

**CITY OF KODIAK
REQUEST FOR PROPOSALS FOR
PRELIMINARY ENGINEERING AND ENVIRONMENTAL PERMITTING; ST
HERMAN HARBOR REPLACE-PHASE I PN 20-08/8537
ADDENDUM NO. 2
SEPTEMBER 15, 2023**

The following change(s) and/or clarification(s) are made to the Request for Proposals dated August 29, 2023:

- 1) **For Information Only** – the attached “Kodiak St. Herman Harbor Floats Replacement Planning Scoping Document” dated January 27, 2023 is provided for information only.

END OF ADDENDUM NO. 2



Kodiak St. Herman Harbor Floats Replacement Planning

Scoping Document

January 27, 2023

PND No. 221115

Prepared For:

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EXECUTIVE SUMMARY

CITY OF KODIAK ST. HERMAN HARBOR FLOAT REPLACEMENT PLANNING

The City of Kodiak (City) is considering replacing the existing floats in the St. Herman Harbor (SHH). This report was prepared by PND Engineers, Inc. (PND) to assist with preliminary scoping, float concept layouts, project cost estimates, and grant funding opportunities for the planned improvements. Criteria for replacement of SHH floats was developed through a combination of meetings with harbor and City officials, review of the current harbor conditions, and user demand consisting of both existing vessels moored at the harbor and those on a slip wait list.

The comparison of current harbor demand, versus capacity, indicated a deficiency in slips available for a wide variety of vessel lengths. A general conditions inspection performed by PND staff further defined areas of the harbor experiencing deterioration. Therefore, proposed concepts and upgrades were prepared to accommodate such deficiencies.

The total estimated project development costs identified through this study range from approximately \$39,400,000 to \$40,200,000 for the conceptual layouts provided for small to midsize recreational and commercial Floats EE-L and \$13,300,000 to \$16,100,000 for conceptual layouts for large recreational and commercial Floats M-N. The costs include construction, engineering, permitting, and a 30% contingency to accommodate unknown elements prior to full design.

Project construction costs are based on conceptual-level designs and limited site information. The cost estimates represent the best available data for January 2023. Current market conditions continue to be volatile, and recent project costs have increased sharply over those realized 1 year ago.

Information regarding grant opportunities has also been provided in this study to assist the city in targeting funding sources for harbor improvements.

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ACRONYMS & ABBREVIATIONS

AASHTO .American Association of State Highway
and Transportation Officials
ACI American Concrete Institute
ADA Americans with Disabilities Act
ADEC..... Alaska Department of Environmental
Conservation
ADF&G.....Alaska Department of
Fish and Game
ADNR.....Alaska Department of Natural
Resources
ADOT&PF.....Alaska Department of
Transportation and Public Facilities
AISC American Institute of Steel Construction
ASTMAmerican Society for Testing and
Materials
DBB..... Design Bid Build
GPMgallons per minute

HAT highest astronomical tide
HTL high tide line
IBC..... International Building Code
IFC International Fire Code
LAT lowest astronomical tide
MHHWmean higher high water
MHW..... mean high water
MLLW mean lower low water
MLW..... mean low water
MOP manual of practice
MSL mean sea level
MTL mean tide level
mm/yrmillimeters per year
NDS National Design Specification
PS Performance Specifications
psi..... pounds per square inch
ROMRough-Order-of-Magnitude

1. INTRODUCTION

St. Herman Harbor (SHH) was built by the State of Alaska in the 1982 and has been a vital facility for the City of Kodiak's (City) large and diverse commercial fishing fleet for 35 years. The facility provides safe moorage for vessels from all over Alaska and the U.S. West Coast.

In 2006, the City contracted PND Engineers, Inc. (PND) to prepare a St. Herman Harbor Master Planning Report focusing on conceptual design and cost estimates for a Travelift facility and M&P Floats replacement. New M&P floats were installed in 2008 and the remaining harbor floats are the original concrete float systems installed in 1982, which have been in service for nearly 40 years. The typical useful life for concrete float systems from that era ranges between 20 and 30 years. The original float system is beyond its useful life and is in need of replacement based on observed conditions and communications with harbor personnel. Float degradation and cost of maintenance is anticipated to rise exponentially with continued use.

The objective of this phase of the SHH master planning effort is to upgrade the existing harbor to effectively meet the needs of the present and future boating community. The intent of this document is to assist the City in planning, funding, and executing the replacement of the original SHH float systems.

The information presented in this report is separated into five sections:

1. Scoping and Design Criteria
2. Conceptual Harbor Layouts
3. Construction Cost Estimates
4. Construction Phasing Recommendations
5. Grant Funding Opportunities

Details regarding the existing conditions, design criteria, and proposed repairs and updates will be presented in the scoping section, followed by a discussion of several conceptual harbor improvement layouts. Construction cost estimates for all considered layouts are summarized along with information regarding potential grant opportunities and funding sources for harbor improvements.

2. SCOPING

Working closely with the City, PND has identified criteria for preliminary float layouts and construction cost estimates. PND began by investigating the existing slate of vessel types and their sizes, as well as the current slip waitlist to see if adjustments to the existing float layout would increase use efficiency and optimize revenue for the City. PND later performed a general site visit of the harbor to provide supplemental information regarding harbor use, condition of utilities, design criteria, preferred concepts, and items that could potentially be reused, including piles and gangways.

2.1 PROJECT DESCRIPTION

The project includes various upgrades to SHH. Components generally include:

- Remove and replace existing float systems EE-L with new modern float system.
- Extend existing P Head Walk to relocate Float N.
- Add O Float to float systems M-N.
- Provide Americans with Disabilities Act (ADA)-accessible gangways at four (4) locations.
- Provide new potable water, fire water, and electrical systems to all new float systems.
- Provide new sewer pump out stations at selected locations.
- Replace steel piles where needed.

2.2 PROJECT COMPONENTS

Each of the major project components is identified below. General information about the existing systems is briefly summarized, while general condition ratings are provided, when applicable, to identify items for potential reuse, such as gangways and steel piles. This information is based on visual observations from a general site visit performed in November 2022. The project scope is defined for each upgrade or repair item based on PND's understanding of the project. Specific requests by the City are also included.

2.2.1 PREVIOUS, CONSTRUCTION, RENOVATION, AND REPAIRS

Original Construction (1982)

- Designer: PND
- Unknown

Original Construction of Floats N (2000)

- Designer: PND
- Unknown

Original Construction of Floats M&P (2008)

- Designer: PND
- Contractor(s): Western Marine

2.2.2 EXISTING CONDITIONS

St. Herman Harbor has a total of 15 main floats, 13 of which are the original floats installed in 1982 and consist of light-duty concrete modules and timber walers. The majority of these floats accommodate smaller commercial fishing vessels and recreational vessels ranging from 20 to 62 feet in length. Larger vessels that are 63 to 150 feet in length are moored on the west side of the harbor. N Float, located on the southern-most side of the harbor, was constructed in 2000. The float can accommodate vessels up to 150 feet in length and offers linear moorage space to transient vessels.

PND’s site visit of the harbor in November 2022 revealed that the original system construction is experiencing concerning deterioration due to its age, with floats J-L and EE in especially poor condition. Areas of high concern include: failing piles, nonfunctioning electrical pedestals, concrete spalling, differential free boards, and more. Images depicting existing float conditions may be found in Appendix B.

Capacity/Layout

- Floats EE-L
 - ~1,904 linear feet of linear moorage (EE-L)
 - Fairway widths of 1.75 to 2.0 times finger length
- Floats M-N
 - ~1,845 linear feet of linear moorage (M-N)
 - Fairway width 1.4 times finger length (an exception to the minimum ratio of 1.5:1 for fairway to slip length was made for the 150-foot-long vessel mooring on Float N due to angled fingers)

Table 2-1. Existing Slip Count (Entire Harbor)

Slip Length (ft)	17	23	24	30	40	48	55	62	85	100	110	125	150
Slip Count QTY	18	12	50	38	70	35	18	22	28	16	14	6	6

Access

- EE Float Ramp
 - ~80-foot gangway
 - Constructed in 2000
 - Appears to be in good condition for reuse, if necessary
- Ramp #1
 - ~65-foot gangway
 - Access to Floats E-I
 - Constructed in 1982
 - Poor condition, not to be reused

- Ramp #2
 - ~90-foot-long approach dock that connects to a ~70-foot-long gangway
 - Access to Floats J-L
 - Appears to be in good condition for reuse, if necessary
- Ramp #3
 - ~80-foot-long covered gangway
 - Access Floats M-N
 - Appears to be in good condition for reuse, if necessary

Float System Description

- Floats EE-L
 - Concrete modules and timber walers (Floats EE-L)
 - 9-foot-wide main floats
 - Floats in general state of deficiency with concrete spalling and differentials in free boards due to twisting
- Floats M-N
 - Concrete floats
 - Existing floats are fairly new; do not require repair
 - 12-foot-wide main floats

Piling

- Steel pipe piles
- Galvanized with anodes
- Piles failing in lower atmospheric zones (Floats EE-L)
 - Based on observed condition of the existing steel pipe piling, the project should assume reuse of existing piling is not feasible.

Utilities

Existing services include: potable water, electrical, and fire water (See Table 2-2 for services provided on each float). Electrical pedestals in particular are experiencing failure.

