



CRESCENT CITY HARBOR DISTRICT

Design and EA/EIS for Seawall and Citizen's Dock

August 14, 2023

Prepared For:



Crescent City Harbor District
101 Citizen's Dock Road
Crescent City, CA 95531

Prepared By:



ENGINEERS, INC.

3240 Eastlake Avenue E
Seattle, WA 98102

In Association With:

HELIX | GeoEngineers | Cogstone | Harbor Power Engineers | P2S | GSi

Mr. Tim Petrick, CEO/Harbormaster
Crescent City Harbor District
101 Citizen's Dock Road
Crescent City, CA 95531

August 14, 2023

Subject: **Design and EA/EIS for Seawall and Citizen's Dock Statement of Qualifications**

Dear Mr. Petrick and Selection Committee,

The new Seawall and Citizen's Dock project is an amazing opportunity to develop new, multi-use public structures that will revitalize the Crescent City community for years to come. Building on our years of project partnerships, and the deep knowledge of the ecological and geotechnical needs of the site we are eager to be a part of your team to realize the vision for the new Crescent City Seawall and Citizen's Dock.

From PND's previous involvement with this project, plus updated information gathered from the recent phone discussion and walk-through, we understand that the Harbor District is looking for a project that will continue to primarily accommodate fishing, but have the versatility to introduce a broader set of uses. This may include pedestrian promenade accommodations and/or support activities for future wind power resources.



PND and our proposed team –

- HELIX Environmental Planning – Environmental Regulations Lead/CEQA NEPA Planning
- GeoEngineers – Geotechnical Engineering
- Cogstone Resource Management – Cultural and Archeological Investigation
- Harbor Power Engineers – Electrical Engineering
- P2S – Mechanical Engineering
- GSi – Surveyors

– have completed dozens of projects along the California and Oregon coast. We understand the environmental challenges that come with developing piers on hard-rock seismically-active sites, and have completed similar projects elsewhere.

We will be working particularly closely with HELIX Environmental Planning. They will provide NEPA/CEQA expertise and ensure compliance with local, state, and federal environmental laws and regulations. We will also be working closely with GeoEngineers for marine biological and geotechnical engineering. Due to their important roles within this project scope, we are providing further information for each of these subconsultants under Question One's Narrative. Information for our other subconsultants is on their resumes.

Continued...

Mr. Tim Petrick, CEO/Harbormaster
Page 2

August 14, 2023

Our team has closely reviewed Tasks 1-12 under the Scope of Services in Section Three of your RFP. We have ensured all Tasks will be covered by our proposed team. We've asked for feedback from our subconsultants regarding achievable timelines for each task. This informed our response to Question Five regarding schedule modifications.

We also understand that there will be a significant public involvement effort. PND will take the lead in providing information for public relations and meetings, and we are happy to work with your current public outreach and website design team to keep the public up-to-date on the project.

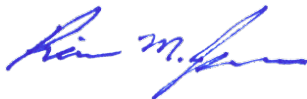
Our project team is experienced with a variety of marine facilities in various ecological and site conditions, including those in Crescent City. We have also included projects completed by HELIX and GeoEngineers in Question Two's "Similar Projects" section.

For example: PND recently completed the Taiheiyo Berth 1-3 project in the Philippines which is very similar to your Seawall and Citizen's Dock redevelopment. It is profiled in this SOQ.

Our team is eager to discuss this new phase of life for Crescent City Harbor's Seawall and Citizen's Dock. If you have any questions regarding our submittal, please contact us at 206.624.1387.

Sincerely,

PND Engineers, Inc. | Seattle Office



Rian Johnson, P.E.*, S.E.**
Vice President | Principal



Todd Belsick, P.E.
Vice President | Principal

*Licensed Professional Engineer in CA

**Licensed Structural Engineer in CA





TABLE OF CONTENTS

- 1. Brief Narrative of Qualifications.....1**
 - PND ENGINEERS, INC. 1
 - HELIX ENVIRONMENTAL PLANNING 5
 - GEOENGINEERS, INC. 6
- 2. Similar Projects 7**
 - PND ENGINEERS, INC. 7
 - Proposed Design Elements..... 7
 - Project Descriptions. 7
 - HELIX ENVIRONMENTAL PLANNING 16
 - GEOENGINEERS, INC. 17
- 3. Project Team & Resumes..... 18**
 - ORGANIZATIONAL CHART..... 18
 - PND ENGINEERS, INC. 19
 - HELIX ENVIRONMENTAL PLANNING 27
 - GEOENGINEERS..... 32
 - COGSTONE 36
 - P2S 38
 - HARBOR POWER ENGINEERS..... 40
 - GSI..... 41
- 4. Pricing42**
- 5. Modification of Tasks & Timeline42**
 - 5a. Summary of Modifications & Clarifications. 42
 - 5b. Modified Timeline..... 44
- Thank you.....45**



1. BRIEF NARRATIVE OF QUALIFICATIONS



FIRM HISTORY

Since 1979 PND has provided services for ports, boatyards, and marine terminal facilities all along the west coast and across the U.S. We offer innovative waterfront design solutions and products, including SPIN FIN™ piles for poor foundations, and the OPEN CELL SHEET PILE™ (OCSP) bulkhead. PND has developed docks, piers, and trestles with load capacities far greater than conventional designs while meeting today’s strict seismic codes. PND has designed over 200 docks, wharfs, and piers in the last ten years. Many of these designs have been based on the practical experience in dealing with the commonly severe conditions of marine environments.

Our staff incorporates field experience and planning experience from concept design to project close-out, aligning port facility projects with cost effective solutions, meeting user demands both now and in the future. PND’s planning services maximize each site’s potential, and integrate features that reduce annual facility maintenance and impacts on the aquatic environment. Other related services include agency coordination, bid support, and construction administration.

With offices located in Seattle, Portland, Anchorage, Juneau, Houston, and Vancouver, BC., we have a staff of over 120, over half of whom are licensed engineers or surveyors. Many of our engineers specialize in marine and difficult site conditions. PND has completed dozens of projects along the California and Oregon coast, including multiple small projects for the Harbor District in recent years.

PND’s in-house expertise includes:

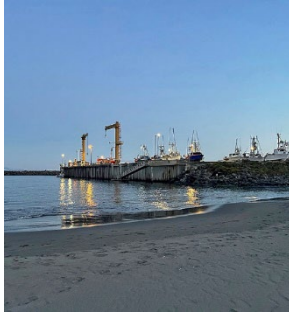


PIERS IN HARD ROCK CONDITIONS

PND has experience piers and seawalls on shallow bedrock in seismically active regions. We are experts in using a variety of techniques to develop a cost-effective design that is adapted to the specific site conditions. We utilize a number of specialty methods for the pile foundation design including SPIN FIN™ piles which can eliminate the need for under drilling. PND has also developed pier designs with rock-socketing and rock-anchoring. These techniques have been used on projects throughout the West Coast for pier projects with large and small vessels.

Having provided Value Engineering services for CCHD’s Inner Boat Basin Reconstruction Project’s Rock Socket Test Pile installation, PND is familiar with the area and can develop details to provide constructable solutions.



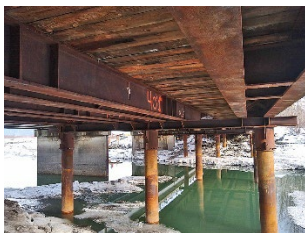


SEAWALLS

PND has extensive seawall experience, from condition assessment and planning to design, including OPEN CELL SHEET PILE™ Bulkheads, z-sheet walls, cast-in-place, and mechanically stabilized earth walls. We will develop alternatives to present to the public and provide the best solution for the site with minimum impact on the environment. Based on our understanding of the site conditions and the high probability of shallow bedrock, we believe the OPEN CELL System may be a very cost-effective solution as a seawall replacement. The system

requires no drilling in the shallow bedrock and has been used to support small to large fishing vessels on projects in throughout the world. A good example is the Port Orford OPEN CELL Bulkhead located just up the coast. The system can be constructed from smaller steel sections that can be trucked in and installed using land-based equipment.

During the design phase we implement 3D modeling programs to check structures against sliding, overturning, and global stability. PND has performed numerous seawall assessments and follow-up designs for repair or replacement of these marine structures. Our engineers are experienced field inspectors with detailed knowledge of the durability and wear of steel, timber, and concrete as it relates to structural capacity. We also can develop fender systems that will hold up to the operation abuse experience at a small port. Our seawall will add overall resiliency to the Citizen's Dock area and may be raised to address concerns about sea level rise or moderate tsunami inundation.



SEISMIC STABILITY

Our team has extensive experience in the seismic and lateral design of bulkheads and piers and have applied this experience on projects on the west coast and across the US in seismic regions and sites with the potential for seismic liquefaction and lateral spreading.

In order to provide a safe and cost-effective solution, our team would carefully evaluate the historical records, existing geotechnical data, and soil borings from the site. If the existing geotechnical data is sufficient for final design, our team would proceed with the information on hand. If additional sub-bottom profiling would result in a more economical solution, our team can provide this recommendation to the Port.



MARINE FACILITY MASTER PLANNING

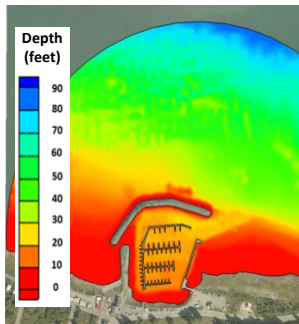
PND provides master planning for marine facilities with a goal toward designing cost-effective and low-impact structures. Our planning services maximize each site's potential, integrating features that reduce annual facility maintenance and impacts on the aquatic ecology. Services include conceptual site design alternatives, preliminary design, and cost estimates for in-water components. PND also provides site civil planning for upland facilities, including preliminary phasing schedules and cost estimates. We are experienced in developing site plans that utilize low-impact development

methods. PND also provides inventories of existing waterfront facilities and their uses, along with recommended actions based on needs, priority of use, and physical condition of existing facilities.



SITE CIVIL & STORMWATER DESIGN

PND provides site civil and stormwater design for harbors, marinas, cruise terminals, waterfront parks, and pedestrian facilities. Our design services include grading and pavement, parking, roadways, street widening, signage, lighting, sidewalks, and pedestrian esplanades. We also provide planning and design of stormwater and drainage, water and sewer utilities, and marine outfalls. Stormwater services include preparation of stormwater master plans; site evaluation; stormwater characterization; and NPDES permit documentation and compliance. Our staff have specialized skills in stormwater hydraulic and hydrologic modeling, and PND has a history of developing innovative design solutions for stormwater conveyance, detention, and treatment systems for difficult waterfront projects.



COASTAL ENGINEERING

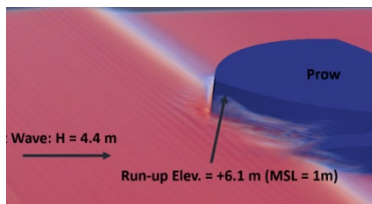
PND's coastal engineering services include shore protection, wetland restoration, large rubble mound breakwaters, soft shoreline protection, outfalls, vertical wave barriers, floating breakwaters, and wave deflectors. PND provides coastal assessment of wind, wave, and currents, including wave generation, wave reflection, wave trans-formation, and wave structure interactions. Our coastal engineers have direct experience applying a number of numerical models, including MIKE-21, BOUSS2D, CGWAVE, SWAN, STWAVE, OpenFOAM, and Sedtrans. PND also has relationships with several universities that allow application of cutting-edge, non-commercially available software.



SEA-LEVEL RISE STUDIES

PND previously conducted Sea-Level Rise Studies for both Crescent City Harbor District and the City of Crescent City. Each study described the physical and economic impacts for rising seas at the harbor district with changes to the current tectonic patters.

Using data specific to the Crescent City geography and history feeds into the overall understanding of resiliency and will allow PND's team to develop structural designs for waterfront facilities that will better meet environmental challenges and provide additional resiliency for the harbor facilities.



TSUNAMI STUDIES

PND has led tsunami studies for multiple coastal entities such as the WSDOT Ferries Division. We also developed a conceptual design in 2019 for the Crescent City Tsunami Center, a proposed vertical tsunami evacuation center for Crescent City, CA, with a rooftop structure for assembly and refuge for 1,000 people. The rooftop will also serve as a helipad to support emergency operations after the tsunami.

Our services include site-specific tsunami inundation evaluation, structural analysis and design, armoring and scour provisions, and ADA-accessible evacuation facilities. PND provided engineering services for the Tsunami Safe Haven Berm for the City of Long Beach, WA, in 2017. The project was funded by a



FEMA Hazardous Mitigation Grant. PND also provided a tsunami inundation analysis as a part of the siting study for the SEARHC Hospital in Sitka, AK.



PREVIOUS WORK WITH SUBS

PND has a long history of successful project delivery with both **GeoEngineers** and **Harbor Power Engineers**. This team has provided innovative solutions to Ports and other public and private waterfront clients for projects of all sizes.

PND has worked with GeoEngineers on many projects to come up with creative and cost-effective solutions to address seismic codes for waterfront structures. For the Port of Everett’s Mill A site, we worked with GeoEngineers to compare the OCSP system with a tie-back combi-wall system for a wall with a -42-foot toe elevation and a +20-foot surface elevation. Performing an apples-to-apples comparison using the same codes and factors of safety, the OCSP was determined to be the most cost-effective solution.

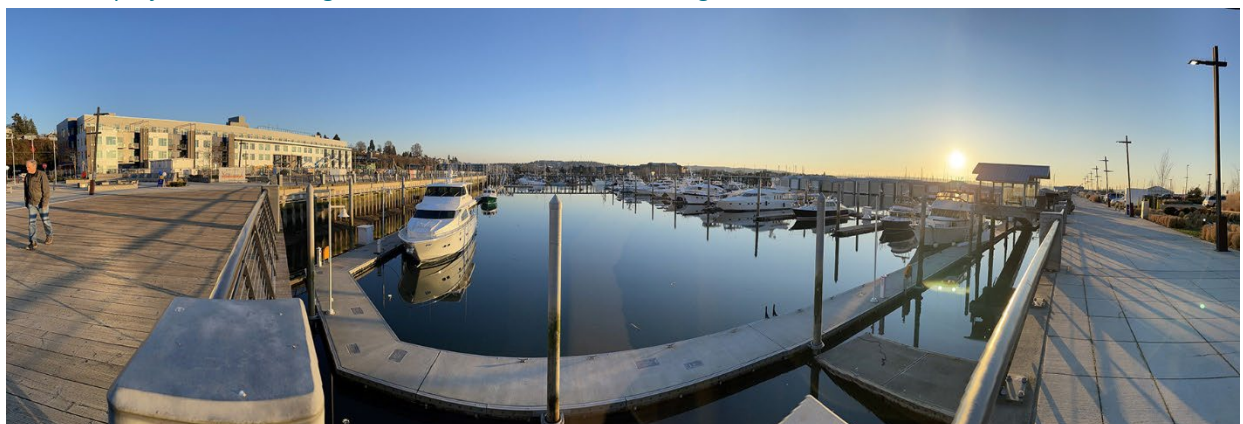
PND and GeoEngineers also teamed for the repair of the LaFarge Cement Bulkhead in Seattle, Washington. PND developed a driven batter pile tie-back design to stabilize short segments of sheet pile wall that have failed. The batter piles were equipped with SPIN FIN™ Pile Tips. These pile tips are equipped with plates arrayed in a helical pattern to develop additional tension that results from the wall pressure on the steel sheet pile face. The tension piles were evaluated using numerical modeling for the site to ensure the repair met the required minimum factors of safety for the City of Seattle building code. The project was successfully installed in 2007 and was found to still be in excellent condition during a recent assessment.

