includes strong leadership, diverse talent, and proven expertise to support WSF. Our program team was assembled to collaborate with WSF in a manner that fosters creativity and innovation throughout permitting and design phases of the project.

Exhibit 1 A Winning Team

Experienced GEC Manager

Experienced Project Manager who understands requirements of large GEC contracts and can effectively manage a multidisciplinary team to deliver a successful project on budget and on schedule.

WSF Experience

The M&N Team has more than 20 years supporting WSF on projects such as the Mukilteo and Colman Dock Multimodal Terminals. We are familiar with WSDOT/WSF procedures and standards and were the consultant manager for development of the WSF Terminal Design Manual.

Upland Site & Terminal Building Design

The M&N Team includes Parametrix with strong transportation planning and multimodal design. Parametrix has experience working with WSDOT and WSF on ferry, roadway, and multimodal access projects. Local award-winning Rolluda Architects brings efficient and beautiful design to the team for the terminal building.

Expertise in Environmental & Permitting Services

Strong environmental and permitting leads with M&N and Parametrix, who understand WSF processes and the intricacies of Puget Sound.

Stakeholder Relationships

The M&N Team has relationships with WSF staff, strong ties with KT, and has worked with the regulatory agencies in Puget Sound for decades.

Cost & Schedule Controls

9001-certified leveraging internal tools to efficiently track project progress. The M&N Team includes a group of former contractors (over 40 between M&N and KMC) to provide insight/innovative ideas for constructability and for project phasing to maintain operations during construction.

Breadth & Depth

M&N has organized a team that can cover the full scope for both projects with a deep bench of experienced waterfront structural and upland terminal engineers. As the No. 1 ranked firm by *Engineering News Record* in marine and port facilities among their top 500 design firms, M&N has the depth and breadth of waterfront expertise to balance both projects in parallel.

Exhibit 2 Subconsultant Expertise

Firm, Expertise, and Profile

Parametrix | NEPA/SEPA Review, HEAL Act, Landside Site Design, Complete Streets, Stormwater Design & Compliance, Survey

Parametrix, 100-percent employee-owned, is dedicated to providing quality engineering, planning, and environmental sciences with superior client service. Founded in 1969, Parametrix has offices across the western U.S. and more than 800 professionals providing multidisciplinary services in transportation, natural resources, planning, water, wastewater, environmental engineering and sciences, and surveying.

Parametrix is an integral teaming partner providing leadership and expertise related to landside site design and transit/traffic considerations, Complete Streets application, stormwater and utility design, National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) review, HEAL Act compliance, cultural and historic resources, stormwater compliance including considerations related to 6PPD, surveying, and project delivery determination.

Their experience includes project management support, EIS development, transportation discipline report preparation, and right-of-way (ROW) coordination for the Mukilteo Multimodal Terminal; **Program Management (PM)/Construction Management (CM) support for the General Construction (GC)/CM contract for Colman Dock Multimodal Terminal**; and several projects for KT including design and construction management for the Silverdale Transit Center. They also hold the WSDOT Active Transportation Staff Augmentation contract, which includes the development of a process for Complete Streets alternatives development.

Shannon & Wilson (S&W) | Geotechnical, Shoreline Permitting

Founded in 1954, S&W is a Seattle-based consulting firm dedicated to providing services related to the geologic, hydrogeologic, and subsurface environments, as well as environmental permitting expertise. S&W has more than 175 staff providing services throughout the Pacific Northwest as part of an overall staff of 369 across 15 U.S. offices. Capabilities include the design of deep foundation systems for piers, bridges, wharves, aprons, dolphins, mooring, and docks; the design of cantilever and anchor bulkheads to extend landside fills; the design of embankments and berms to mitigate run-off; static and seismic slope stability analyses, the-design of seawalls, bulkheads, and revetments to prevent erosion and scour from river and ocean wave action. Their engineers are experienced in the analysis of soil liquefaction and lateral spreading in coastal environments, including designing foundation systems to resist loads from these phenomena.

Their experience includes the recently (2024) completed Trans Mountain Expansion Project Westridge Marine Terminal with M&N, one of the largest new marine terminals constructed in the Pacific Northwest in the last decade. This is just one of 29 projects that S&W has worked on with M&N over the last 40+ years. Other relevant projects with M&N include the Terminal 46 Redevelopment, Terminal 6 Expansion, Terminal 25 to Terminal 30 Connection, and the Port of Everett's South Terminal Wharf and Rail Upgrade.

Art Anderson | SDVOSB, SBE, WA VOB | MEP Services

Located in Bremerton, Washington, Art Anderson boasts a 65-year legacy offering a comprehensive array of architectural, engineering, planning, research, and construction management services, seamlessly bridging the gap between land and sea. **Over the last decade, they have completed 25 terminal projects and 27 marina projects in the Puget Sound Region.**

The Greenbusch Group (GG) | MWBE, SBE | In-air and inwater noise, Vibration analysis and monitoring, Fire protection

A multidisciplinary engineering design firm, GG has dedicated 34 years to exceptional design, successful partnerships, and sustainability in their projects. Providing acoustical design, audio/video engineering, noise and vibration consulting, and vertical transportation services, GG supports new and renovated community buildings, and transportation facilities.

GG also has a wide public agency client base including WSF, WSDOT, Sound Transit, King County, Seattle Department of Transportation (SDOT), and Port of Seattle.

Hough Beck & Baird Inc. (HBB) | DBE, WBE | Landscape Architecture

Since 1990, HBB has provided landscape architecture services to numerous transportation agencies including WSF. They have worked on more than 50 waterfront projects throughout Western Washington providing services for ferry terminal projects, hand carry and motorized boat launches, and waterfront dock upgrades with upland planting improvement. HBB has developed plans and construction documents for waterfront parks, natural shoreline areas, public access piers (surfaces and aesthetics), esplanades, boardwalks, and other public amenities.

Having recently completed work on the Mukilteo Ferry Terminal, HBB is currently providing landscape architecture services supporting the final phases of construction for the Colman Dock in downtown Seattle.

Integrated Design Engineers (idE) | DBE, WBE | Building Structural

idE is a structural engineering consulting firm based in Seattle, WA with a strong record of design for the WSDOT, City of Seattle, Sound Transit, Port of Seattle, King County, and other municipal entities. By engaging early and frequently with architects, contractors, building owners, and fellow engineers, they develop structural solutions that enhance overall project performance. This approach has garnered them numerous prestigious awards over the years. They were acknowledged in 2021, as they were invited by the Port of Seattle to participate in their inaugural PortGen Accelerator program and PortGen Showcase.

Kelly McNutt Consulting LLC (KMC) | DBE, WBE, SBE | Schedule, Cost Estimating, CRA-CEVP-VE, Constructability Review

KMC was established in 2020 and collectively brings more than 200 years of experience on mega project construction management in the heavy civil industry necessary to accurately assess and deliver projects. Their heavy civil industry experience includes highways, tunnels, marine, and transit both heavy and light rail and operating facilities and stations. Their collaborative experience on various contract models includes CM/GC, Design-Build (DB), and Design-Bid-Build (DBB) on heavy highway, demo, and rail projects across North America. They use their decades of direct construction experience to develop costs and schedule, and constructability assessment.

Marine Surveys & Associates (MSA) | DBE, WBE | Macroalgae/Eelgrass Surveys, Biological Site Surveying

MSA is a Port Townsend, WA-based worker-owned environmental consulting cooperative, certified as a small and woman-owned business. MSA scientists have decades of experience performing biological surveys, writing biological reports, developing permit applications and mitigation plans, and implementing monitoring protocols for complex projects involving aquatic, shoreline, and wetland ecosystems throughout western Washington. MSA is one of the only biological firms in the area that can conduct diver-led eelgrass surveys (if topside surveys do not prove usable). Known for quick response times, clients include Washington State Parks, Washington State Department of Fish and Wildlife (WDFW), and the Port of Seattle.

Rolluda Architects Inc. (RAI) | DBE, MBE | Landscape Architecture

RAI, located in the historic Pioneer Square neighborhood of Seattle, offers more than 40 dedicated design professionals committed to the highest level of quality services. RAI's project portfolio includes transit stations, park and ride facilities, parking structures, light rail/commuter stations, and bus transfer stations for clients including Sound Transit, King County METRO, Pierce County Transit, and Community Transit.

Exhibit 3 Project Experience Chart

	PROJECTS	SCOPE OF SERVICES																		
		Program Management	Scheduling (P6)	Predesign Studies	NEPA/SEPA/Permits/ Studies	FTA Lead Agency	Cost Estimating	CRA/CEVP/VE	Constructability Reviews	Project Delivery Determination	Terminal Building Planning/Design	Site Circulation Design	Architectural Services	Building Permit	Complete Streets/ADA	Trestle Design	Seismic Study	Geotechnical Engineering	Coastal Engineering	Design Support During Construction	Ferry Project
1	WSF | Mukilteo Multimodal Terminal	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓		✓
2	Port of Seattle | Terminal 5 Berth Modernization	✓	✓	✓	✓		✓		✓		✓	✓	✓			✓	✓	✓	✓	✓	
3	Silverdale Transit Center | Kitsap Transit			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓	✓
4	Husky Terminal and Stevedoring | Husky Terminal Reconfiguration	✓	✓	✓			✓				✓	✓	✓	✓			✓	✓			
5	US Navy | Dry Dock 5 Joint Base Pearl Harbor-Hickam	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	
6	Marine Atlantic | Ferry Terminals Master Planning, North Sydney, Nova Scotia, and Port aux Basques, Newfoundland, and Labrador		✓	✓			✓		✓		✓	✓	✓		✓				✓		✓
7	WSF | Seattle Multimodal Terminal at Colman Dock		✓			✓	✓			✓								✓		✓	✓
8	WSF | Electrification Program	✓	✓	✓		✓	✓			✓			✓	✓				✓		✓	✓
9	WSDOT | SR 520 Bridge Replacement and HOV Program (GEC)	✓	✓	✓	✓		✓	✓	✓						✓					✓	
10	WSDOT | I-5 Steilacoom to Thorne Lane Corridor Improvements (GEC)	✓		✓	✓		✓	✓	✓	✓					✓			✓		✓	
11	USACE | Ensley Engineer Yard String-Out Replacement	✓	✓	✓			✓	✓	✓	✓		✓				✓	✓	✓	✓	✓	
12	Treasure Island Community Development | Treasure Island Ferry Terminal		✓	✓	✓		✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓
13	GGBHTD | Golden Gate Ferries Terminals	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
14	BC Ferries | Swartz Bay Ferry Terminal Berth 1 Replacement			✓			✓		✓							✓	✓	✓	✓		✓
15	WETA | Downtown San Francisco Ferry Terminal		✓	✓	✓		✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓
16	NYC Economic Development Corporation | New York Citywide Comprehensive Ferry Study		✓	✓	✓		✓	✓	✓			✓			✓	✓					✓
17	HDOT | Hawaii Superferry, Honolulu, Hawaii		✓	✓				✓	✓	✓		✓			✓	✓	✓		✓	✓	✓
18	Tetra Tech | Edmonds Waterfront Analysis			✓			✓					✓			✓						✓
19	WSF | System-Wide Seismic Study, WA	✓															✓	✓	✓		✓
20	WSF | Bremerton Ferry Terminal Seismic Upgrades																✓	✓	✓		✓
21	WSF | Kingston Ferry Terminal Seismic Retrofit																✓	✓			✓

RELEVANT PROJECTS

The M&N Team has worked on ferry projects at more than 50 locations nationwide (and internationally), for a wide range of owners and operators and has more than 20 years supporting WSF on projects. Furthermore, M&N team has extensive experience with multidisciplined waterfront/ port project services including GEC contracts, [similar to large agency on-call contracts, such as Indefinite Delivery/Indefinite Quantity (IDIQ) and Multiple Award Task Order Contract (MATOC) for large clients like ports, the U.S. Army Corps of Engineers (USACE), the U.S. Navy, the U.S. Coast Guard (USCG), National Parks Service, etc.] marine structure design, environmental studies/permitting, landside design, traffic considerations, cost estimates, and scheduling. The M&N Team's experience on projects similar to the Southworth Program coupled with our unique technical expertise provides valuable insight and knowledge for this program and as your GEC. The list below are samples of recent complex infrastructure projects.

