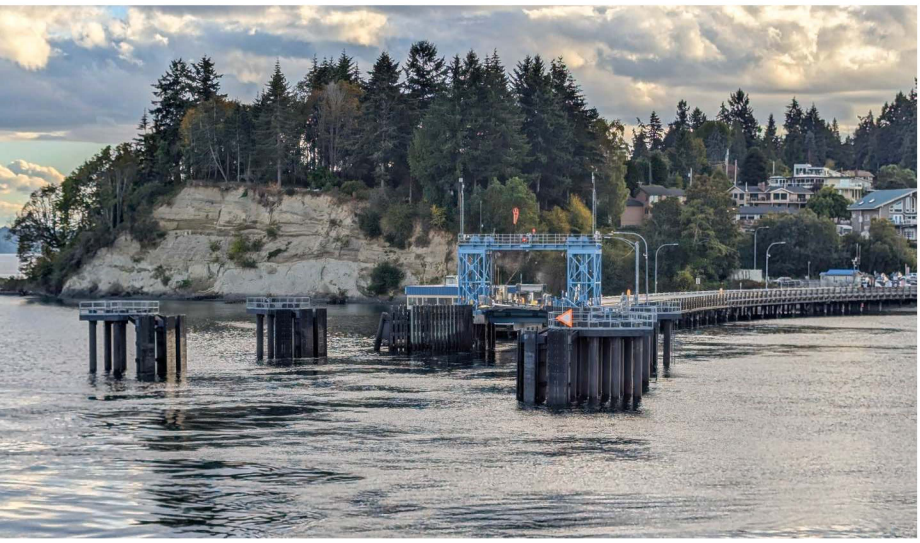
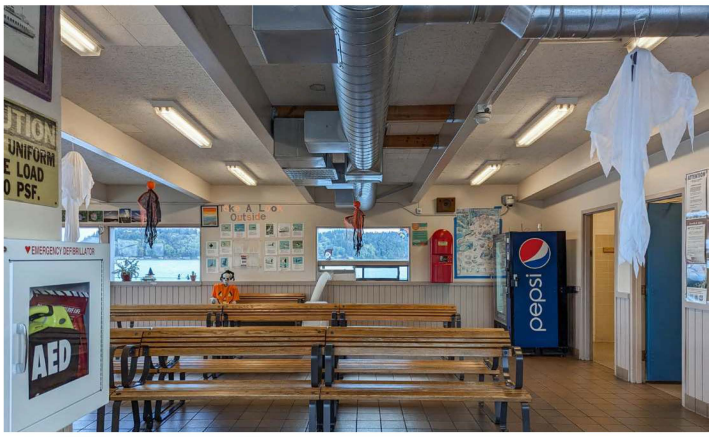
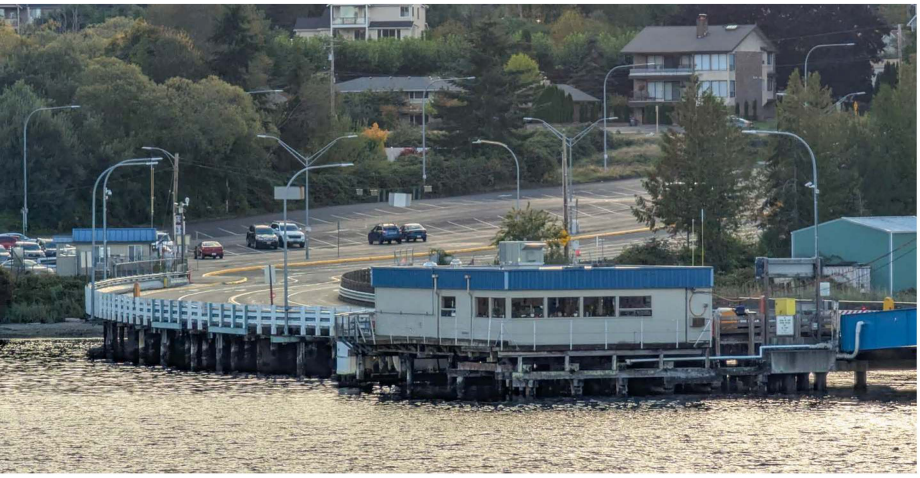
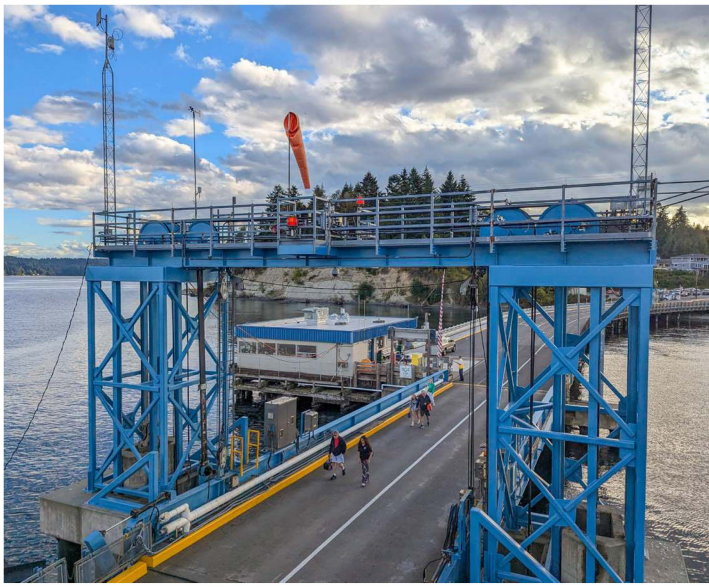
kpff









WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
STATE OF WASHINGTON DEPARTMENT OF TRANSPORTATION FERRIES DIVISION

WSF Southworth Program General Engineering Consultant for the SR 160 / Southworth Terminal – Terminal Building & Trestle Replacement Program // Packet A

STATEMENT OF QUALIFICATIONS

KPFF CONSULTING ENGINEERS // 10.16.2024

01 CRITERIA
QUALIFICATIONS/EXPERTISE OF FIRMS ON OUR TEAM

A. Organization Chart(s)

WSDOT/WSF
Project Manager

PIC/Program Manager
Andy Bennett, PE
KPFF

Project Manager
Ed DeBroeck, PE, DBIA
KPFF

Contract & Subconsultant Mgr
Sethany How
KPFF

Building Design
Todd Maki, PE
Building Design Manager
KPFF

Building & Site Design Team

Christine Scharrer, AIA
Architecture
Scharrer AD (DBE)

Todd Maki, PE*
Structural
KPFF

John McMillan, PE, PMP*
Civil
KPFF

Doug Lindquist, PE, GE, LEED AP
Geotechnical
Haley & Aldrich

Mike Thomson, PE, LEED AP BD+C
Mechanical/Plumbing Engineer
P2S

Akshay Prabhu, PE, LEED GA, DBIA
Electrical
P2S

Trestle Design
Andrew Gastineau, PE, PhD
Trestle Design Manager
KPFF

Trestle Design & Permitting Team

Ellis Beckwith, PE*
Civil
KPFF

Andrew Gastineau, PE, PhD*
Structural
KPFF

Akshay Prabhu, PE, LEED GA, DBIA
Electrical
P2S

Madan Karkee, PhD, PE, PEng
Geotechnical
Haley & Aldrich

Kathy Ketteridge, PhD, PE
Coastal Engineering
Blue Coast Engineering (DBE)

James Shannon*
Permitting
Haley & Aldrich

Mike Thomson, PE, LEED AP BD+C
Mechanical/Plumbing Engineer
P2S

Jessica Blanchette
Biologist
Haley & Aldrich

Project Controls
Kristen Kissinger, AICP
Project Controls/QC Manager
KPFF

Project Controls Team

Kristen Kissinger, AICP
Project Controls
KPFF

Steve King*
Schedule
Ott-Sakai (DBE)

Steven Paget, CVS, LEED AP BD+C
Risk Management
Sazan

Dennis Teschlog
Cost Estimating
ProDims (SBE)

Kevin Sakai, PE
Constructability Reviews
Ott-Sakai (DBE)

Core Team: *

NOTE: See Page 24 in Criteria 5 for additional information on our team set-up and qualifications.

Terminal Building

The **Building and Site Design Team** will be led by Todd Maki, who is a Senior Associate at KPFF and has led a variety of building design projects. Like the TDP Team, the BSD Team is comprised of firms with a long track record working together. Todd will also lead the structural design effort.

Trestle Replacement

The **Trestle Design and Permitting Team** will be led by Andrew Gastineau, who has worked on multiple WSF terminal projects in both lead and supporting roles, as well as other waterfront projects for other public and private sector clients. Andrew will also lead the structural design effort.

Project Controls

The Project Controls Team will be led by Kristen Kissinger, who has provided similar services for large-scale King County Metro Transit and Seattle Public Utilities projects covering multiple task orders and scopes of work.

Summary List of each Firm on the Team and their Expertise

Prime

KPFF Consulting Engineers, is a civil and structural engineering firm with deep experience in waterfront and transportation projects. KPFF's waterfront clients have included commercial ports, shipyards, naval facilities, and ferry terminals in Washington, Oregon, California, and Alaska. We have designed piers, wharves, floating docks, berthing structures, dry docks, cargo terminals, and ferry terminals.

KPFF has worked with WSF for over 50 years on projects including: buildings, transportation and operational focused planning efforts, operations consulting; asset management; vessel design selection, and acquisition support; safety, security, and emergency management; strategic, business, system, route, and project planning; program management; public and stakeholder engagement; terminal design; grant support, and construction management. KPFF will be providing **project management, building, trestle and project controls managers, civil and structural engineering.**

Subconsultants

Blue Coast Engineering LLC (Blue Coast), are providing **coastal engineering service**s. They are a Seattle based engineering firm founded in 2018, are a certified WBE and DBE specializing in coastal engineering, resiliency, and restoration. Typical services include hydrodynamic and wave modeling, coastal engineering evaluation and design, and sediment transport and geomorphic analysis to support design of functional waterfront projects that are resilient to sea level rise and other climate change concerns (i.e., increased storm frequency).

6+ Yrs Teaming w/KPFF

Haley & Aldrich Inc., are providing **geotechnical engineering and environmental permitting**. They have decades of experience on waterfront projects throughout the Puget Sound region, including extensive work on WSDOT and ferry terminal projects. They have produced multiple NEPA/SEPA submittals and biological evaluations; and coordinated permitting efforts with the city, state, and federal agencies; design engineers; and existing waterfront businesses. They have worked with KPFF providing geotechnical services for the Mukilteo Ferry Terminal and Port of Seattle Terminal 91.

46+ Yrs Teaming w/KPFF

Ott-Sakai & Associates LLC, is a group of construction professionals providing **constructability reviews,** cost estimating, **scheduling,** and value engineering. They provide support for the planning, design, and delivery of predominately heavy highway projects. Approaching projects from a General Contractor's point of view, they address the details of subcontracting, staging and phasing, cost effective construction alternatives, and maintenance of traffic to minimize conflicts that could result in claims and unexpected additional construction costs. Ott-Sakai is a state certified MBE and DBE firm.

10+ Yrs Teaming w/KPFF

ProDims, is a project management firm with focus in **cost estimating** and scheduling services. They excel in providing detailed estimates for seismic upgrades, terminal replacements, mechanical and electrical upgrades, HVAC systems, and water distribution. They utilize industry-standard software, such as Primavera P6 and Microsoft Project, tailoring their approach based on contract requirements, client preferences, and project complexity. ProDims is a SBE certified firm.

33+ Yrs Teaming w/KPFF

P2S, will be providing **mechanical, electrical, and plumbing services**. They are a one-stop resource offering mechanical, electrical, plumbing, technology, and fire protection design services. P2S also provides commissioning and construction management services. Some of the engineering services provided include building systems design, central utility plants, utility master plans, infrastructure design, feasibility studies, and energy audits.

16+ Yrs Teaming w/KPFF

Säzän Group, services encompass the entire life cycle of facilities, from planning through maintenance and operations. They also provide **risk management,** mechanical, electrical engineering and facility condition assessments. Säzän has provided Value Planning Options Analysis (VP/OA), Budget Evaluation Study Team (BEST) studies, Value Analysis (VA), Value Engineering (VE), Risk Cost Analysis (RCA), and Constructability Risk Assessment (CRA) services to state, county, municipal, Federal, and Tribal governments. All studies they facilitate entail Cost Analysis, including budget validation, estimate reviews, and assessment relative to comparable projects. Risk is assessed for cost, schedule, and performance impacts using a range of tools from Excel-based risk evaluation to software-based probabilistic modeling. They typically engage cost and risk professionals on our teams.