Table 2-2. Existing Utilities (Entire Harbor)

Float	Sewer	Potable Water	Electrical	Fire Water
EE	N	Y	Y	Y
E	N	Y	Y	Y
F	N	Y	Y	Y
G	N	Y	Y	Y
H	N	Y	Y	Y
I	N	Y	Y	Y
JJ	N	Y	Y	Y
J	N	Y	Y	Y
K	N	Y	Y	Y
L	N	Y	Y	Y
S (head walk)	N	Y	Y	Y
R (head walk)	N	Y	Y	Y
Q (head walk)	N	Y	Y	Y
M	N	Y	Y	Y
N	N	Y	Y	Y
P (head walk)	N	Y	Y	Y

2.2.3 SCOPE OF REPAIRS & UPGRADES

Floats EE-L will be replaced, as they have met their useful life expectancy. During float replacement, PND will assess the potential for increasing capacity. We are also exploring the reuse of gangways and steel piles in the existing harbor. Floats M-N will be reused and expanded by detaching and shifting Float N to the west and renaming it Float O. A new float will then be added between the existing floats M and N to accommodate more commercial vessels.

Criteria for New Float Layouts

- Provide moorage capacity that is equal to, or greater than, that provided in the existing harbor.
- Target fairway to slip length ratio of 1.75:1, with a minimum fairway to slip ratio of 1.5:1.
- Minimum Stall width (clear distance between fingers) per Tobiasson/American Society of Civil Engineers (ASCE) recommendations.
 - Stall dimensions – minimum 1:10 (width : length ratio)
- Maximum ratio of vessel length overall (LOA) to slip length – 1.1:1 or 5 feet maximum over length.
- ADA accessibility to be determined

Table 2-3. Target Slip Counts (Entire Harbor)

Slip (ft)	20	26	30	36	40	50	60	100	110	120	125	150+	Linear Moorage
Qty	24	83	58	14	79	55	51	47	18	1	6	8	2

Float System

Viable float systems are dependent on climate and site-specific conditions. For SHH, PND recommends timber floats with polytubs for all new recreational use floats and a monolithic concrete or modular pipe float for the new N Float.

Timber Floats (Polytub)

Timber floats are traditionally used to accommodate smaller vessels due to their light mass. For snow and ice regions, timber-decked floats are often preferred because of the ease of ice removal. These floats typically offer low installation costs, and repairs can generally be done readily with local crews.

One popular type of timber float is a polytub float. Polytub flotation units with lighter side walers and decks eliminate all below-water connections for improved longevity. These floats are built as large as possible while allowing transport and can be easily field assembled.

Monolithic Concrete Floats

Monolithic concrete systems are large sections manufactured with structural connections that eliminate the waler system and have fewer parts and pieces than modular floats. Monolithic systems offer greater stability due to the large size of each unit. The systems are also less prone to twist and are generally stronger than other concrete floats. Monolithic float modules are typically 40 to 60 feet in length, but have been cast as long as 100 feet for single-piece finger piers. Monolithic systems provide a longer life span with less maintenance than modular floats because they eliminate timber as the primary structural element. Monolithic floats have deeper sections and greater structural rigidity for handling mooring forces from larger vessels.

Modular Pipe Floats

Modular pipe floats are an ideal solution for facilities exposed to harsh environments such as large waves, high tidal fluctuations, ice flows, and heavy snow loads. Pipe floats provide durable systems suitable for sites where floats are seasonably removed because the pipe bottom allows them to ground-out without damage and they can be launched by crane or trailer. Pipe floats can be manufactured from welded galvanized steel pipe or high-density polyethylene plastic pipe (HDPE) and are usually connected together in 20- to 60-foot segments. These floats predominately have timber decks but can also support concrete decks.

The following upgrades will also be made to the float system:

- Replace head walks S and Q with ± 10 -foot-wide head walks.
- Extend head walk P to accommodate additional float.
- New landing floats at gangways.

Piling

- New steel pipe piles
 - 16-inch-diameter by 0.500 inches to 24-inch-diameter by 0.500 inches
- Galvanized with anodes for protection

Utilities

All identified utilities for Floats EE-L are to be replaced at the same time as the floats. See Table 2-4 for a listing of utilities for each float. The new Float N is proposed to be located to the far west end of the harbor and will be designed and constructed with new utilities. Existing utilities on Floats M and O (formerly known as N) to be demolished and replaced with the new Float N construction.

- New utility systems will include connections to the City-owned services for potable water, fire suppression water, sewer and electrical in the uplands area.
- The City will provide a preferred method of water utility transmission from shore to floats, whether that be via insulated flexible hoses, suspended beneath the gangways, or via a submarine line.
- Provide upland hotboxes with backflow preventer. No meter.
- Install potable water service risers, as shown on concept drawings.
- For the fire suppression system, provide a completely new Class I Manual Standpipe System with a capacity of 500 gallons per minute (GPM) at most remote location hydraulically. Two-hose connections are to have 100 pounds per square inch (psi) residual pressure in accordance with IFC Ch. 36, NFPA 303 and NFPA 14.
- Provide upland Fire Department Connection (FDC) with gangway-suspended pipe connection to float.
- 2 ½-inch fire hose connections on float, spaced per NFPA 14.
- Power to floats I-L will be replaced up to and including the uplands main service switchgear.
- Shore power pedestals will be of stainless-steel construction.
- Shore power pedestals will have metering for all individual receptacle outlets, as opposed to meters for individual slips.
- Position pedestals at the junction of main floats and finger floats, if possible. This is contingent upon designing a means for users to run cords without causing a trip hazard on the finger floats.
- Pedestals for live-aboard slips (if approved) would have two (2) 50A, 208V, 1-phase receptacles and two (2) 30A, 120V receptacles.
- Stainless-steel substations will be provided on the floats. Power circuits will be configured so that repairs to the system will have nominal effects on other harbor users.
- Telecommunications rough-in will be provided for use of the local providers, similar to the new boat harbor.
- Sewer service pump out stations are to be provided at the ends of floats JJ, KK, and O (the existing N float).

Table 2-4. Proposed Utilities at Listed Floats (Entire Harbor)

Float	Sewer	Potable Water	Electrical	Fire Water
EE	N	Y	N	Y
E	N	Y (one spigot at mid float)	N	Y
F	N	Y (one spigot at mid float)	N	Y
G	N	Y (one spigot at mid float)	N	Y
H	N	Y	N	Y
I	N	Y	Y	Y
JJ	Y (pump out station at end of float)	Y	Y	Y
JJJ (new)	N	Y	Y	Y
J	N	Y	Y	Y
K	N	Y	Y	Y
KK (new)	Y (pump out station at end of float)	Y	Y	Y
L	N	Y	Y	Y
S (head walk)	N	Y	Y	Y
Q (head walk)	N	Y	Y	Y
M	N	Y	Y	Y
N (new)	N	Y	Y	Y
O (formerly N)	Y (pump out station at end of float)	Y	Y	Y
P (head walk)	N	Y	Y	Y

2.3 DRIVE DOWN FLOAT

Drive down floats are large floating structures with vehicular access. Typical minimum dimensions are 90 feet by 90 feet or 80 feet by 120 feet. The City has identified a drive down as a desired piece of infrastructure for the community. The float would greatly enhance the facilities in Kodiak by providing harbor users with a means of vehicular access at boat level where vessels may be moored alongside the float for ease of loading and offloading.

Several conceptual locations were considered in SHH, including replacement of the existing boat launch or existing boat lift with a drive down float. Unfortunately, due to the large nature of these structures, there is no ideal location for a drive down float to exist without sacrificing valuable vessel moorage. Both proposed locations would not only disrupt the placement of vessels in the area, but would also provide limited access for vessels on the opposite side of the harbor. Conceptual locations in the adjacent St. Paul Harbor were also considered for the drive down float; however, similar issues arose in regards to disruption of vessel moorage within the harbor and limited maneuvering space (See Appendix A).

One option identified in meetings with harbor personnel suggested extending a road along Uski Island and placing the drive down near the existing sea lion float in St. Herman Bay. This location would utilize undeveloped areas and avoid occupying areas that would be better used for vessel moorage. However, the location would also require construction of a crossing bridge near Float F, a new access road, and additional parking.

2.4 DESIGN CRITERIA

2.4.1 GENERAL PARAMETERS

Design Life: 30 years

2.4.2 TIDAL DATUMS

Station: 9457292, Kodiak Island, AK

Epoch: Present (1983-2001)

Tide Datum Elevations (feet):

- Highest Observed Tide (12/31/1986): +13.59
- Highest Astronomical Tide (HAT): +11.50
- Mean Higher High Water (MHHW): +8.77
- Mean High Water (MHW): +7.87
- Mean Sea Level (MSL): +4.50
- Mean Tide Level (MTL): +4.48
- Mean Low Water (MLW): +1.10
- Mean Lower Low Water (MLLW): 0.00
- Lowest Astronomical Tide (LAT): -2.68
- Lowest Observed Tide (12/14/2008): -3.87

2.4.3 DESIGN STANDARDS

General

- City of Kodiak Standard Construction Specifications and Standard Details
- American Society for Testing and Materials (ASTM) Material Standards
- ASCE Manual of Practice 50, Planning and Design Guidelines for Small Craft Harbors, 2012 (MOP 50)
- United States Access Board Summary of Accessibility Guidelines for Recreational Facilities (2003)

Structural

- American Wood Council, National Design Specification, 2018 ed. (NDS)
- American Institute of Steel Construction, Specification for Structural Steel Buildings, 2022 ed.
- American Concrete Institute, Building Code Requirements for Structural Concrete, 2019 ed. (ACI 318-19)
- American Association of State Highway and Transportation Officials, LRFD Bridge Design Specifications, 8th ed. (AASHTO)
- American Welding Society, Structural Welding Code-Steel, 2020 ed. (D1.1)

- International Building Code 2021 ed., (IBC)

2.4.4 STRUCTURAL DESIGN LOADS

All Components

- Dead Load: Weight of all materials of construction
- Wind Speed (structures): 150 mph (3-second gust)
- Wind Speed (floats/vessels): 132 mph (30-second duration)
- Ground Snow Load: 45 pounds per square foot (psf)
- Seismic: $S_5=1.6$, $S_1=0.9$

All Floats & Gangways

- Berthing Load: Based on vessel dimensions and displacement
- Vessel Mooring Loads: Determined via detailed wind analysis on actual vessel sizes, vessel type, mooring location, mooring line configuration, and wind directions.
- Uniform Live Load: 60 psf (floats shall have 8-inch surplus freeboard at full uniform live load)
- Ground Snow Load: 35 psf maximum
- Design Vessel
 - Finger Length: +5 feet
 - Width: Per Tobbiasen
 - Height: Per Tobbiasen
- Vehicle Loads: Bobcat S100 skid steer loader (5,100 pounds total)

2.4.5 POTABLE WATER PARAMETERS

Pressure: 20 PSI minimum, 80 PSI max.