PND has completed, and is working on, over 50 waterfront and upland projects with Ed David of Harbor Power Engineers. As a waterfront electrical power system specialist, Ed provides designs supporting large public redevelopments, such as Waterfront Place Central for the Port of Everett, smaller float systems in private marinas, and multiple wharf, pier and dock improvements. Harbor Power Engineers is based in California.



Waterfront Place Central at the Port of Everett

A current project with GeoEngineers, P2S, and Harbor Power Engineers





BRIEF NARRATIVE OF QUALIFICATIONS: SUBCONSULTANTS



HELIX FIRM HISTORY

HELIX is a California corporation and leader in environmental planning, design, and natural resource sustainability statewide. Established in 1991 and with offices in Sacramento, Placer, San Diego, Orange, Riverside, and Los Angeles counties, HELIX provides a broad range of environmental compliance services throughout California. HELIX has extensive experience helping public and private clients across a variety of sectors comply with local, state, and federal environmental laws and regulations, manage natural and cultural resources, and design and construct sustainable projects. The preparation of CEQA and NEPA documents and associated technical studies is one of HELIX's primary areas of expertise.

HELIX has completed environmental documents for residential, mixed-use, commercial, industrial, and transit-oriented development projects. They have also worked on general, community, and specific plans as well as documents for educational, medical, institutional, and correctional facilities. In addition, HELIX has supported a variety of public infrastructure projects from pipelines and water treatment plants to fire stations, parks, roads, bridges, and highways.

Specifically, HELIX understands the environmental issues typically associated with waterfront development and their team has staff with direct experience. HELIX's proven approach to environmental compliance produces legally defensible documents in an efficient, cost-effective manner. They devote the utmost attention to quality which has given their clients the confidence to bring their most sensitive and controversial projects to them, time and time again.

PROJECT UNDERSTANDING

We understand that the District proposes to replace the seawall and dock with similar facilities, albeit constructed to withstand anticipated sea level rise (1.5 feet), 100-year storm surges, and 50-year tsunami events. In addition, commercial seafood loading and transportation parking lot would be repaired/renovated along with aged cargo handling equipment atop the seawall. PND and its subconsultants shall undertake design of the proposed improvements, while HELIX shall undertake environmental compliance documentation per the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) for the proposed project.

The District has received funding from the California Coastal Conservancy and US Department of Transportation Maritime Administration (MARAD) for the proposed project. Helix will be supported by a single subconsultant, Cogstone Resource Management, for the preparation of National Historic Preservation Act (Section 106) analysis for the built environment.

HELIX will initiate the environmental scope of work through preparation of the Purpose and Need Statement (Task 3), determination of the level or EIR/EA analysis required (Task 7), and CEQA Project Description (Task 9.2). Upon approval of Tasks 3, 7, and 9.2 from the District and federal lead agency, HELIX will conduct and compile the results of the data collection (Task 8). Draft EIR/EA preparation will commence once 30% design plans are submitted for District/federal agency review.



GEOENGINEERS FIRM HISTORY

GeoEngineers is an employee-owned earth science and engineering firm with 19 offices nationwide, including an office in San Diego, California. For 43 years, GeoEngineers has been a trusted partner and advocate to local cities, counties, states, and public agencies across the West Coast. Core services include geotechnical engineering, engineering geology, performance-based design, environmental remediation, construction design services, and natural resource sciences.

GeoEngineers has completed thousands of port projects locally, regionally, and internationally. Their geotechnical engineering services span geotechnical evaluations, field engineering services, earthwork design services, earth retention systems, foundations and structures, and seismic design and vibrations. Their in-house natural resource team focuses on marine and aquatic infrastructure project permitting. Their capabilities span biological and wetlands assessments; nearshore; marine and terrestrial biology; habitat planning; mitigation and restoration; and environmental permitting and regulatory support services.

As a multi-disciplinary firm, GeoEngineers takes a collaborative approach to projects blending science, engineering, and regulatory considerations/priorities into optimal solutions. They have significant experience addressing challenging soil and groundwater conditions, seismic evaluations including liquefaction, shoreline and slope stability, and habitat restoration and mitigation.

GeoEngineers' knowledge of similar conditions and regulations comes from recent experience working on the Port of Everett Waterfront Place Center and Port of Bremerton Port Orchard Marina Breakwater Replacement – both in partnership with PND. GeoEngineers is also managing ongoing work to provide dredge spoils management services to the Crescent City Harbor District. From planning through design, permitting, and implementation, they use practical methods to achieve results that are technically sound, environmentally conscious, and economically sensible.

PROJECT UNDERSTANDING

Geotechnical Engineering

We have reviewed regional geologic maps and existing geotechnical information within the site vicinity. Based on our review, we understand that native soils beneath the site consist of loose to dense sand overlying stiff siltstone/mudstone "bedrock". Since the site is located within a seismically-active region, we anticipate that the upper loose sandy soils are potentially liquefiable during design earthquake event and would be of the key considerations from the design perspectives.

We understand that our geotechnical investigation and engineering services will consist of a geophysical investigation, a subsurface investigation, engineering analysis, development of seismic design criteria, and preparation of a geotechnical report summarizing our findings and conclusions.

Marine Biology

We at Geo natural resources will compile and summarize available information on existing marine habitats, threatened and endangered species use, and essential fish habitat relevant to the overall impact analysis. This will culminate in a summary document that can/will be an appendix to the Helix NEPA/CEQA analysis. We will also draft summary protected resource baseline language to be included in the body of the report. We will coordinate with Regulators, PND, Helix, and the Harbor District.



2. SIMILAR PROJECTS



ENGINEERS, INC.

PROPOSED DESIGN ELEMENTS:

Our understanding of the goals for this project are to provide a new seawall and Citizens’ Dock to mitigate climate related hazards such as tsunamis, storm surges and sea-level rise as well as providing a safe working environment for the local commercial fishing fleet. In addition, expanding economic opportunities for use of the facilities; such as accommodating larger vessels, will be taken in to consideration when planning the new facilities. Furthermore, increasing public access and use of the harbor area is a must.

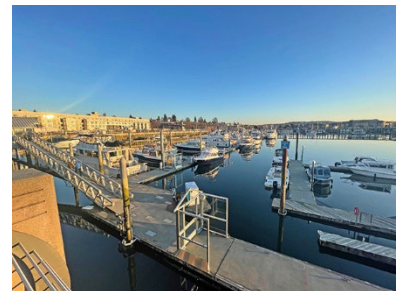


Blending the visual aesthetics of a working waterfront with an accessible public space will be an important element of the design. The look and feel of the new infrastructure will be blended with the functionality of the facilities and choice of materials.



Functionality is the quality of being suited to serve a purpose well. This is true for both the commercial aspects of the project as well as the public spaces. Clearly identifying and delineating user areas to avoid conflict is paramount.

The existing Citizens’ Dock footprint will be reviewed to determine the most efficient layout to accommodate existing uses and possible future larger vessels and/or trucks or increased public access.



On the commercial side, expanded and updated loading equipment that will allow safer, more efficient unloading will be incorporated into the design of seawall and dock. It is also anticipated that new and modern buildings on the dock will be incorporated into the design. For this proposal, it is assumed that design of these building structures will be incorporated into a future design phase; however, the dock structure will be planned to accommodate these structures.

The re-envisioned waterfront facilities allow for expanded opportunities for the public to enjoy this area of Crescent City. The infrastructure for walking / biking paths, picnic area, play areas and interpretive / educational options can be incorporated into the design. For this proposal, it is assumed that design of these public amenities will be incorporated into a future design phase; however, the area may be planned to accommodate these structures.



Construction materials will be selected based upon the most efficient structural solutions for both the seawall and Citizens’ Dock.



Anticipated usage, seismic and environmental loading will control the design. It is envisioned that the seawall will incorporate steel sheet pile with a concrete cap. The Citizens' Dock is anticipated to be constructed of steel pipe piles supporting concrete pile caps and a concrete deck. A concrete topping slab may also be incorporated. Both the seawall and dock will incorporate a corrosion protection system to achieve the lifespan goals of the project. This may include coatings, anodes, wraps etc. Fendering systems will also be provided to assist in berthing of vessels while providing protection to the new infrastructure. The fendering systems will be selected to provide maximum flexibility for anticipated vessels that may utilize the facilities. Fishing fleet preferences will be considered as well as potential future uses such as off shore wind farm support vessels.



PROJECT DESCRIPTIONS

Taiheiyo Cement | Cebu Island, San Fernando, Philippines

SEAWALL / BULKHEAD

■ YES

SEISMIC CONSIDERATIONS

■ YES

PERMITTING PROCESS

■ NO

OWNER

Taiheiyo Cement

COMPLETION DATE

TBD

PND STAFF

Rian Johnson, PE – PIC

Chris Fornace, PE – PM

Brian Porter, PE –
Structural Design

SUBCONSULTANTS

GeoEngineers, Inc. –
Geotechnical Evaluation



Award: Pile Drivers Construction Association Project of the Year, 2022

The Taiheiyo Cement Facility in San Fernando on Cebu Island in the Philippines produces cement for distribution across the Philippines. Taiheiyo Cement needed to upgrade their existing gravity block jetty which included four outer berths (Berths 1-4), five inner berths (Berths 5-10), two RORO berths (Alpha Beach and Echo Beach), and constructing a pile-supported jetty dock.

PND designed a 720-foot-long OPEN CELL SHEET PILE™ (OCSP) bulkhead along the alignment of Berths 1, 2, 3, and 4 to reinforce the existing quay wall. The bulkhead creates a vertical face at the berthing face of the cement dock. The top elevation of the dock is +10 ft MLLW to match the existing dock, and the bulkhead's exposed face extends to a maximum depth of -8.0 m MLLW to allow ample underkeel clearance for the design vessels. PND



Taiheiyo Cement Facility
San Fernando, Cebu Island,
Philippines

also provided construction support for the bulkhead project, which was completed in August 2020.

PND is also designing a new 70-foot by 492-foot-long pile-supported pier platform with dolphins. The pier is under construction and will include a trestle foundation and an access bridge between the pier platform and existing quay wall.



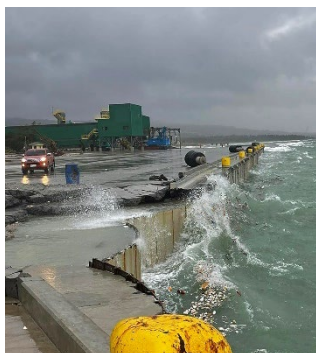
Work also included a value engineering concept design for the Echo Beach Modification project, which will reinforce the existing Echo Beach concrete pier for seismic stability and add a new a barge ramp using an OCSP bulkhead. Echo Beach is an expansion jetty in front of the existing quay. The OCSP with the selected alternative after comparing costs and construction methods with tied-back z-sheet wall with an A-frame dead-man anchor support.

The project site is in an area prone to severe environmental exposure and loading. The face of the OPEN CELL System is exposed to waves, scour, seismic events, and typhoon forces. The site is also subject to severe seismic forces and the OPEN CELL System was adapted to meet the requirements of the Philippines building codes to resist these forces.

To mitigate corrosion from the active marine environment, the design included a two-part corrosion protection system which included a spray metalized coating with an epoxy coated surface. PND specified supplemental anodes to ensure the wall would perform safely throughout its design life.

To prevent scour undermining, PND and JPC coordinated on the scour requirements at the toe of the wall and provided additional tailwall reinforcement to resist scour undermining. The OPEN CELL System which relies on stability from the tailwall embedded on the retained soil mass is less prone to scour undermining than traditional cantilever or tied-back z-sheet pile system.

Not only was the OPEN CELL System designed for the chronic exposure of the marine environment, it was also designed to resist the large forces and rapid draw down associated with tropical storms. The resistance of the





system was demonstrated when Typhoon Rai made a direct hit on the region and the system performed with only superficial damage from the Category 5 storm.

On December 16, 2021 the constructed areas of the OCSP System withstood the effects of Category 5 Typhoon Rai. This Super Typhoon destroyed existing concrete caisson walls adjacent to the OCSP System and at least two sheet pile walls on the same island. A "State of Calamity" order was issued on Cebu Island and in the province.

The completed OCSP at Berths 1-4 sustained little damage on the cells and were operational the following week. Echo Beach, which was still under construction, only sustained superficial damages that were quickly repaired. In response to the performance of the OCSP and the damage sustained to the existing block wall RORO ramp at Alpha Beach; this area was designed and built on a fast-track basis using the OCSP System using only materials available on-site. It was a classic example of found-object engineering which demonstrated teamwork and ingenuity between the Owner, Contractor, and Design Team. The project was designed and constructed in two months as a part of emergency repair work after the typhoon.





Seiner Wharf at Port of Everett's Waterfront Place Central | Everett, WA

SEAWALL / BULKHEAD

■ YES

SEISMIC CONSIDERATIONS

■ YES

PERMITTING PROCESS

■ YES

OWNER

Port of Everett

COMPLETION DATE

Ongoing

PND STAFF

John Keiser, PE – PIC
Chris Wiest, PE – PM
Chase Castona, PE
Brian Nielson, PE, SE

SUBCONSULTANTS

GeoEngineers, Inc. –
Geotechnical Evaluation
Harbor Power Engineers
P2S



PND has been leading a multidisciplinary project team since 2015 with planning, permitting, and design of public infrastructure for the Port of Everett's Waterfront Place Central (WPC) project. Spanning 65 acres of waterfront property in Everett, Washington, the WPC project is a 1.5M-square-foot mixed-use development which includes: 447,500 square feet of new commercial office space; 63,000 square feet of retail and restaurant space; 20,000 square feet of marine retail; and up to 660 new waterfront homes.

One of the largest waterfront-facing developments on the West Coast, Waterfront Place Central at the Port of Everett rests on old timber piles and marshlands. The installation of new bulkheads and tons of new fill have raised all new building parcels and roadways between 2'-6' to transform empty industrial sites into vibrant gateways leading to housing, commerce, and recreation.

Focusing on infrastructure, safety and accessibility, PND has been working with the Port of Everett to accommodate the impacts of future sea level rise, high tides and seismic events, while creating welcoming spaces that serve waterfront and upland users.

Much of this work is visible at the Seiner Wharf Platform and Dock and Fisherman's Harbor where finished projects include Hotel Indigo, Pacific Rim Plaza & Fountain and the Central Marina Floats.

Existing bulkheads, which encompass Fisherman's Harbor, were not designed to today's seismic standards and needed an upgrade to support new buildings. Older wall segments, which have outlived their useful design life, were replaced. Newer wall segments were enhanced through soil ground improvements. The original timber bulkhead at





Seiner Wharf, some areas of which were 100 years old, was replaced by a new cantilevered Z-sheet pile wall.

By utilizing newer design methodologies, PND constructed a more efficient cantilevered bulkhead, which was easier to install. This helped minimize construction costs while providing seismic resistance.

Along with 2-foot-diameter, cementitious piles augured up to 40 feet deep into a solid soil layer, this structure provides new building parcels engineered to withstand up to 6’ of lateral movement and resist liquefaction during a seismic event.



