

Harai & Associates, Inc.

Consulting Civil Engineers & Land Surveyors

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July 12, 2021

Steve Giesprecht
Borough Manager
Petersburg Borough
P.O. Box 329
Petersburg, Alaska 99833

Re: Banana Point Breakwater Replacement Design
Papke's Landing Marine Facility Conceptual Plans
Engineering Services Proposal

Steve,

I would like to offer engineering services for these two projects; 1) Banana Point Breakwater Replacement Design and 2) Papke's Landing Marine Facility Conceptual Plans. Both projects are presently at the end of their design life and in need of repair or replacement. This proposal will be offered as two separate engineering projects.

Banana Point Breakwater Replacement Design

Banana Point boat launch is protected by a series of floating breakwater that is about 30 years old. The floats have deteriorated or gone missing due to harsh weather and waves over the years. This engineering services project will provide a floating breakwater design that will most likely follow the concept of the existing breakwater. It is possible after inventory of the existing breakwater system, parts of the original may have some service life left and only a few new breakwater floats would need to be replaced or the replacement can be phased over several years. These are option that will be considered.

I will be working with you and Borough staff during this project to come up with the best design. The final product from these engineering services will be a floating breakwater design drawings and technical specifications for going to bid for the construction and installation of the floating breakwater. The design drawings and technical specifications bundled into a bid package that can be advertised for this construction.

Costs for Banana Point engineering services are estimated as follows:

Preliminary project inventory of information
Professional Engineer:
6 hrs @ \$115/hr = \$690.00
Field assessment of existing floats

Professional Engineer: 6 hrs @ \$115/hr =	\$690.00
Preliminary design Professional Engineer 32 hrs @ \$115/hr =	\$3,680.00
Preliminary drawings for review by Borough Professional Engineer 24 hrs @ \$115/hr =	\$2,760.00
Site survey to set control monuments for float positioning 2 Man Survey Crew 8 hrs @ \$175/hr =	\$1,400.00
Final drawings after Borough approval Professional Engineer 24 hrs @ \$115/hr =	\$2,760.00
Technical specification documents Professional Engineer 24 hrs @ \$115/hr =	\$2,760.00
Project manual and cost estimate for the bidding process Professional Engineer 24 hrs @ \$115/hr =	<u>\$2,760.00</u>

Banana Point Breakwater Replacement Design
Engineering Services Total \$17,500.00

Papke's Landing Marine Facility Conceptual Plans

Papke’s Landing Marine Facility presently exist as a wooden trestle with a single wooden float at the end for docking boats, a boat launch ramp that was originally constructed as a log transfer facility during the timber industry boom day. And a small substandard parking area to service both the float and the boat ramp.

This proposal is for site improvement conceptual drawings targeting a new trestle/float for docking boats, boat launch ramp improvements, parking lot improvements, public restrooms, et cetera, for the upgrade of the area to meet the public needs for the future. Along with these conceptual drawings will be a preliminary cost estimate that will itemize the different phases of improvements.

I will be working with you and Borough staff during this project to come up with the best design. The final product from these engineering services is a set of conceptual drawings to be use as a future planning tool. These conceptual drawings and cost estimate can be used as a guide for detailed design construction drawings for building the different phases of the upgraded Papke's Landing Marine Facility.

Costs for Papke's Landing Marine Facility Conceptual Plans engineering services are estimated as follows:

Preliminary project inventory of information	
Professional Engineer:	
24 hrs @ \$115/hr =	\$2,760.00
Field assessment of existing site	
Professional Engineer:	
12 hrs @ \$115/hr =	\$1380.00
Site survey of existing site	
2 Man Survey Crew	
8 hrs @ \$175/hr =	\$1,400.00
Preliminary conceptual design	
Professional Engineer	
32 hrs @ \$115/hr =	\$3,680.00
Preliminary conceptual drawings for review by Borough	
Professional Engineer	
24 hrs @ \$115/hr =	\$2,760.00
Final conceptual design	
Professional Engineer	
32 hrs @ \$115/hr =	\$3,680.00
Final conceptual drawings & cost estimate after Borough approval	
Professional Engineer	
24 hrs @ \$115/hr =	<u>\$2,760.00</u>
Papke's Landing Marine Facility Conceptual Plans	
Engineering Services Total	\$18,420.00

The total cost for these engineering services is summed up below:

Banana Point Breakwater Replacement Design	\$17,500.00
Papke's Landing Marine Facility Conceptual Plans	<u>\$18,420.00</u>
Engineering Services Total =	\$35,920.00

The total cost for these engineering services is \$35,920.00. If you have questions or I can be of further help, please call me. Thank you, for considering my engineering and design services.



Alan Murph, PE/LS
Harai & Associates, Inc.