Flow: 15 GPM per hose bib

Concurrent Use: Assume 30% of risers in use at any one-time maximum

2.4.6 FIRE WATER PARAMETERS

Flow: 500 GPM at the two most remote hose connections (250 GPM Each)

Input Pressure: 200 PSI maximum

Outlet Pressure: 100 PSI minimum

2.4.7 WASTEWATER PARAMETERS

EE-L Discharge: 60 to 90 GPM maximum cumulative discharge

Confirm all vessels rely on remote suction (no onboard discharge pumps)

M-O Discharge: 40 to 70 GPM per pump

2.4.8 ELECTRICAL PARAMETERS

TO BE DETERMINED.

2.5 AVAILABLE DATA

Available data for the project has been limited to what has been provided to PND.

- Transpac Marinas, Inc. report documents
- Vessel waitlist
- 2005 peer review of PND findings
- PND St. Herman Harbor Comprehensive Plan
- 2002 facility conditions inspection data
- 2010 Kodiak Waterfront Master Plan
- 2010 cost estimate provided by PND

3. CONCEPTS

3.1 CONCEPT DEVELOPMENT

Using vessel moorage and transient data provided by the City, PND reviewed current moorage demand and capacity for SHH. The current harbor consists mainly of original floats constructed with light-duty concrete modules and timber walers in 1982 that accommodate small commercial fishing and recreational vessels. Floats EE-L, are to be entirely replaced and reconfigured due to their age and deterioration. Images depicting existing float conditions are in Appendix C. Larger vessels are moored on floats N and M&P, which were constructed more recently in 2000 and 2008, respectively. These floats are considered fairly new and are to remain during reconstruction of the harbor.

The reconstruction goals for the SHH floats include maximizing moorage capacity to accommodate both existing and waitlisted vessels, while also maintaining enough fairways between floats. A graph of current vessel moorage demand, existing and waitlisted, was developed to help indicate which slip lengths were higher priority for the harbor (see Figure 3-1).

Upon consideration of moorage demand and capacity, PND recognized limitations in maximizing moorage within the existing space of floats EE-L. An expansion of the existing M-N floats was suggested to open up opportunities for accommodating additional larger vessels without sacrificing slips and fairway widths in areas better suited for recreational and smaller commercial vessels. NOAA bathymetry and tide datum were also considered in conceptual development of the floats.

Conceptual layouts for the SHH replacement were separated into two groups: Floats EE-L for recreational and smaller commercial vessels and Floats M-N for larger commercial vessels. Six general layouts were developed for replacing floats EE-L and two general layouts were developed for expanding floats M-N. These eight total arrangements consist of varying slips counts, as shown in Table 3-1. See Appendix A for conceptual layout drawings.

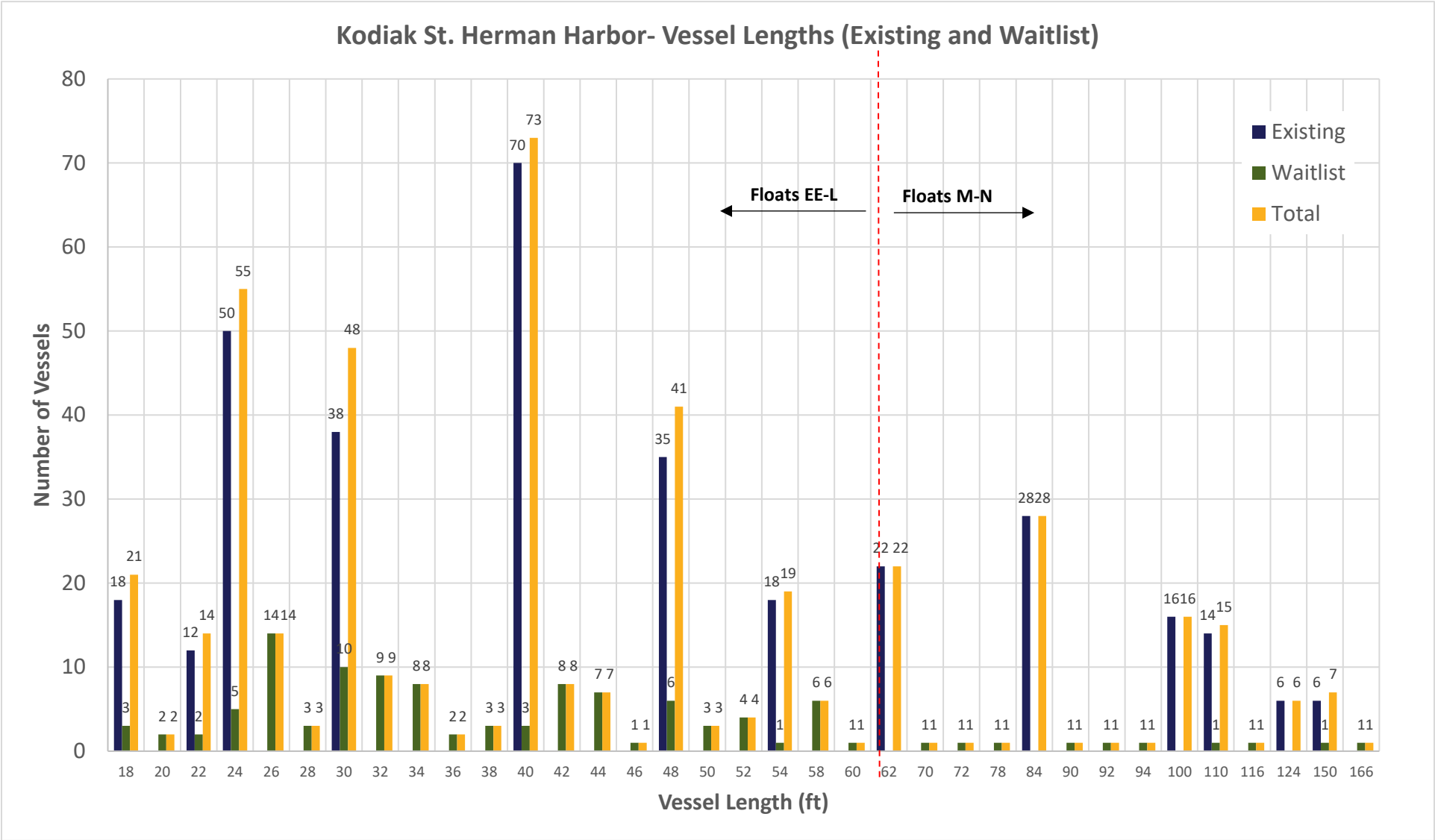


Figure 3-1. Existing and Waitlisted Vessel Lengths

Table 3-1. Concept Comparison

Floats EE-L (Slip Lengths ≥20 feet and ≤ 60 feet)											
Length (ft)	Existing Slip Count	Waitlisted Vessels	Proposed Slip Length (ft)	Target Slip Count	Concept 1 Slip Count	Concept 2 Slip Count	Concept 3 Slip Count	Concept 4 Slip Count	Concept 5 Slip Count	Concept 6 Slip Count	
17	18		20	24	28	26	28	30	30	26	
20		6									
23	12		26	83	80	86	92	92	92	92	
24	50										
26		21									
30	38	20	30	58	58	62	66	66	62	66	
36		14	36	14	10	10	10	10	20	10	
40	70	9	40	79	84	88	98	98	88	74	
48	35		50	55	57	60	62	62	63	58	
50		20									
55	18		60	51	55	36	37	39	39	54	
60											
62	22	11									
Subtotal	263	101									

Floats M-O (Slip Lengths >60 feet and ≤ 150 feet)							
Length (ft)	Existing Slip Count	Waitlisted Vessels	Proposed Slip Length (ft)	Target Slip Count	Concept 1 Slip Count	Concept 2 Slip Count	
70		1	100	47	20	33	
73		1					
78		1					
85	28						
100	16						
110	14	4	110	18	14	33	
120		1	120	1	15	1	
125	6		125	6	6	6	
150	6	1	150	6	6	6	
150			Linear Moorage	1	1	1	
167		1	Linear Moorage	1	1	1	
Subtotal	70	10		78	61	79	

Green indicates vessel slip size needs that are met with the concept

Blue indicates vessel slip size needs that may be met using excess from larger slip lengths

3.2 CONCEPT NARRATIVES

A comparison of the various concept layouts is provided below. Six float layout concepts are provided for floats EE-L, which are considered to be recreational and smaller commercial vessel slips. Two concepts are provided for floats M, N, and O, which are considered to be large recreational and commercial vessels.

Floats EE-L Concepts (Slip Lengths ≥ 20 feet and ≤ 60 feet):

Concept 1 (EE-L) – Base Layout

- Removes existing slips on Float EE to provide room for loading and linear moorage. Maintain 90.5 feet between Floats EE and E to allow for operations on ride side during low tide.
- Removes existing Float R head walk
- Adds new Floats JJJ and KK
- Maintains fairway of 1.5 times the vessel length between Floats E-F, F-G, and G-H. Fairway of 1.75 times the vessel length for all other vessels.
- Provides transient/linear moorage on west side of Float JJJ.
- Provides 85 feet between Floats JJJ and J to allow for access to Float S.
- Does not meet target slip count for 26-foot and 36-foot slips; however, these slip size needs can be met by using excess slips from larger slip lengths.

