



**Washington State  
Department of Transportation**

**2023 WASHINGTON STATE FERRIES (WSF)  
FLEET-WIDE EMERGENCY RESPONSE SUPPORT**

**PACKET A**

Prepared by:  
Elliott Bay Design Group LLC

November 21, 2023



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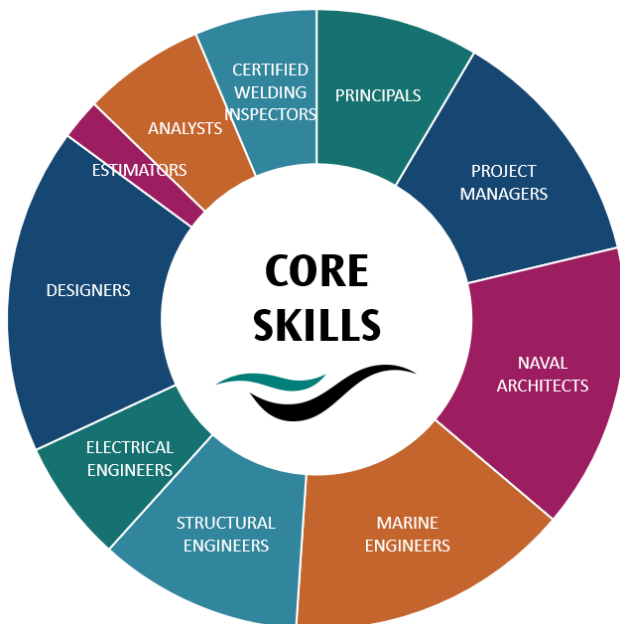
## CRITERIA 1 | QUALIFICATIONS & EXPERTISE

### PROPOSED PROJECT TEAM

Elliott Bay Design Group (EBDG) is a full-service, employee-owned naval architecture and marine engineering firm that supports owners, operators, and shipyards. Since our inception in 1988, we have established ourselves as a responsive, reliable, and innovative company that harmonizes construction and operation through design.

EBDG is committed to providing Washington State Ferries (WSF) with unparalleled emergency response support, as a one-source solution provider for the WSF fleet-wide emergency response support contract.

Our team of naval architects, engineers, designers, certified weld inspectors, and analysts have expertise in designing vessels and marine facilities, analyzing the feasibility of marine transportation, and providing engineering support for fleets of vessels including incident response support.



With nearly a century of experience as an established marine engineering and naval architecture firm, and 30+ years performing incident response support services for various clients, EBDG is the ideal proponent for the WSF fleet-wide emergency response support contract.

EBDG has provided similar services to several maritime operations. Clients include:

- Alaska Marine Highway System
- Sause Bros.
- Black Ball Transport Inc.
- Kirby Offshore Marine
- Tidewater Barge Line
- O'Hara Corporation

The diverse blend of operations from ferries, tugs and fishing vessels demonstrates our competence and understanding of the requirements of an incident response program.

Since 1991, EBDG has provided 24-hour damage stability and residual structural strength analysis for tank vessels requiring oil spill response plans under the Oil Pollution Act of 1990 (OPA90). These services are identical to those now required of non-tank vessels. EBDG provides incident response services for US Coast Guard monitored vessels operating in Alaska, Hawaii, the Gulf Coast and West Coast regions. Actual incident responses and real-time drills have provided us the opportunity to fine-tune our procedures so that we can confidently approach each new situation.

We maintain pertinent information on each vessel in the fleet, so help is literally a phone call away. Clients have full access to all naval architecture and marine engineering disciplines

and 24-hour pager access to on-call staff. When the situation requires on-site support, we can immediately deploy personnel.

## LOCATIONS

EBDG employs a staff of 57 individuals nationwide, with two office locations, one in Seattle, Washington and one in Covington, Louisiana as depicted on the map. Our staff work remotely in several states across the Country as illustrated by the shaded green states. Fostering a remote work environment harnesses diverse talent regardless of location, ensuring our clients receive unparalleled support and expertise for their projects.

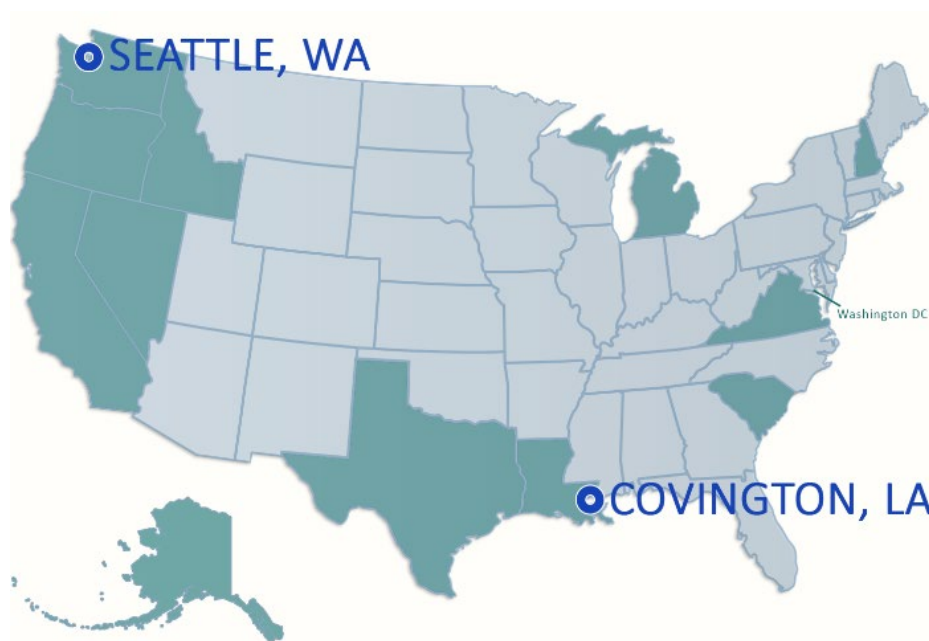
We proudly provide expertise across a comprehensive spectrum of disciplines, encompassing project managers, estimators, naval architects, engineers, designers, certified