To mitigate stormwater runoff that comes with new hardscape, building and tenancy, PND has developed stormwater conveyance and treatment systems within the new fill areas that integrate with new waterfront structures supporting long-term stormwater treatment.

Part of this innovative system is the use of outfall systems where water-facing stormwater pipes have check valves installed at water side with outlets that remain closed most of the time to keep bay water from backfilling into the system. During a heavy rainfall, stormwater runoff is diverted through new treatment systems before it gets to the outfall. Once treated, the water pressure in the system opens these valves allowing cleaner water to spill into the bay, maintaining a healthier marine ecosystem.



PND also developed a new marina master plan that would increase capacity for recreational boaters, the commercial fishing fleets and accommodate larger boats, opening the Port to new users. New floats feature uninterrupted linear moorage which is less expensive to develop and accommodates a wider range of boat types and sizes. Utility connections for fresh water, electricity and fire safety are routed throughout the float system. PND also designed all the utilities infrastructure, roadways, and sidewalks, and provided bid and construction support for the projects.



Segment E

PND is currently providing structural design for this 165-foot bulkhead called “Segment E” being built in front of the existing timber bulkhead. The purpose of the project is to replace the deteriorating timber bulkhead and wharf while also bringing improved seismic performance to the site. The proposed wharf will be approximately 3200 square feet. Wharf will consist of cantilevered steel pipe piles, steel pile caps, timber glulam stringers and timber decking. The wharf will be designed for pedestrian traffic and capable of supporting an AASHTO H10 Truck.

Our proposed Mechanical Engineer, **P2S** provided mechanical engineer design services developing the 65% contract drawings and specifications (to be used for pricing) for the marina fuel systems, including the underground storage tank design for the replacement of two 30,000-gallon underground gasoline and diesel fuel storage tanks, pumps, distribution piping from the tanks to the bulkhead, and associated devices, controls, and leak detection systems.



Dakota Creek Shipyard Redevelopment | Anacortes, WA

SEAWALL / BULKHEAD

- YES

SEISMIC CONSIDERATIONS

- YES

PERMITTING PROCESS

- YES

OWNER

Dakota Creek Industries

COMPLETION DATE

2009



PND was the project manager and principal designer from planning through construction for the Dakota Creek Industries (DCI) shipyard at the Port of Anacortes. The project created significant additional deep water mooring space in two dredged berths, a 350-foot heavy-load pier, a 450-foot-long OPEN CELL™ deep-water bulkhead with heavy-load capacity, and over two acres of upland development with new storm water and utility systems. Dredging included removal of unsuitable sediments which were disposed of at an upland site.

The project was designed to accommodate mid-size vessels. The project was sited on shallow bedrock and utilize SPIN FIN Pile Tips to eliminate the need for drilled rock anchors or rock sockets. PND also performed the geotechnical engineering, dredge design, permitting, and upland site civil design and stormwater capture and treatment.

The \$16 million project was completed in December 2009 after two construction seasons. The shipyard remained in continuous operation throughout construction. The project was executed by DCI through a cost-plus contract. Cost effectiveness was a design and construction driver. PND worked with DCI to clearly identify current and future operational needs and to optimize design.

The Dakota Creek Shipyard Redevelopment project won a 2009 American Society of Civil Engineers (ASCE) Honor Award.



Ketchikan Berth IV Replacement | Ketchikan, AK

SEAWALL / BULKHEAD

- YES

SEISMIC CONSIDERATIONS

- YES

PERMITTING PROCESS

- YES

OWNER

Survey Point Holding Company

COMPLETION DATE

2007

PND STAFF

Todd Belsick, PE
Brian Porter, PE



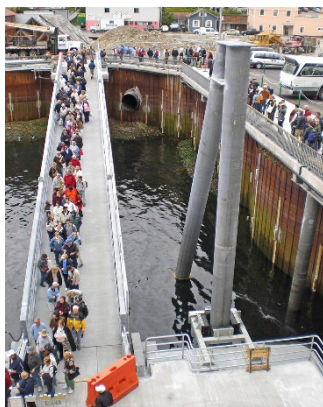
PND provided management, permitting, concept and final design, and construction administration services for the replacement of Ketchikan Berth IV for Survey Point Holdings. The new cruise ship dock has the capacity to berth vessels up to 1,000 feet long.

PND designed new in-water structures that include an OPEN CELL® bulkhead, dolphins, fender system, and a combination platform dock and 50-foot by 150-foot floating dock. The floating dock is accessed by a steel transfer bridge and new pile-supported dock.

The use of PND’s patented OPEN CELL bulkhead solution created a large upland parking lot and maneuvering area. The PND team analyzed vehicle and pedestrian traffic patterns to determine the most efficient use of this area. Upland design included a 200-foot-long access road and 1-acre ground transportation area, as well as 500 lineal feet of pedestrian pathway. PND’s services also included design of stormwater collection and treatment, pavement, and utilities.

The design and construction of the project occurred simultaneously and required close coordination with the Client, Contractor, and jurisdictional permitting authorities. PND coordinated with the City of Ketchikan Public Works Department for sewer and water utility design and installation, and with ADOT&PF to obtain the necessary driveway access permit. This fast-track project was ready for the arrival of the first cruise ship in May 2008.

Vehicle and Pedestrian Traffic. The access road required a detailed Traffic Impact Analysis (prepared by Kittleson and Associates) and negotiations by PND on behalf of the client with Alaska DOT&PF to identify terms and conditions for the installation of a future traffic signal. The access approach was complicated by the need to construct a retaining wall and connect to Water Street, which is both an elevated pile-supported structure and a fill-





supported on-grade street. Pedestrian access was accommodated through the design of minimum 12-foot sidewalks and pathways that were designed to meet ADA requirements and minimize conflicts with major traffic corridors. An asphalt pavement section was designed to handle the seasonal heavy bus load requirements.

Stormwater. The site required design and permitting through DOT&PF for a major transition structure to divert Jim Creek through the site and out of the way of future development. As a condition to building the cruise ship berth, a stormwater treatment system was designed to treat oil and particulate contaminants prior to outfall into Tongass Narrows.

Utilities. The 300-foot-long water main was designed to meet both fire-fighting demands and potable water demands from mooring ships and the public restrooms. The site was serviced with an 8-inch sewer main to accommodate the restrooms and the future retail site development. PND also prepared performance criteria for site lighting and electrical services into the site.



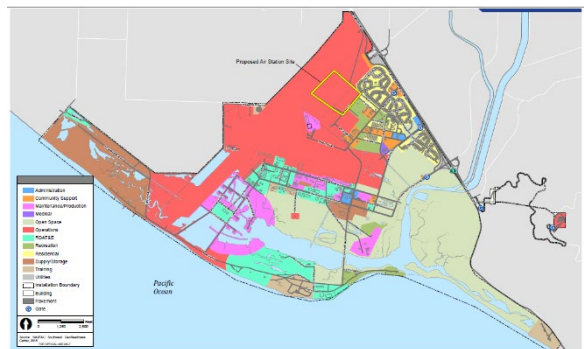
SIMILAR PROJECTS: SUBCONSULTANTS



SIMILAR PROJECTS

U.S. Coast Guard Air Station at Naval Base Ventura County, Point Mugu NEPA Environmental Assessment

HELIX prepared an Environmental Assessment (EA) addressing the construction and operation of a new U.S. Coast Guard (USCG) Air Station at Naval Base Ventura County, Point Mugu. The USCG previously operated out of Los Angeles International Airport; however, the USCG was unable to renew its lease and was forced to relocate. The Proposed Action would construct a new USCG Air Station at Point Mugu, consisting of a hangar, support facilities, an aircraft parking apron, taxiway, vehicle parking lots, and access roads. HELIX provided initial input into the site development process to help the U.S. Navy and USCG minimize project impacts to sensitive resources, especially wetlands/waters of the U.S. The NEPA compliance process was completed on an accelerated basis to help expedite the USCG's transition from its temporary Forward Operation Base at Naval Base Ventura County Point Mugu to permanent facilities better suited to supporting its critical mission of 24/7 emergency response, search and rescue, drug and migrant interdiction, law enforcement, and marine and waterways conservation and protection. Work was completed under contract to Naval Facilities Engineering Systems Command (NAVFAC) Southwest.



Fort Bragg Waste Transfer Station CEQA IS/MND

HELIX prepared a CEQA IS/MND for a new Transfer Station and Recycling Buy Back Center in the City of Fort Bragg, Mendocino County. The project includes the construction of a direct transfer station with a direct transfer operation, a buy-back center, recycling-only self-haul center, customer service office, and associated supporting uses. Solid waste would be transferred from route trucks to larger trailers to be hauled to the City of Willits; no waste would be retained on site for more than 24 hours. HELIX conducted air quality, greenhouse gas emissions, energy use, and noise technical reports; peer-reviewed applicant-provided biological technical report; and led the preparation of the project description and impact analysis for all resource sections of the IS/MND in compliance with Appendix G of the State CEQA Guidelines. The IS/MND and proposed project were approved by the City Planning Commission in October 2022. Work was completed under contract with the City of Fort Bragg.



SIMILAR PROJECTS

Crescent City Harbor District, Dredge Spoils Management, Environmental and Geotechnical Engineering Services; Crescent City, California

An estimated 90,000 cubic yards of sediment dredged from the Crescent City Harbor have been placed in an upland dredged material storage site owned and operated by the Crescent City Harbor District. Removal and disposal of the dredge spoils at an off-site disposal facility was not feasible due to the projected transportation and disposal costs. Space in the upland dredged material storage site is needed and now there is an option to remove dredge spoils and re-use elsewhere. The State of California North Coast Regional Water Quality Control Board (Water Board) regulates the re-use and disposal of such material in the region. The Water Board has indicated that re-use of the material from their upland dredged material storage site would require a permit issued under the Water Board’s waste discharge requirements (WDRs). GeoEngineers conducted a soil evaluation and prepared a report that the dredge material meets the requirements of the Water Board for beneficial reuse. We are also providing a geotechnical engineering evaluation of the dredge material to determine compaction characteristics and amendments needed to ensure compaction.



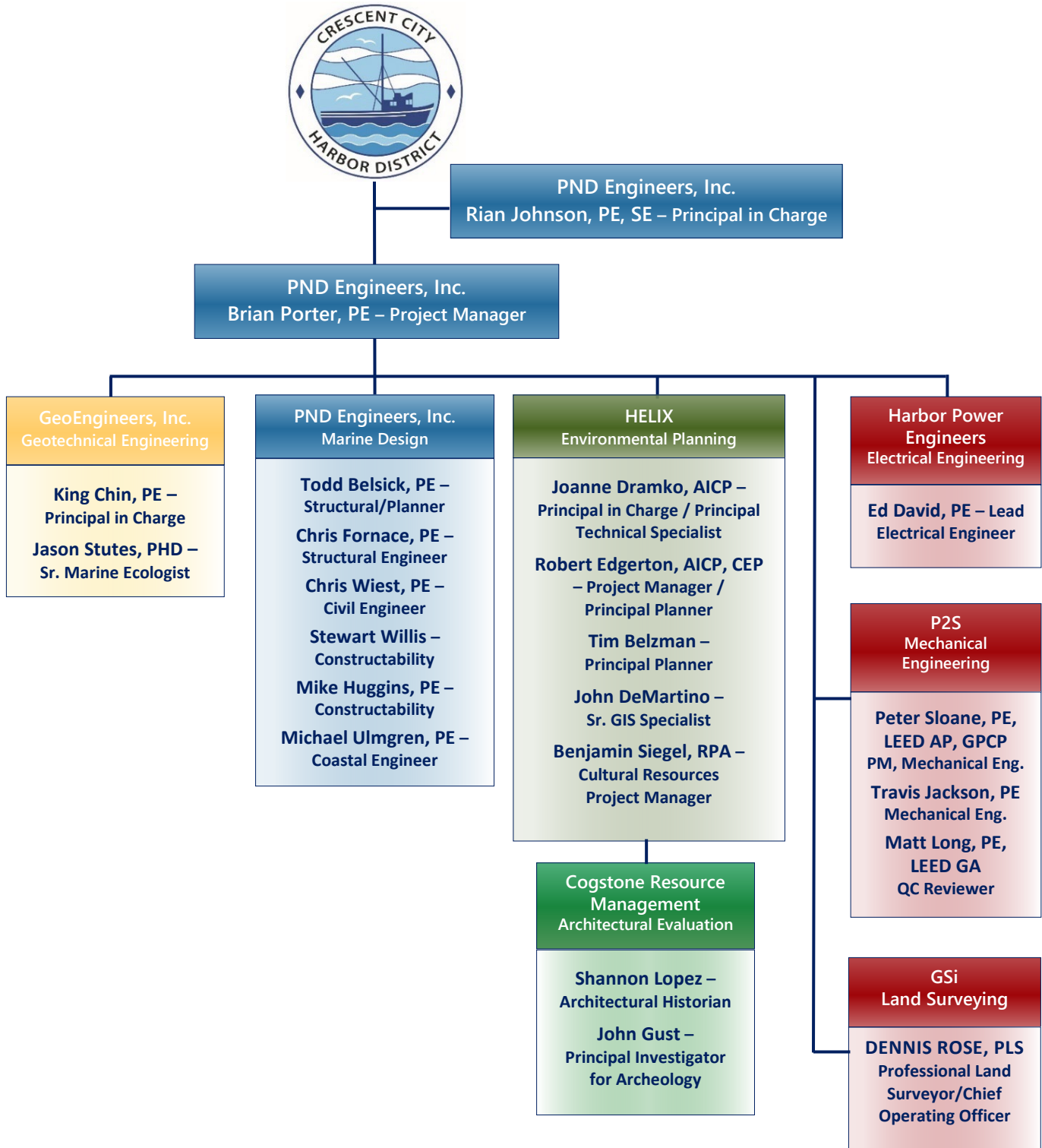
British Petroleum (BP), Harbor Island Distribution Terminal Bulkhead Replacement, Seattle, Washington

The project consists of replacement of the 700-foot-long bulkhead located at the BP Distribution Terminal in Harbor Island, Seattle, Washington. The existing bulkhead was constructed in 1900 and is providing lateral support to the existing truck fueling station and warehouse/office building. GeoEngineers provided geotechnical engineering services that included soil characterization, seismic hazard analyses, slope stability analyses, liquefaction assessment, and ground improvement design development. GeoEngineers completed an exploration program consisting of borings and seismic cone penetration tests to obtain additional geotechnical data for the replacement project. Geotechnical information from previous studies at the site were also reviewed and evaluated. We performed dynamic deformation analysis using the computer program FLAC using the advanced effective soil models to realistically assess the effects of soil liquefaction on the existing bulkhead and to develop various seismic and liquefaction mitigation options and configurations to select the most cost-effective design that has the least impact to the operation of the terminal during construction.





3. PROPOSED TEAM & RESUMES





RESUMES: PND ENGINEERS, INC. – PRIME CONSULTANT

RIAN JOHNSON, P.E., S.E., LEED AP | Vice President, Principal Structural Engineer
Project Role: Principal in Charge



Rian Johnson is a structural engineer specializing in marine construction, design, engineering, and administration. He has 20 years of experience in various areas of the engineering industry, including engineering consulting and public works. His work includes project management, on-site construction administration, marine facility design, deep foundations analysis, and project management. Specialized skills include structural analysis and design, weld and pile driving inspection, and contract administration. He has worked on all aspects of engineering for ports, harbors, marine facilities, bridges, roadways, utilities, and temporary works projects. Rian’s projects have given him extensive working knowledge of applicable design and construction codes, including PIANC, AASHTO, ASCE, and USACE design guidelines.