Concept 2 (EE-L) – Modified Layout

- Provides linear moorage on the east side of Float E, maintains slips on the west side.
- Replaces linear moorage on Float JJJ with slips.
- Provides 80 feet between Floats EE and E.
- Fairway of 1.75 times the vessel length for all vessels; however, slight excess in fairway width between Floats J and JJJ, as well as Floats L and M.
- Does not meet target slip count for 60-foot slips, needs cannot be met elsewhere in this concept.

Concept 3 (EE-L) – Modified Layout

- Shifts Float EE west to open up west and east side of float during low tide operations.
- Replaces linear moorage on Float JJJ with slips.
- Shifts Floats EE-L east so that there is 175 feet between Floats L and M (1.75 times the vessel length for 100-foot vessels on Float M) to open up more space for larger vessels to maneuver.
- Does not meet target slip count for 60-foot slips, needs cannot be met elsewhere in this concept.

Concept 4 (EE-L) – Modified Layout

- Shifts Floats E-L so that there is 150 feet between Floats L and M (1.5 times the vessel length for 100-foot vessels on Float M).
Does not meet target slip count for 60-foot slips, needs cannot be met elsewhere in this concept.

Concept 5 (EE-L) – Modified Layout

- Replaces ten (10) 40-foot slips with ten (10) 36-foot slips.
- Does not meet target slip count for 60-foot slips, needs cannot be met elsewhere in this concept.

Concept 6 (EE-L) – Modified Layout

- Shifts Float EE back to original position.
- Repeats Concept 1 for Floats E and J-L so that target slip count for 60-foot slips may be met, adjusts other slip lengths/floats accordingly.
- Fairway of 1.75 times the vessel length for all vessels.
- Does not meet target slip count for 36-foot and 40-foot slips; however, these slip size needs can be met by utilizing excess slips from larger slip lengths.

Floats M-O Concepts (Slip Lengths >60 feet and ≤ 150 feet):

Concept 1 (M-O) – Original Layout

- Detaches and shifts existing Float N to the west.
- Adds new float between the existing floats with 120-foot slips on the east side and linear moorage on the west side.
- Maintains fairway of 1.75 times the vessel length between Floats M and N. Tighten up fairway to 1.5 times the vessel length between Floats N and O to allow for space between existing vessel lift.
- Does not meet target slip count for 100-foot or 110-foot slips; needs cannot be met elsewhere in this concept.

Concept 2 (M-O) – Modified Layout

- Modifies new float to include 100-foot slips on the west side and 110-foot slips on the east side.
- Does not meet target slip count for 100-foot slips; however, slip size needs can be met by utilizing excess slips from larger slip lengths.

4. CONSTRUCTION COST ESTIMATES

PND has prepared Rough-Order-of-Magnitude (ROM) construction cost estimates for each layout option. Each estimate has been prepared to a level of accuracy targeted to be within 30% of the actual costs. To ensure a reasonable level of accuracy for the current economic climate, we have used current cost estimates from recent similar scoping projects. Estimates cover major elements of the planned improvements, including floats, gangways, and harbor utilities. The total estimated project development cost ranges from approximately \$39,400,000 to \$40,200,000 for the six (6) conceptual layouts provided for recreational and smaller commercial Floats EE-L. For the two (2) concepts proposed for the larger commercial floats, Floats M-N, the total estimated project development cost ranges from approximately \$13,300,000 to \$16,100,000. See Table 4-1 below for a summary of all the float replacement costs. Detailed construction cost estimates are provided in Appendix B.

Table 4-1. Cost Summary

FLOAT REPLACEMENT COSTS SUMMARY	
Recreational/Small Commercial Floats EE-L	
Concept 1	\$40,146,970
Concept 2	\$39,324,838
Concept 3	\$39,875,581
Concept 4	\$40,029,443
Concept 5	\$39,861,187
Concept 6	\$39,621,201
Large Recreational and Large Commercial Floats M, N, & O	
Concept 1	\$13,282,861
Concept 2	\$16,078,583

5. CONSTRUCTION PHASING RECOMMENDATIONS

Based on the resulting construction cost estimates, PND has provided two preliminary construction phasing recommendations that are geared toward minimizing disruption to harbor operations and accommodating potential funding appropriations.

PND recommends that both phased float replacement plans begin on the southwest end of the harbor with the large commercial floats and then move northeast toward the recreational and smaller commercial floats. Project Phasing Approach 1 would consist of four phases. The first phase of construction would extend Head Walk P to facilitate the relocation of Float N (becoming Float O), approximately 400 feet to the southwest. The second phase would include the addition of a new Float N, as shown in the conceptual drawings (Appendix A). Phase 3 and 4 would include removing and replacing the adjacent existing float systems, starting with Floats J-L then finishing with Floats EE-JJJ under a final phase. Gangways and utility connections would be replaced at the same time as the floats in each designated phase.

Project Phasing Approach 2 would be a more cost-efficient plan that reduces the four phases from the previous approach into two phases: construction in the large commercial float portion of the harbor (Floats M-O) and construction in the recreational and smaller commercial float portion of the harbor (Floats EE-L). Project phasing approaches are illustrated in Figure 5-1 and 5-2 below. See Table 5-1 and Table 5-2 for cost estimate breakdowns by phase.

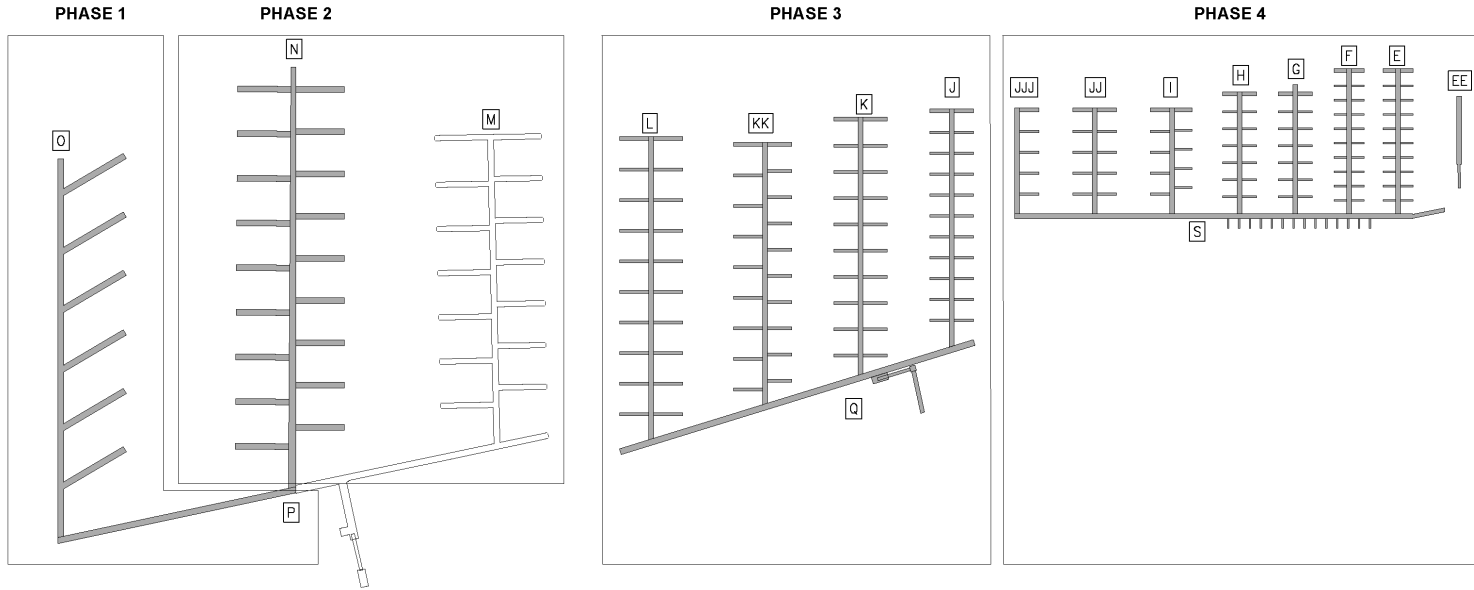


Figure 5-1. Construction Phasing Approach 1

Note: M Float will remain in place and receive electrical upgrades.