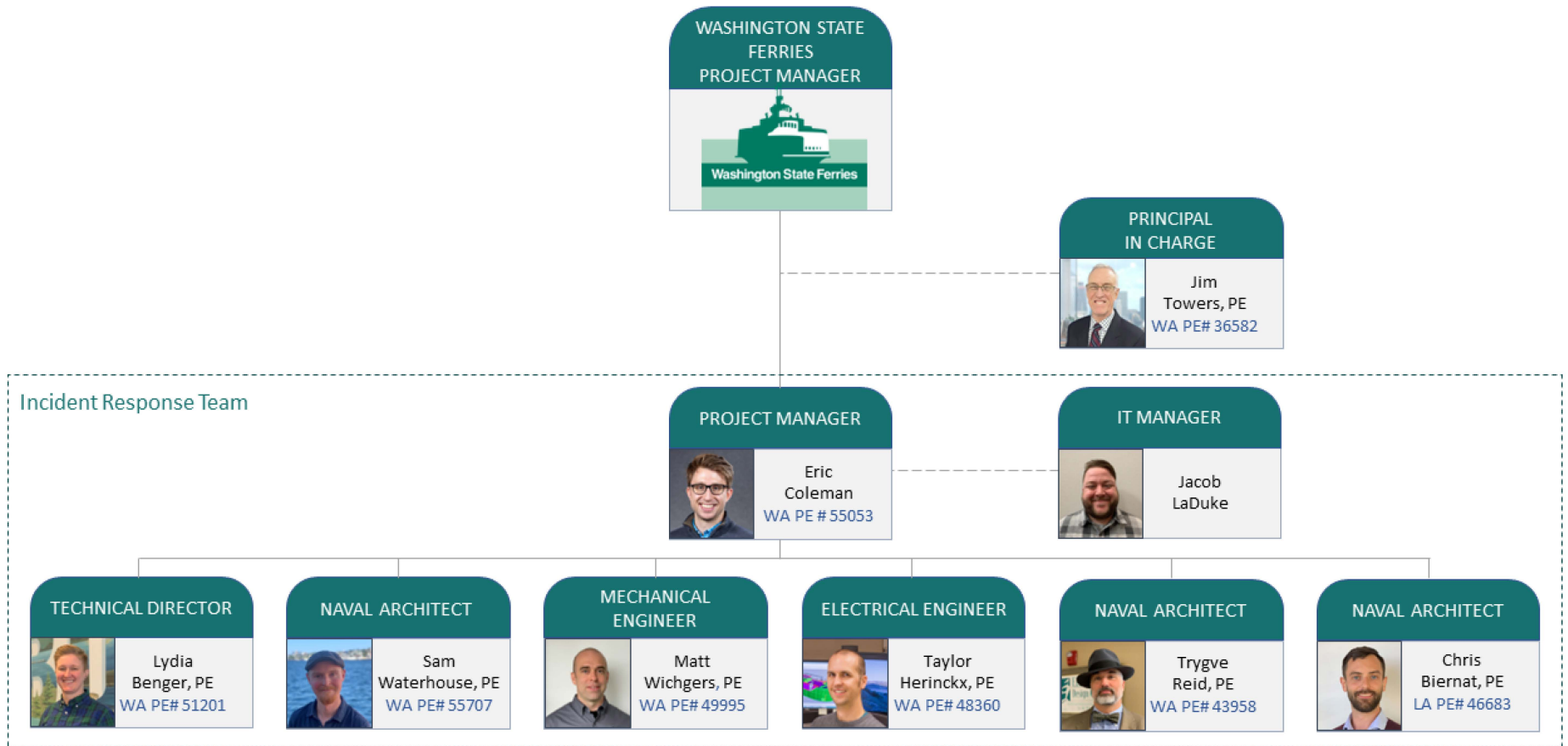
weld inspectors, analysts, structural engineers, and electrical engineers. Our dedicated team of 40 skilled professionals are located within the state of Washington and the Greater Portland Metropolitan Area. Among them, 18 hold licenses as Professional Engineers.

## TEAM ORGANIZATION

EBDG's key staff shown in the following organizational chart, depicts lines of communication and available disciplines for each member of the incident response team.

Eric Coleman, our identified Project Manager, will have overall responsibility for the contract and will be the direct point of contact for the WSF Project Manager. Eric will collaborate closely with Jim Towers, Principal in Charge, throughout the project. Jim will serve as an executive contact for WSF, ensuring the project's timely completion and satisfaction of deliverables.





## STAFF AVAILABILITY

EBDG has identified the key staff below and provides more detail in Criteria 3. Their availability is outlined in the table, indicating hours per month. These dedicated team members are equipped with EBDG's emergency response pager, a smartphone app, Zipit, designed for priority messaging and incident and emergency response. The assigned team member will monitor the pager constantly, ensuring 24/7 immediate contact. In the event of an emergency, EBDG is committed to staffing the project with resources at 100% availability until resolution.

Our key staff are committed to supporting the project presently and into the future, throughout the five-year contract period. In addition to this specified team, EBDG's extended staff is readily available to meet evolving project requirements or expedited schedules.

## PROJECT EXPERIENCE

Our firm's success derives from a thorough understanding of passenger vessels, their technology, and the needs of public agencies as they plan, procure, and maintain major assets such as ferry boats.

For over three decades EBDG has excelled in incident response programs across diverse operations. Since our first incident response contract in 1991, we have been delivering 24-hour damage, stability, and structural analysis services to numerous clients. Our specialization lies in incident response for vessels monitored by the US Coast Guard, and our refined procedures are the result of real-time drills and actual emergency responses. Clients benefit from immediate access to our naval architecture and marine engineering expertise, with our on-call staff available 24/7.