EDUCATION

M.S., Civil Engineering,
Stanford University,
2008
B.S. Civil Engineering,
University of
Washington, 2001

REGISTRATION

P.E., S.E.
AK #141129
P.E., S.E. CA,
C 87081, S 6598
P.E. CT, #0034814P.E.
LA, #40097
P.E. MA, #54352
P.E. NC, #051427
P.E. OR, #94651
P.E., S.E. WA,
#42785
P.E. WV #025377
P.E. NCEES #62528
P.Eng. British
Columbia, #201867

SELECTED RELEVANT PROJECT EXPERIENCE

Crescent City Harbor District Projects, Crescent City, CA. Principal-in-Charge. Rian has led multiple design study, evaluations, cost estimates, and value engineering projects for the CCHD over the past 15 years. Notably, Rian led Sea-Level Rise Studies for both CCHD and the City of Crescent City which have informed his projects for this site under following On-Call Contracts. Other projects include a Tsunami Center Study, Rock-Socket Test Pile value engineering, and cost estimating for the Seawall and Citizen’s Dock improvement project.

Taiheiyō Cement Marine Facilities, Cebu Island, Philippines. Principal in Charge. Providing design for bulkhead replacement and a new pile-supported jetty platform at the Taiheiyō Cement marine facilities, used for mooring and material offloading/loading of cement carrier and general cargo vessels. PND designed a 220-meter-long OCSP bulkhead along the alignment of Berths 1, 2, and 3 to reinforce the existing quay wall. Work also included a value engineering concept design for the Echo Beach Modification project, which will reinforce the existing Echo Beach concrete pier for seismic stability and add a new a barge ramp using an OCSP bulkhead.

Tongue Point Boat Haulout Piers, Astoria, OR. Principal-in-Charge. Leading this Design-Build project for Hyak Marine which includes a 1500 metric ton, electrically-powered boat haulout travel lift: the largest haulout in the U.S. The two haul out pile-supported piers are 230 feet-long and 12 feet-width composed of steel pipe piles, steel girders, and a reinforced concrete deck. The shoreline abutment incorporates an OPEN CELL SHEET PILE™ (OCSP) Bulkhead to support the heavy-loads along the shoreline. The upland work area includes a heavy-lift zone to support vessels and the large boat haulout travel lift, electrical upgrades, and stormwater improvements.

Depoe Bay Floats 2-4 Replacement, Depoe Bay, OR. Principal-in-Charge. Leading assessment and design for the replacement of three docks, piles and utilities located in Depoe Bay Harbor. Work includes community outreach, 100% design, construction bid documents, construction costs and bid assistance. A full metocean study was undertaken to gather and complete the baseline environmental design criteria.



BRIAN PORTER, P.E. | Senior Engineer

Project Role: Project Manager



Brian Porter has 15 years of experience with civil and structural design projects in the Pacific Northwest and Alaska, including marine structures, bridges, and pedestrian access. His projects include floats, piers, docks, and gangways at waterfront parks, marinas, and boat launch facilities. He also provides design for docks and passenger boarding facilities at cruise ship, ferry, and marine terminals. His experience includes design fabrication and construction inspection for work on bridges, marine/waterfront structures, pedestrian access, non-motorized facilities, and industrial sites. Brian has also provided condition assessments for numerous marine facilities in the Pacific Northwest.

EDUCATION

B.S. Civil
/Environmental
Engineering, 2004,
University of
Washington

REGISTRATION

Professional Civil
Engineer:
Washington
#45266, 2008

CERTIFICATION

Certified Welding
Inspector (CWI),
American Welding
Society

SELECTED RELEVANT PROJECT EXPERIENCE

Crescent City Harbor District Pile Rock Socketing VE Study, Crescent City, CA. Project Manager. Provided value engineering services to Dutra Construction Co. for the socket pile installation technique for the Crescent City Harbor District Inner Boat Basin Reconstruction project. Work included design and implementation of a lateral load test program to ‘proof’ the rock socket concept.

Ketchikan Berth IV, Ketchikan, Alaska. Project Engineer. Provided structural engineering design services for Berth IV, which included an additional floating dock and transfer bridge. The design, as well as the fast-track construction completion, allowed for maximum berthing space during the Alaska cruise season. Mr. Porter provided structural engineering, construction fabrication, and installation oversight for the project.

Ketchikan Berth III Port Berth Expansion, Ketchikan, Alaska. Project Engineer. PND was responsible for the expansion of the City of Ketchikan’s cruise ship terminal and the uplands development to accommodate the increased tourist traffic. Mr. Porter provided structural engineering services on work that included a floating dock moored by steel pile piles, a fixed pile-supported pier, and a 130-foot transfer bridge. He also provided fabrication inspection for all the prefabricated components for this project and assisted in overseeing their installation.

Duke Point Marine Terminal Upgrade, Nanaimo, British Columbia. Project Manager. Leading design services for construction of new inner and outer dolphins at Duke Point Ferry Terminal in Nanaimo on Vancouver Island. PND is Engineer-of-Record for Ruskin Construction Ltd. under a design-build contract with Seaspan Ferries Corporation. PND’s services include value engineering studies; schematic design, design development, and final design; project management and coordination; civil and structural engineering; fabrication inspection; and on-site construction observation.

Duncan Bay Coal Terminal, Duncan Bay, BC. Project Engineer. Provided preliminary design for the marine components of the Duncan Bay Coal Terminal development. The project included design of a 1,000-foot approach dock and shore-side connection; platform dock with fender systems; and breasting and mooring dolphins with connecting catwalks.



TODD BELSICK, P.E. | Vice President | Principal

Project Role: Structural / Planner



Todd Belsick has 25 years of experience specializing in structural engineering for marine/waterfront structures, recreational facilities, and bridges. His project assignments have given him a broad range of experience in project management, design, fabrication, inspection, and construction administration. His marine/waterfront experience includes wharfs, piers, docks, and marinas, as well as cruise ship, ferry, and marine terminals. Todd's cruise terminal design projects have included berthing piers to accommodate 1,200-foot vessels, floating docks, dolphins, fenders, mooring systems, bulkheads, passenger boarding systems, transfer bridges, and upland amenities such as waterfront pedestrian promenades.

EDUCATION

Bachelor of Architectural Engineering, 1998, The Pennsylvania State University

REGISTRATION

Professional Civil Engineer:
WA, #39312, 2002;
OR, #90699, 2015;
AK, #12727, 2010;
FL, #82032, 2016;
Belize, #188-2013, 2013.
Structural Engineer:
AK, #14221, 2014.

SELECTED RELEVANT PROJECT EXPERIENCE

Ancich Waterfront Park Pier and Netshed Building Retrofit, Gig Harbor, WA. Principal-in-Charge. Leading planning, permitting, and engineering services to the City of Gig Harbor for shoreline and pier improvements, including design of 120 LF of shoreline restoration, new bulkheads, re-grading, hardscaping, and geotechnical evaluation. PND also designed two new piers to replace the existing pile-supported piers and improvements to the historic netshed building on the pier.

Ketchikan Berth IV, Ketchikan, AK. Project Manager. Led engineering design and construction administration for Berth IV for the City of Ketchikan. PND designed new in-water structures that include dolphins, a fender system, an OPEN CELL® bulkhead, and a combination platform dock and 50-foot x 150-foot floating dock accessed by a steel transfer bridge and new pile-supported dock. Design and construction were completed in time to allow maximum berthing space during the Alaska cruise season. The new dock has the capacity to berth cruise vessels up to 1,000 feet long.

Ketchikan Berth III, Ketchikan, AK. Project Manager. Led design for the expansion of the City of Ketchikan's cruise ship terminal and uplands development. The project encompasses a 1,200-foot elevated timber walkway, bus staging area, street widening, sidewalks, parking, traffic flow, two renovated cruise ship berths, and a marina reconfiguration. Engineering services for marine structures included a 50-foot by 300-foot floating dock moored by steel pipe pile dolphins, a fixed pile-supported pier, and a 130-foot transfer bridge. Mr. Belsick also led construction administration and full-time on-site construction quality assurance services. 2022: Led study to utilize dock for small cruise ship vessels.

Taiheiyo Cement Marine Facilities, Cebu Island, Philippines. Structural Engineer. Providing design for bulkhead replacement and a new pile-supported jetty platform at the Taiheiyo Cement marine facilities, used for mooring and material offloading/ loading of cement carrier and general cargo vessels. PND designed a 220-meter-long OCSP bulkhead along the alignment of Berths 1, 2, and 3 to reinforce the existing quay wall. Work also included a value engineering concept design for the Echo Beach Modification project, which will reinforce the existing Echo Beach concrete pier for seismic stability and add a new a barge ramp using an OCSP bulkhead.

Foss Maritime Rainier Shipyard Load-Out Bulkhead, Rainier, OR. Project Manager. Led project management, geotechnical review, final design, and construction support for a new OPEN CELL load-out bulkhead at Rainier Shipyard on the Columbia River. The bulkhead design expanded Foss Maritime's shipyard into the river by 80 feet. The new bulkhead will be used for fabrication of ships and load-out of large vessels.



CHRISTOPHER WIEST, P.E. | Senior Civil Engineer

Project Role: Civil Engineer



Chris Wiest is a senior civil engineer with 23 years of experience in engineering and project management for waterfront projects, upland site development, fish passage design, hydrologic/ hydraulic studies, geotechnical investigations, and road and bridge design. He has specialized skills in computer stormwater hydrologic modeling, regional hydraulic modeling, stormwater treatment system design, geotechnical analysis, and project site grading. His work includes planning, permitting, and design of access roads and utilities, including reinforced concrete structures; sanitary sewer and storm sewer utility layout; pump stations and force mains; water supply; and fish passage culverts.

EDUCATION

B.S. Civil Engineering,
2004
Gonzaga University

REGISTRATION

Professional Civil
Engineer:
Washington
#47047, 2010
Oregon
#100926, 2023

SELECTED RELEVANT PROJECT EXPERIENCE

Waterfront Place Central, Port of Everett, WA. Project Manager. Leading planning and design of public infrastructure for a 65-acre mixed-use development at the Port of Everett. Tasks included Fisherman’s Harbor utilities infrastructure, roadways, and sidewalks; Seiner Wharf; Central Marina Floats; Pacific Rim Plaza and Splash Fountain; and the Esplanade. Currently leading Phase II & III, which includes design of the Wharf’s Edge, Esplanade, and Millwright upland districts.

Central Marina Floats, Fisherman’s Harbor – Waterfront Place Central, Everett, WA. Project Manager/Civil Engineer. Led design of Central Marina Floats project which included design of 1,945 LF of new and 340 LF of reconfigured existing concrete floats complete with anchor piles, utilities, and gangways, completed in 2019. The float project at Fisherman’s Harbor is part of planning, design, and construction support for public infrastructure for a 65-acre mixed-use development at the Port of Everett. In addition to his role as Project Manager, Mr. Wiest provided utility design for the Central Marina Floats project, which included a new fire suppression dry standpipe system, potable water system and sewer pump out system.

Craftsman District Development, Phase 1 & 2, Port of Everett, WA. Civil Engineer. Provided design for uplands development of the 13-acre Craftsman District Development site at the Port of Everett, which included buildings and a boatyard for marine crafts associated with the 12th Street Marina. Work included site grading; new stormwater collection and treatment design; and utility design and coordination, including potable and fire water supply. Phase 2: Led civil design of a 2-acre expansion of the site. Work included upland site grading; new storm water collection and treatment.

Salmon Bay Marina, Seattle, WA. Civil/Geotechnical Engineer. Provided preliminary site-civil engineering for dredging, replacement of marina floats and gangways, and utility upgrades at Salmon Bay Marina on the Lake Washington Ship Canal. The project planned to increase the berthing depth in a portion of the marina through dredging up to 12,000 cubic yards of material. Following dredging, the existing floats, piles, and gangways were planned to be replaced with a system capable of handling mega-yacht vessels. PND also prepared and coordinated all permit application forms, drawings, and support documentation for in-water permits.



CHRIS J. FORNACE, P.E. | Senior Civil Engineer

Project Role: Structural Engineer



Chris Fornace has over 10 years of experience in the engineering field, primarily focused on civil and structural design in the Pacific Northwest and Alaska. He is experienced with braced excavations, cellular sheet pile structures, pile-supported structures, fender systems, pedestrian access, and bridges. His projects include structural design for building foundations, retaining walls, park structures, elevated trails and pedestrian promenades, and pile-supported piers and docks. Mr. Fornace also provides structural inspection and condition assessment for bridge and dock structures, as well as on-site construction inspection and field engineering services.

EDUCATION

B.S. Architectural Engineering, 2012, Drexel University
M.S. Civil Engineering, 2012, Drexel University

REGISTRATION

Professional Civil Engineer:
Washington # 53192, 2015

CERTIFICATION

AWS: QC1 - Associate Welding Inspector

SELECTED RELEVANT PROJECT EXPERIENCE

Central Marina Floats/Seiner Wharf – Waterfront Place Central, Everett, WA. Design Engineer. Mr. Fornace provided engineer design and construction support services Port of Everett’s Central Marina Floats project including design of 1,945 LF of new concrete floats and 340 LF of reconfigured existing concrete floats complete with anchor piles, utilities, and gangways, completed in 2019. Other completed tasks include Seiner Wharf; Fisherman’s Harbor development; Pacific Rim Plaza and Splash Fountain; the Esplanade; and utilities infrastructure, roadways, and sidewalks. Currently leading Phase II & III design for the Wharf’s Edge, Esplanade, and Millwright upland districts.

Segment E Bulkhead & Wharf – Waterfront Place Central, Everett, WA. Structural Engineer. Providing structural design for this 165-foot bulkhead being built in front of the existing timber bulkhead and wharf while also brining improved seismic performance to the site. The proposed wharf will be approximately 3200 square feet. Wharf will consist of cantilevered steel pipe piles, steel pile caps, timber glulam stringers and timber decking. The wharf will be designed for pedestrian traffic and capable of supporting an AASHTO H10 Truck.

Taiheiyo Cement Marine Facilities, Cebu Island, Philippines. Structural Engineer. Providing design for bulkhead replacement and a new pile-supported jetty platform at the Taiheiyo Cement marine facilities, used for mooring and material offloading/ loading of cement carrier and general cargo vessels. PND designed a 220-meter-long OCSP bulkhead along the alignment of Berths 1, 2, and 3 to reinforce the existing quay wall. Work also included a value engineering concept design for the Echo Beach Modification project, which will reinforce the existing Echo Beach concrete pier for seismic stability and add a new a barge ramp using an OCSP bulkhead.

Port of Alsea Marina Replacement, Waldport, OR. Project Manager. Led engineering design services to Bergerson Construction for replacement of the Port of Alsea Marina. The existing 34-year-old marina was demolished, and new docks were built that extend 40 feet farther out into Alsea Bay. The new marina includes 38 boat slips, short- and long-term tie-ups, walkways, and a gangway. The old fishing and crabbing pier and float were replaced with a new 30-foot by 24-foot platform and a 150-foot by 10-foot floating dock with a gangway. Construction was completed in April 2021.