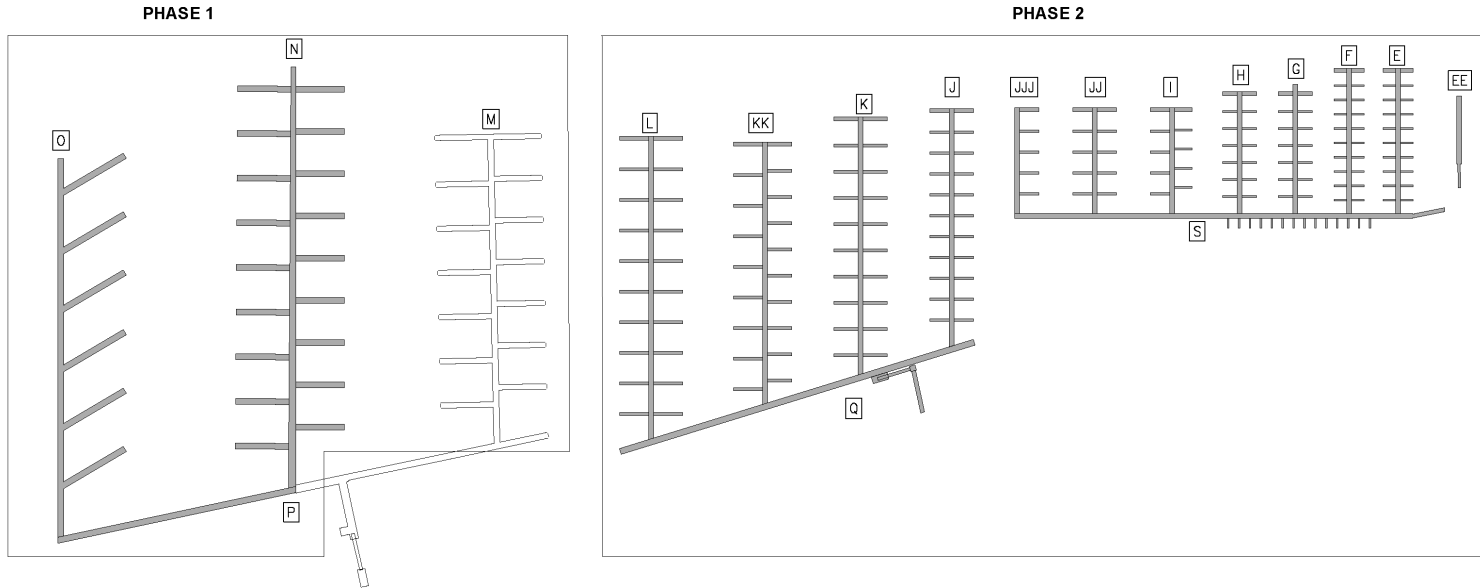


Figure 5-2. Construction Phasing Approach 2

Note: M Float will remain in place and receive electrical upgrades.

Table 5-1. Construction Phasing Approach 1

PROJECT PHASING APPROACH 1					
Components	Phase 1	Phase 2	Phase 3	Phase 4	Totals
Relocate N Float to "O"	\$664,000.00				\$664,000.00
Extend P Float	\$1,062,032				\$1,062,032.00
Furnish 24-inch Piling	\$396,688				\$396,688.11
Mobilization and Demobilization	\$950,000				\$950,000.00
Demo and Disposal	\$45,000				\$45,000.00
Contractor Indirects	\$181,200				\$181,200.00
Concept-Level Contingency	\$1,394,875				\$1,394,874.94
Engineering and Project Management	\$386,975				\$386,974.99
New N Float		\$5,661,358			\$5,661,357.69
Install Utilities		\$1,736,880			\$1,736,880.00
Install Anodes		\$105,000			\$105,000.00
Mobilization and Demobilization		\$550,000			\$550,000.00
Contractor Indirects		\$271,800			\$271,800.00
Concept-Level Contingency		\$2,092,312			\$2,092,312.40
Engineering and Project Management		\$580,462			\$580,462.48
Demo Existing Floats J-L			\$270,000		\$270,000.00
Furnish 16-inch Piling			\$455,400		\$455,400.00
New Floats J-L and Headwalk			\$12,249,574		\$12,249,574.00
Install J-L Anodes			\$124,200		\$124,200.00
Install Utilities			\$1,961,352		\$1,961,352.00
Mobilization and Demobilization			\$950,000		\$950,000.00
Contractor Indirects			\$438,000		\$438,000.00
Concept-Level Contingency			\$5,248,717		\$5,248,716.60
Engineering and Project Management			\$1,343,743		\$1,343,743.32
Dredge Small Vessel Harbor			\$6,543		

PROJECT PHASING APPROACH 1					
Components	Phase 1	Phase 2	Phase 3	Phase 4	Totals
Demo Existing Floats EE-JJ				\$180,000	\$180,000.00
Furnish 18-inch Piling				\$1,020,000	\$1,020,000.00
New Floats EE-JJJ and Ladders/Safety Equipment				\$6,338,340	\$6,338,340.00
Install EE-JJJ Anodes				\$186,300	\$186,300.00
Install Utilities				\$2,942,028	\$2,942,028.00
Install Trestles and Gangways				\$945,800	\$945,800.00
Mobilization and Demobilization				\$800,000	\$800,000.00
Contractor Indirects				\$292,000	\$292,000.00
Concept-Level Contingency				\$3,499,144	\$3,499,144.40
Engineering and Project Management				\$895,829	\$895,828.88
PHASE TOTALS	\$5,080,770	\$10,997,813	\$23,047,529	\$17,099,441	\$56,225,552

1. All estimates are based on 2022 U.S. dollars.
2. For the purpose of phasing evaluation, the above plan is based on Concept 1 for Floats EE through L and Concept 2 for float M, N, & O.

Table 5-2. Construction Phasing Approach 2

PROJECT PHASING APPROACH 2			
Components	Phase 1	Phase 2	Totals
Relocate N Float to "O"	\$664,000.00		\$664,000.00
Demo and Disposal	\$45,000		\$45,000.00
Extend P Float	\$1,062,032		\$1,062,032.00
New N Float	\$5,661,358		\$5,661,357.69
Furnish 24-inch Piling	\$396,688		\$396,688.11
Install Utilities	\$1,736,880		\$1,736,880.00
Install Anodes	\$105,000		\$105,000.00
Mobilization and Demobilization	\$1,100,000		\$1,100,000.00
Contractor Indirects	\$453,000		\$453,000.00
Concept-Level Contingency	\$3,487,187		\$3,487,187.34
Engineering and Project Management	\$967,437		\$967,437.47
Demo Existing Floats		\$450,000	\$450,000.00
Furnish 16-inch Piling		\$455,400	\$455,400.00
Furnish 18-inch Piling		\$1,020,000	\$1,020,000.00
Install New floats		\$18,587,914	\$18,587,914.00
Install Anodes		\$310,500	\$310,500.00
Install Utilities		\$4,903,380	\$4,903,380.00
Mobilization and Demobilization		\$1,200,000	\$1,200,000.00
Contractor Indirects		\$730,000	\$730,000.00
Concept-Level Contingency		\$8,747,861	\$8,747,861.00
Engineering and Project Management		\$2,239,572	\$2,239,572.20
Dredge Small Vessel Harbor		\$6,543	
Install Trestles and Gangways		\$945,800	\$945,800.00
PHASE TOTALS	\$15,678,583	\$39,596,970	\$55,275,552

1. All estimates are based on 2022 U.S. dollars.
2. For the purpose of phasing evaluation, the above plan is based on Concept 1 for Floats EE through L and Concept 2 for float M, N, & O.

6. GRANT FUNDING OPPORTUNITIES

COMMERCIAL PASSENGER EXCISE TAX

Administrator: City of Kodiak

Eligibility: Local governments receiving cruise ship port calls

Use of Funds: The State of Alaska collects a head tax of \$34.50 per passenger on large (250+ berths) cruise ships operating in the state. Of that, \$5 per passenger is distributed to the first seven ports of call in Alaska. These funds may be used on port facilities, harbor infrastructure, and other services that support the cruise ships calling on a community. Use of these funds has been the subject of recent lawsuits.

REVENUE AND GENERAL OBLIGATION BONDS

Administrator: Alaska Municipal Bond Bank Authority (AMBBA)

Eligibility: Alaska municipalities, joint action agencies, and regional health organizations

Use of Funds: AMBBA can assist eligible Alaska borrowers with bond financing for capital improvements such as schools, water and sewer systems, public buildings, harbors, and docks. General obligation bonds are backed by a city's taxing authority, such as a local property tax, while revenue bonds are backed by specified revenues from an income-producing project. Projects completed with support from AMBBA have include harbor improvements in Seward and Homer.

ALASKA MUNICIPAL HARBORS MATCHING GRANT

Administrator: Alaska Department of Transportation and Public Facilities (DOT&PF)

Eligibility: Alaska municipalities and regional housing authorities

Use of Funds: This program requires a 50/50 match and can only be used for the construction phase of small boat harbor facilities. Legislative grants to municipalities may not be used for the local match requirement. Maximum state contribution is \$5 million per year.

BETTER UTILIZING INVESTMENTS TO LEVERAGE DEVELOPMENT (BUILD) GRANTS

Administrator: U.S. Department of Transportation (DOT)

Eligibility: State, local, and tribal governments

Use of Funds: Formerly known as TIGER grants, BUILD grants help fund surface transportation projects such as roads, bridges, transit, rail, port, or intermodal transportation. Half of the available funds (\$450 million of \$900 million) are designated for rural areas of the United States. There is no matching requirement for projects in rural areas. The minimum project award for rural areas is \$1 million, and the maximum is \$25 million. Selection criteria focus on "safety, economic competitiveness, quality of life, state of good repair, innovation and partnerships with a broad range of stakeholders." Cost-benefit analyses are welcomed, but not required; DOT recognizes that these analyses are not always possible in the early feasibility stages of the planning process.

USDA RURAL COMMUNITY FACILITIES DIRECT LOAN & GRANT PROGRAM

Administrator: U.S. Department of Agriculture

Eligibility: Public agencies, non-profit organizations, and tribal entities located in rural areas

Use of Funds: Funds may be used to purchase or construct various types of community facilities, including health care clinics, street improvements, community centers, fire trucks, museums, community gardens, and many other types of facilities. Priority is given to communities with fewer than 5,500 residents and/or median household incomes below 80% of the state non-metropolitan median household income. Loans, grants, and loan guarantees are available through this program. Applicants must be unable to finance the project from their own resources and/or through commercial credit at reasonable terms.

STATE OF ALASKA BOATING AND ANGLER ACCESS GRANT PROGRAM

Administrator: Alaska Department of Fish and Game, Sport Fish Division

Eligibility: Typically involve state, federal, and local agencies that manage boating access sites

Use of Funds: Funds for this program derive from federal excise taxes and import duties placed on recreational fishing and boating equipment and supplies – as set up by the Dingell-Johnson Act. This program will cover up to 75% of the cost of an eligible project and requires a 25% non-federal match. Funded projects must primarily benefit the recreational boating and sport fishing public (not primarily benefiting subsistence or commercial fishing users).