EBDG is delighted to present the following reference projects, exemplifying our capacity to support WSF's fleet-wide emergency response contract. Each project mirrors the services requested by WSF and has been successfully executed within the past three years.

| NAME   | DISCIPLINE                            | PE #     | AVAILABLE HOURS/MONTH * |
|--|---------------------------------------|----------|-------------------------|
| James Towers, PE   | Principal in Charge                   | WA 36582 | 32                      |
| Eric Coleman, PE   | Project Manager & Naval Architect     | WA 55053 | 32                      |
| Lydia Bengert, PE  | Technical Director                    | WA 51201 | 32                      |
| Matthew Wichgers, PE   | Mechanical Engineer                   | WA 49995 | 32                      |
| Samuel Waterhouse, PE  | Naval Architect                       | WA 55707 | 32                      |
| Taylor Herinckx, PE  | Naval Architect & Electrical Engineer | WA 48360 | 32                      |
| Trygve Reid, PE  | Naval Architect                       | WA 43958 | 32                      |
| Christopher Biernat, PE  | Naval Architect                       | LA 46683 | 32                      |
| Jacob LaDuke   | IT Manager                            | N/A      | 32                      |
| <i>*Hours available are dependent upon WSF needs, emergency response will take priority over any other projects and will be staffed as needed.</i> |                                       |          |                         |



**INCIDENT RESPONSE SUPPORT | ALASKA MARINE HIGHWAY SYSTEM**  
Value: \$22,151 | Dates: 05/2021 – Current

EBDG successfully continues to execute the Incident Response contract for the Alaska Marine Highway System (AMHS). This project demonstrates our firm's profound expertise in developing and implementing effective incident response protocols for maritime operations, specifically ferry operators.

EBDG developed a comprehensive incident response protocol tailored specifically for the AMHS fleet and operations. This protocol is designed to address and mitigate potential vessel incidents efficiently.

Additionally, EBDG utilized its expertise to integrate a robust document management system into AMHS operations. This system, previously developed by EBDG for AMHS, ensures meticulous documentation of all incidents. The documentation process is streamlined, allowing for efficient retrieval and analysis of incident data.

Under the Incident Response contract, EBDG took charge of dispatching a specialized team of nine incident response professionals to AMHS vessels whenever required. This involved creating a responsive and dynamic dispatch system to ensure timely and effective deployment of resources.

Through our successful collaboration with AMHS, EBDG has not only met but exceeded the expectations of our contract with AMHS. This is recognizable in our performance evaluation provided by AMHS within Packet B.



**INCIDENT RESPONSE SUPPORT | SAUSE BROS.**  
Value: \$73,914 | Dates: 08/2012 – 12/2023

EBDG's successful track record of over a decade, providing incident response services to Sause Bros. (Sause) tailored to their ocean-going tug and barge operations, emphasizes our commitment to delivering specialized, effective, and timely solutions. Our expertise in damage stability and structural analysis, coupled with 24/7 accessibility and on-site deployment capabilities, has positioned us as a reliable partner to Sause.

The primary focus of this project was on refining procedures and optimizing damage stability and structural analysis in real-time scenarios through comprehensive incident response drills, reflecting our commitment to continuous operations improvement and adaptation to the challenging maritime environment.

The project involved real-time response drills and emergency responses, allowing us to fine-tune our procedures to meet the distinct requirements of Sause.



INCIDENT RESPONSE SUPPORT | BLACK BALL FERRY LINE

Value: \$5,000 | Dates: 08/2012 – 01/2023

EBDG provided Black Ball Ferry Line (Black Ball) incident response support for the last decade. The contract was a subscription-based offering encompassing structural, stability, and capacity information for Black Ball's operations. The primary focus of this service was to provide 24/7 accessibility to our naval architects, equipped with the expertise to perform damage stability analysis, structural analysis, and provide timely advice in the event of an incident such as grounding.

EBDG worked closely with Black Ball to enhance emergency response capabilities through comprehensive incident response drills in the challenging operating conditions from Washington State to Vancouver Island in Canada.

The focus was on refining procedures and optimizing damage stability and structural analysis in real-time scenarios, ensuring the readiness of Black Ball Ferry Line to address emergencies promptly and effectively.

## CRITERIA 2 | QUALIFICATIONS OF PROPOSED PROJECT MANAGER

EBDG is pleased to offer Washington State Ferries a team comprised of experienced marine professionals who are well qualified to provide marine engineering, naval architecture, and incident response services. Leading the team is Project Manager, Eric Coleman. Eric has over 10 years of marine industry experience including vessel design and managing similar public agency ferry projects. Eric is responsible for the oversight of EBDG's incident response program including managing all on-call incident response contracts.

### PROJECT MANAGEMENT EXPERIENCE

Below we present three recent projects managed by Eric, each highlighting his adeptness in project management, demonstrating his familiarity with state and federal regulations, and showcasing his ability to manage various aspects of complex projects.

**1** [Alaska Marine Highway System | 05/2021 – Current](#) | As Project Manager for AMHS' Incident Response contract, Eric has led the team to establish an incident response protocol to be used in case of vessel incidents, maintain documentation of incidents utilizing an EBDG developed document management system previously created for AMHS under this contract, and is responsible for dispatching any of the nine members of the incident response team to an AMHS vessel as needed.

**2** [Alaska Marine Highway System | 07/2022 – Current](#) | As Project Manager, Eric led an international team to conduct a Comprehensive Evaluation of the Alaska Marine Highway System. The project examined all aspects of the ferry system, from

budgeting to planning to safety culture and staffing. The findings from these evaluations will form the basis for immediate improvements to the system as well as future AMHS planning initiatives.

**3** [Washington State Ferries | 04/2020 – 01/2021](#) | As Naval Architect, Eric led a study evaluating the powering requirements and feasibility of using an azimuthing thruster propulsion system onboard the new Hybrid Electric Olympic Class for Washington State Ferries. Additionally, Eric developed a route profile to identify the crossing energies for the vessels in several varying environmental conditions. Eric also assisted with several tasks involving computational fluid dynamics (CFD), including a series of speed and powering studies.