MIKE HUGGINS, P.E. | Principal, Senior Engineer
Project Role: Constructability



Mike Huggins has over 30 years of construction-related design experience holding the positions of Chief Engineer, Project Field Engineer, and Estimator in a full range of marine heavy-civil construction. His technical capabilities include design/development and detailed estimating of broad-scope engineering systems, providing technical expertise and constructability review in design-build projects, and managing multi-discipline engineering work. Mike served as the Chief Engineer/Senior Construction Engineer and as an Estimator for General Construction Company from 1996 to 2003. He continues works with national and regional contractors to solve construction engineering problems inherent while building complex marine structures.

EDUCATION

University of Washington, M.S., Civil Engineering, 1988
University of Washington; B.S., Civil Engineering, 1985;
Technical University of Denmark, Valle Scholar, Marine Engineering, 1987

REGISTRATION

Professional Civil Engineer:
WA # 26812;
AK #8097;
CA #47424;
OR #14461;
MT #20364;
LA #PE.0037973; NY #092920-1.

SELECTED RELEVANT PROJECT EXPERIENCE

Seiner Wharf Terminal Repair and Construction, Port of Everett, WA. Construction Engineer. Providing engineering support for design and construction of a new bulkhead and wharf at the Port of Everett. The bulkhead is a cantilevered Z-sheet wall with concrete cap. The wharf consists of steel pile piles, supporting steel pile caps with timber glue laminated stingers and timber deck. The project was completed in May 2017.

Mill A Site Open Cell Bulkhead, Port of Everett, WA. Principal in Charge/Project Manager. Led the preliminary design and cost estimating process for this bulkhead concept update. PND provided preliminary design and cost estimates for the Port of Everett Mill-A cleanup/containment system bulkhead analysis. The goal of the project was to complete the initial effort to configure the bulkhead to meet the environmental objectives and provide a high-capacity marine terminal at conclusion of the work.

CWB (Center for Wooden Boats) Float Reconfiguration, Seattle, WA. Principal in Charge. PND designed and assisted with the permitting of the renovation for The Center for Wooden Boats. The project included the following elements: Driving new steel float pile in and around existing structures; Modify existing site plan; Retrofit of aged timber floats; Design of a new gangway and access ramp structure to meet ADA standards; Retrofit and strengthening of existing Boathouse and Boat Shop; Provide assistance in permitting present and future use of the site.

Port of Anacortes Engineering Support 2021, Anacortes, WA. Principal in Charge. Led multiple projects for this on-call contract including the evaluation and reconstruction design of wharf's bulkhead sinkhole, and apron tiedown improvements.

Baffinland - Milne Inlet Ore Dock, Baffin Island, Nunavut, Canada. Structural QA/QC. Provided structural review of engineering design for the construction of an OPEN CELL™ ore dock and for ship-loader and conveyor system pile foundations at Milne Port in Nunavut, Canada. PND also provided construction observation for the project, which was completed in July 2015.



STEWART WILLIS | Project & Regulatory Coordinator
Project Role: Constructability



Stewart Willis has 10 years of project management experience in heavy civil marine construction projects. He is experienced in the management and oversight of complex environmental permits including Incidental Harassment Authorizations, USACE 10/404 Permits, and Clean Water Act Section 401 Water Quality Certifications. Stewart brings strong skills in: cost control and forecasting; document control; contract administration; change management; estimating and proposals; scheduling; safety and quality control; and environmental management to all his projects. *NOTE: all projects were with Pacific Pile & Marine, prior to Stewart joining PND. The first three PPM projects were done while teamed with PND:*

EDUCATION

BS: Geology
Western WA
University, 2014

CERTIFICATIONS

USACE CQC-M
Certified

Certified Erosion &
Sediment Control
Lead (CESCL)- AK

OSHA 30

SELECTED RELEVANT PROJECT EXPERIENCE—

Pier 55.5 Apron Replacement, Seattle, WA. Project Engineer. Project works included the removal and disposal of the existing timber Pier 55.5 apron and the installation of a new steel pile-supported apron with precast deck panels and CIP topping slab. Stewart acted as a project engineer from award through completion of this project and was responsible for procurement, scheduling, quality control and financial and contract administration.

Chignik Public Dock, Chignik, AK. Project Engineer. Project entailed the construction of a new public dock for the village of Chignik, Alaska. Work included the installation of a 54,000 square foot OPEN CELL™ dock structure constructed of approximately 935 sheet piles with associated fender systems, breasting and mooring dolphins, access catwalks and upland staging and access areas. Stewart was the on-site project engineer responsible for overall quality control and adherence with project specifications. He also managed the project’s marine mammal monitoring program and ensured compliance with all regulatory requirements.

Portage Cove Harbor Expansion, Haines, AK. Project Engineer. Scope of work included removal and reinstallation of seaplane float, installation of an 1,800 LF 16-inch diameter wastewater outfall, and dredging and disposal of more than 120,000 CY of sediment. Stewart led the on-site and quality control management of the project ensuring strict adherence to project specifications and regulatory requirements.

White Rock Pier Reconstruction, White Rock, British Columbia, Canada. Project Manager. Project scope entailed the reconstruction of a 315-foot section of the White Rock Pier which was destroyed during a severe winter storm. Stewart managed the project from award to final completion handling procurement, contract and financial administration, scheduling, and management of 3rd party environmental partners to ensure the protection of important local marine resources.

Port of Alaska Petroleum & Cement Terminal- Phase 2, Anchorage, AK. Project Manager. Stewart acted as Project Manager for the Phase 2 construction of the Petroleum and Cement Terminal at the Port of Alaska, leading the construction and quality control efforts through successful project completion of this complex and multi-disciplined project. Scope of work included the installation of nine 12-foot diameter monopile dolphins, believed to be some of the largest full-length pile ever installed on the west coast of North America. Stewart’s duties included the management of over \$30 million in subcontractor scopes of work as well as a robust marine mammal monitoring program to protect the threatened Cook Inlet Beluga Whale.



MICHAEL ULMGREN, PE, MS | Senior Engineer
Project Role: Coastal Engineer



Michael Ulmgren has 10 years of coastal and water resources engineering and research experience. He was previously a research professional at the University of Alaska Anchorage (UAA), where he performed studies related to coastal engineering, often working on coastal erosion research. Michael conducted wave and storm surge modeling, shoreline change modeling, sediment transport studies, and thermal modeling. Before his job at UAA, Michael was a civil associate at Michael Baker International, where he worked on water resources engineering projects. Michael has performed hydraulic and hydrologic modeling and analysis, stream stability, and scour analysis. As part of his academic studies, he assisted with hydrokinetic research at UAA.

EDUCATION

M.S., Civil Engineering,
University of Alaska
Anchorage
B.S., Civil Engineering,
University of Alaska
Anchorage

REGISTRATION

Professional Civil
Engineer: Alaska
#145780

SELECT RELEVANT PROJECT EXPERIENCE

ARRC Seward Passenger Dock Replacement, Seward, AK. Coastal Engineer. Michael performed mooring analysis based on multiple concepts using MIKE 21-MA and Optimoor to predict loads in mooring components for the Royal Caribbean’s Quantum and Radiance of the Seas cruise ships. He designed a riprap revetment by accounting for the predicted wave climate associated with a 50-year storm event and the angle of attack at the passenger dock. Propwash scour calculations were performed as part of predicting bed scour and toe scour at the sheet-pile interface.

Chefornak Engineering Support, Chefornak, AK. Coastal Engineer. Michael prepared the metocean design criteria report with predicted recurrence intervals of extreme fetch-limited waves and the estimated design vessel wake, as well as calculated water levels during extreme high-water conditions. Extreme currents at the berths were calculated by accounting for tides, storm surge, and peak streamflow during spring breakup.

Naknek Lagoon Shoreline Protection Study, Naknek, AK. Coastal Engineer. Michael performed a shoreline protection study in the vicinity of Naknek’s existing wastewater lagoons, analyzing shoreline stability concerns and evaluating feasibility of shoreline protection measures. The predicted life expectancy of the wastewater lagoons was calculated as it relates to shoreline erosion.

Port Orchard Marina Breakwater, Bremerton, WA. Coastal Engineer. Michael estimated design environmental conditions, computing wave transmission coefficients for the existing breakwater and alternative breakwater configurations. He used MATLAB code to perform Fourier transform analysis on wave measurements from devices deployed inside and to the east of the marina. Recorded wakes were correlated to observed ferry traffic in Sinclair Inlet.

Depoe Bay 2-4 Floats Replacement, Depoe Bay, OR. Coastal Engineer. Michael developed a Delft3D model with the capability to simulate waves and currents inside Depoe Bay. Delft3D-Flow and Delft3D-Wave were coupled, and the effect of short-wave groups on long waves were accounted for through the use of a surfbeat/roller model. Based on extreme waves along the Northwest coast, significant wave heights, peak wave periods, and depth-averaged currents were predicted inside Depoe Bay. Flow patterns and magnitudes of extreme depth-averaged currents associated with a tsunami were predicted based on review of recorded conditions in March 2011 as tsunami surges struck the Oregon coast.



RESUMES: SUBCONSULTANTS

EDUCATION

Master of Environmental Science and Management, University of California, Santa Barbara, 2000

Bachelor of Arts, Fine Arts, New College of Florida, 1991

REGISTRATIONS/ CERTIFICATIONS

American Institute of Certified Planners, AICP Certified Planner No. 020810

California Air Resources Board, Greenhouse Gas Lead Verifier No. H-18-041

PROFESSIONAL AFFILIATIONS

American Planning Association

Association of Environmental Professionals

JOANNE DRAMKO, AICP

Principal-in-Charge/Principal Technical Specialist



Ms. Dramko authors and/or manages the production of environmental documents for a variety of project types, including residential, commercial, recreational, transportation, water/wastewater, and utilities. Her focus is climate change and sustainability within the context of CEQA. In her 22 years of experience with environmental reports under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), Ms. Dramko has prepared environmental documentation for numerous planning projects,

including Programmatic Environmental Impact Reports (PEIR), Initial Study/Mitigated Negative Declaration (IS/MND), Environmental Assessments (EA), Climate Action Plans (CAP), Energy Action Plans, General Plans, and Specific Plans. She has conducted noise and air quality analyses using survey equipment such as the American National Standards (ANSI) Type II noise level meter, computer models such as the California Emission Estimator Model (CalEEMod), and the Federal Highway Administration Traffic Noise Model. Ms. Dramko is also skilled at communicating technical information to general audiences in public forums, and engaging members of the public in the environmental planning process. In addition, Ms. Dramko is an accredited member of the American Institute of Certified Planners (AICP) and an accredited California Air Resources Board (CARB) Greenhouse Gas (GHG) Lead Verifier.

San Diego Unified Port District As-Needed Environmental Review Consulting Services (2018 - Present). Contract Manager for HELIX’s current As Needed Environmental Review Consulting Services contract with the District. Tasks include coordination with the District on preparing scopes and costs for task orders, ensuring that work is conducted within established budgets and schedules, and providing strategic oversight. Individual projects with the San Diego Unified Port District have included:

- HII San Diego Shipyard Inc. Marginal Wharf Repair and As-Needed Pile Replacement Project (2018 - 2019).
- New Restaurant at Ferry Landing EIR (2017 - 2018).
- San Diego Unified Port District San Diego Marriott Marquis & Marina Facilities Improvement and Port Master Plan Amendment (2011- 2013).
- Kona Kai Resort (2013).
- San Diego Unified Port District Shipyard Sediment Site Project - Convair Lagoon Alternative (2011).
- San Diego Unified Port District BAE Systems Pier 4 Replacement Project (2012).
- Coronado Island Marriott Resort Ballroom, Spa, and Renovation Project IS and MND, San Diego Unified Port District (2008).
- Bayshore Bikeway 2009 Mitigated Negative Declaration Addendum and Greenhouse Gas Analysis (Segments 4, 5, 7, and 8A) (2015).





EDUCATION

Master of Science,
Environmental Sciences,
Colorado State
University, 1999

Bachelor of Science,
Natural Resource
Management, San
Diego State University,
1990

CERTIFICATIONS

American Institute of
Certified Planners,
Certified Planner
No. 159640

**PROFESSIONAL
AFFILIATIONS**

Association of
Environmental
Professionals

American Planning
Association, CCAPA

ROBERT EDGERTON, AICP CEP

Project Manager/Principal Planner



Mr. Edgerton draws upon his experience as both a project manager and a senior environmental planner to aid private companies, governmental agencies, and non-governmental organizations in the planning, entitlement, and permitting of land development and infrastructure improvement projects. Calling upon 28 years of experience in the environmental and land use planning industry, his work focuses on California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) compliance, and he has successfully

processed more than 200 environmental compliance documents such as Environmental Impact Reports/Statements (EIR/EIS), Initial Study/Mitigated Negative Declaration (IS/MND), Environmental Assessments (EA). He has also prepared, consulted on, and processed federal, state, and local permits in support of projects with the U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Services (USFWS), Bureau of Land Management (BLM), State and Regional Water Quality Control Board, and California Department of Fish and Wildlife (CDFW). Mr. Edgerton is an accredited member of the American Institute of Certified Planners (AICP) with an advanced Certificate in Environmental Planning (CEP) accreditation.

City of Fort Bragg Waste Transfer Station IS/MND (2022). Project Manager for the preparation of an IS/MND for a new Transfer Station & Recycling Buy Back Center in the City of Fort Bragg, Mendocino County.

Orleans Mutual Water Company, Water Treatment and Storage Improvements IS/MND (2022 - 2023). Project Manager for CEQA-Plus IS/MND for the proposed replacement of an exiting in-line filtration plant and water distribution system with a new water treatment plant system and water storage tank for the Orleans Mutual Water Company in the community of Orleans, Humboldt County.

Phillipsville Water System Improvements (2020 - 2021). Project Manager for preparation of CEQA IS/MND and biological and cultural resource inventories in support of needed improvements to the water supply and delivery system for the Phillipsville Community Services District located in Humboldt County.

Environmental Assessment for Alert Force Complex (P205) at Travis Air Force Base (2017 - 2020). Project Manager for preparation of an Environmental Assessment per NEPA regulations for the Navy’s Alert Force Complex project on the Travis Air Force Base.

Inyo County Renewable Energy General Plan Amendment and PEIR (2013 - 2015). Project Manager assisting with preparation of a General Plan Amendment and Programmatic EIR to address State-mandated renewable energy demands and utility-scale renewable energy projects within the footprint of Inyo County.





EDUCATION

Master of City Planning,
San Diego State
University, 1999

Bachelor of Science,
Criminal Justice
Administration, San
Diego State University,
1993

**REGISTRATIONS/
CERTIFICATIONS**

County of San Diego,
Approved CEQA
Consultant for Visual
Analysis

**PROFESSIONAL
AFFILIATIONS**

Association of
Environmental
Professionals

TIM BELZMAN
Principal Planner



Mr. Belzman authors and manages preparation of environmental compliance documents in accordance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). With 22 years of experience, he has successfully assisted clients with a variety of project types, including transportation, residential, commercial, mixed-use, educational, and recreational. Mr. Belzman has extensive experience with, and specializes in, transportation projects and visual impact analysis. He is skilled in preparing all types of

environmental compliance documents, including Environmental Impact Reports (EIR), Initial Studies/Mitigated Negative Declarations (IS/MND), Negative Declarations (ND), Addenda and Notice of Exemptions (NOE) under CEQA, and preparation of Environmental Impact Statements (EIS), Environmental Assessments (EA), and Categorical Exclusions under NEPA, as well as Community Impact Assessments, Visual Impact Assessments and Section 4(f) Evaluations. In addition, he oversees preparation of technical studies, manages multi disciplinary teams, and coordinates with public agency staff. Mr. Belzman also has experience in land use policy analysis and permit processing, and has prepared and contributed to various planning documents, including Specific Plans, Master Plans, and site feasibility and constraints analyses.