8+ Yrs Teaming w/KPFF

Scharrer Architecture and Design, is a full-service **architectural** design firm specializing in public, transportation, and infrastructure projects. Their work emphasizes creating places that enhance the urban environment, are easy to use and understand, and are inherently sustainable. Scharrer AD and KPFF are currently working together with the Whatcom Transit Authority on conceptual expansions for their Maintenance, Operations and Administration Building (MOAB), the Midway Lot and location of the Paint Booth. Scharrer AD is a state certified DBE and WBE firm.

10+ Yrs Teaming w/KPFF

B. Relevant Projects

KPFF

Washington State Ferries, Mukilteo Ferry Terminal Phase 2, Mukilteo, WA

(2014—2023) AMOUNT RECEIVED $19.5M

As Prime Consultant, KPFF provided structural, civil, and mechanical engineering along with project management for the design and construction of an award-winning new ferry terminal and multimodal transportation facility that includes a state highway extension, expanded upland holding area, new terminal building, new ferry berth, new transit center, and other public amenities. To address a wide variety of environmental and permit commitments, KPFF's project management team worked closely with the project stakeholders to deliver a design that satisfied all of the over 500 commitments made to key stakeholders and project partners by WSDOT during the project development stage. KPFF also supported WSF's efforts to comply with the FTA requirements associated with the project funding. The project elements designed by KPFF included the pile-supported wharf that forms both the foundation for the terminal building and the bridge between the ferry and roadway, the terminal building structure, utility coordination, overhead passenger loading span, the drilled shafts supported the vehicle transfer span, and the adjacent fishing pier and small vessel docks.

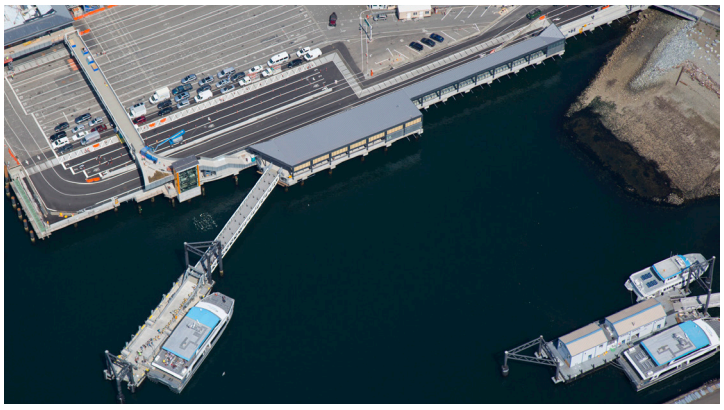
CHALLENGE: Liquefiable site conditions and lateral spreading concerns required close and interactive collaboration between structural and geotechnical engineering disciplines to develop and assess alternate design solutions and adopt an optimal design for construction. An innovative design using concrete-filled steel piles supporting the trestle in combination with four rows of pinch piles along the toe of waterside slope was developed to meet the slope performance in the terminal building area. For upland area adjacent to the terminal building, about 700 feet of retaining wall on top of the waterside slope was needed to support fill to raise the site grade. A cantilevered steel sheet pile wall designed to meet project performance requirements under liquefaction-induced lateral spreading of the slope was estimated to cost about $5 million and was prohibitive in consideration of the overall project budget. The project team collaborated to develop a more cost-effective solution to wall design by adopting a life safety approach and designing a wall system that can tolerate large deformations without catastrophic failure.

This LEED Gold project has been recognized by various awards: ASCE Outstanding Civil Engineering Achievement Honor Award, 2023; ACEC National Honor Award, Transportation Projects, 2022; ENR NW

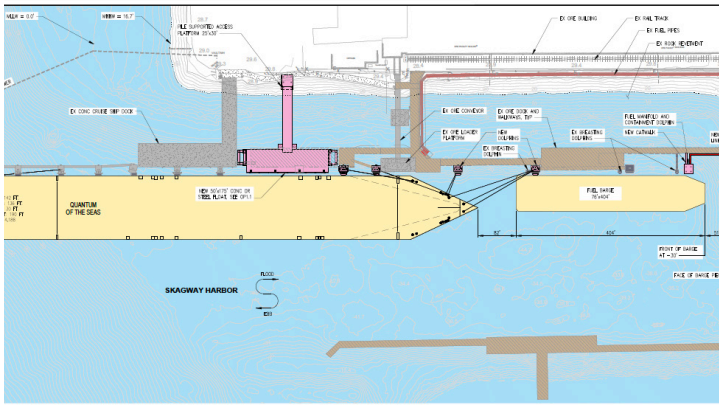
ABOVE: Mukilteo Ferry Terminal

ABOVE: Mukilteo Ferry Terminal

ABOVE: Pier 50 Passenger Only Ferry Terminal



ABOVE: Pier 50 Passenger Only Ferry Float



ABOVE: Skagway Ore Dock

ABOVE: Skagway Ore Dock

Regional Project of the Year and Transportation Project of the Year, 2021; ACEC Washington State Gold Award, Transportation Projects, 2022; ASCE Region 8 Project of the Year Greater than $10 Million, 2021 and American Institute of Architects, Seattle Honor Awards, Energy in Design Award, 2021.

King County Metro Marine Division, Pier 50 Passenger Only Terminal, Seattle, WA

(2016—2024) AMOUNT RECEIVED: $400K

KPFF has worked with King County Metro Marine Division to replace their passenger only ferry landing float and terminal building. As part of this project, which replaced and upgraded their current passenger loading system and floating dock. KPFF provided planning, procurement support and engineered bridging documents for a replacement 117' x 30' open cell concrete float used by various vessel types and passenger loading configurations. KPFF also designed mechanical passenger loading ramps and utility systems. KPFF provided owners technical representation and general project management throughout the proposal, design and construction phases. KPFF was the designer for the guide piles holding the float and the large gangway attaching the float upland. KPFF also designed the passenger queuing building with their subconsultant architect.

The accelerated timeline was set due to the timing of the Colman Dock project that was outside of King County's control. To speed up the overall project KPFF recommended using a design-build approach for completion. KPFF assisted King County Marine Division with their first ever design-build project to successfully complete the project on time.

Client Satisfaction level: The client (KCMMD) rated KPFF's quality of work as **Exceptional** (1 Unsatisfactory – 5 Exceptional). KPFF was responsive, flexible and came up with creative solutions. As the project proceeded there were several changes related to schedule and configuration, which were due to circumstances external the engineering work. KPFF met all of the Owner's expectations and the client would be delighted to work with us again.

CHALLENGE: Key challenges and mitigating measures: Key challenges to this project were phasing, continuous operations and an accelerated timeline. The project was phased to both accommodate the neighboring Washington State Ferries' Colman Dock Project and to ensure there were continuous passenger services. To keep operations going the former floating terminal was moved to a new temporary location. KPFF designed key components to be ready for the move and work closely with the contractor to accelerate the move and enable it to happen over a single week.

Municipality of Skagway, Cruise Terminal Dock, Skagway, AK

(2021—2024) AMOUNT RECEIVED: $6M (DESIGN FEE)

KPFF worked with the Municipality of Skagway, Alaska to redevelop the existing cruise dock, ore dock, barge loading facility and the uplands areas. KPFF has led the design as prime consultant through design, permitting and Construction that was completed in May 2024.

The project includes upgrading the terminal to accommodate cruise vessels up to 1200 feet long by installing new dolphins and retrofitting existing dolphins. The project also includes demolition of existing structures and replacing them with a 500' long steel float and movable steel transfer bridge designed to AASHTO standards on a seismically vulnerable slope subject to liquefaction. Advanced meta-ocean analysis was performed by to size the guide piles that will hold the float in place in the exposed Taiya Inlet. Wave analysis was also performed to size appropriate riprap armoring on the slopes around the terminal.

The project also included the design and use of temporary fuel lines to provide continuous service to the town while construction activities blocked the existing fuel lines. KPFF designed a new fuel header and fuel lines as part of the second phase of the project. The fuel header will accommodate the large tidal swings in Skagway. KPFF worked closely with Petro Marine to ensure the design would meet the needs of the operations. As part of the project, KPFF performed analysis and design repairs to Skagway's failing wave barrier wall.

CHALLENGE: The project had tight timelines due to in-water windows, Alaska winter weather and the presence of marine mammal. Ed was able to successfully navigate the team through these challenges and take the project from initial conception through to final design and construction in under 21 months – which meant that Skagway was open for the 2024 cruise season.

Blue Coast

Whatcom County, Lummi Island Ferry Propeller Wash and Vessel Wake Evaluation, Bellingham, WA

(2024) AMOUNT RECEIVED: $75,730 (FEE)

As a subconsultant to KPFF, Blue Coast Engineering led a coastal engineering analysis to evaluate potential impacts to existing dock and fender structures and eelgrass beds adjacent to the proposed new ferry terminal from propeller wash and vessel wake. Work included computational fluid dynamics (CFD) modeling to resolve the 3D velocity field due to propeller wash from ferry docking operations and measurements and empirical calculations for ferry wake parameters at the ferry terminal. Predicted velocities and wake heights were used to complete a hydraulic evaluation to identify and quantify potential impacts to structures and eelgrass.

CHALLENGE: To verify empirical predictions of vessel wakes from the existing ferry, which can have high degree of uncertainty, Blue Coast staff completed a one-day field evaluation to measure wakes along the shoreline to increase the confidence in the conclusions of the study.

Kitsap Transit, Rich Passage Passenger Only Fast Ferry Wave Energy Evaluation Study, Bremerton, WA

(2006 TO PRESENT) (PREVIOUS EXPERIENCE TO START OF BLUE COAST IN 2018) AMOUNT RECEIVED: BLUE COAST FEES $750,000

From 2006 to 2016, Blue Coast staff have been assisting Kitsap Transit on the planning, environmental studies, vessel selection, vessel operational criteria, and public outreach to establish fast ferry service along the Bremerton to Seattle ferry route. The stakeholder outreach and communications program were integral to the public acceptance of the Kitsap Transit fast ferry plan. Since 2017, Blue Coast staff have been working on the implementation of the fast ferry service along the Bremerton route as well as environmental consultation on two additional fast ferry service operations from Kingston and Southworth. In addition, they have been monitoring the changes to the beaches as a result of the fast ferries on the Bremerton to Seattle route from 2017 to present.

Recently Blue Coast has assisted Kitsap Transit with environmental consultation on two additional fast ferry service operations from Kingston and Southworth. Work included Vessel wake wash measurements of fast ferries travel between Seattle and Southworth.

CHALLENGE: Blue Coast staff worked with Kitsap Transit during design of the new ferry vessel, including field testing, to inform design of a fast ferry vessel that would produce a smaller wake.

Port of Seattle, Terminal 91 Berths 6 and 8 Replacement, Seattle, WA

(2021), AMOUNT RECEIVED: $42,825 (FEE)

As a subconsultant to KPFF, Blue Coast Engineering led a coastal engineering evaluation to inform design for replacement of Berths 6 and 8 at Terminal 91 at the Port of Seattle. Work included development of a two-dimensional wave transformation model for Elliott Bay, which included a high-resolution model grid within the Terminal 90 and 91 slips. The wave model was validated using existing wave information in Elliott Bay in deeper water adjacent to the project site. The wave model was used to develop 2D wave parameters along the alignments for Berths 6 and 8. Predicted wave information was then used to design bank protection under the berths. A targeted empirical propeller wash evaluation was also completed to develop scour predictions at the toe of the new bank protection structure. Bathymetry data over several years, which clearly showed several large propeller scour areas from cruise ship operations, was used to calibrate the empirical model used to estimate propeller wash scour at Berths 6 and 8.

Haley & Aldrich

Port of Seattle, Terminal 91 Berths 6 and 8, Seattle, WA

(2020—ONGOING) AMOUNT RECEIVED: $213,000 (FEE)

As a subconsultant to KPFF, Haley & Aldrich supported the replacement of Berths 6 and 8 along the east side of Pier 90 at Terminal 91, providing geotechnical engineering for the project plans.

The project analyses included advanced 1- and 2-dimensional site response analyses with advanced constitutive models to capture the seismic hazard and liquefaction behavior of the site. The 2-dimensional model also accounted for the soil structure interaction between the terminal and the soils.

The recommendations included ground improvement recommendations as well as driven pile recommendations for the new structure.

CHALLENGE: As part of this effort, they advanced supplementary explorations and completed geotechnical analysis that allowed reducing the upland ground improvement from more than 90 feet deep to approximately 40 feet deep, likely saving several million dollars in project costs.

NAVFAC, NW P-834 SSN Service Pier Extension, Naval Base Kitsap-Bangor, Silverdale, WA

(2022) AMOUNT RECEIVED: $450,000

Haley & Aldrich led the geotechnical design and construction of a series of three major additions to the Service Pier at the Naval Base Kitsap- Bangor nuclear submarine base over a period of 25 years.