### PROJECT MANAGEMENT ABILITIES

As Project Manager, Eric has consistently demonstrated exceptional project management abilities across a spectrum of challenges within various projects. All three of the above-mentioned projects required Eric's ability to manage all aspects of the project. Examples of his achievements in navigating project schedules, scope of work, budgetary considerations, and handling changes throughout the project duration are highlighted below:

- [Project Schedule](#) | Eric effectively managed project schedules in all three projects, ensuring the timely delivery of milestones. Notably, in the Incident Response Support for AMHS Eric led the team to establish an incident response protocol, maintaining a structured schedule for incident documentation and dispatching.



- **Scope of Work** | Eric controlled project scope, ensuring strict adherence to defined project objectives. This was evident in the Comprehensive Evaluation of AMHS, where he led an international team in examining all aspects of the Alaska ferry system.
- **Budget** | Demonstrating financial judgment, Eric successfully managed budgets in all projects, maintaining financial control and delivering within allocated resources. In the Washington State Ferries project, Eric, as Naval Architect, ensured the efficient use of resources in evaluating the powering requirements for the Hybrid Electric Olympic Class.
- **Changes Throughout Project Life** | Eric showcased flexibility and adaptability in handling changes that arose during the life of each of these three projects amongst other projects he has managed for EBDG. This was notably exemplified in the Incident Response Support for AMHS, where he played a pivotal role in dispatching the incident response team to vessels as needed, reflecting a dynamic and responsive approach to project changes.

## PROJECT MANAGEMENT ACCREDITATIONS & LICENSES

Eric received his Bachelor of Science in Naval Architecture and Marine Engineering from the University of Michigan in 2012, and his Master of Science in Business Analytics from the University of Washington in 2022. Eric is a licensed Professional Engineer in the State of Washington, No. 55053 issued in 2017 and became a Certified Associate in Project Management (CAPM) in 2018.

## CRITERIA 3 | KEY TEAM MEMBERS QUALIFICATIONS

EBDG provides similar incident response services to several other clients along the West Coast. We securely maintain vessel and company documentation, provide 24/7 emergency contact services, and are prepared to devote all resources necessary in support of the vessel owner in the event of an emergency/incident. Our team has successfully participated in numerous incident response drills as well as responded to actual real-time vessel incidents. Our approach and protocol for incident response has proven effective.

### INCIDENT RESPONSE TEAM ROLES & RESPONSIBILITIES

Our in-house incident response team, listed below, consists of nine staff members, specializing in all marine engineering disciplines. This team is available at all hours and can be dispatched to the incident scene, if necessary.

- James Towers, PE  
Principal in Charge – Sr. Naval Architect
- Eric Coleman, PE  
Project Manager & Naval Architect
- Lydia Bengler, PE  
Technical Director
- Samuel Waterhouse, PE  
Naval Architect
- Matthew Wichgers, PE  
Mechanical Engineer
- Taylor Herinckx, PE  
Naval Architect & Electrical Engineer

- Trygve Reid, PE  
Naval Architect
- Christopher Biernat, PE  
Naval Architect
- Jacob LaDuke  
IT Manager

### TEAM MEMBER RELEVANT EXPERIENCE



James Towers, PE  
Principal in Charge

Jim rejoined EBDG in February 2014 as a Senior Naval Architect and Marine Engineer, he now serves as Chief Concept Engineer, Sr. Naval Architect and Principal in Charge. He has more than 45 years of experience in vessel design and construction with a specific emphasis on structure. He is a recognized industry expert in vessel design and has been a part of numerous ferry vessel construction and refurbishment projects. Jim has worked for the Pacific Northwest's top shipyards, where he developed his engineering talent. Jim's experience includes production engineering and management, shipyard estimating and budget control, CAD design, and repair yard engineering and management. His extensive experience includes adherence to WSDOT and public agency regulations and procedures, demonstrated through his roles in numerous ferry vessel projects at EBDG. Relevant project experience includes:

- 1 Alaska Marine Highway System | 05/2021 – Current | Senior Naval Architect and Principal in Charge for the current incident response program for AMHS. Jim serves as the executive point of contact to AMHS to ensure project success.

**2** **Hawaii Department of Transportation | 07/2015 – 05/2016** | As the Sr. Naval Architect Jim developed a feasibility study to examine cost sharing of vessel incident responses between owners and operators of small commercial vessels operating in Hawaii.

**3** **Sause Bros. | 10/2004 – 12/2004** | As Naval Architect Jim provided incident response support including calculations and analyses for the barge, SUNSET BAY.



**Eric Coleman, PE**  
Project Manager

Eric joined EBDG in 2018 as a Naval Architect and was promoted to an Associate

Project Manager in 2021, and Project Manager in 2023. Eric's experience is broad, with an emphasis on preliminary and detail design work of aluminum and steel vessels. He has worked on a wide variety of commercial vessels and charter yachts up to 210 feet in length. Eric's background includes hands-on shipyard experience, comprising production oversight, class and regulatory compliance, and designing for production. Within his role as project manager Eric has gained a comprehensive understanding of public agency regulations. His project management roles include ensuring compliance with regulatory standards in the design and execution of marine projects. Eric is a licensed professional engineer in Washington State. Relevant project experience includes:

**1** **Alaska Marine Highway System | 05/2021 – Current** | Project Manager for the current incident response program for AMHS. Eric's achievements as the PM include leading the development and implementation of a robust incident response protocol tailored for vessel-related contingencies. This protocol

provides AMHS' with the resources and ability to respond effectively to incidents. Additionally, Eric's responsibilities include dispatching members from the nine-person incident response team to AMHS vessels as the need occurs. Eric's multifaceted approach ensures the seamless execution of the incident response contract, reflecting his dedication to the safety and operational continuity of AMHS.