Type of Project: Trestle

Treasure Island Ferry Terminal, San Francisco, CA | Treasure Island Community Development | Fee: $1M (final design) | Firm: M&N

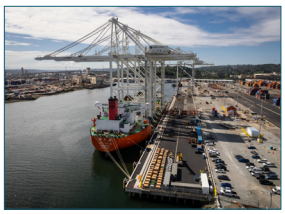
Relevance to Southworth Program: Program Management, Trestle Design, CEQA/Permits/Studies, Geotechnical Engineering, Coastal Engineering, Project Delivery Determination

M&N provided engineering services for the planning, permitting, design, and construction assistance for the new ferry terminal, a redevelopment of the former Navy base in San Francisco Bay. The development creates 8,000 new residential units with retail and commercial business infrastructure. The ferry service will provide public transportation on and off the island to San Francisco and is an alternative mode to the Bay Bridge. M&N provided early planning for the project including studies of anticipated ridership demand, alternatives for various ferry vessels, ferry schedule, and development of environment forces (winds, waves, currents, and SLR) to be used in the permitting and design of the project. M&N provided input for the Environmental Impact Report (EIR) and obtained the regulatory permits required from USACE, Regional Water Quality Control Board, and Bay Conservation and Development Commission. After EIR and permit approvals, M&N worked with Power Engineers Construction to provide Design/Build services to Treasure Island Community Development (developer) and Treasure Island Development Agency (City of San Francisco agency). Services included final design drawings and calculations for the ferry pier, docking float, 900-foot-long concrete breakwater to protect from incoming ocean swell, shore protection elements, which included coastal wave analysis, surf run up, storm drain outfalls, and development of SLR strategy and implementation. The design had to provide for up to 10 feet of lateral shore movement during the design earthquake in this highly active seismic area. M&N worked with the contractor during construction to ensure the ferry terminal was constructed in accordance with the design intent and to resolve questions that arose during construction.

Type of Project: Building, Trestle

Terminal 5 (T5) Berth Modernization Design and Support Services, Seattle, WA | Port of Seattle | Fee: $7.9M | Firm: M&N

Relevance to Southworth Program: Program Management, Terminal Building Planning/Design, Predesign Studies, Architectural Services, SEPA/Permits/Studies, Cost Estimating, Site Circulation Design, Design Support During Construction



The Port of Seattle embarked on the upgrade and modernization of its T5 berth facility to accommodate berthing and loading/uploading of up to 18,000 twenty-foot equivalent unit (TEUs) ships. M&N augmented Port staff and led a large multidisciplinary team to support the Port in implementing the modernization. M&N managed multiple subconsultants through planning, design, and permitting of a multimodal terminal, including waterfront and upland terminal areas and a longshore building. Key expertise was provided for terminal planning, intermodal yard planning, rail network evaluation, transportation planning and analysis for the terminal and surrounding Harbor Island users and community, vessel studies for passing, mooring, and berthing—all for various throughput scenarios. The M&N team supported all phases of design and the team's geotechnical engineer worked closely with the structural design team to balance structural resiliency with initial capital costs. M&N led the project team through the SEPA environmental impact statement (EIS) for the Port (SEPA lead agency) using the planning studies as a basis. The M&N team develop, with the Port, construction documents and detailed cost estimates for the marine and supporting infrastructure and provided construction support through June of 2024 when construction was completed.

M&N's strong understanding of waterfront and multimodal terminal facilities and an ability to augment client staff while effectively manage a large team of subconsultants was critical to project success. Additional materials were developed for the Port's use in marketing the terminal to potential customers.

- Building Project

- Trestle Project

Type of Project: Trestle

Ensley Engineer Yard String-Out Replacement, Memphis, TN | USACE, Marine Design Center (MDC)| Fee: $4.6M | Firm: M&N

Relevance to Southworth Program: Program Management, Predesign Studies, Scheduling, Cost Estimating, Constructability Reviews, Seismic Study, Geotechnical Engineering

The Ensley Engineer Yard (EEY) located on the south shore of McKellar Lake in Memphis is an operational base and full-service marine maintenance/vessel docking and mooring facility designed to support the navigation, revetment, and flood control missions of the USACE on the Mississippi River and its tributaries. EEY is a vital facility during and following an emergency event. The EEY string-out consists of approximately 5,445 feet of existing floating piers (string-out) that are moored by vertical steel monopiles and timber pile clusters, as well as mooring lines attached to deadmen along the bank.

M&N developed a master plan for rehabilitation and improvements of the EEY floating dock. The master plan provided specific modifications resulting in a modernized vessel docking and mooring facility and improving overall efficiency and capabilities of the yard including developing alternative floating pier (string-out) arrangements.

M&N served as the lead consultant for the final design of the replacement of the 5,400 feet of floating pier (string- out), managing a design team of three subconsultants. The scope included demolition and removal of the existing mooring facility, geotechnical site investigations, geoseismic analysis, and hydraulic and hydrodynamic investigation, an old railroad fixed-pile supported trestle demolition, design of string-out mooring system, and design of east and west side connector bridges. Each connector bridge consists of two segments with a fixed pile-supported pier and a float at the middle. Being a site susceptible to liquefaction, slope failure was addressed in design of pile foundations for the abutments and middle fixed pier.

The work also included naval architectural coordination with the float provider; naval architectural support for the string-out floats; design of a fendering system along the waterside face of the string-out as a mooring protection system from berthing impact; string-out mooring hardware; design of connector bridge landing barges; utilities, including electrical power, lighting, water, air, communication, and security conduits; construction phasing and schedule; and construction cost estimate.

Type of Project: Building, Trestle

Mukilteo Ferry Terminal, Mukilteo, WA | WSDOT| Fee: $2.1M/$280,152 | Firm(s): Parametrix/ HBB - DBE, WBE

Relevance to Southworth Program: Program Management, NEPA/SEPA/Studies, Landscape Architecture, Terminal Building Planning/ Design

Parametrix provided project management, EIS development, and traffic analysis for this ferry terminal. Parametrix completed the NEPA/SEPA EIS, meeting Federal Transit Agency (FTA) requirements, to relocate the terminal to the site of a former Air Force/Navy jet fuel tank farm and munitions loading pier. The two-year, fast-track effort included coordination for the redesign of the terminal facilities, streets, roadways, and sidewalks; a new transit center; and improved links to the nearby Sound Transit commuter rail station. Parametrix worked closely with FTA, WSF, and interagency review teams to coordinate the work of WSF EIS technical staff for archaeology, ecosystems, noise, hazardous materials, water, and air quality. In 2013, the project won the FTA Outstanding Achievement Award for Excellence in Environmental Document Preparation, EIS Category, for the Mukilteo Multimodal FEIS. Parametrix also prepared the transportation discipline report evaluating multimodal improvement alternatives to the ferry terminal.

Other tasks included analysis of traffic impacts from the project at several key intersections and developing and evaluating alternatives to improve multimodal connections to the ferry terminal for pedestrians, bicyclists, bus riders, Sounder commuter rail riders, and vehicles. To inform the alternative decision-making process and evaluation, design details for integrating the mix of ferry terminal, transit, and non-motorized connections were developed, including a series of options designed to improve bus operations at a relocated transit center. Parametrix continued through 2021 to support WSF and the final design team with stakeholder coordination, third-party agreements, and ROW acquisition.

HBB provided landscape architecture including ethnobotanic plant material and enhanced promenade features. The public promenade emphasizes the marine environment with waves of exposed aggregate patterns, and hand-seeded patterns of colorful aggregates, curving seat walls, transparent cable railing, custom cedar log benches, and lighted bollards. Plant identification signs provide ethnobotanic interpretive information in the indigenous Lushootseed language. Bioretention cells and pervious pavement are designed to treat onsite stormwater.

Type of Project: Building, Trestle

Seattle Multimodal Terminal Redevelopment at Colman Dock, Seattle, WA | WSDOT | Fee: $2.5M/ $314,672/ $378,444 | Firm(s): Parametrix/GG - MWBE, SBE/HBB - DBE, WBE

Relevance to Southworth Program: Landscape Architecture, Terminal Building Planning/Design, Cost Estimating

Parametrix provided owner's advisory and project/construction management support for the reconstruction of this ferry terminal. The project involved reconstructing the existing terminal while maintaining 24/7 operations and coordinating with multiple ongoing major projects, including Elliott Bay Seawall, SR 99 Viaduct demolition, and waterfront reconstruction. The first three phases included the passenger ferry terminal, south-half dock, and first phase of the new terminal building (completed in 2019) and reconstruction of slip number 3.

Parametrix helped WSF with evaluating project delivery methods leading to selection of Heavy Civil GC/CM, helping WSF secure state approval in December of 2014. Parametrix served as the primary author of the procurement documents and contract and facilitated the contractor selection and supported WSF in negotiations for the initial and subsequent phases. Th team also supported WSF with external key partners, audit issues, FTA grant compliance, and cost/ schedule support of contract negotiations and amendments. Parametrix facilitated other consultant support including design management and has continued helping WSF in navigating complex contracting and compliance issues.

The team has worked to address a variety of project challenges including funding delays and coordination of interagency agreements and projects. The new terminal building was recently opened on time despite multiple funding delays and pandemic challenges. As one measure of the effectiveness of the delivery method and WSF team performance, the project was completed with a high-level of partnering and much lower level of disputes than would be typical of a project of this size and complexity, as the team used the flexibility of GC/CM delivery to quickly develop new delivery plans while mitigating impacts.

GG provided mechanical engineering, in-air and inwater noise support/vibration analysis, and monitoring for the replacement and expansion of this multimodal facility.

HBB provided planting, irrigation, and urban design services. Raised concrete planters located along the Alaska Way street frontage and pedestrian entry areas were designed with Public Artist collaboration. Custom details were prepared for improvements located on top of the trestle structure. Also provided design of the Elevated Pedestrian Plaza incorporating enhanced concrete and granite unit paving. The result is a friendly, inviting open space that reinforces clear and open circulation, while providing the opportunity to sit, rest, and gather.

Type of Project: Building

Silverdale Transit Center, Silverdale, WA | Kitsap Transit| Fee: $2.5M | Firm: Parametrix

Relevance to Southworth Program: NEPA/SEPA/Permits, Building Design, Constructability Reviews, Site Circulation Design

Parametrix completed design and permitting, and managed construction of this new transit center. A traffic analysis was conducted and environmental review for NEPA and SEPA requirements were also completed. The project included survey and base map preparation, geotechnical investigation and evaluation, Americans with Disabilities Act (ADA) requirements, ROW acquisition, shelters and comfort station with architectural treatment, cultural evaluation, hazardous material assessments, and draft and final contract plans, specifications, and estimates. The project included seven subconsultants and an overall project budget for design, ROW, and construction that was highly constrained. Property costs skyrocketed over the life of the project. The Parametrix team was responsive to these changes working closely with KT to identify design improvements and property acquisition reductions to stay within budget with no impact to the operational objectives of the new transit center. The project also included key partner coordination with Kitsap County, WSDOT, Harrison Hospital, and FTA.

Type of Project: Building

Transit Center Improvements and Bus Drop Off/Pick Up Areas, Pierce County, WA | Pierce Transit | Fee: $62,000 | Firm: RAI - DBE, MBE

Relevance to Southworth Program: Building Design

The project involved improvements to four outdated transit centers in Pierce County. Roofs and gutters were repaired and replaced, both the exteriors and interiors were repainted, and seats and benches were replaced. The locations included Tacoma Mall Transit Center, 72nd Street Transit Center, SR 512 Transit Center, and Tacoma Community College Transit Center.

Type of Project: Building

Lynnwood Link Extension Shoreline North/185th Station Garage and Bridge, WA | Sound Transit | Fee: $2.5M | Firm: RAI - DBE, MBE

Relevance to Southworth Program: Building Design

The project is part of Sound Transit's Light Rail extension from the Northgate Station to the Lynnwood Transit Center. It is one of four stations on the Lynnwood Link Extension. RAI was the design architect for the steel-framed transit station and the ticket vending area at the south end of the station which leads to elevators and glass-enclosed stairs down to the platform. A glass-enclosed stair/pedestrian over-crossing structure with elevators provides patron access to the far side platform at the north end of the station. The ticket vending kiosks are clad with bright colored aluminum metal panels which assist in wayfinding.