RASMUSON PROGRAM

Administrator: Rasmuson Foundation

Eligibility: Non-profit organizations, as well as local and tribal governments

Use of Funds: This grant program is designed to support capital projects of “demonstrable strategic importance or innovative nature that address issues of broad community or statewide significance.” The Foundation specifies that they are rarely the largest or only contributor and generally expect the project will have multiple other funding sources that demonstrate widespread community support. Two different grant programs (Tier 1 and Tier 2) are available, one for grants up to \$25,000 and the other for grants of more than \$25,000.

FEDERAL LANDS ACCESS PROGRAM (FLAP)

Administrator: U.S. DOT

Eligibility: Unrestricted

Use of Funds: FLAP funds support projects that improve access to federal lands. Funding is provided to states via a specified formula. FLAP projects in Alaska typically involve trailhead, boat launch, road, and/or trail improvements.

DOT&PF CIP

Administrator: DOT&PF

Eligibility: DOT&PF manages these funds

Use of Funds: The DOT&PF CIP program works with three main streams of funding for transportation projects in the State of Alaska: federal highway funds, other federal funds, and state capital budget funds.

U.S. DOT PORT INFRASTRUCTURE DEVELOPMENT (PIDP) GRANTS

Administrator: U.S. DOT, Maritime Administration

Eligibility: State, local, or tribal governments or their subdivisions

Use of Funds: Projects funded will “improve the safety, efficiency, or reliability” of coastal seaports (deep draft ports capable of handling drafts of at least 20). A total of \$200 million is made available to all U.S. coastal seaports, while another \$93 million is set aside for the nation’s largest 15 ports by TEUs handled. The minimum grant award is \$10 million and there is no maximum award amount specified.

ALASKA SMALL BUSINESS ECONOMIC DEVELOPMENT LOAN PROGRAM

Administrator: Alaska Department of Commerce, Community, and Economic Development

Eligibility: Small businesses located in Alaska communities with fewer than 30,000 residents

Use of Funds: Loans through this program are to be used to start or expand businesses creating long-term employment, may not exceed \$300,000, and must be adequately secured. These loans are designed to step in or supplement in situations where private banks are not willing to fund an entire project.

U.S. Army Corps of Engineers (USACE) CIVIL WORKS PROGRAM

Administrator: USACE

Eligibility: These projects typically involve a local municipality

Use of Funds: USACE’s civil works program supports selected projects from the planning and feasibility stages all the way through to construction. The new harbor in Valdez is an example of a recent project that received funding from USACE.

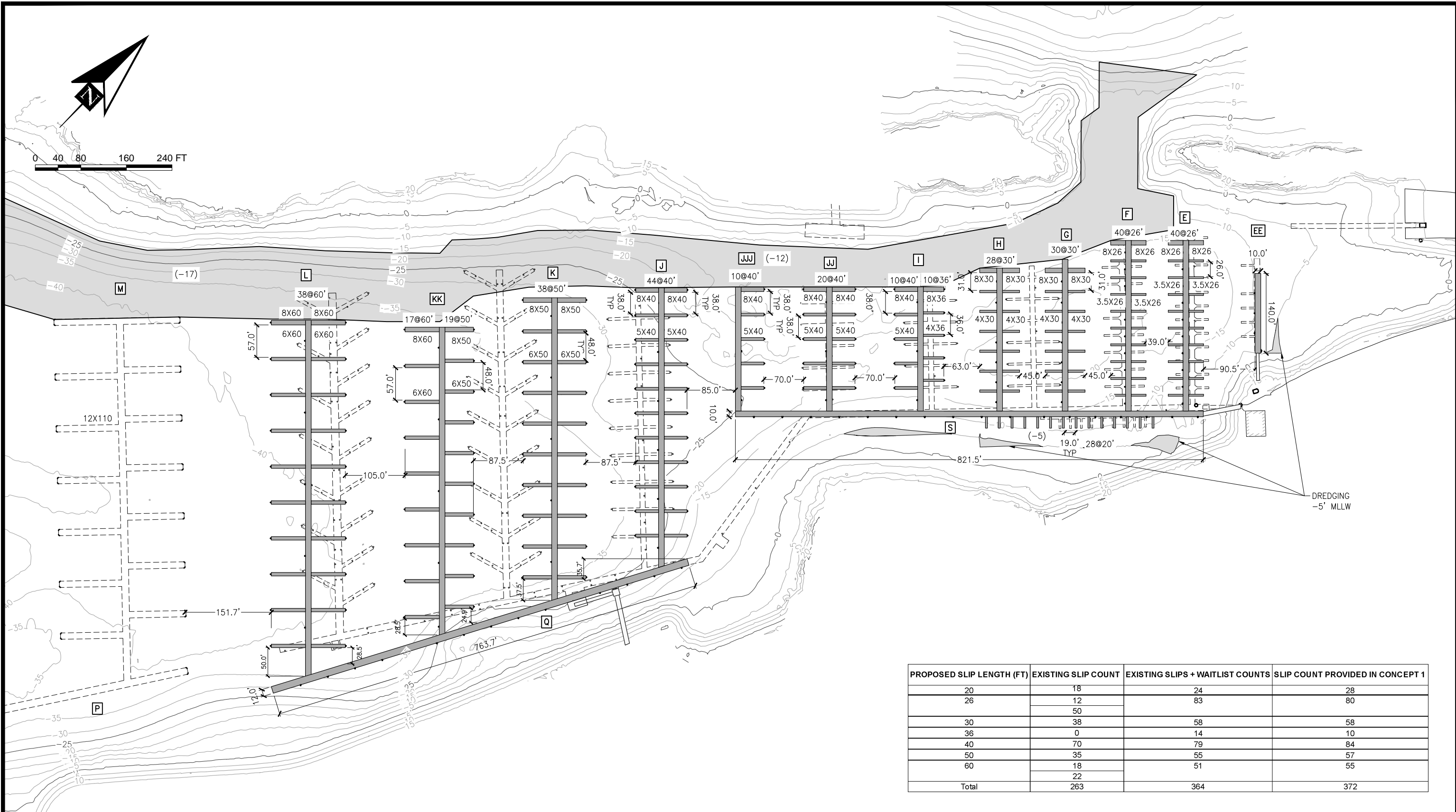
Alaska Industrial Development and Export Authority (AIDEA) PROGRAMS

Administrator: AIDEA

Eligibility: Alaska businesses and communities

Use of Funds: AIDEA supports economic activity in Alaska by providing loan guarantees, conduit revenue bonds, and participation in infrastructure projects (wholly or partially owned by AIDEA). Current port-related projects owned by AIDEA and leased to the private operators include the Skagway Ore Terminal, Ketchikan Shipyard, and the Delong Mountain Transportation System (connecting the Red Dog Mine to export markets).

Appendix A. Concept Drawings



PROPOSED SLIP LENGTH (FT)	EXISTING SLIP COUNT	EXISTING SLIPS + WAITLIST COUNTS	SLIP COUNT PROVIDED IN CONCEPT 1
20	18	24	28
26	12	83	80
30	38	58	58
36	0	14	10
40	70	79	84
50	35	55	57
60	18	51	55
	22		
Total	263	364	372

CONCEPT
11/02/2022

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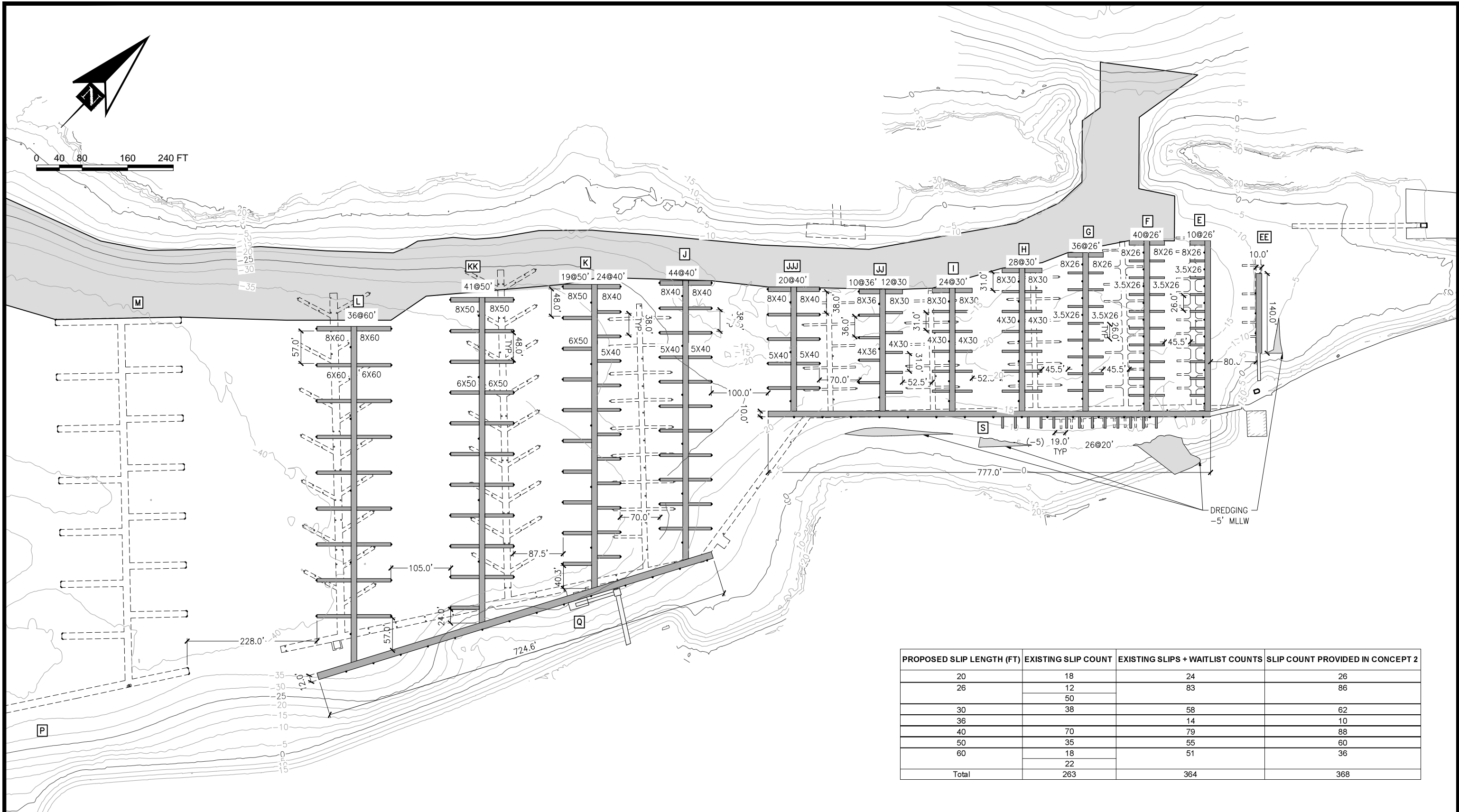
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**KODIAK HERMAN HARBOR
FLOATS REPLACEMENT**