**2** **Trust for Governors Island | 02/2020 – 07/2022** | As part of the engineering and design team to design two ferries, one to replace an existing vessel and another vessel to add to The Trust for Governors Island's fleet. Eric's tasks included schedule and internal meeting development, reviewed engineering documents and drawings including scantling calculations, general arrangements and technical specifications support.

**3** **Vigor Fab | 09/2019 – 09/2020** | As Naval Architect, Eric provided Engineering support by reviewing arrangement drawings and specifications for the WSF Olympic Class Hybrid Ferry for Vigor Fab.



**Lydia Benger, PE**  
Technical Director

Lydia Benger joined EBDG as a marine engineer in 2012 with over five years of engineering experience. In 2019 Lydia took on the role of Technical Director for EBDG while still holding her duties as a marine engineer. Lydia develops new systems designs and modifications for a wide variety of vessels. Ferry projects have been a primary focus for Lydia since joining EBDG. Lydia combines engineering prowess with a deep understanding of WSDOT and public agency regulations. Her involvement in ferry projects showcases her commitment to

adhering to regulatory standards. She also brings significant shipyard experience to EBDG. In this area, Lydia has experience preparing technical documentation for maintenance and installation work in freshwater systems to include condensate and feed and reverse osmosis systems. Lydia's keen mechanical design skills have provided practical and efficient vessel operations from small to large ferries. Relevant project experience includes:

**1** [Alaska Marine Highway System | 05/2021 – 11/2023](#) | Technical Director for the current incident response program for AMHS. Lydia's responsibilities include serving as the client's primary technical resource, and oversight of technical developments throughout the project. Lydia is responsible for directing the technical work and quality assurance of all team members while aiding the staff as necessary to resolve incidents as efficiently and effectively as possible.

**2** [Casco Bay Lines | 05/2018 – 10/2022](#) | As Project Engineer during the development of a propulsion systems selection study and preliminary design report for a new passenger/vehicle ferry design for the Casco Bay Lines (CBL) Lydia oversaw technical development from concept to contract design package; Lydia served as the client's primary technical resource and directed the work and quality assurance of all other team members. Lydia supported CBL through a complex propulsion selection to select a diesel hybrid propulsion system and participated in a Propulsion System Integrator (PSI) selection process. Lydia worked directly with the PSI throughout the contract design phase to ensure that the propulsion system was fully integrated into the vessel design before the design package was provided to shipyards.

**3** [Staten Island Ferries | 09/2014 – 03/2018](#) | As an Engineer Lydia developed mechanical systems calculations and drawings including document review and auditing for the design and construction support of a 4500-passenger Ollis Class Staten Island Ferries for the New York City Department of Transportation.



[Samuel Waterhouse, PE](#)  
[Naval Architect, Mechanical Engineer](#)

Sam joined EBDG in 2013 and serves as the Technical Manager for Naval Architecture. Sam is skilled in vessel design and support, including hull form, structural, systems, and stability engineering. He provides marine support through calculations such as finite element analysis, reports, and on-site assistance. Sam's expertise includes calculating weight estimates for class designs, sustainment support, as well as hands-on maintenance and repair of main systems while at sea. In addition, he is highly proficient with AutoCAD and Rhinoceros software.

In addition to being a professionally licensed engineer, Sam is a Certified Weld Inspector (CWI) through the American Welding Society (AWS).

Sam has served as the technical manager of naval architecture on several public agency projects gaining a profound understanding of public agency regulations including WSDOT procedures. Relevant project experience includes:

**1** [Alaska Marine Highway System | 05/2021 – Current](#) | Naval Architect for the current incident response program for

AMHS. Has provided incident response support for AMHS vessels TAKU, MATANUSKA, TUSTUMENA and MALASPINA, including reviewing ballast conditions and trim and stability and ensuring all vessel files were accurate and up to date.

**2** Sause Bros. | 07/2015 – 03/2016 | As Naval Architect Sam prepared incident response files, including GHS run files for the tug BLACK HAWK.

**3** North Carolina Department of Transportation | 10/2016 – 03/2020 | As Naval Architect Sam provided engineering review of scantling calculations, weight estimate and tonnage assessment for the River Class double ended ferries.



Matthew Wichgers, PE  
Technical Manager Vessel Structures

Matthew joined EBDG in 2007 and serves as the Technical Manager for Vessel Structures. He has a high degree of expertise in the company's sophisticated analysis tools, particularly computational fluid dynamics (CFD) analysis and structural analysis, and in the implementation of analytical results in project design. He has supported numerous ferry design projects, including development of diesel electric ferries, allowing for efficient and economical transportation of passengers and vehicles. As the Technical Manager for Vessel Structures, Matt's expertise extends to adherence to public agency regulations in ferry design projects.

In addition to being a professionally licensed engineer, Matthew is a Certified Weld

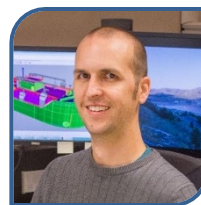
Inspector (CWI) through the American Welding Society (AWS).

Prior to joining EBDG, Matthew served in the US Coast Guard as a Machinery Technician second class aboard the USCG Cutter STURGEON BAY. Relevant project experience include:

**1** Alaska Marine Highway System | 05/2021 – Current | Mechanical Engineer for the current incident response program for AMHS. Matthew's responsibilities include updating fleet information sheets and monitoring the pager system as assigned.

**2** Texas Department of Transportation | 07/2020 – 12/2020 | Provided naval architecture support including diagnosis and design solution of chronic main engine exhaust connection failures and propeller vibration during acceleration for the Port Aransas Ferries.

**3** Kiewit/General/Manson Construction, Joint Venture | 10/2011 – 04/2016 | Executed deliverables as the lead marine engineering and CFD support on the Washington State Department of Transportation project that replaced an existing floating bridge across Lake Washington in Seattle with a new floating structure.