Type of Project: Trestle

Kingston Ferry Terminal, Seismic Retrofit, Kingston, WA | WSF| Fee: $179,668 | Firm: S&W

Relevance to Southworth Program: Trestle Design, Seismic Study

WSF worked to upgrade the ferry terminal slips and bulkhead to be more seismically resilient. S&W evaluated deep foundation performance, lateral spreading hazard, and lateral loading of deep foundations. S&W also conducted site-specific hydraulic modeling of tsunami inundation, SLR, and probabilistic evaluations of seismic and tsunami effects.

Type of Project: Building, Trestle

WSF System-Wide Seismic Study, WA | WSDOT/WSF | WA| Fee: $2.5M | Firm: S&W

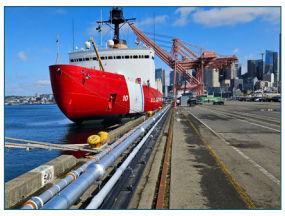
Relevance to Southworth Program: Seismic Study

S&W provided a system-wide seismic study of 12 WSF terminals, including a performance of a probabilistic seismic hazard analysis (PSHA) to develop response spectra for eight terminals located within six miles of an active fault. The PSHA included updated attenuation information and near-fault, basin, and fault rupture effects. S&W evaluated historical subsurface data and coordinated analyses related to liquefaction hazard, lateral spreading hazard, and the effect of liquefaction and lateral spreading on ferry terminal foundations. They prepared a seismic evaluation report and coordinated with WSF structural engineers to complete the study and provide information for use by WSF in future terminal evaluations.

Type of Project: Building, Trestle

Seattle Temporary Facilities, Seattle, WA | U.S. Coast Guard (USCG) | Fee: $609,952 | Firm: Art Anderson - SDVOSB, SBE, WA VOB

Relevance to Southworth Program: Trestle Design, Terminal Building Design



Art Anderson acted as Designer of Record for the construction of temporary facilities on this USCG base as well as site improvements on Terminal 46.

The scope of work also includes temporary shore power mounds and facilities for existing USCG ships. The ships will be relocated to Terminal 46 out of the existing area for a berth widening project. Work in Building 7 will include new power distribution and telecommunications, HVAC and plumbing modifications, fire protection modifications, and architectural modifications.

Type of Project: Building

B206, Keyport Recapitalization and Renovation of High Bay Interior, Silverdale, WA | NAVFAC | Fee: $122,720 | Firm: Art Anderson - SDVOSB, SBE, WA VOB

Relevance to Southworth Program: Building Design

The Art Anderson team provided design services associated with the selective demolition renovation towards the Recapitalization of High Bay B206, Naval Undersea Warfare Center Division Keyport, NBK. The design included flooring, electrical including analyzing the loads on the panels, lighting, plumbing, bathrooms, and roof top AC units including analyzing the heat load to set parameters for the climate.

Type of Project: Building, Trestle

Seattle Fast Ferry Terminal Siting Project, Seattle, WA | Kitsap Transit | Fee: $36,708 | Firm: GG - MWBE, SBE

Relevance to Southworth Program: Trestle, Building Design, Predesign Studies, Permits/Studies

GG assessed potential noise and vibration impacts at downtown Seattle waterfront locations to identify a preferred downtown terminal location to support KT's long-term fast ferry operations. Scope of work included categorizing properties near each alternative; measuring existing sound levels at noise sensitive properties; calculating predicted sound levels from operations of each alternative; evaluating noise and vibration levels from construction; and summarizing the analysis methodology and findings in a Noise and Vibration Technical Report.

Type of Project: Building

Bowlake Transfer Station South Processing Area, Bowlake WA | King County | Fee: $160,000 | Firm: idE - DBE, WBE

Relevance to Southworth Program: Building Design

The KC Bow Lake Transfer Station South Processing Area is a critical component of the ongoing improvements in waste management infrastructure. **As part of RAI's team**, this project reflects our commitment to innovative design and community-focused solutions.

Type of Project: Building Trestle

P454 Multi-Mission Drydock, Bremerton, WA | Naval Facilities Engineering Systems Command (NAVFAC) | Fee: $560,000 | KMC - DBE, WBE, SBEE

Relevance to Southworth Program: Cost Estimating, Constructability Reviews

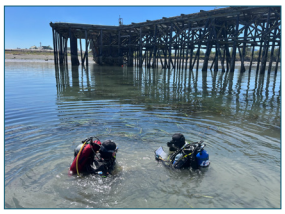
The P-454 project entails demolishing an existing dry dock and supporting structures and constructing a new dry dock. Construction features secant pile cutoff wall and cofferdam systems, bulkhead quay wall, enclosed stairs, utility galleries, electrical and mechanical utility tunnels, drainage tunnels, discharge tunnels, and vessel mooring hardware such as bollards, capstans, and perimeter safety railing. Additionally, the project encompasses inwater work windows and dredging operations.

KMC provided construction specialist and cost estimating expertise including detailed estimate and schedule reviews, constructability assessments, and concept development to enhance project feasibility and execution. **The M2D2 design is a joint venture of three large consultant firms, one being M&N**, to support NAVFAC and lead a large multidisciplinary team through planning and design for this waterfront facility.

Type of Project: Trestle

Eelgrass Transplant and Monitoring, Anacortes, WA | Tesoro Refining & Marketing LLC (now Marathon Petroleum Corporation | Fee: $84,390 | Firm: MSA - DBE, WBE

Relevance to Southworth Program: Permits/Studies



MSA performed baseline habitat and macroalgae surveys, prepared an eelgrass mitigation and monitoring plan, conducted 9 years of SCUBA monitoring surveys, and transplanted endangered eelgrass (Z. marina) beds for the Tesoro Causeway/Wharf Routine Maintenance Project. Survey protocol followed applicable regulatory guidelines.

Type of Project: Trestle

Marines Cove Dredge Project, Whidbey Island, WA | Mariners Cove Beach Club | Fee: $103,404 | Firm: MSA - DBE, WBE

Relevance to Southworth Program: Permits/Studies

As part of a larger dredging project, MSA conducted macroalgae surveys to ensure minimal habitat impact, including eelgrass bed delineation, density surveys, reconnaissance for eelgrass transplant sites, transplant site selection, and baseline transplant/reference site eelgrass density surveys.

Criteria 2 Qualifications of Project Manager

AZADEH BOZORGZADEH, PhD, PE

Project Manager (M&N)

Years of Experience: 23
Education: PhD, Structural Engineering, University of California, San Diego
MS, Civil Engineering, University of Arizona
BE, Civil Engineering, Sharif University of Technology
Registration: PE, Civil, CA, #75033

Azadeh Bozorgzadeh is a marine structural engineer with a focus on managing multidisciplinary teams to execute marine transportation design projects. Azadeh is experienced in multidisciplined waterfront/port facilities, including marine structure design, marine structure permitting, and construction support services.

She has served in a leadership/management role on dozens of marine and waterfront projects including four ferry terminal projects, giving her a strong understanding of waterfront facility/ferries operations. She has a thorough understanding of requirements of the GEC role to deliver a successful project on budget and on schedule. She has the right set of skills to identify challenges in early phases of projects and propose cost-effective solutions, as well as manage their implementation.

As the proposed project manager, Azadeh will provide day-to-day management and be the point of contact for the design team and WSF. She will oversee the design team to assure that WSF's goals and objectives are being met.

Similar Public Building and Marine Structure Project Examples

1 - Golden Gate Sausalito and San Francisco Ferry Terminals, CA Dates: 2011-present **Client/Organization:** Golden Gate Bride, Highway, and Transportation District (GGBHTD)

Azadeh is managing a team of consultants including geotechnical, environmental, architectural, electrical, plumbing, and hydraulics consultants to deliver permits and final engineering design of these ferry terminals.

This project has major challenges due to very short inwater work windows imposed by the city. Azadeh and her team developed a construction phasing sequence that avoided any operations disruptions. This was accomplished by developing a detailed design and construction schedule in close coordination with District Staff.

The project had several environmental and political challenges that required strong leadership. During public outreach, the city of Sausalito's residents were opposed to the proposed size of the terminal and the view from the shoreside – Azadeh's leadership helped successfully reduce the size of the terminal (low profile) without compromising the operational goals and helped the District come to a mutual agreement with the city.

Responsibilities and tasks similar to the Southworth Program include:

- Project management: contract administration and management, implementation of M&N's QA/QC program, risk management utilizing the standard ISO 9001 certified M&N procedures, schedule control, and project controls
- Marine structural design
- Environmental permitting team coordination

Program Features Similar to the Southworth Program

- Pre design studies: Passenger flow analysis, coastal engineering, marine structural analysis, and seismic design of a pier.
- Permitting: Environmental permitting including state as well as federal with NEPA and FTA as the leading agency.
- Site investigations: Geotechnical investigations and recommendations (soil engineering by geotechnical subconsultant), topographic, and bathymetric surveys.
- Utilities: utilities design (water, power, hydraulics).
- Marine Structures: The project at each site involves a 53-foot by 150-foot post-tensioned concrete float held in position with guide piles (pile foundations) connected to the float with pile collars, design of fenders and mooring protection system, 90-foot gangway, fixed pile-supported pier, steel boarding platform, and hydraulic gangplanks.
- Operations: With over two million passengers each year requires remaining in service during all construction work.

› Design work oversight of in-house staff and multiple subconsultants

› Engagement with operators, client staff, and other relevant stakeholders

› Resource and schedule control management

2 - Wharf J9 Replacement and Resilient Shoreline Project Early Floating Dock, San Francisco, CA Dates: 2023 **Client/Organization:** Port of San Francisco

Responsibilities/Tasks Similar to the Southworth Program

- Project management: contract administration and management, implementation of M&N's QA/QC program, risk management utilizing the standard ISO 9001certified M&N procedures, schedule control, and project controls
- Marine structural design
- Design work oversight of in-house staff and multiple subconsultants
- Engagement with Port staff and other relevant stakeholders
- Resource and schedule control management
- Construction cost estimates

Azadeh was the project manager for removal and replacement of a dilapidated portion of Wharf J9 at Pier 47 with a temporary floating dock. This project aimed to support economic recovery of the fishing industry in advance of a final permanent Wharf J9 reconstruction project which is being planned and permitted separately.

The temporary floating dock project consists of demolishing existing mooring piles, and replacing them with a temporary floating dock, pile supported fixed platform, and aluminum access gangway connecting the platform to the floating dock. Azadeh managed a team of consultants including geotechnical, electrical, and cost estimator. The project had a very aggressive schedule and the Port's plan was to open the dock to fishermen in 18 months. The client had the environmental permit based on a conceptual design with 24-inch steel pipe piles. Azadeh's strong understanding of waterfront structures and right set of skills helped her identify undersized pile sizes in an early phase of the project. The seismic analysis of the piles showed that the piles were not strong enough for seismic loads and did not meet current code requirements. Azadeh mobilized the right technical staff on her team to quickly develop alternative design concepts (changing the layout without changing pile sizes) and presented to the client for acceptance so within this aggressive design schedule the project did not face any delay and delivered successfully. The project is currently under construction, and is scheduled to open by end of the year.

Scope of work:

› Marine Structures: The project at each site involved a 270-feet of concrete float held in position with guide piles (pile foundations) connected to the float with pile collars, design of fenders and mooring protection system, 40-foot gangway, fixed pile-supported platform, and 15-foot steel boarding bridge.

› Utilities: utilities design (water, fire protection, power).

Experience as a Project Manager on a WSDOT/WSF or Other Agency

Azadeh's extensive experience with design and management of waterfront projects have instilled a deep understanding of the regulations, processes, and permits required to undertake projects in this environment. This includes requirements of federal agencies, such as FTA, USACE, National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife (USFW), but also state agencies. She also understands the critical impact that local tribes play in the permitting process.

Through projects for the Port of San Francisco, USACE, GGBHTD, Azadeh has encountered numerous regulations and various codes (AASHTO, UFC, IBC, ACSE, etc.) that have impact to design and construction. Examples of these projects are shown below.

1 -Ensley Engineer Yard String-Out Replacement Dates: 2021-2024 **Client/Organization:** USACE MDC

Azadeh led a team of consultants from a pre-design master plan through final design of a 5,445 foot-long floating wharf as part of this marine maintenance facility.