The most recent phase of the project consisted of doubling the berthing capacity of the existing service pier to accommodate two additional Seawolf-class submarines.

The project was geotechnically complicated because of not being able to advance additional subsurface explorations (for site security reasons), which would normally be conducted to provide subsurface data needed for design. Haley & Aldrich was also not able to conduct an initial indicator pile installation program to refine required pile lengths for the pier. They were able to develop a reasonable approach to determining pile order lengths that allowed them to make adjustments in the field based on the installation records of adjacent piles.

CHALLENGE: Navigated complex geotechnical conditions and data limitations to develop a reasonable approach to pile installation.

Haley & Aldrich was able to develop refined design recommendations for pile installation "on the fly" during construction to be able to use drivability data from recently installed piles to project anticipated required pile lengths for the next group of piles to be installed.

Haley & Aldrich provided recommendations for vibratory installation of the steel pipe piles to maximize the amount of vibratory driving at the site versus the use of impact hammers. This portion of Hood Canal is home to various species of marine mammals and permitting considerations demanded that the use of impact driving be minimized. Haley & Aldrich was able to obtain the information we needed while still minimizing the amount of disturbing impact driving. This helped to keep the project on schedule and within budget.

Port of Everett, On-call Environmental Services, Everett, WA

(1999—ONGOING) AMOUNT RECEIVED: APPROXIMATELY $50,000/YEAR

Over the last 25 years as a trusted advisor, Haley & Aldrich has completed 180 projects, providing permit preparation, submittal, and assistance; agency coordination; and negotiation.

Permits have included Corps of Engineers Section 10/404, Sec. 401 Water Quality Certification, Hydraulic Project Approval, and Endangered Species Act and Marine Mammal Protection Act (MMPA) consultations.

Haley & Aldrich have conducted eelgrass and macroalgae surveys; prepared National Environmental Policy Act (NEPA) Environmental Assessments (EAs) and State Environmental Policy Act (SEPA) Environmental Impact Statements (EIS); resource inventories and mapping for master plan support; studies on fish use of estuarine habitats in the lower Snohomish Estuary; environmental permit strategic planning; and mitigation planning, design, and implementation.

CHALLENGE: Haley & Aldrich conducted marine mammal monitoring for the South Terminal replacement project and was asked to consult with the National Oceanic and Atmospheric Administration (NOAA) and US Fish and Wildlife Service (USFWS) to gain a higher daily impact pile blow count limit through a revolutionary real-time calculator of cumulative sound exposure limit. Through our analysis the real-time calculator was approved and saved months of potential construction delays.

Over the past 25 years Haley & Aldrich staff have been involved in numerous habitat restoration projects representing the Port of Everett including Union Slough advanced mitigation bank, Jetty Island beneficial reuse, and Blue Heron Slough wetland and conservation mitigation bank. In addition, Haley & Aldrich staff have represented the Port of Everett as an expert in salmon ecology on the Snohomish Basin Salmon Recovery Technical Committee to attend monthly meetings, review committee documents, provide technical guidance to the committee as needed, and report relevant committee actions to the Port.

Ott - Sakai

WSDOT/WSF, Seattle Multimodal Terminal at Colman Dock, Seattle, WA

(2016—2024) AMOUNT RECEIVED: $260K

Ott- Sakai provided marine/civil cost estimating, independent cost estimate, and development of marine/civil construction schedule. Participated in many meetings with the Construction and Design team and WSDOT to comment of the design completion, discuss constructability, estimate the cost/price (HCSS), and stage/schedule the marine/civil work.

CHALLENGE: Key components of Colman Dock are aging and vulnerable to seismic events. The layout of previous facility created safety concerns and operational inefficiencies due to conflicts between vehicles, bicycles and pedestrian traffic. Key project elements include:

- Replacing the existing timber trestle portion of the dock with a new concrete and steel trestle
- Replacing the main terminal building
- Reconfiguring the dock layout to provide safer and more efficient operations

- Replacing the vehicle transfer span and the overhead loading structures of the northernmost slip
- Replacing the King County Water Taxi facility on the south edge of Colman Dock with local funding from King County
- Constructing a new entry building, elevated plaza and view platform
- Maintaining a connection to First Avenue via the Marion Street Bridge
- Adding a bicycle entry and holding area north of Marion Street

Tri-County Metropolitan Transportation District of Oregon (TriMet), TriMet MAX Red Line Extension & Reliability Improvement, Beaverton, OR
(2018—2021), AMOUNT RECEIVED: $300K
Ott-Sakai provided independent cost estimates at design submittals 20%,30%,60% and 90%. They also assisted in establishment of a Guaranteed Maximum Price with the CMGC.

This Project provided improvements at the Gateway Transit Center (Gateway TC) and at Portland International Airport (PDX) to improve service reliability and reduce delays. While the overall Project included work to extend the service to the Fair Complex (FairPlex) Station beyond Beaverton Transit Center, design of that segment was previously performed and is not included under this contract. Construction involves two new station platforms, two new bridges to accommodate the second track. Construction of a second at-grade ballasted track leading to the Portland International Airport (PDX).

ProDims

Port of Seattle, Terminal 18 Dock Rehab, Seattle, WA
(7/2024—11/2024) AMOUNT RECEIVED: $40,019
The Port of Seattle has initiated two critical projects at Terminal 18 (T18): the installation of shore power and repairs to the pile caps, pile, and toe walls in the berths 3 and 4 area. The T18 Dock Rehab project aims to address severe degradation found in pile caps during a 2023 visual condition assessment. To complete these repairs, the construction will involve cutting access hatches through the pier deck and setting up scaffolding beneath the pier. Both projects will be carried out simultaneously at this active terminal, requiring careful coordination to minimize disruptions to terminal operations. Dennis Teschlog is providing detailed cost estimates for this project. He uses design documents to develop estimates that consider market rates, project-specific constraints, and logistical challenges. Dennis ensures the estimates align with the project's requirements. In addition, ProDims is supporting the project with scheduling and sequencing options to ensure work is completed within the allowed windows. This project involves repairing pile caps below the surface deck of Terminal 18, an active pier where work must be coordinated around daily low tide levels. Work is further restricted by the annual tribal fishing windows, requiring precise planning. Due to these limitations, a full demob and remob of crews and equipment will be necessary midway through the project.

Port of Seattle, Salmon Bay Marina Docks A-C Roof Safety, Seattle, WA
(4/2024—2/2025 EST.) AMOUNT RECEIVED: $42,463
Dennis Teschlog is providing cost estimating services for the 30% design phase of Salmon Bay Marina Docks A-C rehabilitation. His role focuses on developing detailed cost estimates for two design alternatives addressing the lack of fire suppression systems, deteriorated roofing, and structural inadequacies identified in previous assessments. In addition, ProDims is providing various scheduling sequencing options for this project to obtain the best balance of cost efficiency, worker safety, tenant relocation, and timeline value. ProDims is working with the owner and architect to develop a baseline plan before it is issued to the contractors for bid.

Port of Everett, Pier 3 Structural Staging and Electrification Feasibility, Everett, WA
(2024—ONGOING), AMOUNT RECEIVED: $17,682
Dennis Teschlog is providing cost estimating services for the structural condition assessment and potential improvements for Pier 3 at the Port of Everett. His role includes developing cost estimates based on underwater inspection and concrete core testing, as well as for structural modification or replacement options. Additionally, he will estimate costs for the feasibility of installing shore power at the west end of the pier and addressing the electrical requirements for tenants on both the north and south sides of Pier 3.

P2S

Whatcom County, Lummi Island Ferry Replacement & System Modernization, Bellingham, WA
(2023—ONGOING) AMOUNT RECEIVED: $109,841
As a subconsultant to KPFF, this project shows extensive experience with waterfront uplands improvement and electrical infrastructure associated with waterfront development. PS2 provided extensive coordination with PSE to identify power available in submarine cable and identifying innovative solutions to mitigate the challenges with lack of power availability.

CHALLENGE: The project included design for uplands including generator design and designing and providing infrastructure for charging infrastructure for the hybrid ferry. The biggest challenge was to design around the existing system and designing the infrastructure that can stand the test of time. The infrastructure was designed to include adequate spares and approximate location of the future equipment to minimize site disruption in the future. Their team went the extra mile to coordinate the details of exact how the ferry will be charged to ensure that the county does not have to demolish any of the infrastructure installed in this project to accommodate the future electrification.

Port of South Whidbey, Clinton Passenger-Only Ferry Dock Replacement, Freeland, WA
(2022—ONGOING) AMOUNT RECEIVED: $24,739
As a subconsultant to KPFF, this project shows designing a dock equipped with lighting, and power and infrastructure to account for future electrification.

CHALLENGE: The replacement dock accommodates passenger-only ferries that can carry up to 150 passengers each, with vessels being an overall length of 90 feet with a beam of 30 feet. P2S worked with the Port and KPFF to ensure access to the passenger loading area was ADA compliant, produce environmental documentation, prepare permit applications, and ensured the project was in compliance with State and Federal requirements.

King County Metro, Plug-in Hybrid Ferry Implementation Study, Seattle, WA
(2021—ONGOING) AMOUNT RECEIVED: $39,747
P2S is providing electrical engineering services for a study that evaluates the feasibility of installing infrastructure for three hybrid ferry routes in the Seattle Metro area. The study will consist of preparing rough order of magnitude (ROM) utility costs for grid improvement to the sites as well as ROM costs for the required shore-side electrical equipment at each site. Coordination with electrical utility company SCL to come up with innovative solutions/options to solve the power shortage issue at the Seattle terminal for KCMD and WSF with the electrification of the ferries. They identify equipment sizes and charge rates for the ferries and space allocation for the electrical equipment.

Sazan

USACE Seattle District/Far East District, US Army Garrisons Camp Humphreys Main Gate Access Control Point,
Pyeongtaek, South Korea
(9/2021—12/2021) AMOUNT RECEIVED: $50,632 (FEE)
Säzän facilitated a Value Study of the Main Gate Access Control Point (ACP) at USAG Humphreys, Pyeongtaek, South Korea for the Far East District of US Army Corps of Engineers. The purpose of the $16.5 million Camp Humphreys ACP project was to increase capacity and overwatch security for the expanded entry gate, due to significant increases in traffic flow. The scope included construction of new entry and exit lanes, check islands and canopy, gate house and guard booths, search area and turnaround, overwatch position, passive and active vehicle barrier systems, traffic signage and signals, and supporting infrastructure.

The Study team reviewed sequencing, constructability, risk, and construction logistics to assess the potential for combining scope into one phase and validated the project team's conclusion that two phases are necessary. An alternative master plan layout was accepted which optimizes alignments, improves sightlines, and incorporates community enhancement features, helping address community opposition to the project. The team assessed the Gate House roof structure and determined that the planned system would introduce schedule, cost and constructability risk issues and proposed a VE alternative that avoided risks. All told, the Study resulted in $1,240,000 of cost avoidance and $202,000 in value improvements.

Seattle Public Utilities, Cascade Dam/Lake Youngs Reservoir Value Study, Seattle, WA
(6/2019-10/2019) AMOUNT RECEIVED: $77,641 (FEE)
Säzän facilitated a Value Planning Options Analysis (VP/OA) review of Seattle Public Utilities' engineering Options Analysis report, supporting documents, and cost estimates for the Cascades Dam Potential Failure Mitigation project. The purpose of the VP/OA was to identify and evaluate options for reinforcing or replacing Cascades Dam on Lake Youngs, a water supply reservoir serving 1.3 million residents of the metropolitan Seattle area. The earthen dam, constructed in 1934 on very soft peat, silty sands, and fill beneath a top layer of sand and gravel, shows evidence of structural instability. In the event of a significant seismic event, there is a high probability that a partial or complete failure of the dam would occur jeopardizing the municipal water supply.

Following a review of the background and cost documentation and completion of a risk analysis, the VP/OA team identified 32 alternatives and selected eight consolidated options for development. Option

ABOVE: Shoreline North Link Station

strategies included structural cut-off walls, structural inclusions, embankment grouting, cofferdam-style reinforcement, impervious barrier wall, and removal and reconstruction of the dam. The VP/OA team recommended that three options be carried forward in Options Analysis, and that mitigation strategies for seven significant risks be implemented.

Scharrer AD

Sound Transit, Shoreline North Link Station, Shoreline, WA
(2016—2023) AMOUNT RECEIVED: $541,000 (FEE)
Scharrer AD **as a subconsultant to KPFF** supported Sound Transit along with Community Transit and King County Metro who will be providing bus service to the station. Scharrer AD provided design services from 60% design through contract construction administration.