Taylor Herinckx, PE  
Naval Architect, Electrical Engineer

Taylor Herinckx joined EBDG in 2006. He received a BS in Naval Architecture and Marine Engineering from Webb Institute and is a licensed Professional Engineer in six states. His dual expertise in naval architecture and electrical engineering ensures the integration of efficient and compliant systems in marine projects.

Taylor's experience has provided him a comprehensive understanding of public agency regulations. Taylor has extensive experience with vessel and marine electrical engineering, from basic electrical design, load analyses and one-line diagrams, to complex system upgrades and automation interfaces. His skills include not only new and retrofit power, control, and communication system design; but owner's representation and oversight of installations performed by shipyards as well. As a naval architect, he is also skilled in structural engineering and design, subdivision and stability, weight estimating, fire detection and fire loads, piping design, and tonnage calculations. Taylor has supported the development of economic studies including vessel conversion and ferry route feasibility. Taylor's electrical design expertise coupled with his naval architectural background ensures efficient and cost-effective systems which are well integrated with the vessel. Relevant project experience include:

**1** [Alaska Marine Highway System | 05/2021 – Current](#) | Naval Architect and Electrical Engineer for the current incident response program for AMHS. Taylor's responsibilities include regularly covering emergency phone response as the Responding Engineer, in case of incidences. He updates fleet information sheets to ensure vessel accuracy for the AMHS incident response program.

**2** [Kirby Offshore Marine | 12/2008 – 02/2009 & 03/2010 – 06/2010](#) | As Naval Architect Taylor developed Incident Response plans for several tank barges.

**3** [Sause Bros. | 07/2005 – 06/2006](#) | As Naval Architect Taylor developed Incident Response plans for seven tugs.



Trygve Reid, PE  
Naval Architect

Trygve joined EBDG in 2015. He has over 25 years of industry experience related to naval architecture and marine engineering supporting passenger vehicle ferries, oilfield vessels, and high-speed aluminum ferries. His expertise ranges from structural design, vessel design and modification, stability analysis, and production support engineering. Trygve has provided on-call emergent response support, forensic engineering and analysis, construction supervision and life cycle extensions. He is well versed in AutoCAD, GHS, VBA, Solid Works, Moses, SHCP, SMP, ShipMo, MultiFrame, Rhinoceros and FastShip. Trygve's demonstrated expertise is coupled with a profound understanding of WSDOT and public agency regulations in supporting various marine engineering projects at EBDG. Relevant project experience include:

**1** [Alaska Marine Highway System | 05/2021 – Current](#) | Naval Architect for the current incident response program for AMHS. Trygve updates vessel information sheets and reviews vessel information for accuracy. As a member of the incident response team Trygve monitors the pager system in case of an incident or emergency occurrence.

**2** [Texas Department of Transportation | 08/2020 – 06/2022](#) | As Naval Architect Trygve performed assigned tasks associated with the propulsion and power plant modernization for the passenger vehicle ferry JOHN W JOHNSON. Tasks included evaluation

of equipment to be installed, stability test and calculation preparations, structural modification designs and technical specification review.

**3** Louisiana Department of Transportation | 12/2017 – 02/2020 | Provided naval architecture support and review during the repair and repower of the passenger/vehicle ferry CAMERON II. Tasks included development of a NavCAD analysis for propulsion requirements, engine and thruster foundations, structural modifications stability analysis and USCG submittals.



Christopher Biernat, PE  
Naval Architect

Chris Biernat joined EBDG in 2012 and currently serves as a professionally licensed Naval

Architect. Chris supports a variety of vessel projects ranging in size and scope including concept and contract design, analysis and construction support with owner's representation and shipyard oversight. His expertise includes hydrostatics and stability, ship structure, resistance and propulsion. Chris has been an integral part of our alternative propulsion team, designing new and retrofitting existing fleets to hybrid propulsion and implementing new low-emissions fuel options. He focuses on compliance with regulatory standards. He received a Bachelor of Science in Naval Architecture from the University of New Orleans. Relevant project experience include:

**1** Alaska Marine Highway System | 05/2021 – Current | Naval Architect for the current incident response program for AMHS. Has conducted trim and stability review in support of AMHS Incident Response Program.

**2** New Orleans Regional Transit Authority | 11/2019 – 1/2020 | As Naval Architect Chris inspected and prepared survey and repair reports for two passenger ferries, RTA 1 and RTA 2, in order to obtain USCG Certificate of Inspection.

**3** Louisiana Department of Transportation | 12/2017 – 02/2020 | Chris provided additional engineering support for the repower of the ferry M/V CAMERON II including development of deadweight procedure and GHS model.



Jacob LaDuke  
IT Manager

Jacob LaDuke, EBDG's IT Manager, is responsible for ensuring that our systems

adhere to public agency cybersecurity and data protection regulations, contributing to the overall compliance and success of our incident response program. Jacob joined EBDG as the IT Manager in 2020. He has extensive experience from his previous positions at the Department of Defense & the Department of Homeland Security where he was responsible for systems/network administration, and physical/cyber security. Relevant project experience include:

**1** Alaska Marine Highway System | 05/2021 – Current | IT Manager for current incident response program for AMHS.

**2** Sause Bros. | 08/2012 – 12/2023 | IT Manager for current incident response program for Sause Bros.

**3** Black Ball Ferry Line | 08/2012 – 01/2023 | IT Manager for the incident response program.

## CRITERIA 4 | FIRM'S PROJECT MANAGEMENT SYSTEM

### PROJECT MANAGEMENT OVERVIEW

Each EBDG project is assigned a Project Manager (PM) whose responsibilities include developing the budget and schedule for the project, assigning the appropriate staff to the project, ensuring EBDG project policies and procedures are followed, and establishing and following a communications protocol with the customer to meet the needs of the project. In addition to the PM, EBDG also assigns a Principal in Charge (PIC) to each project. The PIC is the senior management advocate for the success of the project. The PIC has significant experience in managing projects and in resolving client disputes, particularly in the specialties representing the bulk of the project scope or with client familiarity.