The unprecedented inflation during 2020 to 2022 increased the construction cost estimate of the project and the client could no longer afford the project. With numerous meetings with personnel at the yard and their need for missions and operations, we developed multiple alternatives to the project. Scope and schedule required constant adjustment throughout the design phase. Through consistent communication, Azadeh was able to keep the MDC and EEY informed and mobilize the right technical staff to quickly develop solutions to present to the client for acceptance or further refinement.

Responsibilities/Tasks Similar to the Southworth Program

- Project management duties: contract administration and management, implementation of M&N's QA/QC program, risk management utilizing the standard ISO 9001certified M&N procedures, schedule control, and project controls
- Marine structural design: led the design of the floating wharf and connector bridges throughout design phases using AASHTO (LRFD Bridge Design Specifications, LRFD Seismic Bridge Design, LRFD Guide Specifications for the Design of Pedestrian Bridges), IBC, UFC, ASCE 7, ASCE 61-14, ACI, AISC)
- Design work oversight of in-house staff and multiple subconsultants
- Directing the team developing construction cost estimates

2 - Downtown San Francisco Ferry Terminal Replacement Project Dates: 2016-2018 **Client/Organization:** Water Emergency Transportation Authority (WETA)/Roma Architects

Azadeh served as PM and structural lead responsible for the design of three ferry slips and associated wharf improvements (vessel docking) at this downtown ferry terminal. This project was part of the WETA plan to expand ferry routes throughout the San Francisco Bay Area under a partnership with Port of San Francisco. Since WETA is responsible for coordinating and providing ferry transportation in response to emergencies or disasters affecting the Bay Area transportation system, the landside (fixed pile-supported pier) and berthing facilities (floating docks) were designed for future use as a staging area for first responders and evacuation by ferry in the event of a major catastrophe.

Program Features Similar to the Southworth Program

- Project Elements: a new fixed pile-supported pier (concrete plaza), a concrete promenade, new steel floats (135 feet by 42 feet), design of fenders and mooring protection system, and new 105-foot-steel gangways.
- Pre design: coastal analyses (wave, wind, current, tidal, etc.), analyses of vessel forces on moorings, and SLR.
- Final Design: the project involved preparation of plans, specifications, and construction cost estimate.
- Stakeholders: design tasks accomplished under Azadeh's guidance with significant coordination with WETA and Port of San Francisco, two separate agencies.

Responsibilities and tasks similar to the Southworth Program include:

› Co-led a multidisciplinary team including geotechnical engineers, MEP, and cost estimating consultants

› Project management: contract administration and management, implementation of M&N's QA/QC program, risk management utilizing the standard ISO 9001 certified M&N procedures, schedule control, project controls, directing the team developing construction cost estimates

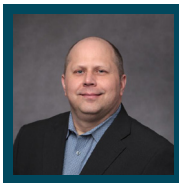
› Marine structural design: led the design of the ferry slips and wharf improvements using AASHTO, IBC, ASCE 7-15, ASCE 61-14, ACI, and UFC

› Risk mitigation: identified risk of some likelihood of obstructions encountered pile driving therefor wharf structure piles were designed with more room for relocating piles if obstruction were encountered. This was an important factor in minimizing construction schedule delays.

Criteria 3 Key GEC Team Member Qualifications

CORE TEAM MEMBERS

Core team members for the proposed GEC Team have been assembled with directly applicable experience to add value and work collaboratively with Azadeh as the PM and WSF as the client.



DARYL ENGLISH, PE, SE, ENV SP, D.PE | Firm: Moffatt & Nichol
Education: MS, Structural Engineering, University of British of Columbia/BS, Civil Engineering, University of British Columbia
Registration/Certification: Professional Engineer – Civil and Structural, Washington/Envision Sustainability Professionals (ENV SP), Institute for Sustainable infrastructure/Academy of Coastal, Ocean, Port, and Navigation Engineers (ACOPNE), Diplomate, Port Engineering
Superpower: All about the trestle

Roles/Responsibilities: Marine Design Manager

Daryl English is a senior project manager and civil/structural engineer with more than 30 years of experience in ports, waterfront design, bridge design, rehabilitation design, peer reviews, value engineering, condition inspections, cost estimating, project scheduling, seismic analysis, and seismic retrofitting. His projects have included deep-water bulkheads, slope stabilizing requirements, seawalls, piled wharves and piers, soil improvements, dredging and dredged slopes, and cellular sheet piles in high seismic regions. In addition to extensive design work on container terminals, cruise terminals, oil terminals, grain terminals and bridge structures, he has performed condition inspections, load ratings, and repair evaluations for marine structures, including timber and concrete wharf facilities, trestles, mooring systems, berthing dolphins, steel docks, and cathodic protection systems.

1 - Port of Seattle, Terminal 5 Berth Modernization Design and Support Services, Seattle, WA | Dates: 2018-2023. Project manager and structural specialist for QA reviews, design support, construction support, and potential claims support for this 2,900-foot-long wharf modernization design. T5 is a legacy wharf constructed in more than 10 phases dating back to the 1960s. Provided multidisciplinary engineering review of upgrades, dredging design, underwater wall design, retrofit strategies, construction phasing, specifications development, and modifications to accommodate super post-Panamax vessels. Provided design and constructability support to minimize changed conditions claims by the contractor for DBB contract. Reviews conducted to provide completeness and accuracy in the contract documents by detecting errors prior to bid advertising, and to make recommendations that capture cost reduction and constructability benefits.

2 - Port of Grays Harbor, AG Processing (AGP), Terminal 4 (T4) Commodity Transfer Facility, Port of Grays Harbor, WA | Dates: 2022-present. Project manager for design and construction of foundations for a new soy meal transfer facility. Work includes a new two-track commodity transfer facility (CTF), over 5-miles of new rail lines in multiple loops, receiving building, scale tower, transfer bridge, yard relocation, three new ship loaders, and T4 dock fender system and stormwater upgrades. Also included is repurposing part of the existing dock as the waterside export portion of the new CTF and replacing an existing 1970s vintage timber fender pile system along the dock with a modern system capable of berthing a vessel mix that includes Panamax-size bulk carriers and with ocean-going barges.

3 - Port of Seattle, Terminal 46 Cruise Terminal Site Development and Support, Seattle, WA | Dates: 2019-present. Deputy project manager and structural lead for the Port's rapidly expanding cruise line of business. Project repurposes and redevelops a container terminal into a new cruise terminal through a Public-Private Partnership (P3) and a traditional DBB delivery approach. Collaborating with the port, partners, stakeholders, and agencies to assure converging the sub-schedules to a common completion milestone for cruise operations to begin. Tasks include project management, schedule development and monitoring, environmental permitting support, structural design redevelopment, landside layout and traffic strategizing, utility reconfiguration, and coordination with a broad team of subconsultants.

MARGARET SCHWERTNER | Firm: Moffatt & Nichol
Education: MS, Aquatic and Fishery Sciences, University of Washington/BS, Agriculture (Animal Science), University of Saskatchewan, Canada
Superpower: Environmental Guru

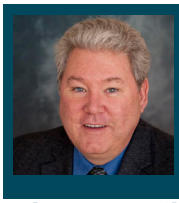
Roles/Responsibilities: Environmental Permitting Manager

Margaret Schwertner is an experienced planner and scientist who will lead the environmental consultant team. She has led multidisciplinary teams for fast-paced federally funded projects that involve NEPA and SEPA compliance and has decades of expertise permitting inwater and shoreline projects in the Salish Sea. Margaret has experience with federal, state, and local permitting for waterfront facilities involving large docks and wharfs, pile removal and pile driving, decking and pile cap work, changes in overwater cover, shoreline excavation and fill activities, and dredging within sensitive marine habitats (eelgrass) and state cleanup sites. She has developed monitoring and mitigation plans and is well-versed at proposing best management measures that are effective, implementable, and result in constructable projects. She has used the Puget Sound Nearshore Conservation Calculator since it was first issued and continues to coordinate with NMFS and USFWS on many projects in the region that require nuanced use of the Puget Sound Nearshore Conservation Calculator. She also remains well-versed at NMFS' more recent approach to programmatic permitting and mitigation banking

1 - Port of Bellingham, Bellingham Shipping Terminal (BST) Rehabilitation, Bellingham, WA | Dates: 2021-2024. Project manager and permitting lead of a multidisciplinary environmental team who completed a USDOT MARAD NEPA EA to support maintenance dredging and wharf rehabilitation at an operational bulk cargo terminal. M&N completed ESA Section 7 review (with the NMFS calculator) and National Historic Preservation Act (NHPA) Section 106 review, all inwater permits, and supported the Port with other grant requirements (risk register and development of bid specifications with Build America/Buy America requirements). She continued to support the M&N Team through final design and is now part of the M&N construction oversight team for permit and MARAD compliance during construction; pile driving and biological monitoring is underway (to be completed by February 2025).

2 - Port of Seattle, Terminal 5 (T5) Berth Modernization Design and Support Services, Seattle, WA | Dates: 2018-2024. Supported the SEPA team to complete the Draft and Final EIS for T5 upgrades in downtown Seattle. Scope included coordinating and completing EIS sections/ technical memorandums on vessel traffic and channel navigation, light and glare, and SLR with support from other M&N staff. The redeveloped pier and deepened berth can accommodate cranes capable of serving the largest container ships on the West coast.

3 - WSF, Mukilteo Multimodal Ferry Terminal, Mukilteo, WA | Dates: 2004-2007. Environmental coordinator assuring clear and complete communication between the engineering and environmental disciplines for a new ferry terminal and multimodal center. Worked on project support documents for the team (Biological Assessment, Alternatives Screened, Draft EIS, the Environmental Design Criteria Technical Memorandum, and the Test Pile Project).



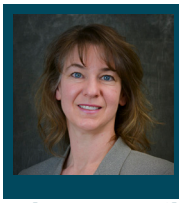
JACK FINK, PE | Firm: Moffatt & Nichol
Education: BS, Civil Engineering, Texas A&M University
Registration/Certification: Professional Engineer - Civil, California
Superpower: All about timing

Roles/Responsibilities: Schedule/Cost/Project Delivery and Constructability

Jack provides more than 35 years of diverse project management and civil engineering experience with emphasis on marine construction. As a former project manager/cost estimator for major marine construction, dredging, and heavy civil construction contractors, Jack possesses a comprehensive background in hard dollar cost estimating, as well as development and management of the project schedule, constructability analysis, QA/QC, and project engineering. Primary responsibilities on heavy civil construction and dredging projects have included project coordination with owners, engineers, and public agencies, change order preparation/negotiation, subcontract administration, construction schedules, project submittals, testing requirements, and daily/monthly reports preparation. His civil engineering experience has focused on study, design, opinions of probable costs, project phasing and scheduling, and construction documentation for marine structures, port facilities, and dredging projects. He also provides engineering support with various computer applications such as AutoCAD, HCSS, MCACES, and others.

1 - GGBHTD, Golden Gate Sausalito and San Francisco Ferry Terminals, San Francisco Bay, CA | Dates: 2019. Lead cost estimator and construction scheduler for this project involving the construction of new and temporary ferry terminal facilities. M&N is the lead designer for the replacement of the aging facilities at the Sausalito Ferry Terminal. The modifications accommodate standardized main deck loading like the other District terminals, to maintain accessible gangways and boarding ramps during all tides, and make sure boarding and disembarking are safe and comfortable for all riders. M&N worked with the District engineering and operations staff to design the new ferry terminal while maintaining temporary facilities as the new terminal is under construction. The construction schedule included all environmental and other City-restricted windows where inwater construction was not allowed.

2 - Water Emergency Transportation Authority (WETA), Downtown San Francisco Ferry Terminal, South Basin, San Francisco, CA | Dates: 2017. Performed quality control and constructability review of the project plans, specifications, cost estimate, and construction schedule for construction of the ferry terminal facilities in downtown San Francisco. M&N prepared final design documents for the ferry terminal which included new ferry berthing facilities at Gates A, E, F, and G for ferry vessels including boarding floats, accessible gangways, passenger ramps, and guide piles. M&N was also responsible for the coastal engineering, dredging evaluations, and associated pier reconstruction. Construction on the first phase of the new South Basin ferry terminal began in 2017.