Del Mar Bluffs Stabilization Improvements (2017 - 2023). Environmental Project Manager for preparation of technical studies, NEPA documentation, Federal Coastal Consistency Certification report, and permits for phased bluff stabilization (installation of soldier piles, lagging, seawalls, and drainage upgrades) along a 1.6-mile segment of North Coast Transit District railroad right-of-way in Del Mar.

Bayshore Bikeway 2009 Mitigated Negative Declaration Addendum (Segments 4, 5, 7, and 8A) (2015). Environmental Project Manager responsible for preparation an Addendum to the Final Mitigated Negative Declaration for the Bayshore Bikeway, Segments 4, 5, 7, and 8A) to support a Port Master Plan (PMP) Amendment to identify a portion of the bikeway alignment within Segment 5 as an Interim Bicycle Route in the PMP.

Bear Valley/East Valley Parkways Widening Project EIR/EA (2001 - 2014). Environmental Planner in support of Land Use and Cumulative Impacts sections of the EIR/EA for roadway widening to approximately 2.4 miles of road within the City of Escondido.

Euclid & Market Complete Streets Environmental Services (2017). Project Manager for the preparation of technical studies in support of CEQA and NEPA documents for “complete street” roadway and pedestrian improvements along the segment of Market Street between 47th Street and Euclid Avenue in the Encanto community of the City of San Diego. Coordinated with Caltrans’ Division of Local Assistance and provided environmental support services to the City of San Diego to obtain a NEPA Categorical Exclusion for the project.





EDUCATION

Bachelor of Science,
Geology, California
State University,
Northridge, 2001

Bachelor of Science,
Economics, Florida State
University, 1992

JOHN DEMARTINO

Senior GIS Specialist



Mr. DeMartino is a GIS professional with 25 years of experience and an extensive background in applying GIS applications and workflows in support of biological, cultural, conservation, transportation, public works, municipal/environmental planning, water, and engineering projects, with an emphasis on California Environmental Quality Act/National Environmental Policy Act (CEQA/NEPA) documentation, environmental permitting, and monitoring. He is proficient in the latest GIS software and technologies,

including ArcGIS Desktop, ArcGIS Server, ArcGIS Online, ArcGIS Collector, Trimble TerraSync and Trimble Pathfinder Office GPS software, ERDAS Imagine and ERDAS StereoAnalyst, SketchUp, and several ArcGIS extensions, including Data Reviewer, Spatial Analyst, 3D Analyst, and Survey123 for ArcGIS. Mr. DeMartino has senior-level expertise both performing and supervising key GIS practices, including GIS data development, GPS data collection, CAD data integration, impact and overlay analysis, spatial modeling, mapping, and QA/QC of final deliverables.

Whiskey Slide Road over Jesus Maria Creek Bridge Replacement (2020 - 2022). Senior GIS Specialist in support of CEQA/NEPA compliance documentation and regulatory permits for a bridge replacement project in Calaveras County (Caltrans District 10). Prepared graphics and impact calculations for CDFW Streambed Alteration Agreement, USACE Section 404 Permit, and Regional Water Quality Control Board Section 401 Water Quality Certification.

Mosquito Road Bridge Replacement at the South Fork American River (2022). Senior GIS Specialist for graphics supporting environmental services including arborist survey, biological assessment, cultural resources report, and CEQA Addendum for replacement of Mosquito Road Bridge at South Fork American River in El Dorado County.

Buckman Road Bridge Replacement Project Across Duck Creek (2022 - 2023). Senior GIS Specialist for graphics support permit applications for required regulatory authorizations for the Buckman Road Bridge Replacement Over Duck Creek Project in San Joaquin County.

Laguna Creek Trail and Bruceville Road Sidewalk Improvements (2019 - 2022). Senior GIS Specialist responsible for preparing mapping and analysis necessary to support NES and Aquatic Resource Delineation for trail improvement project in Sacramento County.

Finks Road Bridge Project (2020 - 2021). Senior GIS Specialist for suite of graphics supporting a cultural resources survey for replacement of a functionally obsolete bridge over the Glenn-Colusa Main Canal in the County of Colusa.





EDUCATION

Doctor of Philosophy Candidate, Anthropology, University of California, Berkeley, 2023

Master of Arts, Anthropology, University of California, Berkeley, 2019

Master of Arts, Maritime Studies and Nautical Archaeology, East Carolina University, 2011

Master of Arts, American History, Emory University, 2007

Bachelor of Arts, History, Cum Laude, Emory University, 2007

CERTIFICATIONS

Registered Professional Archaeologist, No. 989542

U.S. SOI Qualified for Historic Archaeology, Prehistoric Archaeology, and History

PROFESSIONAL AFFILIATIONS

Society for Historical Archaeology

BENJAMIN SIEGEL, RPA

Cultural Resources Project Manager



Mr. Siegel is an archaeologist and cultural resource manager with 14 years of experience directing cultural resource management efforts across the United States and in countries abroad. He regularly authors or co-authors cultural resource assessments and reports associated with projects requiring compliance with Section 106 of the National Historic Preservation Act (NHPA), National Environmental Policy Act (NEPA), and California Environmental Quality Act (CEQA). He has applicable experience in directing records searches, field

surveys, site evaluations, data recovery efforts, and developing resource mitigation plans for large scale cultural resource efforts. Mr. Siegel is also experienced in the application of the California Register of Historical Resources (CRHR) and National Register of Historic Places (NRHP) evaluation criteria to various cultural resources. He meets the Secretary of the Interior’s (SOI) Professional Qualifications Standards for prehistoric archaeology, historic archaeology, and history and is a member of the Register of Professional Archaeologists.

Diamond Springs Parkway Phase 1B Environmental Consulting (2023). Senior Archeologist for Cultural Resources Assessment Report and NHPA Section 106 Consultation for a road alignment project in El Dorado County.

Copper Cove Water System Improvements (2022 - 2023). Senior Archeologist for preparation of a Cultural Resources Report in support of CEQA documentation for proposed infrastructure improvements to maintain potable water services to an expanding community for Calaveras County Water District (CCWD).

Orleans Mutual Water Company, Water Treatment and Storage Improvements IS/MND (2022 - 2023). Senior Archeologist for replacement of an existing in-line filtration plant and water distribution system with a new water treatment plant system and storage in unincorporated Orleans, Humboldt County.

Social and Ecological Resilience Across the Landscape Fire Management Features Cultural Resources (2021 - 2023). Senior Archeologist managing a 8,500-acre fuel break expansion project extending through Stanislaus National Forest lands. Cultural resources studies included Section 106 compliance, intensive pedestrian surveys, documented over 100 cultural resources using California DPR 523 site recordation forms and following Stanislaus National Forest protocols, avoidance and minimization strategies for at-risk cultural resources, and Cultural Resources Inventory Report.

West Point Water Supply Drought Resiliency Biological and Cultural Resource Evaluations (2022). Senior Archaeologist responsible for conducting a California Historical Resources Information System records search and leading a pedestrian survey for a dam enhancement project, approximately four acres in size, located in West Point, Calaveras County.





KING CHIN, PE | PRINCIPAL GEOTECHNICAL ENGINEER

Education

M.S., Geotechnical Engineering, Washington State University
B.S., Civil Engineering, Washington State University

Registrations/Certifications

Professional Engineer: California, #C80359; Washington, #38761; Alaska, #12801; Oregon, #85322PE; Louisiana, #38473; South Carolina, #32617; Arkansas, #17742; Kentucky, #32732

Experience

King has more than 25 years of experience providing geotechnical engineering services along the West Coast, across the United States and around the world. His primary focus has been soil and site characterization, foundation design, soft ground engineering, ground improvement, numerical modeling, and performance based seismic design for Ports and marine projects. King is GeoEngineers' technical expert in soil-structure interaction analysis for foundations and below grade walls, liquefaction induced ground failure evaluations, deformation-based evaluation of embankments, earth retaining and embedded structures, and seismic hazards mitigation. King brings highly technical and innovative approaches that will help achieve the objectives of the project and construction process. Many of King's projects have required extensive collaboration with project teams to resolve complex technical issues related to soil-structure interaction and earthquake loading. He has been involved with geotechnical investigations for piers, wharves, bridges, and coastal projects in Washington, Oregon, Alaska, South Carolina, Republic of Georgia, Caspian Sea, and Panama where performance based seismic design and third-party peer reviews were completed. King is adept in interpretations of codes regarding geotechnical engineering design guidelines outlined in ASCE 61-14 Seismic Design of Piers and Wharves, International Building Code (IBC) 2018/ASCE 7-16, AASHTO LRFD Bridge Design and Construction Specifications and the FHWA manuals related to seismic design of bridge, design of deep foundations (driven piles and drilled shafts) and ground improvement methods. His representative project experience includes:

Port of Everett, Waterfront Place Center; Everett, Washington

Teamed with PND, GeoEngineers is providing geotechnical engineering services for the proposed development at Parcels A7, A8 and A12 as part of the Port of Everett Waterfront Place Center project. The project includes construction of three new retail buildings in Parcels A7, A8 and A12, along the bulkhead located at the southwest corner of the intersection of Seiner Drive and 14th Street. The existing bulkhead consists of a sheet pile wall with tiebacks are not designed to the International Building Code (IBC) earthquake event. Therefore, the building and foundation design will need to incorporate the potential impacts of the bulkhead movement during an IBC earthquake event. Our team provided geotechnical seismic design criteria and geotechnical foundation recommendations in support of the building design and construction. King served as GeoEngineers' principal-in-charge.

Port of Portland, Terminal 6 Berths 604 & 605 Seismic Upgrade; Portland, Oregon

As geotechnical and seismic engineering lead, King provided design and construction management of the jet grouting and stone column ground to stabilize the existing bulkhead at Berths 604 and 605 of Terminal



6 along the Columbia River. He developed the project plans and specifications, and the construction cost estimate of the planned ground improvements. King also provided construction support to the Port's construction manager in responding to requests for information (RFI) received from the contractors throughout the construction including a major design change that occurred during construction.

Jordan Cove Energy, Coos Bay LNG Marine Facilities; Coos Bay, Oregon

The Jordan Cove LNG Marine Facilities Development project includes construction of an approximately 1,400-foot-long LNG Berth consisting of a bulkhead structure and pile supported loading platform, breasting and mooring dolphins. As geotechnical and seismic engineering lead, King reviewed the geotechnical data and engineering reports prepared for the project to develop seismic design criteria and design parameters for use in the seismic design of the LNG Berth and other marine structures. He completed 2D and 3D numerical modeling to evaluate the interactions between the bulkhead and the piles supporting other marine structures for both the static and seismic loading conditions.

British Petroleum (BP), Harbor Island Distribution Terminal Bulkhead Replacement; Seattle, Washington

The project consisted of replacement of the 700-foot-long bulkhead located at the BP Distribution Terminal in Harbor Island, Seattle, Washington. The existing bulkhead was constructed in 1900 and is providing lateral support to the existing truck fueling station and warehouse/office building. Mr. Chin was the principal in charge of the geotechnical engineering services that include soil characterization, seismic hazard analyses, slope stability analyses, liquefaction assessment and ground improvement design development. Various seismic and liquefaction mitigation design configurations were evaluated to select the most cost-effective design that has the least impact to the operation of the terminal during construction.

San Diego County Water Authority, Flow Control Facility Seismic Upgrades; San Diego, California

GeoEngineers provided geotechnical engineering services in support of the proposed seismic upgrades for eight flow control facilities located in San Diego County, California. The project sites are spread across San Diego County from Otay Ranch area in the south to Hidden Meadows in the north. Services included evaluation of existing structures and design of structural improvements to mitigate seismic risk complying with California Building Code (CBC) 2019 and American Society of Civil Engineers (ASCE) 41-17, Evaluation and Retrofit of Existing Buildings. Due to familiarity with site conditions, GeoEngineers utilized non-invasive geophysical survey techniques to investigate site conditions which are faster and more cost effective than conventional geotechnical investigation methods. As principal-in-charge, King oversaw the team's site-specific geotechnical seismic design parameters to inform a more realistic design of structural improvements for each building.

Additional Project Experience

- Ivar's Pier 54 Seismic Upgrade, Seattle, Washington
- South Carolina Ports Authority, Hugh K. Leatherman Sr. Terminal Containment Wall Remediation, Charleston, South Carolina
- U.S. Coast Guard, Ketchikan Base Waterfront Facilities Maintenance and Repairs; Ketchikan, AK
- U.S. Navy, NBK Bangor P-907 TPS Pier and Maintenance Facility; Bangor, WA
- Puget Sound Energy, Tacoma Liquefied Natural Gas (LNG) Facility; Tacoma, WA



JASON STUTES, PH.D. | SENIOR MARINE ECOLOGIST

Education

Ph.D., Marine Ecology, University of South Alabama
M.S., Marine Ecology, University of South Alabama Biology
B.S., Aquatic and Fisheries Biology, University of Louisiana at Lafayette

Registrations/Certifications

USFWS Marbled Murrelet Observer
WSDOT Certified BA Author

Experience

Jason is a permitting specialist with 22 years of expertise related to water resources, environmental evaluation, and review for large capital projects. His specific expertise focuses on the analysis and impact of project-level effects (e.g., dredged material placement, shading, salinity shift, and other habitat modifications) as provisioned under the ESA, Fish and Wildlife Coordination Act, NEPA, Magnuson-Stevens Fishery Conservation and Management Act (Essential Fish Habitat), and Marine Mammal Protection Act (MMPA). His primary expertise is in benthic ecology, particularly with marine and aquatic habitats and the fisheries communities associated with them. Jason has spent his career becoming well versed in nearshore/aquatic habitats with particular emphasis on benthic resources and their ecosystem services. His select representative project experience includes:

Port of Bellingham, Squalicum Harbor Renovation and Redevelopment Project; Bellingham, Washington

Jason is currently working with PND for the Port of Bellingham to develop a comprehensive permitting strategy for redevelopment of both basins of the Squalicum Harbor Marina. This project includes both dredging and reconfiguration of the existing floats to modernize the facilities. As part of the early permitting effort of the new conceptual facilities, GeoEngineers is leading the effort mapping existing habitat types including a full macrovegetation survey along with a characterization of sediments for potential contamination threats. As nearshore ecologist, Jason will be involved in early conceptual design analysis and provide feedback on potential impacts from shading, habitat displacement, and construction effects on threatened and endangered species and the habitats they rely on. Jason will also provide early conceptual input on potential mitigation options.

Port of Bremerton, Port Orchard Marina Breakwater Replacement; Port Orchard, Washington

Jason is currently assisting the Port of Bremerton with permitting and geotechnical services for the replacement of an aging breakwater for the Port Orchard Marina. Jason assisted PND and the Port with early project planning and baseline surveys for natural resources and geotechnical conditions that would be used to inform the overall anchor design for the new structure. To expedite the geotechnical survey effort, GeoEngineers adopted the use of a passive acoustic technologies which eliminated any potential impacts to ESA listed species and marine mammals which streamlined the permitting process. Jason is currently evaluating design concepts with the design engineers for potential impacts using the newly adopted NMFS ESA calculator tool in order to narrow potential design concepts. We are researching various



types of project mitigation approaches for the Port, including on-site and off-site mitigation as well as in-lieu fee programs.