### QUALITY ASSURANCE / QUALITY CONTROL PROCESSES

EBDG has comprehensive quality assurance and quality control protocols to ensure high-quality products and services are delivered within budget and on time. The start of any design or engineering task initiates standard procedures to identify and document customer, regulatory, performance and technical requirements. The primary engineer is responsible for confirming that these requirements are adhered to throughout production. As work is accomplished, crucial assumptions and design decisions are logged. The cognizant professional engineer performs intermediate reviews and check-ins to ensure adherence to identified requirements.

All final design or engineering documents are reviewed for technical content and formatting

by a minimum of two people. A task specific QA/QC form is created at the outset of work and completed prior to release of each final document. The QA/QC form is reviewed and signed by the cognizant professional engineer before he or she signs the final document.

For a particularly complicated scope of work, EBDG will perform an internal independent design review (IDR). The IDR is a high-level technical review of the project to verify the design and eliminate significant issues, errors and omissions prior to release of the project design documents. The IDR is conducted by senior level engineers who are not intimately associated with the project development. The IDR may be conducted at multiple points in the design development when key design decisions are being made. IDR findings are conveyed as a written memorandum and the project manager is responsible for providing a response to each IDR finding. The project manager's responses identify how each IDR finding is resolved and how the project design is modified to address such items.

### TRACKING SYSTEM

In preparing a project proposal, the EBDG Project Manager typically estimates the work hours by labor category. Once the project is approved, the Project Manager uploads the budget into Deltek Vision, an accounting and project management system developed and supported by Deltek Systems, Inc. The Project Manager then receives weekly reports on the time and expenses incurred for their projects. These reports show the detail of the week's activity, the progress of the project against the budget-by-labor category, and a summary of all projects under the Project Manager's control. The Project Manager is charged with updating



the project's percent complete and discussing project progress in a weekly Project Managers' meeting.

## SCHEDULING PROCESS

An "Incident" is anything that happens to a vessel that puts the vessel and its contents at risk of loss, damage, injury, etc. It could be grounding, collision, allision, flooding, or foundering due to heavy weather; whatever might put a vessel at risk and demands immediate attention.

Each month the Project Coordinator will send an email requesting weekly coverage for the Incident Response Pager. Once the staff replies with availability, the Project Coordinator collaborates with the Incident Response Program Manager, Eric Coleman to designate which naval architects will be scheduled as the weekly Responding Engineer. The Project Coordinator then updates the Company Calendar with the Responding Engineer's name and assigned pager monitoring week on the calendar.

In the event of an incident or emergency, the EBDG Responding Engineer completes the incident response checklist with information from WSF and sets up a communication check-in protocol for giving and receiving updates on the situation and the response. The Responding Engineer will assign tasks to the appropriate disciplines. EBDG's entire staff is available to take on assignments in the event of an emergency or incident. The emergency task will take priority over all other assignments until a resolution has been accomplished.

At the start of this contract, we will work with WSF's project manager to identify all key stakeholders, create a written protocol for

communication between all individuals involved, establish a mutually convenient time for regular teleconferences with the project manager.

For non-incident related tasks, our Project Manager Eric Coleman will assemble a project specific team with the appropriate expertise and experience to ensure a successful outcome. Once the team has been identified, Eric will develop a project proposal with staffing schedule, estimated work hours and labor category for each team member, and estimated duration of the project. Proposals for large tasks will also include a Project Work Schedule in a time-scaled Gantt format utilizing Critical Path Method logic. The schedule will show the order and interdependence of tasks and subtasks, project milestones, and deliverables and identify a critical work path through the project. As the project proceeds, there may be changes needed to the scope, schedule or budget of the project. The PM will collaborate with the WSF representative to identify the change needed and develop a change proposal that includes the impacts on the scope, schedule and budget. Once approved, the change will be incorporated into the project schedule, the PM will assign tasking to the staff engineers, and continue to monitor the progress and status of the project.

Our Project Manager Eric Coleman has successfully used these project management tools on all of his projects, including the following three examples:

- 1 [Alaska Marine Highway System | 05/2021 – Current](#) | Current Project Manager for AMHS Incident Response contract where EBDG provides naval architecture services to retain and manage specific vessel

incident response files including vessel drawings and documents that would be used in the event of an emergency/incident, and respond to any such incidents in accordance with 33 CFR Part 155 and USCG NVIC 01-05 CH-1. The PM has utilized our change management system to implement one change order for this project.

**2** [Alaska Marine Highway System | 7/2022 - Current](#) | Project Manager overseeing the engineering team and consultants developing a comprehensive fleet evaluation to determine system wide strengths and weaknesses, operational resiliency and efficiency as well as evaluation of information technology systems and identify processes for integration with the AMHS and Alaska Department of Transportation and Public Facilities. The PM has utilized our project planning processes to develop and manage a communications plan with AMHS, develop and maintain a MS Project schedule for the project, and implement six change orders for this project.

**3** [Woods Hole, Martha's Vineyard and Nantucket Steamship Authority | 7/2021 - Current](#) | Eric served as project manager for a propulsion study for Woods Hole, Martha's Vineyard and Nantucket Steamship Authority comparing propulsion systems on two different routes based upon an existing SSA vessel. Eric developed the scope, budget, and schedule and provided technical support to the engineering team. Eric reviewed and edited the final report and liaised with client to elicit feedback and confirm client satisfaction. The PM has utilized our project planning processes to develop and maintain a MS Project schedule for the project, implement one change order, and develop, solicit, and

implement one subcontractor agreement to assist with the project completion.