SANDY GLOVER, PE, PMP | Firm: Parametrix
Education: BS, Civil Engineering, Ohio State University
Registration/Certification: Professional Engineer – Civil, Washington
Superpower: Sagacious Sandy

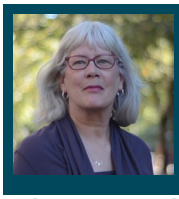
Roles/Responsibilities: Upland Site Design Manager

Sandy Glover is responsible for planning, permitting, and designing roadway, transit, and marine facility projects and has experience and a passion for creating facilities that balance multiple access needs. She has successfully led multidisciplinary groups on significant transportation projects throughout the Puget Sound region. She is experienced in all elements of project management, stakeholder coordination, alternatives development and evaluation, environmental studies, preliminary design, permitting, PS&E, and construction inspection and administration. Sandy is a strong communicator and an experienced liaison between design, NEPA/SEPA processes, and key partners to assure projects move seamlessly into permitting, final design, and construction.

1 - WSDOT/WSF, Mukilteo Mutlimodal Project, Mukilteo, WA | Dates: 2010-2021. Prior to joining Parametrix, Sandy was the consultant project manager for WSF for development of this multimodal improvement project through preliminary design, NEPA, and permitting phases. This work included developing and evaluating alternatives for the improvement of the ferry terminal, resulting in an EIS. She provided scope, schedule, and budget monitoring; strategy and leadership for the team and FTA communications; coordination with key partners and resolving comments; risk identification and management; concept and alternative identification and development review; and QA/QC with crossover communication for all documents. While at Parametrix, Sandy's work continued in a project support role reviewing PS&E; and coordinating project commitments, ROW acquisition, and key partner meetings.

2 - Kitsap Transit, Silverdale Transit Center, Silverdale, WA | Dates: 2015-2021. Sandy was the PM from 0%-60% for this transit center which includes roadway realignments, an eight-bay transit center design, and the design and evaluation of direct access onto southbound SR 303. This work included layout of six alternatives with pros and cons, AutoTURN and ADA evaluation, grading, stormwater management, traffic study, noise analysis, cost estimates, and development of a Documented Categorical Exclusion (DCE) for NEPA.

3 - City of Edmonds, Edmonds Waterfront Analysis, Edmonds, WA | Dates: 2015-2016. As a subconsultant, Parametrix supported all aspects of the Edmonds Waterfront Access Study, which focused on options to the Edmonds Crossing Multimodal Terminal project developed by WSF. As the alternatives development and screening lead, Sandy worked closely with project partners to develop the purpose and need; define level one and level two evaluation criteria; and assess, evaluate, and screen the concepts and alternatives against feasibility, costs, and meeting the purpose and need. Sandy led the development of the design concepts through engineering and developing estimates, including vehicle holding, roadway overpass and underpass of the Burlington Northern Santa Fe (BNSF) railroad, non-motorized facilities, and emergency stations.



SUSAN NEATON, AIA, LEED AP BD+C | Firm: RAI
Education: BArch, University of Detroit/ BS, Environmental Studies, University of Detroit
Registration: Architect - WA
Superpower: Design it and they will build it

Roles/Responsibilities: Terminal Building Design Manager

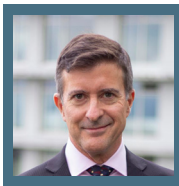
Susan Neaton is a licensed architect and has practiced architecture in Seattle since 1978. Her expertise includes planning and design for municipal, state, and federal government clients. Susan's projects include renovations, retrofits of existing buildings, additions, and remodels, including tenant improvements, space planning, and interior design. She has proven success collaborating with clients and stakeholders working to better understand their mission and goals. Susan brings thoughtful and innovative design solutions to projects, specifically addressing sustainable design elements and low environmental impact materials.

1 - Port of Seattle, SEA Airport Terminal Seating Renovations, Seattle, WA | Dates: 2017-2020. As Project Architect, Susan led the space planning phase of the project. She coordinated with the team's electrical engineer, verified existing conditions, and coordinated seating locations with floor box locations. Susan coordinated the work with the Port of Seattle interior designer, architect, project manager, and individual airlines.

2 - King County, Solid Waste South County Recycling and Transfer Station (SCRTS), King County, WA | Dates: 2018-2023. As PM, Susan is leading the architectural design phase for this new recycling and transfer station for the county. As a subconsultant, contributions include design, QA/QC, specifications, and Green Design and Energy Efficiency design.

3 - King County, Metro, Interim Bus Electrification, King County, WA | Dates: 2023-2024. As PM, Susan is leading the design development phase; document compilation process, submissions, and review comment coordination to AHJ departments; specifications; completion of the GBO scorecard; preparation of graphics for public outreach and City of Tukwila design commission presentations; and lead for construction administration.

PROGRAM SUPPORT TEAM

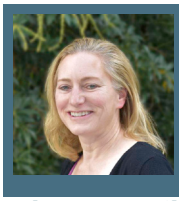


RONALD BYRES, MASC, P.ENG, PE | Firm: Moffatt & Nichol
Education: MASc, Coastal and Ocean Engineering, University of British Columbia/BASc, Civil Engineering, University of British Columbia
Registration/Certification: Professional Engineer – Civil, Washington; British Columbia, Canada
Superpower: Task and Schedule Master

Roles/Responsibilities: Project Director

Ron Byres is a vice president and senior project manager with experience related to ports and harbors, ferry terminals, bridges, and heavy civil engineering projects. Currently based in Victoria, BC, his background encompasses a broad range of port master planning, navigation assessments, structural analysis, coastal engineering, mooring analysis, and field inspections. He has acted in various capacities including project management, conceptual and preliminary design, preparing detailed construction documents, and construction management. He has completed projects in thirteen different countries on five continents. Ron is also a contributing author of the ASCE Manual of Practice 129, Mooring of Ships to Piers and Wharves, Edited by J.W. Gaythwaite.

1. Ministry of Transportation and Infrastructure, Lax Kw'Alaams Ferry Service Upgrade Feasibility Study, Prince Rupert, BC, Canada| Dates: 2021.
2. Trans Mountain Expansion Project - Westridge Marine Terminal, Burnaby, BC, Canada | Dates: 2014-2024.
3. Vancouver Airport, Aviation Fueling Receiving Terminal, Vancouver, BC, Canada | Dates: 2024.



COLLEEN FISCHER, PE | Firm: Moffatt & Nichol
Education: BS, Civil Engineering, University of Washington
Registration/Certification: Professional Engineer – Civil, Washington
Superpower: Advisor - WSF Process and PM

Roles/Responsibilities: PM Advisory Panel

Colleen Fischer has experience in program management, project management, planning, design, and construction support services with a focus in marine transportation and waterfront infrastructure projects including ferry terminals, container terminals, berthing and maintenance facilities,

piers, and associated backlands development. She also has extensive experience with utilities and site layout. Colleen's ferry experience includes feasibility studies involving screening of ferry sites, ferry service route studies/scheduling/vessel requirements, market studies, site layout, and master plans including ADA accessibility, development of alternatives with opinions of probable costs, and operations and maintenance analysis including costs and stakeholder outreach. Of particular note, **Colleen developed a manual of ferry terminal design standards providing comprehensive guidelines and standards for the Washington State Ferry's Terminal Engineering Division.** Colleen has participated in numerous planning activities for ferry projects including feasibility studies, value engineering workshops, and risk assessment studies. She has provided these services for a range of ferry projects throughout the U.S. and Canada.

1. GGBHTD, Golden Gate Sausalito and San Francisco Ferry Terminals, San Francisco and Sausalito, CA | Dates: 2009-present.
2. WSF, Mukilteo Multimodal Ferry Terminal, Mukilteo, WA | Dates: 2004-2007.
3. WSF Terminal Engineering Division, Terminal Design Standards Manual Development, Washington State | Dates: 2010-2012.

AARON PORTER, PE | **Firm:** Moffatt & Nichol
Education: MS, Civil Engineering, Oregon State University/BS, Civil Engineering, Oregon State University
Registration/Certification: Professional Engineer – Civil, Washington
Superpower: Advisor - PM and Coastal Watch

Roles/Responsibilities: Coastal Engineering and PM Advisor

Aaron Porter is a senior coastal engineer with experience in coastal and ports projects. He has proven market development, team leadership, and technical excellence across a range of marine and coastal focused markets. Aaron has specialized experience in offshore wind ports, coastal processes, resilience, linear energy networks, waterfront recreational facilities, ferry terminals, and marine terminal electrification. Aaron thrives in complex project environments applying a solutions-oriented approach to project execution and delivery that relies on proactive collaboration and communication with owners, key partners, and technical leads. He applies his project experience and approach to specialty engineering analysis and scale design projects with a focus on complex waterfront systems and coastal processes.

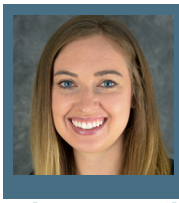
1. WSF, SR160/Southworth Terminal Trestle Replacement, Kitsap County, WA | Dates: 2017-2018.
2. WSF, Sea Level Rise (SLR) Vulnerability Study, Seattle, WA | Dates: 2020-2024.
3. WSF, Terminal Electrification Program, WA | Dates: 2023-2024.

JENIFER YOUNG | **Firm:** Parametrix
Education: Master of Public Administration, University of Washington/BA, English Language and Literature, University of Washington
Superpower: NEPA/SEPA Queen

Roles/Responsibilities: NEPA/SEPA Lead

Jenifer Young has led NEPA and SEPA documentation for numerous transportation and industrial projects involving multimodal facilities and inwater construction. She is experienced in alternatives analysis and feasibility assessments and has been involved with numerous projects for WSDOT, including serving as the Environmental Manager for the SR 520 I-5 to Medina project, and is currently working with FTA and FHWA as co-lead agencies on the Interstate Bridge Replacement Program.

1. WSDOT, I-5 Marvin Road to Mounts Road Corridor Improvements, Thurston and Pierce Counties, WA | Dates: 2022-present.
2. SDOT, South Lander Street Grade Separation NEPA Documentation, Seattle, WA | Dates: 2016-2018.
3. SDOT, Elliott Bay Seawall Project EIS, Seattle, WA | Dates: 2012-2015.



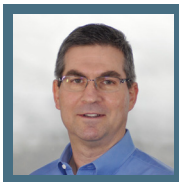
MALLORY WILDE, PE | **Firm:** Parametrix
Education: MS, Civil Engineering - Transportation, University of Washington/BS, Civil Engineering, University of Wyoming
Registration/Certification: Professional Engineer – Civil, Washington
Superpower: Keeping it Moving

Roles/Responsibilities: Landside Civil/Maintenance of Traffic

Mallory Wilde is a transportation-focused civil engineer and project manager specializing in roadway and site development work including roadway, stormwater, transit, and utility projects. She has experience supporting design and construction management projects for multiple

clients throughout Kitsap County and the Olympic Peninsula, including WSDOT, KT, Kitsap County Public Works and the cities of Bremerton, Poulsbo, and Port Angeles.

1. Kitsap Transit, Johnson Road Park and Ride, Poulsbo, WA | Dates: 2023-present.
2. Kitsap Transit, Silverdale Transit Center, Silverdale, WA | Dates: 2015-present.

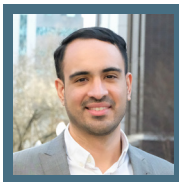


HOWARD HILLINGER, CCM, DBIA, PE | Firm: Parametrix
Education: MPA, Public Administration, University of Washington/BS, Economics, University of Washington
Registration/Certification: Certified Construction Manager, DBIA Certified
Superpower: Make it Buildable

Roles/Responsibilities: Project Delivery Determination

Howard Hillinger is experienced in the management, planning, design, and construction of multi-project capital improvement programs. His areas of expertise include project feasibility analysis, program planning, and management of the design and construction phases of facilities projects. He is also skilled in the use of alternative procurement methods such as DB, Progressive DB and GC/CM to provide bottom line improvements in project delivery. Howard has provided project delivery method selection and implementation support for over two dozen similar projects.

1. WSF, Seattle Multimodal Terminal at Colman Dock, Seattle, WA | Dates: 2014-present.
2. Pierce Transit, Maintenance and Operations Base Infrastructure Upgrade, Lakewood, WA | Dates: 2019-2023.