Christine Scharrer and Scharrer AD led the architectural design for the new parking garage and retained-cut station for Sound Transit. Scharrer AD worked on the final design and documentation for both the parking garage and Link station.

CHALLENGE: During the 60% Design phase the project initiated a major value engineering exercise that included a proposal to move the location of the parking garage. The Scharrer AD team coordinated with Sound Transit, King County Metro, and Community Transit to move the garage and re-design the roof of the garage to accommodate all bus transit facilities. The result was a more optimized facility for all parties, and it created a much more seamless and timely transfer for bus and rail passengers.

Whatcom Transit Authority, On-Call Architect & Engineering, Bellingham, WA
(2021—PRESENT) AMOUNT RECEIVED: $138,000 (FEE)
As a subconsultant to KPFF, Scharrer AD understands how to best support transit agencies' needs. They provided multiple services including programming, planning, documentation, contract administration.

ABOVE: Island Transit, On-call A&E

MOAB Remodel & Expansion: Scharrer AD to provide project management, facility programming, planning and diagramming, and potential phasing and sequencing identification for the expansion of the Maintenance, Operation, and Administration Building (MOAB), development of the Midway Lot Building Site, and identification of a Body and Paint Shop located at WTA's facility in the Irongate neighborhood of Bellingham, WA.

Scharrer AD helped WTA with prioritizing their long-range plans and helping them move forward with projects to better serve their employees and their service community.

Island Transit, On-Call Architect & Engineering, Coupeville & Camano Island, WA
(2021—2024) AMOUNT RECEIVED: $61,000 (FEE)
As a subconsultant to KPFF, Scharrer AD supported stakeholders including both WSDOT and Island Transit representatives. Scharrer AD provided permitting documents and presentation graphics.

Terry's Corner Comfort Station: Scharrer AD is the designer and Architect of Record for a new transit operator rest facility. The facility includes restrooms, park and ride support spaces and break areas for drivers and staff located on Camano Island, Washington.

At Island County Transit's Operations Base in Coupeville, Scharrer AD conducted a study and generated preliminary master planning concepts to accommodate organizational growth in the Administration Building, an expansion of the Maintenance & Operation building, and an addition to the Fuel Building. The full Fuel Building design is forthcoming.

Working with a smaller agency allowed Scharrer AD and KPFF share their expertise in codes and permitting to best serve their client needs.

02 CRITERIA
QUALIFICATIONS OF PROPOSED PROJECT MANAGER

Ed DeBroeck, PE, DBIA

Project Manager

FIRM
KPFF Consulting Engineers

EDUCATION
BS, Civil Engineering
Seattle University

REGISTRATIONS
Professional Civil Engineer WA #50773

DBIA Accredited

TWIC Certified

WHY ED?
- » Experienced with marine industrial and transportation facility planning and development.
- » Has developed multiple projects on active passenger terminals

Ed will be the project manager and has 17 years of experience multidiscipline terminal development in the marine environment. Ed has experience leading large teams of designers, permitting specialists and grant administration with large teams of subconsultants under tight timelines. Ed was the project manager and lead structural engineer for the Skagway Cruise Dock facility, a $55M development that was fully permitted in just over a year, designed in less than two years and built within nine months. As Project Manager, Ed will utilize communication tools to ensure all team members are coordinated to efficiently share information, complete deliverables, and meet the project schedule. Strong working relationships amongst this team strengthen these capabilities. Having recently completed the Municipality of Skagway Cruise Terminal Dock in May, Ed brings relevant knowledge and learnings for in-water work and creative solutions to any challenge that might arise.

A. Similar Buildings/Marine Structures Experience

Municipality of Skagway, Cruise Terminal Dock, Skagway, AK (2021—2024)
KPFF worked with the Municipality of Skagway, Alaska to redevelop the existing cruise dock, ore dock, barge loading facility and the uplands areas. KPFF has led the project as prime consultant through design, permitting and Construction that was completed in May 2024. KPFF lead the permitting process with specialty sub consultants and received the federal permits in 13 months of submission.

The project includes upgrading the terminal to accommodate cruise vessels up to 1200 feet long by installing new dolphins and retrofitting existing dolphins. The project also includes demolition of existing structures and replacing them with a 500’ long steel float and movable steel transfer bridge designed to AASHTO standards on a seismically vulnerable slope subject to liquefaction.

PM Responsibilities: Overall Design, permitting and construction PM, lead Structural engineer, managed budget, schedule and all subconsultants. Ed was responsible for tracking the projects schedule during design, permitting, and construction phases of the project. Ed managed a team of project coordinators to analyze the progress and professional construction schedules during the construction phase schedulers to better evaluate the status of the timeline

Resource Issues: This cruise terminal was a fast-paced project with multiple structures needed design, which required multiple engineers to design simultaneously. Ed was able to pull in over 100 engineers from KPFF's pool of resources to get the design completed within the time constraints. In addition to the complexities with the design, it was under tight time constraints. Ed was able to lead the team from initial conception to construction completion in 21 months. Ed also managed 19 different subconsultants who contributed to achieving the rapid schedule.

Risk Management: Ed worked with the city manager and port director of the municipality of Skagway to identify project and schedule risks and workshop risk mitigation strategies. Several of these major risks included delays due to AK winter and the presence of marine mammals during construction.

King County Metro Marine Transit, Pier 50 Passenger Only Terminal, Seattle, WA (2016—2024)
KPFF has worked with King County Metro Marine Division to replace their passenger only ferry landing float and terminal building. As part of the overall Colman Dock Rehabilitation Program, this project replaced and upgraded their current passenger loading system and floating dock. KPFF provided planning, procurement support and engineered bridging documents for a replacement 117’ x 30’ open cell concrete float used by various vessel types and passenger loading configurations. KPFF also designed mechanical passenger loading ramps and utility systems. KPFF provided

owners technical representation and general project management throughout the proposal, design and construction phases. KPFF was the designer for the guide piles holding the float and the large gangway attaching the float upland. KPFF also designed the passenger queuing building with their subconsultant architect.

PM Responsibilities: Overall Design, permitting and construction PM & Lead Owners Representative for Design-Build portions, lead Structural engineer, managed budget, schedule and all subconsultants.

Risk Management: Ed created a robust risk matrix as required by King County's management guidelines that covered the broad spectrum of this project. This fast-paced project required constant communication with the Design-Build contractor to ensure the identified risks were mitigated and alternative delivery plans were being discussed in advance of any issues.

Project Schedule: Ed's team was responsible for tracking progress on the Design-Build project as the Project Manager and Owner's representative for King County first infrastructure Design-Build project. Ed leveraged the capabilities of King Counties professional schedulers to provide analysis of the project progress.

Resource Issues: The Pier 50 Passenger Only Ferry project was happening concurrently with Colman and the King County contractor was required to work around the Colman schedule which was constantly changing. Ed's role was to manage the project schedule and communicate the changes to get the Pier 50 work completed without impacting or disrupting the Colman schedule.

Whatcom County, Lummi Island and Gooseberry Point Ferry Terminals, Bellingham, WA (2021- Ongoing)

KPFF is the prime consultant for fully replacing the Lummi Island Ferry Vessel and Terminals, Ed DeBroeck is the lead engineer and Responsible in charge for all structural work. The project includes replacement of all wingwalls and mooring and berthing dolphins at both terminals. The Lummi Island terminal is on shallow bedrock and requires rock sockets. Through innovative design, the wing wall dolphins had no rock anchors, saving cost and schedule.

The project includes design and construction of two new passenger only ferry terminals with steel floats that are on hoists to be lifted out of the water when not in use. KPFF is working with a subconsultant for meta ocean studies at the site and WAMMIT modeling of the vessel to determine mooring loads and motions with a wave barrier wall in place. The Coastal Engineering subconsultant is also performing dynamic modeling of the small vessel floats and modeling wave conditions for the new wave barriers.

PM Responsibilities: Overall Design and permitting, lead Structural engineer, managed budget, schedule of engineering and permitting team.

Risk Management: The phasing of this project is critical to ensure continuous service as the ferry terminal is the only access to the island for it's 800 residences. All project risks to delay schedule and operations heavily impact the community. Ed's team has work to identify all of these risks and structured the project to mitigate them by providing alternative methods to access the island with a temporary passenger only terminal. Ed met with island residents to further identify risks and determine mitigation strategies

Project Schedule: This is a MARAD funded project and under strict timelines and buy America requirements. The project must also meet the requirements for the NEPA permit review process to ensure grand funding is secured. KPFF is managing communications with MARAD throughout the process. The project is also funded by state grants that have separate timelines and reporting requirements. Ed's role is track and manage all of these timelines.

Resource Issues: As the design project manager, Ed is responsible for communicating with county staff for design and permitting reviews. The county has limited resources, which means time is constrained and all reviews and communication need to be scheduled efficiently and effectively. To obtain this, Ed facilitated design review charrettes to get required input and review information from operations and engineering staff, which included in person review workshops.

B. Prior Experience as a PM

Washington State Ferries, Colman Dock Multimodal Ferry Terminal Rehabilitation, Seattle, WA (2015—2024)

KPFF was responsible for the design of the Washington State Ferry Colman Dock Ferry Terminal Buildings and passenger loading systems. The three ferry berths that facilitate the loading of 10 million people a year. KPFF designed the buildings and Passenger loading systems to seamlessly load passengers to the top decks of large vessels. KPFF designed the complex moving ramps and hydraulic systems at this site.

As a part of the overall Colman Dock Project, KPFF also worked with King County to replace their passenger loading building, and floating vessel berth. KPFF provided planning, procurement support and engineered bridging documents for a replacement 117' x 30' open cell concrete float used by various vessel types and passenger loading configurations.

Managing Team: As the manager of the slip 3 Overhead Loading (OHL) team Ed managed the engineering team from dock designer (WSP), in house building designer and mechanical engineers (KPFF), multiple architects, electrical engineering from WSF and small business structural engineering firms. The OHL components of the project interfaced with every part of the project and had to be fully integrated into the design. Ed utilized weekly progress meetings

and key review steps to ensure the interrogation was seamless. Ed managed the teams response during construction to ensure any issues could be resolved quickly.

Schedule Control: The slip 3 OHL component of Colman dock interfaced with all aspects of the broader project as the structure and design was fully integrated while on its own timeline. Ed met weekly with the design team and GCCM design contractor to review design and construction schedules and identify issues and open items.

Familiarity with Regulations: The OHL system was design to meet the requirements of the terminal design manual. The OHL bridge had specific requirements due to being an open truss structure to meet AASHTO fracture critical engineers' specifications. The structure also was required to meet IBC requirements as dictated by the city of Seattle.

Municipality of Skagway, Cruise Terminal Dock, Skagway, AK (2021—2024)

Managing Team: Ed managed a large team of 19 subconsultants to accomplish the project on schedule. The complex project required collaboration between all disciples to design concurrently to meet schedule timelines. The project included multiple design and construction packages that were interdependent for design coordination and schedule.

Schedule Control: The schedule was paramount for this project as any delay would jeopardize the cruise season in Skagway, which is the entire economy the town relies on. The project had added schedule pressure from rock slides that had threatened other cruise berths in town that meant this new dock had to be completed on time. Ed met weekly with the municipality and design team leads to ensure the project schedule was being met, any schedule issues or risks were identified and flagged for immediate resolution. Ed also utilized a team of project coordinators to track tasks and open issues to be resolved along with a critical path schedule. During Construction Ed brought on a scheduling specialist to perform schedule analysis of the contractor's complex P6 construction schedule. This process identified key issued with the schedule to explore further by the team.

Familiarity with Regulations: Ed led the permitting consultants to receive all shoreline and Army Corps permits with a 13-month window. To achieve this schedule the design team and the permitting team had to be fully integrated to design a project that could be permitted as easily as possible. The teams work seamlessly to optimize structures and pile sizes around the permitting regulations. The project required biological assessment, federal Army CORPS approvals and several state permits that all required their own process. The team met with National Marine Fisheries from the very onset of design through final approvals to ensure any questions or issues were resolved immediately.

Whatcom County, Lummi Island and Gooseberry Point Ferry Terminals, Bellingham, WA (2021—Ongoing)

Managing Team: Ed led a design team of over 10 engineers to design two ferry terminals and two separate POF terminals concurrently. The project included upgrades to the existing terminal building and civil infrastructure improvements, including stormwater treatment and new fire water service. Ed also led a team of five5 subconsultant firms to accomplish this complex design in an environmentally challenging location. Ed met regularly with the design teams and sub consultants to track progress and resolve design or permitting issues.

Schedule Control: This is a federally funded project has a demanding schedule to meet MARAD required timelines to complete the NEPA permit review process to ensure grant funding is secured. The project is also funded by state grants that have separate timelines and reporting requirements. Ed's role is track and manage all of these timelines, deliverables and coordination with the agencies.