City of Renton, Gene Coulon Beach Park North Water Walk Improvements; Renton, Washington

GeoEngineers worked with the PND design team to develop and permit the replacement of the existing waterwalk and picnic floats associated with the park. The project incorporated the replacement of the existing concrete decking and creosote treated wood with new steel framing and 60% light penetration decking to enhance nearshore productivity while prolonging the life of the structure. Jason, as lead permitter, coordinated with the USACE, USCG, WDFW and the City of Renton in order to obtain the appropriate permits and accommodate timing and use requirements of various funding sources including a WA state appropriation. Use of these materials ensured compliance with future leasing agreements with WADNR. Construction is anticipated to occur in 2024.

City of Gig Harbor, Ancich Waterfront Park Improvement and Pier Replacement, Gig Harbor, Washington

Jason led the permitting effort for the City of Gig Harbor proposed improvements to a historic Netshed in downtown Gig harbor designed by PND. This project resulted in a new public park with nearshore access. The Park features public boat storage, bathrooms, and landscaped areas. Jason as permitting lead worked closely with the design team to develop the permitting documents and advised the design team on design elements and nearshore restoration options for the project. Project also included a full macrovegetation survey and removal of creosote treated wood from the nearshore.

Pembina, Jordan Cove LNG Terminal Dredge Permitting and Mitigation Planning, Coos Bay, OR

Jordan Cove Energy Project is planning to construct and operate an LNG Terminal located on the bay side of the North Spit of Coos Bay, Oregon. Because of project siting, several acres of eelgrass and marine wetlands will be dredged due to various project elements. Jason worked with the client, owner, and their multidisciplinary team including PND to develop a comprehensive permitting strategy and mitigation plan to address impacts due to dredging elements. This included the design of a large-scale eelgrass mitigation site. In addition to this, Jason oversaw a comprehensive eelgrass mapping effort that surveyed over 7 acres of subtidal habitat to accurately delineate eelgrass resources potentially at risk from the project.

Additional Project Experience

- Ports of Ilwaco & Chinook, Capital Dredging and Beneficial Reuse Project; Ilwaco, WA
- Port of Ilwaco, Marina Structure Replacement; Ilwaco, WA
- Port of Everett, Mount Baker Terminal Permitting and Nearshore Restoration; Mukilteo, WA
- City of Oak Harbor, Oak Harbor Marina Expansion; Oak Harbor, WA
- City of Port Angeles, City Pier Project Permitting Services; Port Angeles, WA
- U.S. Navy (NAVFAC), Wharf Design/Permitting Support and Environmental Monitoring, Naval Base Kitsap-Bangor, WA



SHANNON LOPEZ
Architectural Historian

EDUCATION

- 2022 Certificate in Historic Preservation, The Boston Architectural College, Boston
- 2018 M.A., History (with an emphasis in architecture), California State University, Fullerton
- 2012 B.A., History, Minor in Asian-Pacific Studies, California State University, Dominguez Hills

SUMMARY QUALIFICATIONS

Ms. Lopez is a qualified architectural historian with over five years of experience who meets or exceeds the Secretary of the Interior’s *Standards and Guidelines for Architectural History*. Her experience includes architectural history research and surveys with photo documentation and recording of built environment resources for local and federal projects. She has extensive knowledge with Native American and local and state historical societies consultation, and in the analysis of primary and secondary sources. Ms. Lopez is acknowledged as an approved Architectural Historian by Caltrans and is listed as a Principal Investigator on Cogstone’s Bureau of Land Management (BLM) Cultural Resources Use Permit. She is accepted as a Principal Investigator for Architectural History and History by the State Historic Preservation Office (SHPO).

SELECTED EXPERIENCE

Highway 35 Cultural Study, Purisima Creek Redwoods Open Space Preserve, San Mateo County, CA. Cogstone conducted cultural resources and historic built environment assessments to determine the potential impacts to cultural and historic built environment resources from the proposed improvement and expansion on the existing North Ridge parking area to the west. Services included a cultural resources records search, a Sacred Lands File search from the Native American Heritage Commission (NAHC), consultations with local historical societies, and an intensive pedestrian survey. No archaeological resources were identified during the survey. One historic resource, a 1940s era house, was photographed and documented on California Department of Parks and Recreation 523 (DPR 523) forms. A Cultural Resource Assessment Report and a Historic Resource Evaluation Report were prepared. This project was part of Cogstone’s on-call contract with Midpeninsula Regional Open Space District. Prime. Architectural Historian. 2022-2023

Southwest Valley Community Plans Update, City of Los Angeles, Los Angeles County, CA. Cogstone provided programmatic cultural and paleontological resources review for the Environmental Impact Report for this project. The Plan Area is approximately 61 square miles in size encompassing three Community Plan Areas (CPAs). The project involved assessing the potential impacts to cultural and paleontological resources from the proposed CPAs. Services included cultural and paleontological resources records searches, a Sacred Lands File search from the NAHC, and historical society consultations. Cogstone prepared separate Cultural and Paleontological Resources Assessment Reports. The City of Los Angeles was the lead agency under the California Environmental Quality Act (CEQA). Sub to PlaceWorks. Architectural Historian. 2022

Antioch Housing Element Update, City of Antioch, Contra Costa County, CA. This study reviewed and summarized available information regarding known archaeological and historical resources within the boundaries of the City of Antioch to support an update to the city’s General Plan. The project involved the preparation of an Environmental Impact Report (EIR) for the city’s 6th Cycle Housing Element Update in compliance with CEQA. Services included a cultural resources records search, a Sacred Lands File search from the NAHC, and prepared a Cultural and Tribal Cultural Resources Technical Report. The report mapped all prehistoric and historic archaeological sites and historic built environment resources within the city. The City of Antioch was the lead agency under CEQA. Sub to Urban Planning Partners, Inc. Architectural Historian. 2022



JOHN GUST
Principal Investigator for Archaeology

EDUCATION

- 2016 Ph.D., Anthropology, University of California, Riverside (UCR) | 2011 M.A., Anthropology, UCR
- 2007 M.A., Applied Geography, University of Colorado, Colorado Springs (UCCS)
- 2002 B.A., Anthropology, minor in Geography/Environmental Studies, UCCS

SUMMARY OF QUALIFICATIONS

Dr. Gust is a Registered Professional Archaeologist (RPA) with over 11 years of experience in field archaeology. His field expertise includes pedestrian surveys, excavation monitoring, resource recording, and historic artifact analysis. Dr. Gust has extensive experience in California cultural resources, having served as Principal Investigator on a variety of projects at Cogstone in the water, transportation, energy, development, and federal sectors. He has also managed cultural resources monitoring projects for both public and private sector clients. He meets the qualifications required by the Secretary of the Interior’s *Standards and Guidelines for Archaeology and Historic Preservation*. Dr. Gust is a member of the Society for California Archaeology, Society for American Archaeology, and the American Anthropological Association and is listed as a Principal Investigator on Cogstone’s Bureau of Land Management (BLM) Cultural Resource Use Permit.

SELECTED PROJECTS

Southwest Valley Community Plans Update, City of Los Angeles, Los Angeles County, CA. Cogstone provided programmatic cultural and paleontological resources review for the Environmental Impact Report for this project. The Plan Area is approximately 61 square miles in size encompassing three Community Plan Areas (CPAs). The project involved assessing the potential impacts to cultural and paleontological resources from the proposed CPAs. Services included cultural and paleontological resources records searches, a Sacred Lands File search from the Native American Heritage Commission (NAHC), and historical society consultations. Cogstone prepared separate Cultural and Paleontological Resources Assessment Reports. The City of Los Angeles was the lead agency under the California Environmental Quality Act (CEQA). Sub to PlaceWorks. Principal Investigator for Archaeology. 2022-2023

Antioch Housing Element Update, City of Antioch, Contra Costa County, CA. The purpose of this study was to review and summarize available information regarding known archaeological and historical resources within the boundaries of the City of Antioch to support an update to the city’s General Plan. The project involved the preparation of an Environmental Impact Report (EIR) for the city’s 6th Cycle Housing Element Update in compliance with the California Environmental Quality Act (CEQA). Services included a cultural resources records search, a Sacred Lands File search from the Native American Heritage Commission (NAHC), and prepared a Cultural and Tribal Cultural Resources Technical Report. The report mapped all prehistoric and historic archaeological sites and historic built environment resources within the city. The City of Antioch was the lead agency under CEQA. Sub to Urban Planning Partners, Inc. Principal Investigator for Archaeology. 2022

Anaheim Groundwater Treatment Plants Phase A Project, City of Anaheim, Orange County, CA. Cogstone provided cultural resources services and managed Native American monitoring for the construction of four City of Anaheim Public Utilities groundwater treatment plants. Services included managing and scheduling Native American monitoring of construction activities for compliance with the mitigation measures for the project and a cultural resources Workers Environmental Awareness Program (WEAP) training for all construction personnel was provided prior to construction activities. Cogstone prepared Cultural Resources Monitoring Compliance Reports for each of the four treatment plant sites. Sub to CDM Smith. Task Manager and Principal Investigator for Archaeology. 2022-2023



PETER SLOANE, PE, LEED AP, GPCP | Project Manager, Mechanical Engineer



Project Role: Project Manager, Mechanical Engineer



Peter Sloane brings a passion for energy-efficient engineering to a range of projects. He manages and leads design efforts for multiple task orders for new construction and facility improvements at facilities throughout the Pacific Northwest.

His design experience includes design for waterfront, federal, and fueling facilities. Peter uses state-of-the-art building energy modeling tools to guide clients through the selection of energy-efficient mechanical systems that will benefit clients and facilities on a long-term basis.

EDUCATION

BS, Mechanical Engineering,
University of Washington

REGISTRATION

Mechanical Engineer,
WA, 48309

CERTIFICATIONS

LEED Accredited Professional

Guiding Principles Compliance Professional

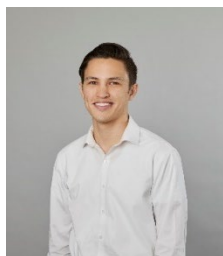
SELECTED RELEVANT PROJECT EXPERIENCE

- **Port of Everett, Waterfront Place Central Planning & Design** – Everett, WA
- **US Navy, P-907 Transit Protection Program Fuel and Maintenance Facility** – Naval Base Kitsap, Bangor, WA
- **US Navy, B2700 HVAC & Electrical Assessment** – Naval Air Weapons Station Whidbey Island, WA
- **US Navy, Building 514 Industrial Ventilation** – Puget Sound Naval Shipyard & Intermediate Maintenance Facility, Bremerton, WA
- **US Navy, Combined Heat & Power Infrastructure Study** – Whidbey Island, WA
- **US Navy, P-1911 RC Complex** – Naval Air Weapons Station China Lake, CA
- **US Navy, P-266 Energy Study** – Naval Air Weapons Station Whidbey Island, WA
- **US Navy, Restore B940** – Puget Sound Naval Shipyard & Intermediate Maintenance Facility, Bremerton, WA
- **US Navy, Survey, Mapping, and Study of Utility Tunnels** – Puget Sound Naval Shipyard & Intermediate Maintenance Facility, Bremerton, WA
- **US Navy, Drydocks 4 & 5 and Pier 3 Modernization** – Puget Sound Naval Shipyard & Intermediate Maintenance Facility, Bremerton, WA

TRAVIS JACKSON, PE | Mechanical Engineer



Project Role: Mechanical Engineer



Travis Jackson is a mechanical engineer who designs mechanical systems for both new construction and facility improvement projects throughout the Pacific Northwest. He brings an eager passion for energy-efficient engineering solutions for clients across multiple industries.

His design experience includes the design of waterfront and fueling facilities. Travis designs energy-efficient systems with long-term benefits for clients using state-of-the-art energy modeling tools.



EDUCATION

BS, Mechanical Engineering, San Francisco State University

REGISTRATION

Mechanical Engineer, WA, 21028908

SELECTED RELEVANT PROJECT EXPERIENCE

- Port of Everett, Waterfront Place Central Planning & Design – Everett, WA
- Port of Port Angeles, Boat Haven Fuel Float – Port Angeles, WA
- US Navy, P-907 Transit Protection Program Fuel and Maintenance Facility – Naval Base Kitsap, Bangor, WA
- US Navy, B6303 VMPB Renovation and Underground Fuel Tanks – Naval Base Kitsap, Bangor, WA
- US Navy, Survey, Mapping, and Study of Utility Tunnels – Puget Sound Naval Shipyard & Intermediate Maintenance Facility, Bremerton, WA
- US Navy, Remodel Building 711 – Naval Base Kitsap, Bangor, WA
- US Navy, Madigan Building 9040 Repair 3 North Inpatient Ward – Joint Base Lewis McChord, WA
- US Navy, Madigan Building 9040 Repair Surgery Clinic – Joint Base Lewis McChord, WA
- US Navy, Remodel Building 9040 Outpatient Clinic – Puget Sound Naval Shipyard & Intermediate Maintenance Facility, Bremerton, WA
- South Seattle College, Automotive Building Renovation – Seattle, WA

MATT LONG, PE, LEED GA | QC Reviewer



Project Role: QC Reviewer



Matt is a detailed-oriented mechanical project engineer experienced in designing new and renovated HVAC and plumbing systems for a range of project types, with a focus on federal and healthcare facilities. He has also worked on systems for educational facilities, mixed-use buildings, retail shopping centers, churches, libraries, and restaurant and commercial kitchens. Matt is proactive in his efforts to identify opportunities for energy and cost savings, excelling in finding the right balance for every client and project.

EDUCATION

BS, Mechanical Engineering, Gonzaga University

REGISTRATION

Mechanical Engineer, CA 35331

CERTIFICATION

LEED GA, USGBC

SELECTED RELEVANT PROJECT EXPERIENCE

- University of Washington Medical Center, Montlake Tower Phase II Expansion – Seattle, WA
- University of Washington, IT Risk Assessment – Seattle, WA
- Seattle Children’s Hospital, Sleep Center & Behavioral Health – Seattle, WA
- Seattle Children’s Hospital, Temporary PICU – Seattle, WA
- Swedish Cherry Hill Medical Center, Chill Hill Center Building Pre-Admitting Clinic – Seattle, WA
- Swedish Cherry Hill Medical Center, Chill Hill Center Building Blood Bank – Seattle, WA



USCG Covered Moorage
Coos Bay, OR



APL Container Cranes
Port of Oakland, Oakland CA



Port of Umm Qasr – Piers 1 & 2
Umm Qasr, Iraq

Education:

Electrical Engineering, CCAF
University of Maryland

Registration:

Electrical PE – Alaska, California
Oregon, Washington, Guam

Professional Affiliations:

Institute of Electrical & Electronic
Engineers (IEEE)
American Boat and Yacht Council
(ABYC)

Ed David, P.E.

Principal/Senior Electrical Engineer

Project Role: Electrical Engineering



Ed has over 35 years of applied electrical engineering, project management and design experience, specializing in electrical power system design for marine and port facilities. He has designed over 200 projects involving marinas, piers, wharfs, docks, dry-docks, waterfront buildings, and boat/shipyards. As a specialist Ed has an in depth understanding of the systems unique to this industry, including shore power/cold ironing, high mast lighting systems, and the supporting upland distribution systems.