EDDIE MONTEJO | Firm: Parametrix
Education: MURP, Urban and Regional Planning/BA, Environmental Studies-Solar & Renewable Energy/AA, Liberal Arts
Superpower: Healer

Roles/Responsibilities: Heal Act Compliance/Social Justice

Eddie Montejo is a senior planner with a decade of experience in environmental justice ((EJ) and years of experience working with Latino and Hispanic communities. Eddie has supported NEPA and EJ on projects throughout the Pacific Northwest. He is dedicated to working with communities to find equitable, context-sensitive, and cost-effective solutions to advance community health, mobility, and economic opportunity.

1. WSDOT, Interstate Bridge Replacement (IBR), Olympia, WA | Dates: 2021-present.
2. Multnomah County, Earthquake Ready Burnside Bridge, Portland, OR | Dates: 2020-2022.

JEREMY BUTKOVICH, PE | Firm: Shannon & Wilson
Education: MS, Civil Engineering, University of Illinois at Urbana-Champaign (UIUC)/BS, Civil Engineering, UIUC/BS, Mathematics, UIUC
Registration/Certification: Professional Engineer – Civil, Washington
Superpower: Digging in the Dirt

Roles/Responsibilities: Geotechnical Engineer

Jeremy Butkovich is a lead geotechnical and seismic engineer with 19 years experience. Areas of expertise include nonlinear time history analyses (e.g., dynamic soil-structure interaction and site response), liquefaction triggering evaluation, slope stability and deformations, and deep foundation design. Jeremy is intimately familiar with WSDOT's design and construction methods and was lead author for the seismic design chapter for the 2024 update of the WSDOT Geotechnical Design Manual. Jeremy has worked on numerous Puget Sound ship/ferry terminals for WSF, WSDOT, and the Port of Seattle.

1. WSF, Systemwide Seismic Evaluation,Various Locations, WA | Dates: 2020-2022.
2. WSF, Kingston Ferry Terminal Seismic Retrofit, Kingston, WA | Dates: 2020-2021.
3. WSF, Vashon Ferry Terminal Slip 2 Seismic Evaluation, Vashon Island, WA | Dates: 2019-2022.

DEAN KOONTS, ASLA, CPD | **Firm:** HBB
Education: Master in Landscape Architecture, University of Washington/BS, Biology, High Point University
Registration/Certification: Professional Landscape Architect – Washington/Urban Design Certificate, College of Built Environments, UW/Crime Prevention through Environmental Design, Professional Designation
Superpower: Lovely Land

Roles/Responsibilities: Landscape Architect

Dean Koonts has 24 years' experience in landscape architecture, specializing in design for projects in shoreline environments. His technical expertise forms the foundation of an integrated approach to landscape architectural design. With specialized training in Crime Prevention through Environmental Design (CPTED), urban design, and planting design, he creates upland spaces that support safe and accessible upland public access at fixed piers, over-water structures, launch ramps, and beaches.

1. WSDOT, Seattle Ferry Terminal at Colman Dock, Seattle, WA | Dates: 2017-2025 (est).
2. Kitsap Transit, Annapolis Foot Ferry Dock, Port Orchard, WA | Dates: 2017-2020.
3. City of Mountlake Terrace, Ballinger Park Public Dock and Pier Improvements, Mountlake Terrace, WA | Dates: 2019-2021.

IGNASIUS SEILIE, PE, SE, F SEI | **Firm:** idE
Education: MSc, Civil Engineering, Washington University in St. Louis/BSc, Civil Engineering, University of Indonesia
Registration/Certification: Professional Engineer – Civil and Structural, Washington
Superpower: All about the terminal

Roles/Responsibilities: Buildings Structural

Ignasius Seilie has more than 35 years experience. He founded Integrated Design Engineers (idE) in 2005 to provide structural engineering solutions rooted in systems thinking and stakeholder collaboration. In the past ten years, he has developed a strong record of design for King County and other municipal entities, including the WSDOT, City of Seattle, Port of Seattle, and Sea-Tac International Airport. Highlights of his 35-year career include structural engineer of record for the award-winning North Transfer Station Tipping and Transfer building and serving as the lead engineer for CenturyLink and Safeco Field (now T-Mobile Park) roof structures.

1. Bowlake Transfer Station South Processing Area, Bow Lake, WA | Dates: 2024-present.
2. Port of Seattle Seaport, On-call Contract, Seattle, WA | Dates: Ongoing.
3. WSDOT, SR99 Seattle Tunnel Operations Buildings, Seattle, WA | Dates: 2019.

BRUCE PATTERSON | **Firm:** KMC
Education: BS, Applied Science in Civil Engineering, University of Columbia
Superpower: All about the money

Roles/Responsibilities: Schedule/Cost Estimating/CRA-DEVP-VE/Constructability Reviews

With more than 40 years in heavy construction, Bruce Patterson's journey began as a laborer in 1975. He embraced roles from surveying to foreman, culminating in a Civil Engineering degree. Joining Kiewit in 1983, he supervised diverse projects, including the Vallejo Marina, iconic Tacoma Narrows, and Port Mann Bridges. With a 32-year Kiewit tenure, Bruce excelled in heavy engineering and marine work, which is evident through achievements like innovative anchoring solutions and adept project leadership.

His expertise thrived in strategic planning for challenging conditions, notably the Tacoma Narrows' anchoring system. At Port Mann Bridge, he played a pivotal role with his profound knowledge of deep foundations and marine intricacies. Bruce's seasoned insights uniquely position him for contributions to design, cost analysis, and comprehensive project advisement.

1. NAVFAC, I-105 WSP P454 Multi-Mission Drydock, Bremerton, WA | Dates: 2022-present.
2. NAVFAC, P-381 Multi-Mission Dry Dock, Portsmouth Naval Shipyard, Kittery, ME | Dates: 2021-present.
3. WSDOT/ODOT/TriMet, Interstate Bridge Replacement Program, Vancouver, WA and Portland, OR | Dates: 2020-present.

BRYAN DECATERINA | **Firm:** MSA
Education: BS, Environmental Science Chemistry, Virginia Commonwealth University
Superpower: Swims with Fishes

Roles/Responsibilities: Macroalgae/Eelgrass

Bryan De Caterina joined MSA in 2018 and has worked in the environmental sector for more than a decade. His work focuses on nearshore habitats with an emphasis on marine benthic ecology. Bryan leads MSA's scientific dive program and has years of experience managing large, complex project teams in marine environments. His technical expertise includes eelgrass transplants and macroalgae impact assessments, mitigation monitoring surveys and other critical area habitat assessments related to the Endangered Species Act and Section 404(b) of the Clean Water Act. He has a thorough understanding of local, state, and federal government regulations and can effectively deliver comprehensive solutions to client stakeholders and regulators alike.

1. Wyckoff Beach Subtidal Sediment Cleanup, Eagle Harbor, WA | Dates: 2023.
2. Marathon Petroleum Corporation, Eelgrass Transplant and Monitoring, Anacortes, WA | Dates: 2015-present.

CURRENT AVAILABILITY

Our team is committed to providing the core team members and resources necessary to meet the project milestone dates identified in the RFQ. Exhibit 4 presents the availability of our core team members and program support team (task leads) through 2029. Additional staff will be made available, as needed. We will provide the right people at the right time to meet cost and schedule requirements.

Exhibit 4 Staff Availability

Team Member (hours per month)	Jan 2025	Feb 2025	Mar 2025	April2025	May 2025	June 2025	July 2025	Aug 2025	Sept 2025	Oct 2025	Nov 2025	Dec 2025	2026-2029
Azadeh Bozorgzadeh | Project Manager	100	100	100	100	100	100	100	100	100	100	100	100	100
Daryl English | Marine Design Manager	100	100	100	100	80	80	80	80	80	80	80	80	100
Margaret Schwertner | Env. Permitting Mgr	80	80	80	80	80	80	80	80	80	80	80	80	80
Jack FInk | Schedule/Cost/Project Delivery	40	40	60	60	60	60	60	60	60	60	60	60	60
Sandy Glover | Upland Site Design Mgr	100	100	100	100	100	100	100	100	100	100	100	100	80
Susan Neaton | Terminal Bldg. Design Manager	60	60	60	60	60	60	60	60	60	60	60	60	60
Ronald Byres | Project Director	40	40	20	20	20	20	20	20	20	20	20	20	20
Colleen Fischer | PM Advisor	80	80	80	80	80	80	80	80	80	80	80	80	80
Aaron Porter | Coastal Engineering, PM Advisor	60	60	40	40	40	40	40	40	40	40	40	40	40
Jenifer Young | NEPA/SEPA Lead	40	40	40	40	40	40	60	60	60	60	60	60	80
Mallory Wilde | Landside Civil/Maintenance of Traffic	80	80	80	80	80	80	80	80	80	80	80	80	80
Howard Hillinger | Project Delivery Determination	40	40	40	40	40	40	40	60	60	60	60	60	60
Eddie Montejo | Heal Act Compliance/Social Justice	40	40	40	60	60	60	80	80	80	100	120	120	120
Jeremy Butkovish | Geotechnical Engineer	60	60	100	100	120	120	120	120	120	120	120	120	160
Dean Koonts | Landscape Architect	40	40	40	40	40	40	40	40	40	40	40	40	40
Ignasius Seilie | Buildings Structural	40	40	40	40	40	40	40	40	40	40	40	40	40
Bruce Patterson | Schedule/Cost Estimating/CRA-CEVP-VE/Constructability Reviews	120	120	120	120	120	120	120	120	120	120	120	120	120
Bryan Decaternia | Macroalgae/Eelgrass	20	20	30	30	30	30	30	30	30	20	20	20	20

Criteria 4 Firm's Project Management System

QUALITY ASSURANCE/QUALITY CONTROL PROCESSES

For the M&N Team, understanding our clients' project objectives is paramount to developing practical, cost-effective solutions. Our firm's Quality Goal is "to deliver services and work products in a manner that meets our clients' stated requirements and written expectations, including conformance with contract requirements, prevailing industry standards, and applicable laws and licensing requirements." The firm's documented Quality Management System (QMS) is rigorous and applied at all levels. We will also provide oversight to confirm that the subcontractors implement a documented QMS. The intent is to achieve our Quality Goal on each project and facilitate continuous improvement in process and products and services we provide. M&N employees understand quality is essential, and each member is empowered and engaged to deliver value to our clients.

M&N's management system is certified through the ISO 9001 process for quality management. This certification means our offices have a robust program in place that meets the standard, which empowers us to deliver products and services that consistently meet client requirements, and the quality of our work is consistently improved.

M&N's QMS is based on three essential tenets of quality: Quality Assurance, Quality Control, and Quality Improvement.

Quality Assurance is the process of verifying that the tenets of the Quality Plan are followed.

Quality Control is the process to verify that work is completed to the stated quality goals.

Quality Improvement is documenting and communicating lessons learned from previous experience.

The M&N Quality Manual requires preparation of a project-specific Design Quality Control Plan (DQCP) under the project manager's direction for each project undertaken by the firm. The assigned quality manager, Scott Branlund, will oversee the DQCP and verify its principles are followed throughout the project. Scott also sees that quality reviews are conducted in a timely manner by highly qualified staff (as described below). Our verification process identifies three distinct levels of review:

- Level I – Review/confirmation of calculations, studies, and deliverables
- Level II – Interdisciplinary reviews
- Level III – Peer review

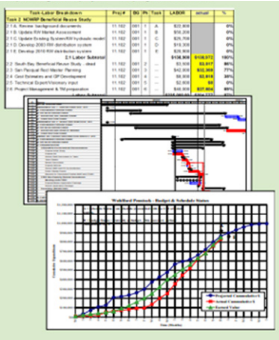
Quality Manager Scott Branlund has 48 years of experience and is fully trained in our QMS. He will work closely with the project team to make certain we continue to meet WSF's expectations and program goals, limit or eliminate rework, and deliver construction plans that yield the most benefit for WSF.

Ron Byres, program director, is responsible for checking processes are following the QMS guidelines including project management, document control, safety, deliverables, and inspection procedures.

TRACK AND MANAGE BUDGET

Strong program and project cost control requires proper planning, communication, execution, and oversight. The following detailed approach is proposed to manage the program budget.

Project Management Plan (PMP). Managing budgets starts with the PMP to lay out the process to execute the work and provide opportunities to identify cost concerns. In close coordination with WSF, the M&N Team will prepare a detailed PMP including proposed scope, schedule, and fee. The work planning effort includes an evaluation of existing data and opportunities to streamline the work and minimize unnecessary efforts. The work plan will be adjusted based on feedback from WSF.