Familiarity with Regulations: Ed met weekly with the environmental permitting lead to collaborate on the complex permitting applications and strategies required for this federally funded project. The project included the development of a biological assessment, and other studies as required in the county shoreline permit and federal NEPA permit. This project also required strict reporting of progress to meet MARAD grant requirements. This project was also designed to meet AASHTO standards and utilized the WSDOT Terminal Design Manual for many structural components.

ABOVE: Skagway Ore Dock

KEY GEC TEAM MEMBERS QUALIFICATIONS

A. Resumes/Roles/Responsibilities & Professional License(s)

FIRM
KPFF

EDUCATION
MMA, Coastal Zone Management, University of Washington

BS, Naval Architecture and Marine Engineering, MIT

REGISTRATIONS
Professional Engineer in WA, Mechanical, #37495

WEDG Certified Professional

Andy Bennett, PE, Principal-in-Charge/Program Manager

Andy was the Program Manager for the previous KPFF's Terminal Engineering On-Call with the Washington State Ferries and is the Project Manager for the design of the Mukilteo Multimodal Terminal, a new $195M ferry terminal. He brings extensive experience in project management, waterfront planning, and design integration. Andy's background includes design, planning, and project management of vessels, terminals, and waterfront facilities. Responsibilities have included contract negotiation, schedule development, RFP preparation, capital and operating cost estimates, regulatory compliance, sensitivity studies, capital acquisition, waterfront planning, and system integration.

Washington State Ferries, Mukilteo Ferry Terminal Phase 2, Mukilteo, WA (2014—2023)

» Principal-in-Charge for the design of a new ferry terminal facility including terminal buildings, holding lanes, extension of SR 525, new municipal streets, landscaping, and public amenities. As the Design Team Project Manager, Andy participated in extensive public meetings to address stakeholder and neighbor concerns over construction and operational impacts. In this role, he also reported directly to WSDOT senior management.

WETA, North Bay Operations and Maintenance Facility, Vallejo, CA (2014—2017)

» As Design Project Manager on the Dutra Group design-build team, Andy led the design of a floating maintenance facility for the San Francisco Bay Ferry. The maintenance facility provides five mooring slips for passenger ferries and two passenger boarding stations. The maintenance slip utilities include potable water, sewage, compressed air, fuel, lube oil, waste oil, and oily waste. The facility consists of concrete and steel floats moored using steel piles with connections to shoreside utilities and services.

FIRM
KPFF

EDUCATION
PhD Civil Engineering, University of Minnesota

MS Civil Engineering, University of Minnesota

BA Physics, Mathematics, St. Olaf College

REGISTRATIONS
Professional Engineer in WA #22004240

Andrew Gastineau, PE, PhD, Trestle Design Manager/Structural Lead

Andrew has nine years of experience working on a variety of transportation-related projects, including bridges, ferry terminals, and floating structures. His marine engineering experience ranges from design of landing and berthing dolphins to large floating maintenance facilities. Andrew is an adept bridge engineer who specializes in bridge rehabilitation and is experienced in load rating structures in accordance with the WSDOT Bridge Design Manual.

Washington State Ferries, Mukilteo Ferry Terminal Phase 2, Mukilteo, WA (2014—2023)

» Design Manager/Engineer. Andrew managed the design team subconsultants and all aspects during the construction phase of the project. He also designed and completed the load rating for the trestle. The new terminal is two stories founded partially on new pier/trestle and partially on grade. The structure was designed to surround the old one to permit construction with minimal disruption to customers.

WSDOT/WSF, Kingston Ferry Terminal Seismic Retrofit, Kingston, WA (2022—2024)

» Project Manager and Structural Lead. Andrew managed all aspects (plans, specifications, estimate, and calculations) of the final structural design for the Kingston Trestle Seismic Retrofit. The retrofit includes a mix a new and retrofitted structure seismically isolated from the structure to remain. The retrofitted portion utilizes lead rubber bearings to dissipate energy and allow the continued use of the existing structure. The project provides seismic resiliency for one of the two slips at the ferry terminal.

Kittitas County, Thorp Truss Bridge Rehabilitation Project, near Ellensburg, WA (2020—2022)

» Deputy Project Manager/Senior Project Engineer. Andrew managed the structural analysis for the truss construction loading requirements and the traffic control design, designed the fractured steel repairs for the truss portal, and developed the Plans, Specifications and Cost Estimate (PS&E) for the project while managing a diverse subconsultant team for a federally funded painting and rehabilitation of the 1930s era truss bridge.

FIRM
KPFF

EDUCATION
MS Civil Engineering, University of Washington

BS Civil Engineering, Illinois Institute of Technology

REGISTRATIONS
Professional Engineer in UT #8846602-2202

Todd Maki, PE, Building Design Manager/Structural Lead

Todd Maki has 14 years of experience in the structural design of new buildings and renovated facilities, focusing on efficiently realizing the client's vision. Todd has played key roles in the successful completion of projects featuring mild-reinforced and pre-tensioned concrete, podium structures, and complex steel framing. He is skilled in the seismic design, evaluation, and retrofit of new and existing structures in the western United States utilizing current guidelines. Throughout his career, Todd has also worked on numerous evaluation and repair projects to help clients extend the usefulness of their facilities.

Port of Seattle, Pier 66 Terminal Reconfiguration, Seattle, WA (2014—2020)

» Structural Lead. Assisted in determining and implementing improvements for the existing Pier 66 waterfront building. The shared facility houses multiple uses – leased office space, cruise ship passenger processing facilities, convention center and event space, and public access to the waterfront. The existing building is primarily supported by an old concrete trestle/ pier structure, but also has a portion supported on the seawall-retained waterfront. The project consisted of three phases- a feasibility study, terminal reconfiguration, and conference center modernization. Key contributions to the project include analysis of the concrete trestle/ pier structure for current seismic considerations, modification of the pier/ trestle structure to support a new floor within the building, and closely working with the City permitting authority to avoid the need for a seismic upgrade of the facility.

WSDOT/Washington State Ferries, Colman Dock Multimodal Terminal, Seattle, WA (2015—2024)

» Structural Lead. Designed new passenger terminal facilities for two ferry agencies with associated office space, police outpost facilities, new leasable commercial space, a public walkway and view platform for the waterfront, and other associated public and retail facilities. The existing facility included numerous trestle and building structures built over 60 years ago. To ensure ferry operations were maintained during construction, complex construction phasing was required while new piles, trestle structures, and building structures were being built.

FIRM
KPFF

EDUCATION
MS Planning and Community Development, University of Arizona

BS Geography and Regional Development, University of Arizona

REGISTRATIONS
American Institute of Certified Planners

Project Management Certification, University of Arizona

Kristen Kissinger, AICP, Project Controls/QC Manager

Kristen has 19 years of experience in transportation and land-use planning and project management. During her tenure at KPFF, she has been focused on waterborne transportation projects, including leading the Puget Sound Regional Council Passenger-Only Ferry Study and Kitsap Transit Passenger-Only Ferry Business Plan. She has worked with WSF since 2012 from involvement with the Mukilteo Ferry Terminal to project manager on the 2040 Long Range Plan and lead contributor on the WSF Electrification Plan, San Juan islands Ridership Maximization Study, and Service Restoration efforts

Washington State Ferries, Mukilteo Ferry Terminal Phase 2, Mukilteo, WA (2014—2023)

» Project Controller and Agreement Manager. Served as the project controller and stakeholder agreements manager, working with WSF staff, the design team, and various stakeholders to meet record of decision requirements and keep the project moving forward

King County DOT, Marine Transportation Program Planning, Seattle, WA (2008—Ongoing)

» Program Manager/Planning Lead. Has led multiple task orders including, but not limited to, program strategic planning, service expansion studies, multimodal planning studies, ridership and future demand assessment, terminal siting studies, operational feasibility studies, and grant funding strategy for both existing and proposed water taxi routes.

Pierce County, Rhodes Lake Road, Bonney Lake, WA (2015—Ongoing)

» Project Controller for the planning phase of three miles of a new multi-lane, multi-modal roadway corridor in Pierce County, connecting SR 162 and the Regional Foothills trail to the new Tehaleh Community development and Falling Water Boulevard. The project included a new bridge over the Puyallup River, significant earthwork, paving, drainage, and environmental preservation and mitigation.

FIRM
Scharrer Architecture & Design, LLC

EDUCATION
Bachelor of Architecture, Kansas State University

Denmark's International Study Program

REGISTRATIONS
Architect, WA #7566

Architect, UT, 12538074-0301

Christine Scharrer, AIA, Architect

Christine is an architect experienced in leading design teams on complex, multi-disciplined urban design and transit projects. With over 30 years of experience serving public clients in the Pacific Northwest, she understands the federal funding mechanisms, challenges and responsibility of these agencies and focuses on efficient, cost-effective and clearly constructible design solutions. Her emphasis is satisfying the client and public goals to promote thriving, sustainable communities.

Christine's work with public and transit agencies – large and small- throughout the Pacific Northwest is extensive and she is passionate about serving these systems and communities with clean design and a focus on passenger experience.

Sound Transit, North Shoreline/185th Street Link Light Rail Station, Shoreline, WA (2016—2023)

» Christine was the lead architect for the design of a new retained-cut station and parking garage for Sound Transit's Lynnwood Link Extension. Christine led the full design team from design through construction, with Scharrer AD staff assisting with design, production, and construction administration. Scharrer AD coordinated with multiple transit agencies including Community Transit, Sound Transit, King County Metro & WSDOT. Christine's responsibilities include leading the architectural design team for the station and garage. Now complete, the station is a celebrated addition to the community.

Washington State Ferries, Anacortes Ferry Terminal, Anacortes, WA (2008—2022)

» In 2008, Washington State Ferries embarked on a new master plan and assessment of existing conditions for the Anacortes Ferry Terminal. The project included evaluation of alternative configurations for more efficient holding, staging, and circulation for automobiles, vans, walk-on passengers, and transit connections, as well as final design for a new terminal building, car-separated pedestrian overpass, and elevated pedestrian gangway for walk-on ferry loading. Christine was the team lead and architectural project manager, assisting WSDOT with several early design studies for an expanded terminal and overhead loading bridge.

FIRM
KPFF

EDUCATION
MBA, Washington State University

BS Civil Engineering, Washington State University

REGISTRATIONS
Professional Engineer, WA, #44710

Project Management Professional, #2238836

John McMillan, PE, PMP, Civil

John brings a strong transportation and management background that encompasses 20 years of design and project management experience on multimodal improvement projects in urban corridors for local agencies in Washington State. His diverse expertise in roadway design, bicycle and pedestrian design, high capacity transit, quality control, and construction phasing will allow him to provide a holistic project management approach to assure quality deliverables. Before joining KPFF, John spent five years working for WSDOT, which provides him with valuable WSDOT experience and an extensive understanding of local, State, and Federal project requirements.

City of Port Orchard, Bay Street Pathway West Situational Study, Port Orchard, WA (2022—Ongoing)

» Project Manager. John lead a federally funded concept level planning study to improve active transportation within a 1.5-mile corridor from the Kitsap Transit Port Orchard Foot Ferry Terminal to the intersection of Port Orchard Blvd and Tremont Street. Scope includes a shared use pathway evaluation along the Port Orchard waterfront, concept development of a new compact roundabout and delivery collaboration with other projects.

City of Seattle, Mount Baker Infrastructure Feasibility Study, Seattle, WA (2021—2022)

» Project Manager. John successfully completed an $80K infrastructure redevelopment report for the City of Seattle to help guide redevelop of 2.5 acres of City property near the Mount Baker Link light rail station on time and on budget. This project demonstrates John's experience delivering a feasibility report for a major excavation and reconstruction project with many complex considerations, including cost estimating to guide significant City affordable housing investment decisions.

FIRM
Haley & Aldrich

EDUCATION
MS, Civil (Geotechnical) Engineering, University of Washington

BS, Civil Engineering, University of Washington

REGISTRATIONS
Professional Engineer, WA, Civil, #38350

LEED Accredited Professional

Douglas Lindquist, PE, GE, LEED AP, Geotechnical

Doug is an award-winning geotechnical and earthquake engineer with over 25 years of experience working on a variety of projects including waterfront structures and transportation infrastructure. Doug is a voting member of the ASCE 61 code committee that prepared the standard Seismic Design for Piers and Wharves that was published in 2014 with an update planned for 2025. He is adept at working with a wide variety of clients and conveying complicated technical issues in an easy-to-understand way.