CONCEPT 1 (EE-L)

DESIGNED BY: KJ DATE: 11/2/22
CHECKED BY: DK PROJECT NO: 221115



PROPOSED SLIP LENGTH (FT)	EXISTING SLIP COUNT	EXISTING SLIPS + WAITLIST COUNTS	SLIP COUNT PROVIDED IN CONCEPT 2
20	18	24	26
26	12	83	86
30	50		
36	38	58	62
40	14	79	88
50	70	55	60
60	35	51	36
	18		
	22		
Total	263	364	368

CONCEPT
11/02/2022

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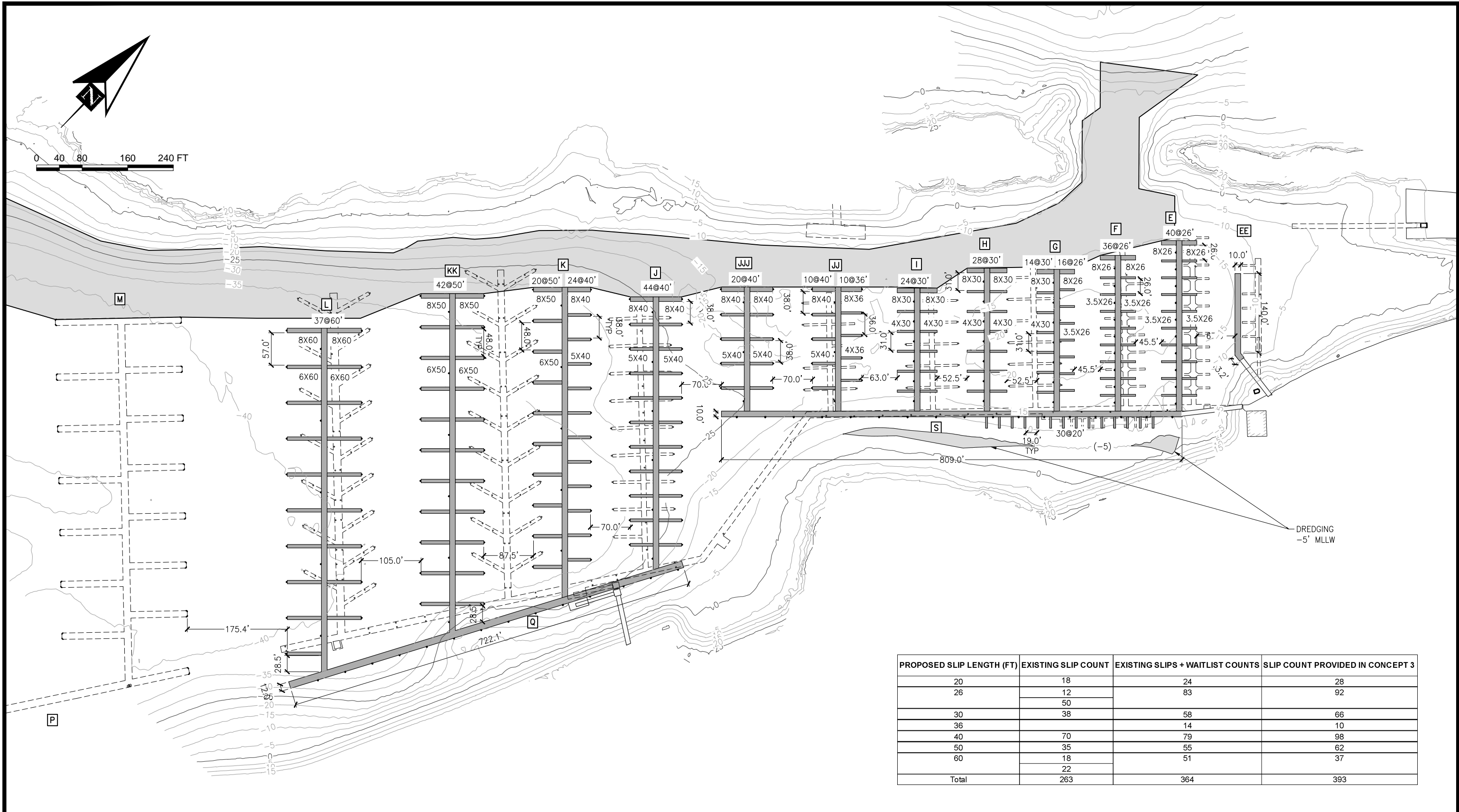
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**KODIAK HERMAN HARBOR
FLOATS REPLACEMENT**

CONCEPT 2 (EE-L)

DESIGNED BY: KJ	DATE: 11/2/22	SHEET ID:
CHECKED BY: DK	PROJECT NO: 221115	



CONCEPT
11/02/2022

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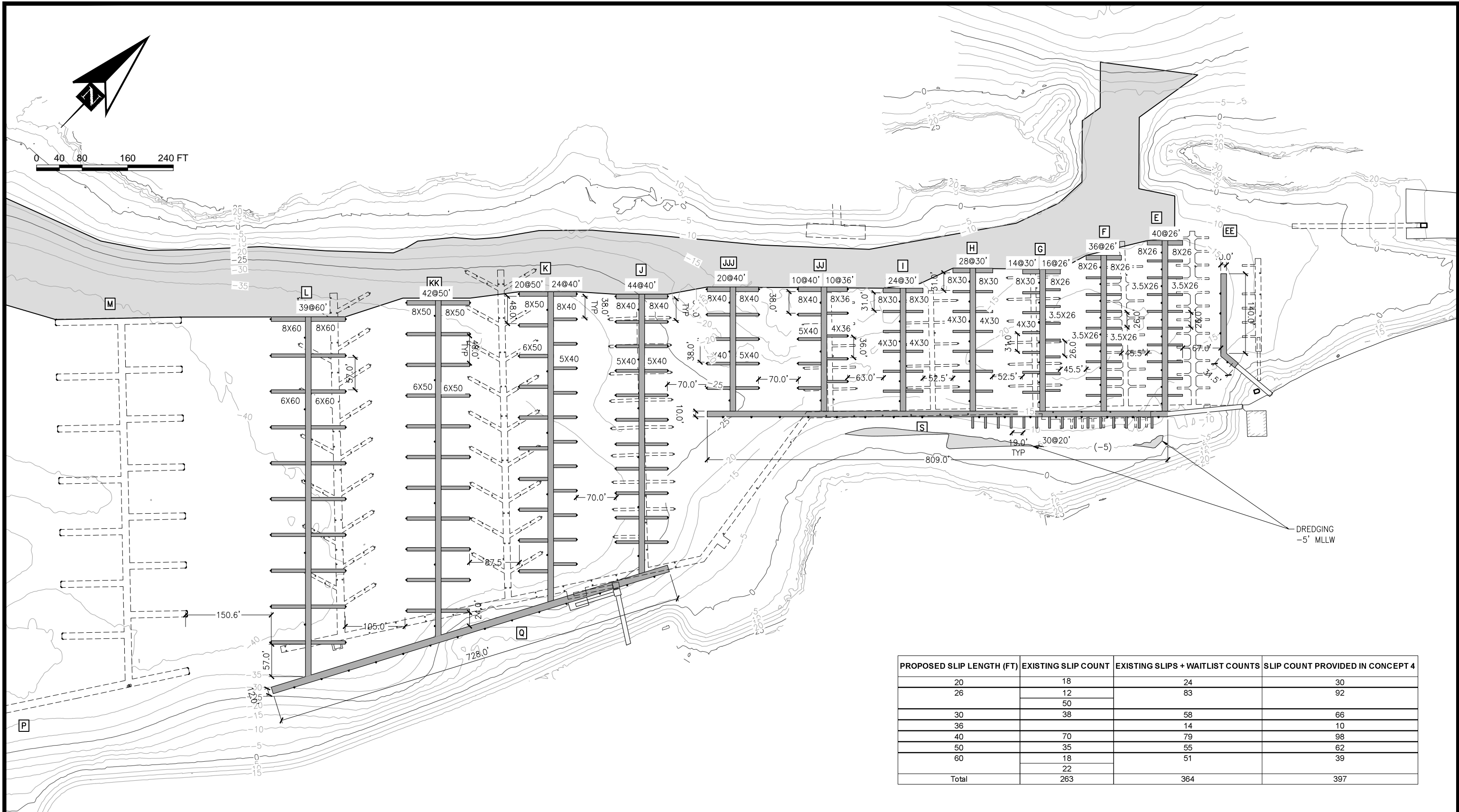
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**KODIAK HERMAN HARBOR
FLOATS REPLACEMENT**
CONCEPT 3 (EE-L)