Managing Budgets. As part of the PMP we will assign responsibility, schedule, and direct labor budgets for each task. This information is typically updated weekly to reflect each task's current status. The PM will regularly review task progress and budget spend. We use an industry standard program/project budget tracking software package, BST, to monitor and approve time and expenses.

Cost Control. We will use this system to develop and review a project's financial forecasts and review those forecasts against actual expenditure in order to develop Cost Reports. These Cost Reports will provide detailed analysis and a summary of all functional areas. Along with regular team meetings, these Cost Reports will allow us to keep the project within budget and on schedule.

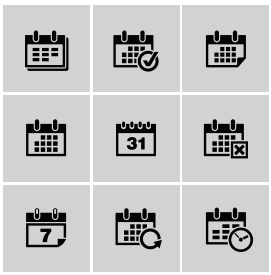
Progress Meetings. We anticipate regular administrative progress meetings with the WSF PM at an interval to be determined. As part of these meetings we will review day-to-day activities in the contract such as new program/project risks, upcoming deliverables, and any other business affecting project budget and schedule. We anticipate a wider GEC/WSF team meeting at longer intervals for technical updates and to determine if a technical breakout meeting is appropriate.

Budget Risk Management. A risk register will be developed in coordination with WSF to identify items that may impact program and project budget or schedule. As part of this exercise, a plan to mitigate the risks is developed and actively managed. Over the course of the program, the risk register is typically updated for each project/task order. If desired we can manage a live version on our server for access by WSF at any time. Our seasoned project management team will develop and maintain an action item tracking list, including origination date, milestone due date, final resolution, and other relevant details to aid in scheduling, monitoring key issues and the risk register, and tracking action items. As part of the Southworth Program we are planning to have a dedicated project controller (Lindsey Motal) who will be the point person for consistent reporting on both the Terminal Building/Upland Improvements and the Trestle.

Contingency Budgeting. Work plans will include a contingency budget item for unforeseen work that may result in a cost overrun. This budget contingency is a critical part of our risk management plan (discussed further in Criteria 5.D). The value of the contingency will be coordinated with WSF and may vary depending on the type of work and the risk for cost overruns. In the event a contingency budget is not used it can be rolled forward to another phase.

Feedback. The GEC Team recommends quarterly or bi-annual high-level meetings with our Program Director to review overall contract performance and budget issues.

SCHEDULING PROGRAM



Schedule development is the process of translating the project scope into activities, contractual milestones, logical relationships, durations, resource availabilities, time constraints, and other schedule basis information into the comprehensive program schedule model. The following detailed approach is proposed to manage the program schedule.

Pre-Schedule Activities. Prior to the program scheduling effort, M&N will develop the Work Breakdown Structure (WBS) used to develop the project schedules and construction cost estimates. The WBS will be presented to WSDOT/WSF for their comment and approval before beginning the scheduling.

Schedule Development. M&N will develop a summary master program schedule with any interdependencies between the projects, as well as detailed project schedules with specific activity codes and deliverables. M&N will prepare the program schedule in accordance with AACE International Recommended Practice No. 91R-16 to the appropriate Class level based on the project definition. M&N will prepare a detailed critical path method (CPM) project schedule using Primavera P6 scheduling software, as part of the program detailed engineering. As part of this process the GEC Team will coordinate with WSF on a deliverable list, schedule, and WSF review times. For this program, a milestone schedule is shown in Exhibit 7.

Schedule Management. As the program schedule is a living document, M&N will maintain an overall master project level schedule for the selected delivery methods, providing consistent updates (at an interval coordinated with WSF), to be used as a tool to make critical decisions throughout the program's lifetime. The scheduler from M&N will also participate in the Cost and Risk Assessment (CRA) workshops to identify schedule risks that may affect the project costs.

Delivery Method. The master and detailed schedules will be used to support evaluation of different delivery methods, and the effect on program and project schedules.

Basis of Schedule. In addition to a regularly updated schedule, a Basis of Schedule (BOS) report is often completed for each major design submittal. The BOS includes the project schedule along with the schedule of assumptions and exclusions.

QA/QC. M&N's Senior Technical Reviewer will conduct a QA/QC review of schedules and BOS documents prior to each submittal.

Criteria 5 Project Delivery Approach

INTRODUCTION

Our project delivery approach begins with developing a clear understanding of scope, client goals and critical success factors, and key issues, risks, and opportunities.

A. How does your firm develop a work plan for this project?

M&N will work collaboratively with WSF's project manager, Lei Lu, to develop a work plan for the program which includes separate project work plans for the Terminal Building/Upland Improvements and the Trestle Replacement, based on goals and client requirements. M&N has an extensive project management toolbox including customizable forms, spreadsheets, and checklists to aid in development of a comprehensive work plan. The main elements of the work plan are described in Criteria 5C. Based on input from WSF, Azadeh Bozorgzadeh, our proposed PM, will work with her management team to develop a draft work plan for WSF review and comment. Comments will be incorporated to the satisfaction of WSF, and the revised work plan made available to the project team for reference and guidance. The work plan is a living document that is continually modified in response to project changes.

B. Who is involved with the decision-making process for development of the work plan?

As project manager, Azadeh will lead the development of the work plan. She will involve key M&N Team members (from both the Terminal Building/Uplands and Trestle project teams) and WSF in developing the plan and reviewing the draft before it is finalized. Azadeh will work closely with the WSF PM to make sure key issues and critical success factors are documented. M&N recommends reaching out to funding partner KT for input on goals and project success factors. Providing input from WSF, KT, and key M&N Team members will make certain project needs are captured, minimizing surprises that can affect scope, schedule, and budget. A key benefit of this collaborative approach is endorsement of the plan by the project team including WSF. Upon completion, the work plan is approved by Azadeh, M&N Project Director Ron Byres, and WSF.

C. Describe each of the elements of the proposed work plan for these projects.

The work plan establishes objectives and requirements for the projects, and identifies the information, procedures, and instructions required to successfully deliver the projects in accordance with the client contract, M&N business requirements as defined in the M&N QMS, and the legislation and regulations of the project jurisdiction (Kitsap County). Elements of the proposed work plan are described below.

Project Vision. This is the big picture purpose for each of the respective projects, as identified by WSF. The project vision will be discussed with WSF during the scoping phase and will support WSF's overall mission "to provide safe, secure, efficient, reliable, and environmentally sound marine transportation for people and goods throughout Puget Sound". It includes clear definition of WSF's critical success factors.

Communication Plan. Identifies how communications within the M&N Team, with WSF, and with key partners are to be managed. The Communication Plan identifies recurring meetings with WSF (type and frequency) and meetings with key partners. If applicable, it will also identify materials requested by the WSF communications team to support public outreach such as renderings. The Communication Plan also includes a client care plan with a schedule for client check-ins focused on obtaining feedback regarding M&N's and subconsultants' performance. Project Director, Ron Byres, will develop the client care plan and coordinate obtaining client feedback.

Project Team. The work plan includes a list of team members, their project roles, and contact information.

Scope of Work. The work plan includes definition of a WBS which identifies a list of tasks and subtasks that make up the project scope. The WBS is linked to project schedule and budget so progress of each task can be tracked and reported on individually.

Budget. Project budget will be developed for individual tasks according to the project WBS structure. The work plan includes a summary of the contract budget including any amendments.

Project Delivery Schedule. Includes critical milestones, the due date of each deliverable, and interim milestones such as QC and WSF reviews. Critical path management is used to identify tasks which must be completed on time to avoid project delays and identify any float in non-critical path items. Detailed schedules for the entire Southworth Ferry Terminal Program will be developed for DB and DBB delivery methods to establish critical paths and relative efficiencies of the alternative delivery methods. M&N will work collaboratively with WSF to maintain the schedule(s).

Deliverables and Milestones. Includes a list of all deliverables, content of deliverables, and deliverables due dates. Project deliverables will be identified in coordination with WSF during the scoping process in accordance with Appendix I Deliverables Expectation Matrices of the WSF Terminal Design Manual (TDM).

Quality Plan. The quality plan identifies the key deliverables, deliverables dates, QC review periods, and people responsible for the QC. The QC effort will be overseen by Scott Branlund.

Document Management Plan. Includes project index and electronic folder structure, project data and document naming conventions, document distribution protocol, and project record retention requirements. M&N maintains project records electronically with a standardized project folder structure to streamline efficiency. The deliverables will be kept on the M&N server for WSF to access anytime via SharePoint.

Risk Management Plan. Identifies program and project risks and how risks are to be managed. Azadeh and key M&N Team members will meet with WSF early to develop risk registers for each project and the overall program identifying risks, mitigation strategies, and responsible parties for tracking risks. The risks will be categorized as high, medium, and low based on likelihood of occurrence and magnitude of impact on critical items such as cost and schedule. Azadeh will work with the management team and responsible parties to continually update the risk registers and make sure risks are being managed throughout the program.

Change Management Plan. Describes the procedures for identifying, tracking, and managing changes to project scope, schedule, and budget. Formal approval will be required by WSF prior to work on any change regardless of the size or impact.

Project Closure Plan. Includes details on client debrief, subconsultant debrief, partner debrief, lessons learned, filing of project records, and document retention time. Documentation of lessons learned is an important part of M&N's culture which fosters employee growth and enhances success of future projects.

Project Opportunities. Throughout the duration of the program, the work plan will include review and tracking of program opportunities. The M&N Team have outlined a few potential project opportunities in Exhibits 7 and 8. These will be discussed as part of the initial scoping discussions and revisited, or added to as the program progresses.

Exhibit 5, currently provides a few examples of risks that could impact one or both projects, and possible mitigation measures that would be vetted as part of the risk management process.

D. Describe how your work plan addresses risk and contingencies that may arise during the projects.

Early risk identification will be built into the work plan with a risk register, as described in Criteria 4 and 5C, along with collaborative cross discipline efforts to develop effective risk mitigation. Azadeh and key M&N Team members will meet with WSF early to develop a risk register identifying risks, mitigation strategies, and responsible parties for tracking risks. The work plan also proposes contingencies to minimize and mitigate risks, such as:

- A contingency budget for unforeseen work that may result in a cost overrun.
- The inclusion of time allocated within the schedule for both projects to meet, discuss, and update the risk register, rank the risks, and identify and select any necessary mitigation measures and approaches based on clear understanding of WSF's project goals and priorities.
- The inclusion of clear, frequent, and focused communication between WSF and key M&N Team members to track and document risk management decisions and allow for flexibility and effective pivots if required for either project.

ENVIRONMENTAL/PERMITTING EXPERTS

The M&N Team's environmental scientists and regulatory specialists have the right experience to support WSF ferry projects having worked on projects at Southworth, Colman Dock, Mukilteo, Kingston, and Vashon terminals.

Azadeh will work with the management team and responsible parties to continually update the risk register and make sure risks and any necessary mitigation measures and approaches are being managed throughout the program on both projects. As noted above, risk management will be incorporated into the project schedules along with contingency budgeting and risk tracking and documentation, as described in Criteria 4. The M&N Team has extensive experience identifying and managing risk for large waterfront facilities. We respect and acknowledge WSF's similar experience and will work together through the risk management process appropriate for this program.

The table below provides additional key examples of other environmentally-related risks and contingency strategies to showcase our team's experience with inwater work.