Port of Tacoma, Pier 4 Reconfiguration, Tacoma, WA (2012—2018)

» Engineer-of-Record for geotechnical and seismic engineering design services for the reconfiguration of Pier 4. The project widened the Blair Waterway and deepened the berth to accommodate larger and deeper draft container cargo ships. The work included deep soil explorations for design of new concrete piling as well as development of seismic design criteria. This project demonstrates the ability to evaluate existing conditions, evaluate liquefaction potential, and perform slope stability with state-of-the-art deformation-based analyses to predict static and seismic ground movements. Haley & Aldrich staff also recommended innovative reuse of portions of the existing pier structure that saved $10 million compared to new construction.

Port of Seattle, Smith Cove Cruise Ship Terminal at Pier 91, Seattle, WA (2006—2009)

» Project Manager for geotechnical engineering for the Smith Cove Cruise Terminal at Pier 91. The project involved the construction of a two-story building at the south end of the pier between the apron bulkheads on either side of the fill mole. Gangway structures were built on each side of the building to service two cruise ships at a time. Haley & Aldrich completed deep explorations along the bulkhead line during previous projects at the site; this knowledge helped influence where further explorations were needed to verify soil conditions for pile design.

FIRM
P2S

EDUCATION
BS, Mechanical Engineering, University of Washington

REGISTRATIONS
Professional Engineer, WA, Mechanical, #35263

LEED Accredited Professional

Mike Thomson, PE, LEED AP BD+C, Mechanical/Plumbing Engineer

Mike is a mechanical engineer and routinely works with clients and colleagues to innovate designs that achieve primary project goals, reduce energy consumption, and reduce future maintenance costs. His diverse portfolio includes the design of HVAC and plumbing systems for educational, federal, and healthcare projects, from new construction to major campus renovations and expansions. As P2S's Seattle office lead energy modeler and Energy Life Cycle Cost Analysis (ELCCA) expert, Mike is passionate about practical energy efficiency strategies and net zero design.

John US Navy, Puget Sound Naval Shipyard Infrastructure & Optimization Program Utility Study, Bremerton, WA (2021—2023)

» Senior Mechanical Engineer. Studied several pier and dockside utilities at PSNS as part of the SIOP program. These included compressed air, domestic water, saltwater, collection, holding, and transfer (CHT) for ship sanitary systems, oily waste systems, fueling, and others. The studies were provided to understand the age of systems, system deficiencies, and the costs for repairing those systems as well as bringing them up to current Navy design requirements. Pipe hydraulic models were Included in the analysis to understand the relationship between pier/dockside utilities and adjacent buildings/vertical construction.

Port of Seattle, Terminal 91 Uplands Development, Seattle, WA (2021—Ongoing)

» Senior Mechanical Engineer. Involved developing additional industrial space at Terminal 91. Providing MEP engineering design for infrastructure and core and shell building design for three light industrial buildings totaling 120,000 SF to the north side of terminal 91. The scope included providing mechanical, electrical, plumbing, fire protection, security, telecom/data, and lighting design for the site and building core and shell.

FIRM
KPFF

EDUCATION
BA, Civil Engineering, Carroll College of Helena, MT

REGISTRATIONS
Professional Engineer, WA #51053

TWIC Certified

Ellis Beckwith, PE, Civil

Ellis is a Civil Engineer and Project Manager with 16 years of experience in civil engineering design on multidisciplinary port, waterfront, and industrial site development focusing on site planning, phasing, civil utilities analysis and industrial stormwater treatment. His management experience ranges from small projects to large multi-disciplined teams responsible for full-service project development. He has seen numerous projects of various sizes from conception through design and construction.

Whatcom County, Lummi Island & Gooseberry Point Ferry Terminal Replacement, Bellingham, WA (2022—Ongoing)

» Civil Engineer. Leading the upland civil utilities and stormwater planning. Work includes all new structures for both the Lummi Island and Gooseberry Point terminals. Each terminal includes the design for new passenger only ferry access for times when the new car ferry is undergoing maintenance. Major components of the project include stormwater treatment system capable of meeting NMFS requirements and firewater tank and pump system to provide fire suppression to the Lummi Island side of the project. This involved working with NMFS and the Whatcom County Fire Marshal to determine the requirements for those systems. KPFF has also provided cost estimates for the project as it is current in design.

Port of Seattle, Container Terminal Projects SSA, Seattle, WA (2015—2024)

» Lead Engineer and Project Manager. He has completed three major industrial stormwater treatment upgrades on the Port of Seattle's Terminal 46, Terminal 18, and Terminal 5 respectively. The projects included retrofitting of the existing deep stormwater systems to collect and treat stormwater to meet ISGP benchmarks. The retrofits included the design and installation of cutoff walls and inline valves to prevent extreme high tide events from migrating up through the conveyance systems and inundating the treatment systems with salt water.

FIRM
P2S

EDUCATION
MS, Electrical Engineering, Arizona State University

BS, Electrical Engineering, University of Mumbai, India

REGISTRATIONS
Professional Engineer, WA, Electrical, 21003394

Akshay Prabhu, PE, LEED GA, DBIA, Electrical Engineer

Akshay has a decade of electrical engineering and project management experience including new system design, electrical system upgrades, medium voltage infrastructure design, facility assessment, and utility master plans. His experience includes electrical design and assessment of projects for ports, municipalities, higher education campuses, healthcare, commercial, and industrial fields. Akshay has worked extensively in the ferry electrification world for passenger and car ferries in Washington state. Akshay has served as project manager and electrical engineer, providing comprehensive solutions on various feasibility studies and infrastructure design projects.

Whatcom County Lummi Island, Ferry Replacement & System Modernization, Bellingham, WA (2023—Ongoing) (subconsultant to KPFF)

» Senior Electrical Engineer. Working on the design for uplands improvements at the Gooseberry point and Lummi Island terminal to accommodate a new hybrid diesel-electric ferry vessel, renovating existing restrooms to make them ADA compliant along with other ancillary improvements. P2S is providing MEP engineering services for new generator design on both Gooseberry and Lummi Island terminals, power for the new fire pump, electrical infrastructure for the new hybrid ferry, cost estimation, construction phasing, restroom renovation, security upgrades, and lighting design.

Port of South Whidbey, Clinton Passenger-Only Ferry Dock Replacement, Freeland, WA (2022—Ongoing) (subconsultant to KPFF)

» Senior Electrical Engineer. Worked with the Port and KPFF to ensure access to the passenger loading area was ADA compliant, produce environmental documentation, prepare permit applications, and ensured the project was in compliance with State and Federal requirements. Responsible for the electrical scope of work, which consisted of site lighting for the new dock as well as high-level schematic planning for power cord hookups to ensure the dock is forward compatible with a future electric passenger-only ferry.

FIRM
Haley & Aldrich

EDUCATION
PhD, Geotechnical Earthquake Engineering and Foundations, Tohoku University

MS, Civil/Structural Engineering, University of Hawaii,

B. Tech. (Honors), Civil Engineering, Indian Institute of Technology

REGISTRATIONS
Professional Engineer, WA, #49586

Madan Karkee, PhD, PE, PEng, Geotechnical

Madan brings over 30 years of experience in geotechnical engineering, seismic design, and research, with specialized expertise in earthquake engineering, soil dynamics, and deep foundations. He has provided engineering design and construction services and successfully managed projects to create coastal transportation systems along many of the Puget Sound region's bodies of water.

Washington State Ferries, Mukilteo Ferry Terminal Phase 2, Mukilteo, WA (2014—2023) (subconsultant to KPFF)

» Senior Technical Expert for geotechnical design covering offshore, shoreline and upland areas of this new ferry terminal project. Project components consisted of the ferry terminal including a pier, a main terminal building (concrete trestle), a vehicle transfer span, pedestrian overhead loading, wingwalls, a passenger and maintenance building, a supervisor's building, toll booths, and a transit center.

City of Port Angeles, Waterfront and Transportation Improvement Plan (WTIP), Port Angeles, WA (2012—2015)

» Geotechnical Engineering PM for planning, design, and construction of a multiphase project along the Port Angeles waterfront. The WTIP is envisioned to create unique gathering spaces for residents and visitors while also addressing parking and multi-use traffic flow issues. The project includes a variety of spaces along the shoreline, including an approximately 400-foot-long pile-supported esplanade, the new West End Park, a multi-use building, plaza area, waterfront trail, roadways reconstruction, intersection improvements, and a reestablished beach west of Terminal 4.

Port of Tacoma, East Blair Terminal 3 Development, Tacoma, WA (2008—2009)

» Lead Investigator of soil liquefaction. Responsible for evaluating the dynamic characteristics of subsurface soils end evaluation of liquefaction potential based on cyclic direct simple shear (DSS) tests. Work included seismic evaluations, liquefaction analysis, design of pile foundations, and assessment of the behavior of piles during driving for the apron extension and upland facilities.

FIRM
Blue Coast Engineering

EDUCATION
PhD, Ocean Engineering, Stevens Institute of Technology, Hoboken, NJ

ME, Ocean Engineering, Stevens Institute of Technology, Hoboken, NJ

BS, Civil Engineering, University of Maryland, College Park, MD

REGISTRATIONS
Professional Engineer, Civil, WA, #52805, FL, #63094

Kathy Ketteridge, PhD, PE, Coastal Engineering

Kathy has over 20 years of experience in modeling, analysis, and design of development, remediation, and restoration projects in the marine environment. She has managed large interdisciplinary teams to deliver engineering projects from concept through construction and provided technical support to assist clients with addressing complex hydrodynamic and sediment transport issues. Kathy has conducted numerous analyses to evaluate resiliency of existing infrastructure to sea level rise and future flood risk and assisted in design of functional structures along the shoreline resilient to sea level rise.

Port of Seattle, Terminal 91 Berths 6 and 8 Replacement, Seattle, WA (2021) (subconsultant to KPFF)

» Lead Coastal Engineering. Led a coastal engineering evaluation to inform design for replacement of Berths 6 and 8 at Terminal 91 at the Port of Seattle. Work included development of a wave transformation model for Elliott Bay which was used to develop wave height parameters along the proposed berth alignments. Predicted wave information was then used to design bank protection under the berths. A targeted empirical propeller wash evaluation was also completed to develop scour predictions at the toe of the new bank protection structure.

Whatcom County, Lummi Island Ferry Propeller Wash Evaluation, Bellingham, WA (2024) (subconsultant to KPFF)

» Lead Coastal Engineering. Led coastal engineering analyses to evaluate potential impacts to existing dock and fender structures and eelgrass beds adjacent to new ferry terminal due to propeller wash and vessel wake from ferry vessel. Work included computational fluid dynamics (CFD) modeling to resolve the 3D velocity field due to propeller wash and measurements and empirical calculations for ferry wake parameters at the ferry terminal. This information was then used to complete a hydraulic evaluation to identify and quantify potential impacts to structures and eelgrass.

FIRM
Haley & Aldrich

EDUCATION
MS, Biological Sciences, Central Washington University

BS, Business Administration, University of Delaware,

REGISTRATIONS
WSDOT Qualified Senior Author for ESA Biological Assessments, WA

James Shannon, Permitting

Jim brings 27 years of experience, with a focus on advising clients with environmental permitting requirements, sensitive species, and ecological processes. He participates on interdisciplinary design teams from the conceptual design phase through permitting, construction, and post-construction monitoring. Jim has the understanding about the environment and the conservation of our resources and enjoys challenges to find the right solution for his clients' natural resource needs.

Port of Everett, Bulkhead Segment E replacement, Everett, WA (2020—Ongoing)

» Permitting. Assisted with the permitting process. Funding came from the FHWA, which required the National Environmental Policy Act (NEPA) review process to proceed through the WSDOT. Jim used the Local Areas Guideline Manual and other WSDOT publications to facilitate the permitting process. He wrote an Endangered Species Act (ESA) biological assessment (BA) with a marine mammal monitoring plan, essential fish habitat evaluation, and WSDOT NEPA environmental classification summary (ECS) form. He also led a macroalgae and eelgrass mapping survey using Washington Department of Fish and Wildlife (WDFW) protocols to support the Joint Aquatic Resources Permit Application (JARPA) and Hydraulic Project Approval (HPA) permit process.

Wa. Dept. of Fish and Wildlife, Elliott Bay Fishing Pier Replacement Eelgrass & Macroalgae Survey & Report, Seattle, WA (2024—Ongoing)

» Biologist. Led a macroalgae and eelgrass mapping survey to determine environmental baseline conditions for this pier replacement project. Mapping was conducted by underwater video and divers to document and quantify eelgrass and macroalgae. Macroalgae distributions followed WDFW protocols and were geo-referenced and mapped using GPS. Jim wrote an existing condition report that included detailed species and habitat type descriptions to inform NEPA/State Environmental Policy Act (SEPA) documentation and the JARPA/HPA permit process.