Clients appreciate Ed's enthusiasm, clarity in communications, and pro-active management style.

Relevant Experience:

- Hyak Tongue Point – Mobile Boat Haulout Facility; Astoria, Oregon
- Port of Seattle – Terminal 91 Passenger Boarding Sys; Seattle, Washington
- Port of Seattle – Terminal 25/30 Matson Yard Imp; Seattle, Washington
- US Seafoods Homeport, Seattle, Washington
- Port of Kalama – Small Cruise Ship Dock; Kalama, Washington
- Port of Umm Qasr - Iraqi Naval Piers 1 & 2; Umm Qasr, Iraq
- Dakota Creek Shipyard; Anacortes, Washington
- Todd Shipyard; Electrical System Upgrade; Seattle, Washington
- Port of Oakland - APL Container Cranes; Oakland, California
- Port of Long Beach - Crane Turntable; Long Beach, California
- Renovation of Piers 3 and 5, Naval Air Station; Adak, Alaska
- Port of Port Angeles – Boat Haven Redev.; Port Angeles, Washington
- Port of Everett – 12th Street Marina Basin; Everett, Washington
- Northwest Maritime Center & Pier; Port Townsend, Washington
- Oak Harbor – Municipal Pier; Oak Harbor, Washington
- Port of Bellingham – Squaticum Harbor Gate 3 Exp; Bellingham, WA
- Seldovia Ferry Pier & Floating Dock; Seldovia, Alaska
- Homer Ferry Pier & Floating Dock; Homer, Alaska
- Hope Bay Mine Seaport, Nunavut, Canada (Arctic Circle)
- Adak Naval Operating Base - Piers 3 & 5 Utility Renovation; Adak, Alaska
- Adak Naval Operating Base – 12kV Electrical Dist. System; Adak, Alaska
- Tacoma Old Town Dock Reconstruction; Tacoma, Washington
- USCG Covered Moorage; Coos Bay, Oregon
- Kitsap Transit – Annapolis Pier Ferry Dock, Annapolis, Washington
- Port of Bellingham - Gate 3 Expansion Bellingham, Washington
- Port of S. Whidbey - Langley Harbor Redevelopment; Langley, Washington



DENNIS ROSE, PLS

Professional Land Surveyor/Chief Operating Officer



Biography

Mr. Rose has over 21 years of experience as a California Professional Land Surveyor (PLS). He has brought his background as an information technology systems professional to the survey industry. His IT expertise allows him to recognize technological advantages and apply them to real-world survey solutions. As COO, Mr. Rose is tasked with overseeing daily business activities, managing budgets, developing strategic plans, creating policies, and ensuring client satisfaction. His ability to effectively communicate the needs of his clients to the field crews and mappers ensures that the job is done efficiently, effectively and on schedule.

Relevant Experience

Ocean Beach Pier Replacement Project, San Diego, CA. *Professional Land Surveyor.* GSi was contracted to perform topographic survey and underground utility locating along the shoreline for the purpose of pier structural evaluation for potential replacement. The topographic survey was executed concurrently with the bathymetric survey to allow full beach and sea floor profiling. Mr. Rose was responsible for providing oversight and guidance on the entire project, conducting QA/QC on all data deliverables and providing final professional land surveyor stamping and sign off.

Lake Eleanor Bathymetric Survey, Thousand Oaks, CA. *Professional Land Surveyor.* GSi was contracted to perform a topographic and hydrographic survey of Lake Eleanor to enable inundation mapping and to develop an Emergency Action Plan. Mr. Rose and his team used a CEE-LINE single beam echo sounder, coupled with a Trimble R10 GNSS system and TSC3 data collector, to undertake the bathymetric survey from a kayak. He run survey lines at regular intervals throughout the extents of the lake and took topographic survey shots were collected around the edges of the lake to determine lateral lake extents and water level elevations. A comprehensive map of the survey area was delivered to the client with lake surface area and volume determinations.

San Diego Unified Port District, Austal Floating Dry Dock Survey Services, National City, CA. *Professional Land Surveyor.* Responsible for providing professional land surveyor oversight and review/sign off on all deliverables for the Austal Floating Dry Dock project. Mr. Rose and his team utilized existing tidal benchmarks and survey control provided by the client to provide topographic survey and utility locating services according to the applicable scope of work and guidelines required for completion of a grading plan for site improvements.

San Diego Unified Port District, TAMT, Phase 3 Electrical Survey Services, San Diego, CA. *Professional Land Surveyor.* GSi field crews completed a topo survey at the 10th Avenue Marine Terminal in support of the TAMT Phase 3 project. The scope of work for this project involved a topographic survey along a roughly 100-foot wide corridor centered on the proposed alignment of updated electrical conduits. All surface features were collected and mapped. Mr. Rose provided professional land surveyor oversight, final QA/QC, and was responsible for signing off on all deliverables.

Education:

Southwest Missouri State University: Computer Info Sys (CIS)

Santiago Canyon College: Land Surveying Training Coursework

University of California Los Angeles (UCLA): Management Development for Entrepreneurs (MDE) Program

Professional Licenses and Certifications:

Professional Land Surveyor (PLS) California No. 9045 (2013)

CPR First Aid Training

Professional Affiliations:

California Land Surveyors Association (CLSA)

Total Years of Experience: 21

Years with Firm: 7



4. PRICING

Crescent City Harbor District's Scope of Services and related task list was closely reviewed by our proposed team to inform the pricing. Modifications and clarifications are included in Section 5.

PROJECT DESIGN

\$934,000

FINAL EA/EIS DOCUMENT & CEQA/NEPA PROCESS

\$312,000

5a. MODIFICATION OF TASKS & PROJECT TIMELINE

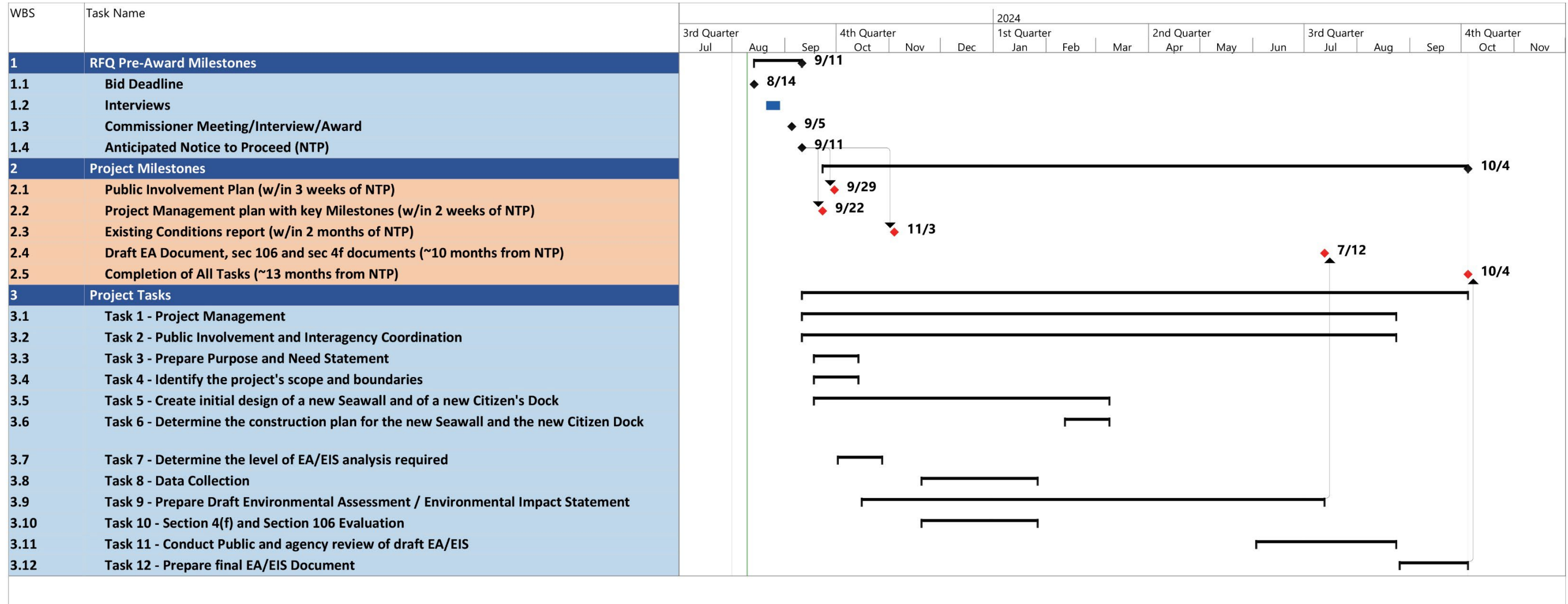
As the Prime Consultant, PND sees the following Task Item Modifications and clarifications to the RFQ scope of work documents as necessary to realistically achieve each set of tasks.

- **TASK 1 – PROJECT MANAGEMENT (ALL TASKS)**
 - Electronic copies in place of hard copies will be provided during each month's invoicing/progress reports.
 - Biweekly meetings will be held remotely with the CCHD project management staff.
- **TASK 2 – PUBLIC INVOLVEMENT AND INTERAGENCY COORDINATION**
 - Our team will assist with advancing the Public Involvement Plan (PIP) already in process by CCHD's community relations consultant.
 - Our team will provide the necessary technical support and documentation for CCHD's community relations consultant to:
 - Hold and arrange at least three public meetings (2 public meetings & a public hearing) during the project.
 - Our team will attend these meetings remotely, as requested.
 - Develop (or update an existing) project website, which will explain the project, the process and the status of the EA/EIS project.
 - Project Meeting presentations will be led by CCHD's community relations consultant. All handouts, presentation materials, maps, graphic display boards, or related materials will be provided by CCHD's community relations consultant.



- **TASK 5 – CREATE INITIAL DESIGN OF A NEW SEAWALL AND OF A NEW CITIZENS' DOCK**
 - Excludes design development of building structures. Our team will include the necessary foundation and utility design for this phase of the project.
- **TASK 7 – DETERMINE THE LEVEL OF CEQA/NEPA ANALYSIS REQUIRED**
 - Assumes one of the virtual meetings identified under Task 2 will be expended as part of the internal consultation effort.
- **TASK 8 – DATA COLLECTION**
 - Services identified under the RFQ Task 10 will be covered under task 8.
 - Our scope does not include a site visit, ambient land or aquatic noise measurements, or analysis of potential water-borne noise impacts on aquatic species.
- **TASK 9 – PREPARE DRAFT ENVIRONMENTAL ASSESSMENT / ENVIRONMENTAL IMPACT STATEMENT**
 - CCHD will serve as the CEQA lead agency.
 - The NEPA federal lead agency is assumed to be MARAD.
 - The CEQA/NEPA process for the project will be completed via the following process:
 - Notice of Preparation (NOP) – our team will prepare a draft NOP for the project in conformance with CEQA Guidelines Section 15082.
 - Our team will prepare and submit an electronic copy of the project description to CCHD and federal lead agency.
 - The EA/EIS document will adhere to the CEQA and federal lead agency NEPA requirements and include the following:
 - Executive Summary
 - Introduction
 - Project Description
 - Environmental Setting, Impacts, and Mitigation Measures
 - Biological Resources
 - Cultural Resources and Tribal Cultural Resources
 - Alternatives Analysis
 - Significant Environmental Effects Which Cannot Be Avoided
 - Growth-Inducing Impacts of the Proposed Project
 - Cumulative Impacts
 - References and Persons/Agencies Consulted and Report Preparers
 - Deliverables
- **TASK 10 – SECTION 4(F) AND SECTION 106 EVALUATION**
 - Services requested under RFQ task 10 will be covered in Task 8.

5b. PROJECT TIMELINE

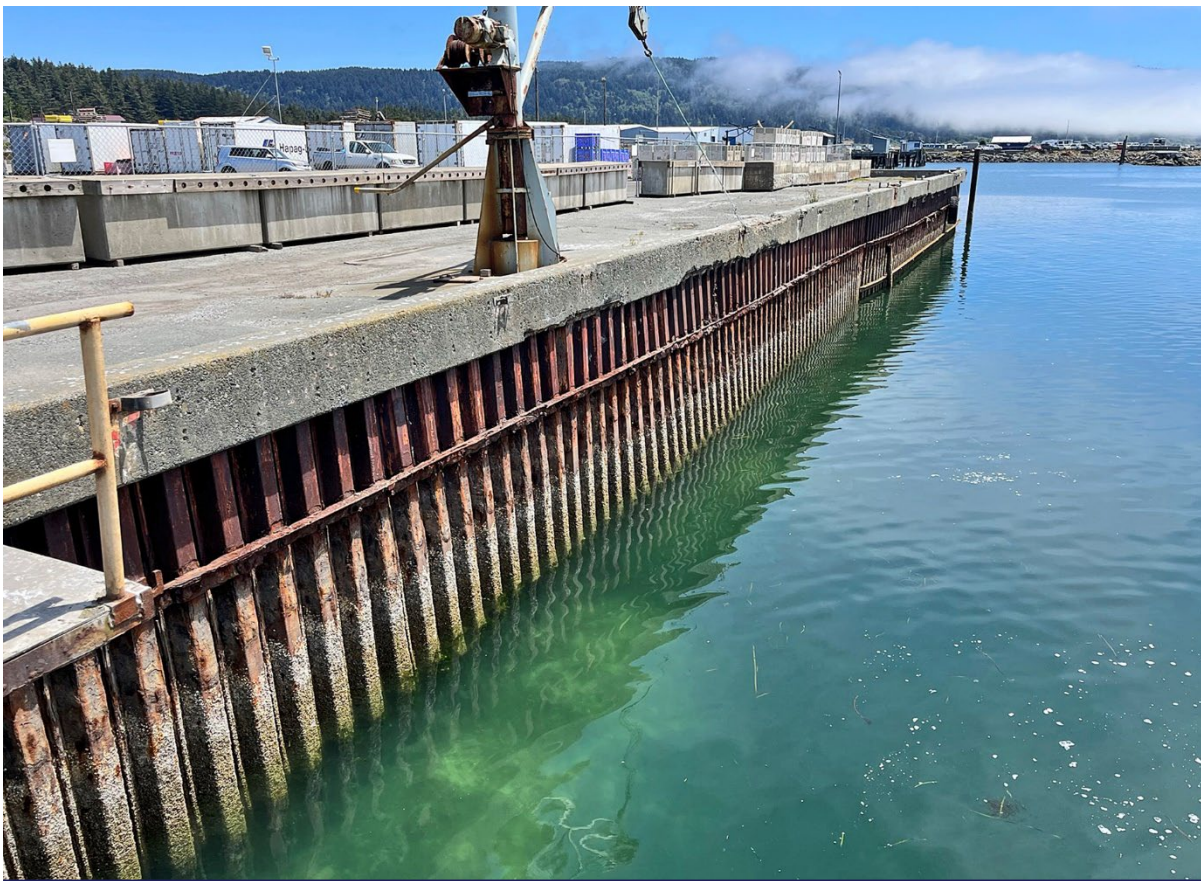




Thank you

Thank you for taking the time to share your needs and hopes for the future of Crescent City's Seawall and Citizen's Dock. We look forward to discussing the many opportunities for this project.

Kim M. [unclear] *Tom Bell*



**Anchorage
Palmer
Juneau
Seattle
Portland
Houston
Vancouver, BC**

pndengineers.com



ENGINEERS, INC.