Exhibit 5 Risks and Contingencies

RISKS	CONTINGENCIES
Building and Upland Improvements	
6PPD from tires is lethal to coho salmon and can contaminate water systems, impact schedule and project costs	• Parametrix has experience evaluating potential impacts from 6PPD-quinone and whether new/ increased impervious surfaces would result in adverse effects to ESA-listed species.
Trestle Replacement	
Lengthier permit time for trestle vs. building/upland jeopardizes schedule	• Commence preliminary design for trestle in 2025. • Permit key overwater work to occur external to inwater work window.
Construction material/ procurement delays (piles) jeopardize schedule	• Commence preliminary design for trestle in 2025, allowing for more construction float in 2028 and 2029.
Delays by NMFS and USFWS on ESA review jeopardize schedule	• Use latest WSF BA Reference (BAR) for terminal baseline conditions. BAR reduces need to write full BA and helps identify WSF BMPs. • M&N Team's scientists are experienced and engaged with NMFS and USFWS; will leverage reduction in overwater cover in NMFS Puget Sound Nearshore Conservation Calculator and maximize conservation credits (reductions of overwater cover, when located near eelgrass beds, result in higher conservation credits).
Possible eelgrass survey delays (weather and summer growing season)	• Team will plan for multiple alternative survey days along with full density surveys to collect data and avoid schedule delays based on the need for further field work. MSA is one of the few Pacific Northwest firms that employs scientific divers for eelgrass surveys. Most agencies accept data collected through remote sensing methods for qualitative presence-absence surveys, but projects that require density surveys in deeper water and/or mitigation do require diver collected data.
Both Projects	
Maintain operations during construction.	• Leverage expertise of consultant team's extensive group of former contractors to provide insight/ innovative ideas on cost-effective project phasing to keep the terminal operational during construction.
NEPA required in addition to SEPA due to federal funding nexus	• Design and environmental leads will work together during preliminary design to identify environmental concerns or benefits that could require changes to design. • Both projects anticipated to qualify for NEPA Categorical Exclusions as preservation projects. The M&N Team with support from WSF with early coordination with FTA on level of NEPA review. Team includes Linda Gehrke, former FTA Region 10 Administrator, if needed. • Federally funded projects require additional compliance (Build America Buy America, etc.). Team familiar with federal requirements, which will be part of early design considerations.
Schedule/meet critical milestones	• Identify long-lead items up front to allow for early procurement and eliminate delays.
Unexpected site soil, groundwater, sediment, and hazardous materials conditions can impact costs and schedule	• The M&N Team includes scientists that can characterize site soil, groundwater, and/or sediment conditions (pile and trestle removal) and assess for hazardous materials (building demolition). Can develop sampling and analysis plans for pre-characterization of planned excavation areas for soil, develop contaminated material management plans, and support post demolition characterization (i.e., post trestle removal) if requested by Ecology.

Exhibit 6 Schedule

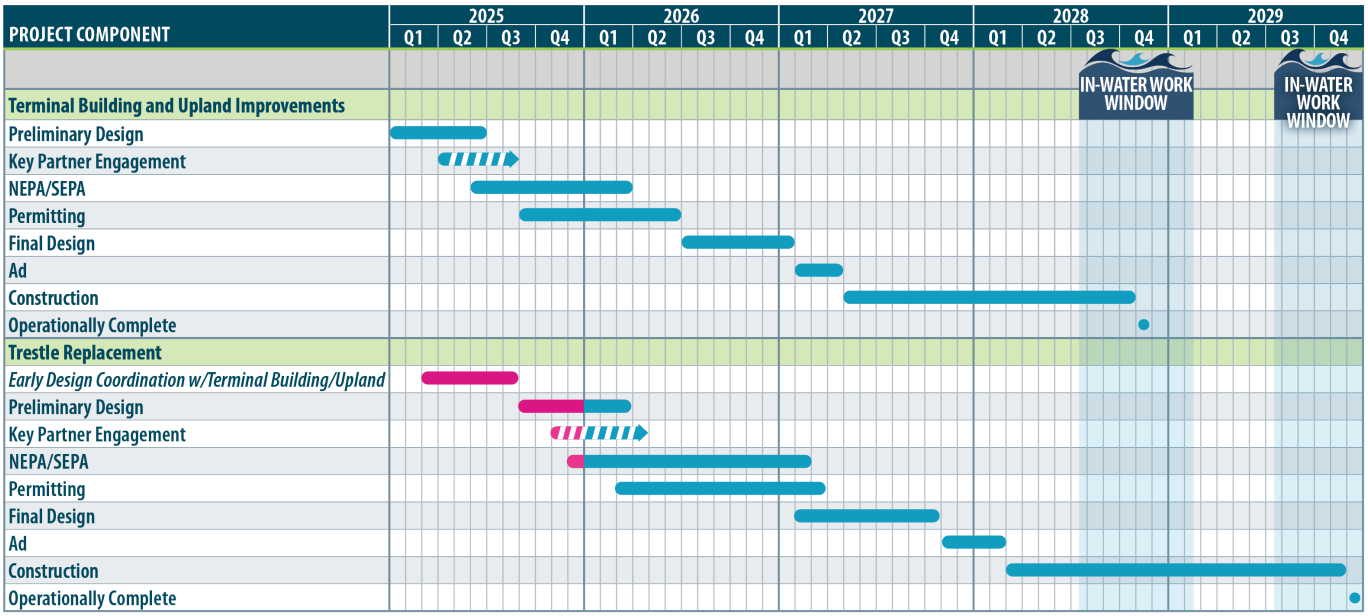


Exhibit 6 incorporates the RFQ schedule for the Terminal Building and Upland Improvements and the Trestle Replacement projects. The schedule schematic and following discussion, based on early assumptions and information at this time, is meant to provide an example of how possible risks and mitigation measures demonstrate the M&N Team's experience in dealing with similar types of projects. Risk identification and contingency implementation, including specific mitigation measure/approach development, will be completed early in the planning phases for each project.

The early phase of the program is focused on the Terminal Building and Upland Improvements. However, preliminary design of the trestle is the most important from a schedule perspective due to the time required to obtain inwater permits. Possible schedule risks affiliated with permitting and environmental studies (eelgrass survey) have been identified in Exhibit 5. Early conceptual design for the entire program (upland terminal and trestle) will still support independent project permitting but allow for additional time for agency review for the trestle project. The M&N Team's development of two strong project teams will allow for overlap of preliminary design and permitting, thus maintaining critical project schedules.

E. Describe how your approaches to resolving issue(s) within the project team, client and stakeholder. Please note that public outreach and government relations are not part of this contract.

As PM, Azadeh will be supported by Colleen Fischer and Aaron Porter as PM Advisors as well as Ron Byers as Project Director. She will be responsible for coordination of the design team. Through active engagement in all design phases, Azadeh, Colleen, and Aaron will be familiar with all project related issues and able to work in collaboration with discipline managers to resolve issues that may arise. Azadeh will develop a plan to outline procedures for resolving issues at the different stages of the project. The plan will include weekly coordination calls focusing on resolution of high-risk work items or cost issues. This will help identify and resolve issues early before they become issues. The plan will also include a spreadsheet in which we will track progress on design elements and use to identify any potential issues.

With a trusting relationship with WSF and other stakeholders and promoting common understanding, Azadeh will focus on early identification of issues and promote creative solutions to satisfy all parties expectations and project goals. The M&N Team believes clear communication and well-defined expectations/goals is an essential requirement for the success of the project.

WATERFRONT WORK IS WHAT WE DO! The M&N Team will work with WSF to incorporate permitting and design strategies early in the process for both projects. The team's environmental scientists will work closely with project engineers to integrate feasible environmental impact avoidance and minimization measures to reduce required mitigation, allow for demonstration of no net loss of ecological functions, and leverage habitat benefits (for the trestle, a reduction in overwater cover). **Part of this approach involves the regulatory engegement, so that they have time to understand the projects and pass on concerns.**

Exhibit 7 Opportunities Map

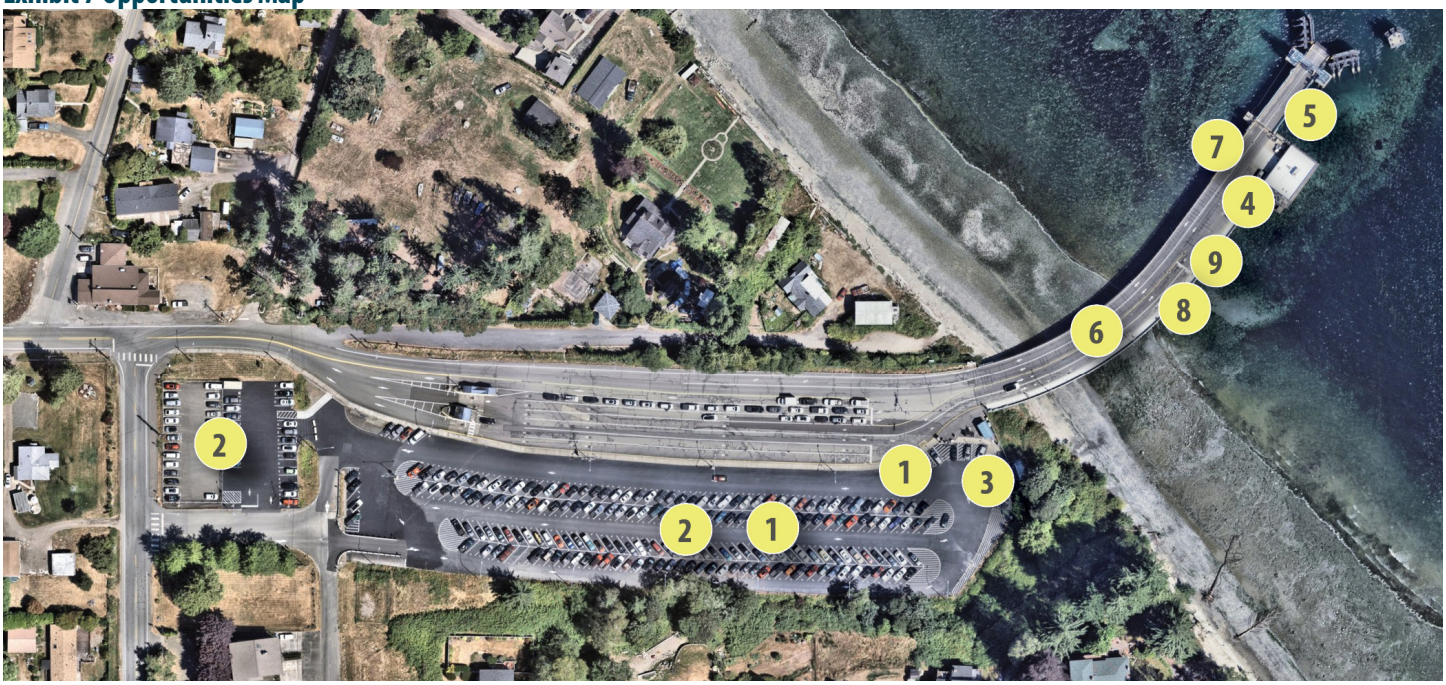


Exhibit 8 Opportunities Map Guide

OPPORTUNITIES	STRATEGY/APPROACH
1. Optimize Customer Experience (Landside).	• Evaluate Complete Streets with separate pedestrian/bike lane to reduce level of traffic stress. • Consider pedestrian refuge in parking lot for internal pedestrian circulation.
2. Transit/Parking Area. Vehicle holding shifted upland encroaches on existing parking/bus circulation.	• Reconfigure parking lot to maximize efficiency and facilitate seamless modal transfers. • Evaluate parking configuration to maintain bus circulation within parking lot and avoid transit conflict with vehicle loading area (as shown in KT conceptual design).
3. Passenger Waiting Areas. Size to accommodate WSF and KT services.	• Work with WSF and KT to adapt criteria to co-locate WSF and KT ferry services, and meet desired level of service (LOS).
4. Optimize Customer Experience (Waterside).	• Consider providing wind screen and/or cover for long pedestrian walk to waiting area.
5. Future Second Slip. Do not preclude future second slip.	• Coordinate with WSF on future-proofing trestle circulation, trestle infrastructure, and passenger staging/waiting areas to accommodate future second slip.
6. Vehicle Loading. Accommodate Vashon-bound vehicles backing onto vessel.	• Evaluate space needs for backing up and/or turning around on trestle. • Minimize trestle overwater coverage without compromising safety and operational efficiency of loading operations to expedite permitting and maximize mitigation credit.
7. Electrification. Plan for future VCS and terminal electrification needs.	• Coordinate with WSF on future-proofing trestle utilidors and/or electrical power equipment placement on site for future electrification options (upland and waterside).
8. Tsunami Loads. Design for tsunami loads on trestle and buildings.	• Evaluate tsunami loads on structures including leveraging award-winning methodology developed by current M&N staff specifically for overwater structures at Southworth.
9. Sea Level Rise. Design trestle to accommodate SLR.	• Value-engineer the trestle design leveraging detailed understanding of SLR and the WSF system, future adaptations strategies, and site geometric constraints. • Confirm existing transfer span meets or can be adapted for projected SLR needs.

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