FIRM
Ott-Sakai

EDUCATION
MBA, Business Administration, University of Washington

BA, Business Administration, Pacific Lutheran University

Steve King, Schedule

Steve has over 45 years of experience in the construction industry. He has held positions such as superintendent, project engineer, estimator, claims and dispute resolution analyst, project manager, and construction manager. Steve has been involved in a wide range of transportation, mining, and water-related projects, including highways and bridges, wharfs, trestles, tunnels, light rail transit, railroads, marine facilities, airfields, public parks, hydroelectric projects, wastewater treatment plants, and environmental mitigation sites.

WSDOT, I-5 Mounts Road to Thorne Lane-JBLM Task AI Stage 3 Exit 119 Interchange Design-Build, near JBLM, WA (2019–Ongoing)

» Scheduler. This project proposes to widen I-5 to add one through lane each direction from Thorne Lane to DuPont-Steilacoom Road. A local road connection is proposed between Gravelly Lake Drive and Thorne Lane. A bicycle/pedestrian facility is proposed along the corridor. Steve developed an initial schedule based on 15% documents and helped identify how to shorten the schedule, reduce risk of erosion control, manage traffic, and evaluate indirect cost.

Port of Seattle, T46 Cruise Terminal Risk Analysis Support, Seattle, WA (2020–Ongoing)

» Scheduler. Steve provides risk assessment through a cost and schedule review for this project involving a public-private-partnership for a new cruise terminal.

Sound Transit, I-405 BRT Brickyard Station VE Study Project Review On-Call, Kirkland, WA (2020).

» Constructability Review. Provided a constructability review to define constraints. Sound Transit's I-405 BRT connects communities along I-405 and SR 518 from Lynnwood to Burien. One of the ten stations is the Brickyard Station is located between two WSDOT projects near Juanita Woodinville Way and includes a fish passage.

FIRM
Sazan

EDUCATION
MPA, Environmental Policy and Planning, University of WA Evans School of Public Policy and Governance

Graduate Program, Education/Teaching Credential, Pacific Oaks College

BA, Envi. Design, Antioch University

REGISTRATIONS
CVS, SAVE Int'l

Charrette Mngmnt/ Facilitation, Nat'l Charrette Institute

Management of Sustainability, UofW

LEED AP BD+C

Steven Paget, CVS, LEED AP BD+C, Risk Management

As a senior Certified Value Specialist and facilitator of value studies and design charrettes, Steven has a reputation for leading teams to high-value results. He has been engaged in facilities and environmental design for more than 30 years, providing leadership in high-performance facilities design and construction.

USACE Seattle District/Far East District, US Army Garrisons Camp Humphreys Main Gate Access Control Point, Pyeongtaek, South Korea (9/2021— 12/2021)

» Facilitated Value Study. Reviewed sequencing, constructability, risk, and construction logistics to assess the potential for combining scope into one phase and validated the project team's conclusion that two phases are necessary. An alternative master plan layout was accepted. The team assessed the Gate House roof structure and determined that the planned system would introduce schedule, cost and constructability risk issues and proposed a VE alternative that avoided risks. All told, the Study resulted in $1,240,000 of cost avoidance and $202,000 in value improvements.

Seattle Public Utilities, Cascade Dam/Lake Youngs Reservoir Value Study, Seattle, WA (6/2019-10/2019)

» Facilitated a Value Planning Options Analysis. The purpose of the VP/OA was to identify and evaluate options for reinforcing or replacing Cascades Dam on Lake Youngs, a water supply reservoir serving 1.3 million residents of metropolitan Seattle, Washington. Following a review of the background and cost documentation and completion of a risk analysis, the VP/OA team identified 32 alternatives and selected eight consolidated options for development. The VP/OA team recommended that three options be carried forward in Options Analysis, and that mitigation strategies for seven significant risks be implemented

City of Woodland, Scott Avenue Reconnection/I-5 Crossing Project VA Study, Woodland, WA (2015)

» Facilitated an Options and Value Analysis for the City of Woodland evaluating alternative alignments to reconnect Scott Avenue at I-5.

FIRM
ProDims

EDUCATION
BS, Civil Engineering, University of Washington

Dennis Teschlog, Cost Estimating

Dennis is an experienced cost estimator with 33 years of experience, specializing in cost development for all design phases, from conceptual studies through final design. He has past expertise with the Washington State Ferries, providing cost estimates for seismic upgrades and terminal replacements to ensure long-term durability and compliance with current standards. Dennis's skills include developing detailed estimates for all CSI divisions, including mechanical and electrical systems, and performing life cycle cost analyses. He is also experienced in design reviews, value engineering, and creating parametric costs and funding documents for waterfront structures.

Washington State Ferries, Mukilteo Ferry Terminal Phase 2, Mukilteo, WA (2014—2023) (subconsultant to KPFF)

» Senior Cost Estimator. Responsible for developing the landside buildings cost design phase cost estimates replace the existing Mukilteo Ferry Terminal with a new passenger terminal and multimodal facility.

Washington State Ferries, Southworth Ferry Terminal Seismic Upgrade, Southworth, WA (2013)

» Senior Cost Estimator. Provided cost estimating for the seismic upgrades for the Southworth Ferry Terminal Building. This upgrade included seismic improvements to the facility based on the concept report. The new retrofit is expected to last an additional 75 years. This upgrade brought the terminal up to current earthquake standards.

Washington State Ferries, Vashon Island Ferry Terminal Seismic Upgrade, Vashon Island, WA (2013)

» Senior Cost Estimator. Provided cost estimating for the seismic upgrades for the Vashon Island Ferry Terminal Building. The new retrofit is expected to last an additional 75 years and will bring the terminal up to current earthquake standards.

FIRM
Ott-Sakai

EDUCATION
BS, Civil Engineering, University of Washington

REGISTRATIONS
Profession Engineer WA, #33051

Kevin Sakai, PE, Constructability Reviews

Kevin has 30 years of experience in the construction management of transportation infrastructure. He has direct experience in the Puget Sound area as the cost estimator. He was the construction project manager on large projects, including the Sound Transit Pine Street Bus Tunnel Extension and Downtown Seattle Transit Tunnel Retrofit project as part of Sound Transit's Central Link. Since joining Ott- Sakai & Associates, Kevin has served as a construction specialist providing CPM schedules, estimating, and constructability input for high profile projects.

Pierce County, Chambers Creek Bridge Replacement and Dam Removal, Pierce County, WA (2022-Ongoing) (subconsultant to KPFF)

» Constructability and Cost Estimating. Provided constructability reviews, cost estimating, and construction scheduling for this bridge.

Seattle Department of Transportation, John L Lewis Memorial Bridge, Seattle, WA (2018—2021)

» Constructability Support. Providing constructability support and cost estimating on a 1,900-foot-long pedestrian and bicycle bridge that spans over I-5, 1st Avenue NE, and wetlands to improve connectivity for non-motorized access within the Northgate community.

King County Parks Department, EasTrail NE 8th Street Crossing, Bellevue, WA (2018-2024) (subconsultant to KPFF)

» Constructability Reviews. Developed a construction working day schedule, and cost estimate. This project constructs a pedestrian bridge that spans NE 8th in Bellevue. The new bridge is constructed adjacent to Sound Transit's Wilburton Station.

FIRM
Haley & Aldrich

EDUCATION
BS, Aquatic and Fishery Sciences (minor in Qualitative Sciences), University of Washington

REGISTRATIONS
Boater's License, WA

PADI SCUBA Open Water

Jessica Blanchette, Biologist

Jessica is a fish biologist with 10 years of experience. She has a diverse background in environmental permitting and field studies documenting the presence of protected species and habitats. Jessica has supported permitting, including NEPA and SEPA, for projects throughout the Puget Sound region. Many of her regional marine projects include eelgrass surveying, mitigation, and monitoring.

Washington State Department of Ecology, Custom Plywood remediation, Anacortes, WA (2014—2020)

» Biologist. She has acted as a field and lab technician and as lead as well as task manager for Phases 2 and 3 of remediation. This includes habitat monitoring and reporting for beach restoration performance associated with Phase 2 plus permitting, dredging and capping quality control, and eelgrass mitigation and monitoring for Phase 3. She continually supports Ecology as a trusted advisor by tackling emerging issues associated with the cleanup and in maintaining the prolific eelgrass bed within the impact area.

Port of Everett, Jetty Landing Boat Launch Connector Channel & North Marina Approach Dredging Permitting, Everett, WA (2020—Ongoing)

» Biologist. Jessica supported permitting (JARPA and SEPA) and eelgrass surveying for the project. The Port of Everett is proposing to dredge portions of a relatively new shoal to maintain safe navigation access to their existing boat launch and around existing pier and dock structures. Work included eelgrass and macroalgae survey, using a live video system and an experienced on-board biologist to document the extent of eelgrass and macroalgae in the proposed project area. Jessica also assessed potential impacts on Endangered Species Act-listed species and their habitats within the City's shorelines to support the Shoreline Master Program (SMP) Habitat Assessment.

B. Availability

The KPFF team has the capacity and commitment to respond to and complete assignments in a timely and efficient manner. Our key personnel were selected based on their WSDOT building and trestle design expertise, and availability to complete the anticipated work of this project and commitment through to completion. Our team members' availability in hours per each month is shown below for the next five years. The 2026 is broken down by three months however the number of hours is for each month. The hours in years 2027, 2028 and 2029 are for each month in each year.

Name Role, Firm	2025												2026				27	28	29
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	J/F/M	A/M/J	J/A/S	O/N/D	2027	2028	2029
Ed DeBroeck, PM, KPFF	80	80	80	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Andy Bennett, PIC, KPFF	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Building & Site Design Team																			
Todd Maki, Bldg Design Mgr/ Structural, KPFF	80	80	80	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Christine Scharrer, Architect, Scharrer AD	48	48	48	48	48	48	48	48	48	48	48	48	75	75	75	75	75	75	75
John McMillan, Civil, KPFF	60	60	60	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Doug Lindquist, Geo-technical, Haley & Aldrich	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Akshay Prabhu, Electrical, P2S	60	60	65	65	70	70	70	70	70	80	80	80	125	125	125	125	125	125	125
Mike Thomson, Mechanical/ Plumbing, P2S	40	40	50	50	55	55	55	60	60	65	70	70	125	125	125	125	125	125	125
Trestle Design & Permitting Team																			
Andrew Gastineau, Trestle Design Mgr/Structural, KPFF	80	80	80	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Ellis Beckwith, Civil, KPFF	60	60	60	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Akshay Prabhu, Electrical, P2S	60	60	65	65	70	70	70	70	70	80	80	80	125	125	125	125	125	125	125
Maden Karkee, Geo-technical, Haley & Aldrich	10	10	20	30	30	40	40	40	40	60	60	60	80	80	80	80	80	80	80
Kathy Ketteridge, Coastal Engineering, Blue Coast	30	30	40	40	40	40	40	40	40	40	40	40	120	120	120	120	150	150	150
James Shannon, Permitting, Haley & Aldrich	20	20	20	20	20	20	20	20	30	30	30	30	40	40	40	40	60	60	60
Mike Thomson, Mechanical/ Plumbing, P2S	40	40	50	50	55	55	55	60	60	65	70	70	125	125	125	125	125	125	125
Jessica Blanchette, Biologist, Haley & Aldrich	20	20	30	30	30	30	40	40	20	40	40	20	40	40	40	40	60	60	60
Project Controls Team																			
Kristen Kissinger, Project Controls Mgr & QA/QC, KPFF	60	60	60	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Steve King, Schedule, Ott-Sakai	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Steven Paget, Risk Mngmnt, Sazan	96	96	96	96	96	96	96	96	96	96	96	96	100	100	100	100	150	150	150
Dennis Teschlog, Cost Estimating, ProDims	40	40	40	40	40	40	40	40	40	40	40	40	60	60	60	60	80	80	80
Kevin Sakai, Constructability, Ott-Sakai	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60

04 CRITERIA
PROJECT MANAGEMENT SYSTEM

A. Quality Assurance/Quality Control Process

Developed as part of the work plan, the quality control plan will include a list of deliverables that includes the designer and checker, as well as fields to record reviews by the technical discipline lead and the interdisciplinary quality control team.

- Each design engineer checks their own work prior to submitting to quality control checker.
- The quality control checker reviews the drawings and calculations for technical accuracy.
- A senior engineer within each discipline is responsible for reviewing design and analytical approaches used, as well as constructability.
- The Integrated Design Quality Control team conducts interdisciplinary checks to ensure the separate discipline designs are compatible with one another and meet the project goals.
- The Project Manager reviews each deliverable for contract and client requirements.
- The Quality Control Manager maintains the quality control tracking system and conducts audits to ensure the rest of the team is following the established procedures.