## INTERNAL TEAM COORDINATION

EBDG uses Microsoft Teams as its central point for all projects. For each project, a separate Teams site is created. This site is the central repository of all project documentation including contracts, drawings, specifications, letters, images, vendor information, as well as internal "chat" communication between project team members. In addition, regular project team meetings are held to ensure that all team members are informed of the status and issues with the project. Action items are captured from these meetings and tracked by the PM until resolution.

## CLIENT COMMUNICATION

Organization is essential to project success. At the start of every project we work with our client's project manager to identify all key stakeholders, create a written protocol for communication between all individuals involved, establish a mutually convenient time for regular teleconferences with the project manager and devise a plan for in-person progress meetings, field inspections, design concept reviews and presentations. To facilitate this organization process, we build a File Transfer Protocol (FTP) site which allows the client's project manager to view project materials as they are developed. This unfettered access to project status and deliverables helps ensure that the project stays on track and proceeds smoothly.

## CRITERIA 5 | PROJECT DELIVERY APPROACH

### APPROACH TO WORK PLAN

We understand that under this contract, EBDG will provide naval architecture services to retain and manage specific vessel incident response files including vessel drawings and documents that would be used in the event of an emergency / incident. EBDG uses a collaborative process to develop project work plans. This process involves the PIC, PM, and the project staff engineers working together to review the scope of work, develop the individual tasks that form the total plan, and discussing the budget and schedule for each task. The PM is responsible for the decision-making throughout the project, and thus reviews the proposed final work plan against the company-wide staff planner to determine the availability of staff engineer resources and collaborates with the other EBDG PMs to ensure the best use of all resources. A key part of the EBDG project plan development is reviewing risks to the project as well as the individual tasks. The risk analysis considers possible contingencies and the potential response options to that contingency. These are captured in a project risk analysis document that is shared with all project team members. This document is regularly reviewed and updated as the project progresses.

Initially, we will provide an incident response protocol with narrative, contact names, and checklist for review by WSF. This document will propose EBDG's established methodology for supporting WSF in the event of a vessel incident, including how to contact us, what information to provide, what support we will provide, and who will be the EBDG primary

contact. This protocol has been developed and refined through our working relationships with contracted clients, other vessel owners, operators, and regulators, iterated based on experience, and follows the guidelines in 33 CFR 155 and NVIC 01-05 CH-01. As part of the incident response protocol, we will also include previously developed Incident Response Sheets and Tank Arrangement Drawings customized for each of WSF's vessels to be used during an emergency incident.

EBDG will develop a document management system and file structure for WSF's fleet of vessels on EBDG's secure, cloud-based document storage system accessible through the internet from any location. This entire file structure will also be replicated in WSF's Incident Response Locker and will be updated through this document management system several times. To continue to maintain this established set of documentation, EBDG will work with WSF to understand the planned annual project schedule and create dialog around the content of these projects to help EBDG and WSF understand what impacts they may have on the incident response files. When updated technical information is provided by WSF, we will review. EBDG will modify documents impacted by the project, save the back-up file to the EBDG document storage system, and forward any updated files to WSF for inclusion in the Incident Response Locker. The schedule to modify the document will depend on the scope of the changes, and both will be discussed with WSF for confirmation prior to starting.

The document management system and file structure will continue to be maintained in tabular form in an Excel spreadsheet, by vessel, for use in tracking the name, type, revision, and

date of the various files. If large amounts of information need to be changed or revised, EBDG will replace the entire Incident Response Locker file system via ShareFile software or other means acceptable to WSF. Annually and following any overhaul/ refurbishment efforts, this list will be reviewed and compared to the actual files on hand and updated as needed.

33 CFR Part 155 requires that the following documentation be maintained for each vessel: general arrangement, midship section, lines plan, tank tables, load line assignment, and light ship characteristics. 33 CFR Part 155 also requires that vessel owners have prompt access to computerized, shore-based damage stability and residual strength calculation programs. To satisfy this requirement, EBDG will maintain a current version of the General Hydrostatics (GHS) program and GHS models of each of WSF's vessels.

The file listing and management approach will be described in a short narrative to memorialize the approach within this specific contract. All files will be maintained electronically and compatible with Microsoft Office 365, Microsoft Project 2021 Adobe Acrobat 2023, AutoCAD 2024, and GHS.

## APPROACH TO RESOLVING ISSUES

Effective communication within the project team members, client, and stakeholders is the key to addressing and resolving issues that arise during the project. Included in the initial development of the incident response protocol, a communications protocol will also be defined. This will include who is notified (WSF, EBDG, and Stakeholders) when there is an incident, which may vary depending upon the type of incident, and who does the notifying. The

typical internal EBDG communications protocol for a response to an incident is the following:

- 1 WSF notifies the EBDG Responding Engineer of an incident.
- 2 The EBDG Responding Engineer completes the incident response checklist with information from WSF and sets up a communication check-in protocol for giving and receiving updates on the situation and the response.
- 3 EBDG Responding Engineer notifies the EBDG PIC and the PM of the incident as well as the appropriate technical engineer depending upon the type of incident (Naval Architecture, Mechanical, Electrical).
- 4 EBDG staff respond to the incident, including on-scene if necessary, until WSF determines that the issue is resolved or EBDG support is no longer needed.
- 5 After incident resolution, a lessons learned meeting is held. This meeting will discuss and document lessons learned from the incident (or drill) to include the actual physical response, the effectiveness of the communications protocol, the effectiveness of the incident response checklist, and action items for change and improvement.

## ASSUMPTIONS OF WORK BREAKDOWN

For consistency with our filing system, EBDG's preference is to use our WBS system which generally follows the US Navy SWBS; however, we have no objection to using the WBS provided from WSDOT for this project.

## IDENTIFICATION OF KEY MILESTONES

The key milestones in this project are the following:

## ELLIOTT BAY DESIGN GROUP

- Development of the incident response protocol.
- Development of the incident response checklist.
- Development and population of the vessel document management library for each vessel in the WSF fleet.
- Creation and maintenance of a Lessons Learned database and the action item status from each Lesson Learned.