B. Tracking System(s) to Monitor Project Budget/ Scope

The design budget for each task order will be developed using MS Excel by the Design Managers and technical leads, with separate tabs for each subconsultant. Each task order budget will be organized by deliverable, and deliverables will be grouped as appropriate to facilitate tracking and reporting, with intermediate milestones to monitor progress. Between milestones, the percent complete is determined based on progress toward the next milestone. In this way, we will continuously track budget versus cost in real-time.

The scope of work will be documented in detail in the Basis of Design report, which is described in detail in Section 5, Project Delivery Approach.

C. Scheduling Program Process & Types of Software

For multidisciplinary projects with multiple subconsultants and multiple task orders, we prepare an MS Project schedule to understand task relationships and identify tasks that are on the critical path. Our process includes:

- A baseline schedule is developed that aligns with project work plan.
- Progress is updated periodically as required.
- The schedule is adjusted as needed to reflect changes in scope or milestone dates.
- As the schedule changes for specific tasks, we identify measures that can be taken to keep the overall project on schedule.
- We understand WSF will have a PrimaVera P6 schedule that will be fed by the consultant team's critical path schedule, and we will structure our tasks and subtasks to streamline this process.
- Steve King (Ott-Sakai) will develop the baseline construction schedule using Primavera P6 based on his experience as a marine and general contractor and technical inputs from the design team.

Case Study
Mukilteo Project Management System

This project management approach was used successfully on the Mukilteo Multimodal Ferry Terminal project, with three separate design teams working collaboratively on seven different construction contract packages. This approach to the design and construction phasing was developed to improve the efficiency of the design teams and construct the project based on the availability of funding, which also created unique project management challenges and opportunities. Not only did each contract package integrate multiple disciplines, the individual packages were integrated into the overall project build strategy. Based on this experience, the interdisciplinary reviews are critical for project success and this is where the experience of our team and history of working with all of our subconsultants make our team particularly well suited for this project.

05 CRITERIA
PROJECT DELIVERY APPROACH

Team Structure & Overall Project Approach

The Southworth GEC team will be led by Ed DeBroeck, PE, who has been the Project Manager for ferry terminals at Pier 50 in Seattle and in Skagway for the Alaska Marine Highway. He has also been responsible for shipyard and port projects across Puget Sound and will bring this breadth and depth of experience to efficiently deliver the new trestle, terminal, and other improvements. Andrew Bennett, PE, will be the Principal-in-Charge, bringing his recent experience with the award-winning Mukilteo Multimodal Ferry Terminal to ensure the GEC team understands and meets the expectations for the project.

As a GEC contract, we understand the scope of services required from the consultant team goes beyond the usual design and permitting, which we have done successfully on many prior projects for WSF. To address these additional services and provide separate organizational charts for the Trestle and Terminal Building, we have organized our team into three work groups:

1. Project Controls
2. Trestle Design and Permitting
3. Building and Site Design

The **Project Controls Team** will be led by Kristen Kissinger, who has provided similar services for large-scale King County Metro Transit and Seattle Public Utilities projects covering multiple task orders and scopes of work. Kristen and her team at KPFF will establish the procedures and tracking tools necessary to manage design task order schedules and budgets and support WSF internal reporting requirements. The rest of the Project Controls Team will be made up of small business subconsultants with whom KPFF has worked before, including:

- ProDims for construction cost estimating
- Ott-Sakai for constructability reviews and construction scheduling
- Sazan for cost and schedule risk management

Each of these subconsultants has a strong history of working with WSDOT and other agencies to keep complex infrastructure projects on time and within budget.

The **Trestle Design and Permitting Team** will be led by Andrew Gastineau, who has worked on multiple WSF terminal projects in both lead and supporting roles, as well as other waterfront projects for other public and private sector clients. Andrew will also lead the structural design effort. KPFF has successfully delivered many projects with the other members of the TDP team across Puget Sound.

- KPFF will be responsible for the trestle and shoreline civil engineering, led by Ellis Beckwith, who has been leading KPFF's coastal resilience and adaptation portfolio.
- Haley & Aldrich (formerly Hart-Crowser) and KPFF worked together to develop the innovative solutions implemented in the new Mukilteo Multimodal Ferry Terminal. H&A and KPFF have also worked together on multiple projects for the US Navy, Ports of Seattle and Tacoma, and other divisions within WSDOT. For the Southworth project, we will be working with both their geotechnical engineering and permitting groups.
- P2S is another firm with whom our relationship goes back several decades, including work with the US Navy, ports in California and Washington, and recent ferry electrification projects across the country. These collaborative efforts have included electrical, mechanical, plumbing, fire protection, security, and information technology elements.
- Blue Coast Engineering has been providing coastal engineering service to KPFF since it was founded in 2018 and we had been working with the founding principals for years before that.

The **Building and Site Design Team** will be led by Todd Maki, who is a Senior Associate at KPFF and has led a variety of building design projects. Like the TDP Team, the BSD Team is comprised of firms with a long track record working together.

- KPFF will be responsible for upland civil engineering, led by John McMillan who has extensive experience with transit facilities in general and Kitsap Transit multimodal faculties in particular.
- Scharrer AD is an architectural firm which has collaborated with KPFF on Sound Transit and other public transit projects.
- P2S will provide comprehensive mechanical, electrical, and plumbing design, as well as fire protection, IT, and security as needed.

» Haley & Aldrich, whose long history with KPFF has already been discussed, will provide geotechnical support to the building and upland design teams.

While the scopes of work for the Trestle and Building Design Teams are fairly independent, the Project Manager and Project Control team will establish regular meetings to ensure critical project information is shared and all team members understand their respective scopes, schedules, and budgets.

The KPFF GEC team will start with a kick-off meeting with the WSF team to understand the project goals, scope, schedule, budget, stakeholders, and any other factors that could affect design and construction. Working with the WSF team, we will develop a detailed design schedule defining the milestones and deliverables that will be required to construct the new trestle, terminal building, and other improvements. Using the detailed schedule, we will negotiate the initial task orders that will be required to set the project up for success. During this initial phase, we will work closely with WSF and Ott-Sakai, our construction scheduler, to develop a phasing plan for the various elements of the overall program.

Once the program and construction phasing plan has been established, the two design teams will develop preliminary designs based on the concepts provided with the RFQ and additional discussions with WSF and other stakeholders. As the design are developed, we will engage Sazan to conduct Cost and Risk Assessments (CRA), Cost Estimate Validation Processes (CEVP) or Value Engineering (VE) studies as needed to ensure the overall program provides the best possible overall value to WSF.

The trestle design will utilize the available data from prior geotechnical investigations at the site and the draft WSDOT geotechnical report, with additional review by Haley & Aldrich. We will also review all prior wind and wave studies at the site to inform the design of the bulkheads and other coastal protection systems. If additional data is needed, we will utilize existing public domain sources as much as possible prior to conducting any field investigations.

We will validate the trestle demolition and construction phasing shown in the concept plans and develop structural models to analysis the integrity of the structural at each phase under the appropriate dead, live, environmental, seismic, and tsunami loads. In parallel with the structural phasing analysis, the architecture and MEP design will be developed to minimize disruptions to utility and passenger services.

The terminal building design will begin by validating the building program and structural approach, followed by development of alternate architectural options, if desired. Once the basic architecture and structural systems have been established, the building team will develop the final design of the respective systems.

At each phase of the design, the plans, specifications, construction cost estimates, and other documents will be submitted in accordance with the WSF Design Deliverables Matrix.

Throughout the process, the KPFF leadership team, comprised of our Project Manager, Principal-in-Charge, and the three team leads, will meet regularly with the WSF team to discuss any design, scope, or schedule issues as they arise so they can be addressed and resolved as soon as possible.

A. How KPFF Develops a Work Plan for this Project

The basic work plan structure is based on client and project requirements. Key issues are identified in collaboration with the WSF project manager. Based on this information, the KPFF Project Manager creates a Draft Work Plan with input from the technical leads. The Draft Work Plan is reviewed by the PIC and Team Leads for completeness and suitability. The draft is edited to address comments received, and the revised draft is presented to the WSF project management team for review and comment.

Once all comments from WSF have been resolved, the Final Work Plan is presented to both client and consultant project teams, and copies are provided to each team member. The Final Work Plan is modified as needed during the project, with modifications reviewed and approved by the WSF Project Manager. The current Work Plan will always be available for review or distribution to new team members.

B. Who is Involved with the Decision-Making Process for the Development of the Work Plan

As described on the previous page, the Project Manager is responsible for writing the Work Plan based on input and review comments from the WSF management team, our PIC, and group and technical leads from the design team.

C. Describe each of the Elements of the Proposed Work Plan

Team Mission: This is the big picture purpose of the project. It addresses the end product, the relationship between the end product and the greater community, and how the team works together.

Scope of Work: This element includes the list of deliverables and work items, content of each deliverable, and individuals responsible for development and checking of each deliverable.

The scope of work for each element will be developed by the respective design team group and technical leads and approved by the appropriate lead from WSF. Any assumptions made will be documented in the Basis of Design report, discussed in detail on the following page.

Budget Estimate: Each task order and work item, including project management and quality assurance/ quality control, is assigned a budget, which will be reported in accordance with standard WSDOT reporting requirements.

CPM Schedule: The project schedule includes the due date for each deliverable, as well as interim milestones such as quality control submittals, project team meetings, stakeholder meetings, and public engagement events.

The schedule for individual tasks will be developed based on the required resources and the need for data sharing with other elements. A Critical Path analysis will be conducted to identify tasks that must be completed on time and to identify any slack for non-critical tasks.

If contingencies arise on tasks that have schedule float, every effort will be made to resolve the contingency within the available time. If a contingency arises on a critical path item, resolution will be made a priority, and additional analysis will determine the effect on the overall project and to identify other options to mitigate the impact and keep the overall project on schedule.

Roles & Responsibilities: The responsibilities of each key member of the design team, including WSF and consultant staff, will be defined in the project plan. If staff changes occur, the plan will be updated as needed.

Measures of Success: The ultimate success of the project will be construction of the new terminal on schedule, on budget, and with a minimum of change orders. Measures of success will be developed to support this ultimate project goal and will include schedule, budget, and risk.

Risk Management Plan: The risk management plan is linked to the quality assurance plan, as a high-quality product will have low risk. In addition to quality control processes, our team includes Steve Paget who will assist with CRA, CEVP, and VE studies as well as Steve King, who has extensive experience as marine contractor.

Change Management Plan: Recognizing that new issues will likely come up, particularly with regard to site constraints and stakeholder outreach, our change management plan will utilize a comprehensive Basis of Design report to document design requirements at the start of the project and identify changes as they occur. When changes occur, the WSF and consultant project managers will work closely with the appropriate technical leads to identify and document the preferred solution, as well as impacts it may have on schedule and budget.

Quality Plan: Our quality plan includes a process for conducting quality control reviews on individual deliverables, multidisciplinary reviews, and an audit process. The plan is described more fully in Section 4 of this proposal.

D. How KPFF's Work Plan Addresses Risk & Contingencies that May Arise

If new issues arise or changes occur during design development, whether due to new information, program changes, or new requirements, the Project Manager, Design Managers, and relevant technical lead will identify the change and its impact on the design. This information will be promptly shared with the WSF project manager and technical staff, and a joint effort made to develop alternatives that meet all other project requirements.

Once a preferred alternative has been identified, the impact on budget and schedule will be assessed, with any changes incorporated into the project work plan.

We have found that a comprehensive Basis of Design (BOD) report is very valuable for identifying and managing change during the design process. The BOD will document all design requirements and assumptions on which the design is based. In this way, the effect of new information on the design can quickly be evaluated and managed.

E. KPFF's Approach to Resolving Issue(s) with the Project Team, Client and Stakeholders

The day-to-day coordination of the design teams will be the responsibility of the Project Manager and Design Managers. When issues arise that cannot be resolved by the directly affected parties, the Design Manager and Project Manager will work together to resolve the issue.

A similar approach will be taken to resolve issues between the WSF and consultant design teams, with initial responsibility for resolution falling on the affected individuals, facilitated by the Project Manager and WSF Coordination Liaison. If this is not successful, the WSF and consultant team project managers will discuss and resolve the issue. In the unlikely event the project managers are not able to come to a mutually agreeable conclusion, we will rely on the working relationships between WSF and KPFF senior management to allow them to negotiate an effective solution.

We anticipate WSF will take the lead with respect to stakeholder engagement, with the consultant team playing a major supporting role. In this role, we would not expect to come across issues directly with stakeholders; rather, issues are more likely to arise between WSF and project stakeholders. In these cases, we will use the technical and professional experience of the consultant team to develop options, with the final resolution to be developed by WSF in collaboration with the affected stakeholders.

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