DESIGNED BY: KJ	DATE: 11/2/22	SHEET ID:
CHECKED BY: DK	PROJECT NO: 221115	
		3 of 10



PROPOSED SLIP LENGTH (FT)	EXISTING SLIP COUNT	EXISTING SLIPS + WAITLIST COUNTS	SLIP COUNT PROVIDED IN CONCEPT 4
20	18	24	30
26	12	83	92
	50		
30	38	58	66
36		14	10
40	70	79	98
50	35	55	62
60	18	51	39
	22		
Total	263	364	397

CONCEPT
11/02/2022

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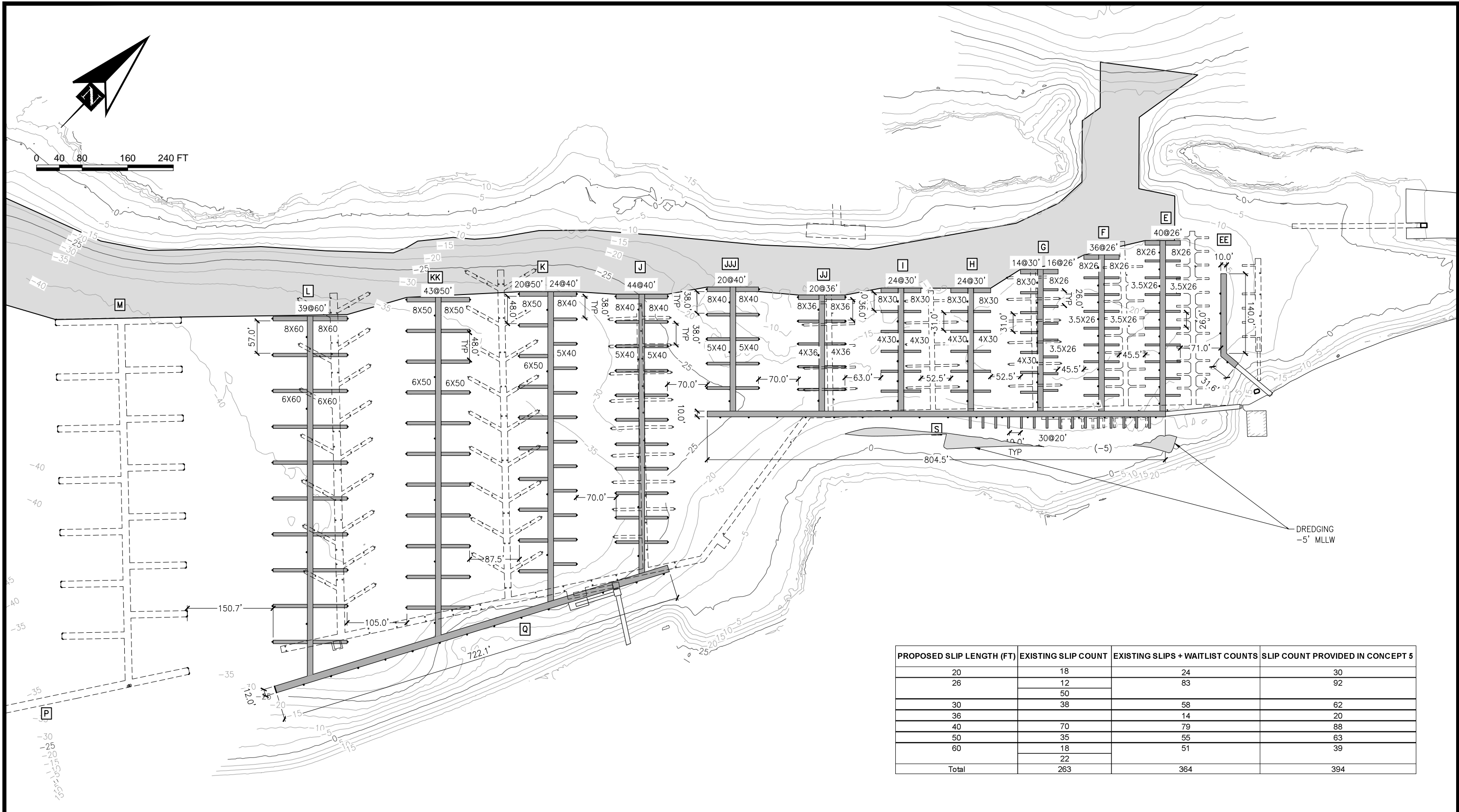
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**KODIAK HERMAN HARBOR
FLOATS REPLACEMENT**

CONCEPT 4 (EE-L)

DESIGNED BY: KJ	DATE: 11/2/22	SHEET ID: 4 of 10
CHECKED BY: DK	PROJECT NO: 221115	



PROPOSED SLIP LENGTH (FT)	EXISTING SLIP COUNT	EXISTING SLIPS + WAITLIST COUNTS	SLIP COUNT PROVIDED IN CONCEPT 5
20	18	24	30
26	12	83	92
30	38	58	62
36		14	20
40	70	79	88
50	35	55	63
60	18	51	39
	22		
Total	263	364	394

CONCEPT
11/02/2022

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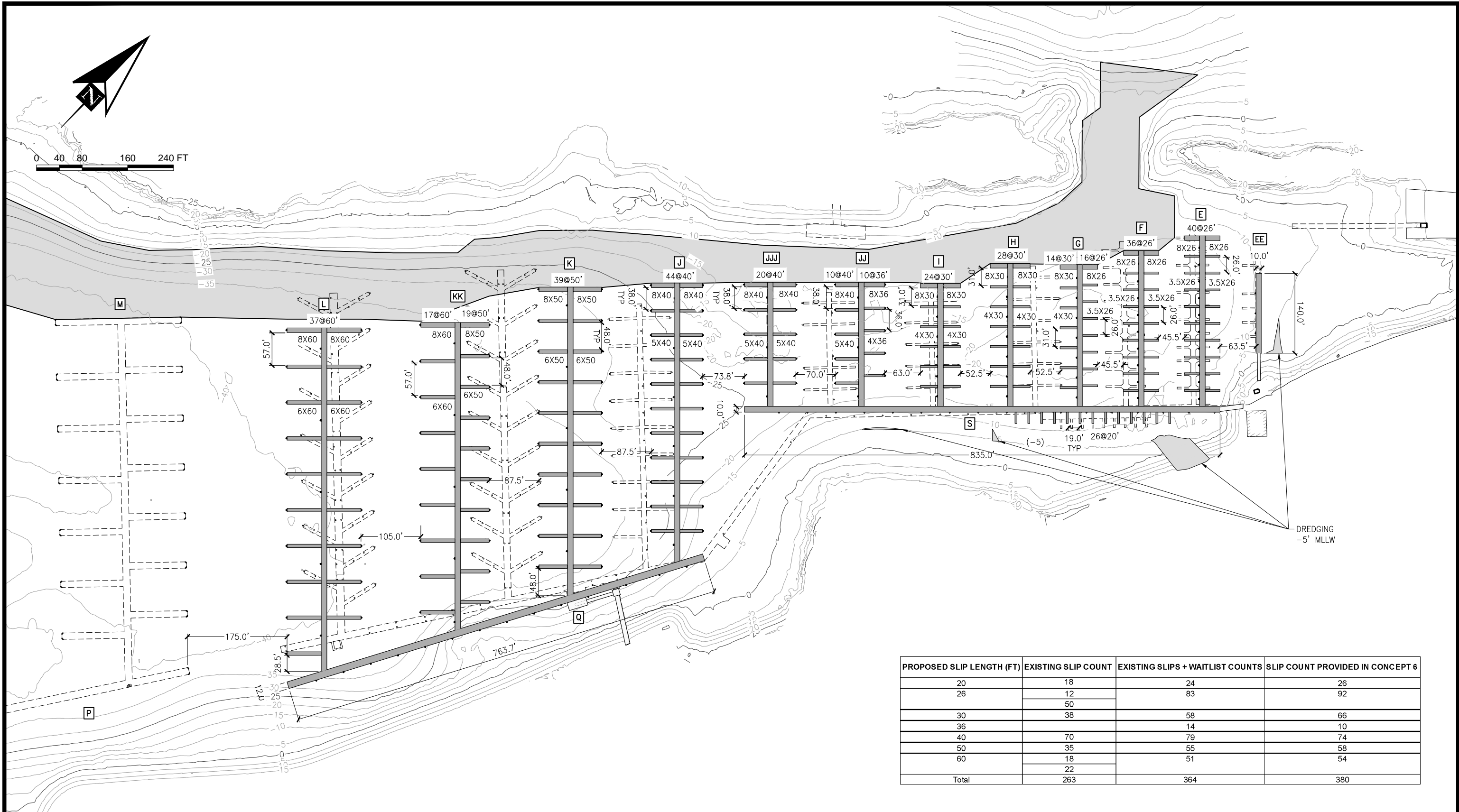
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**KODIAK HERMAN HARBOR
FLOATS REPLACEMENT**

CONCEPT 5 (EE-L)

DESIGNED BY: KJ	DATE: 11/2/22	SHEET ID:
CHECKED BY: DK	PROJECT NO: 221115	



PROPOSED SLIP LENGTH (FT)	EXISTING SLIP COUNT	EXISTING SLIPS + WAITLIST COUNTS	SLIP COUNT PROVIDED IN CONCEPT 6
20	18	24	26
26	12	83	92
	50		
30	38	58	66
36		14	10
40	70	79	74
50	35	55	58
60	18	51	54
	22		
Total	263	364	380

CONCEPT
11/02/2022

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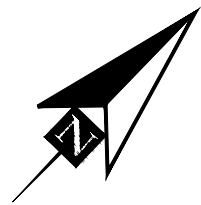
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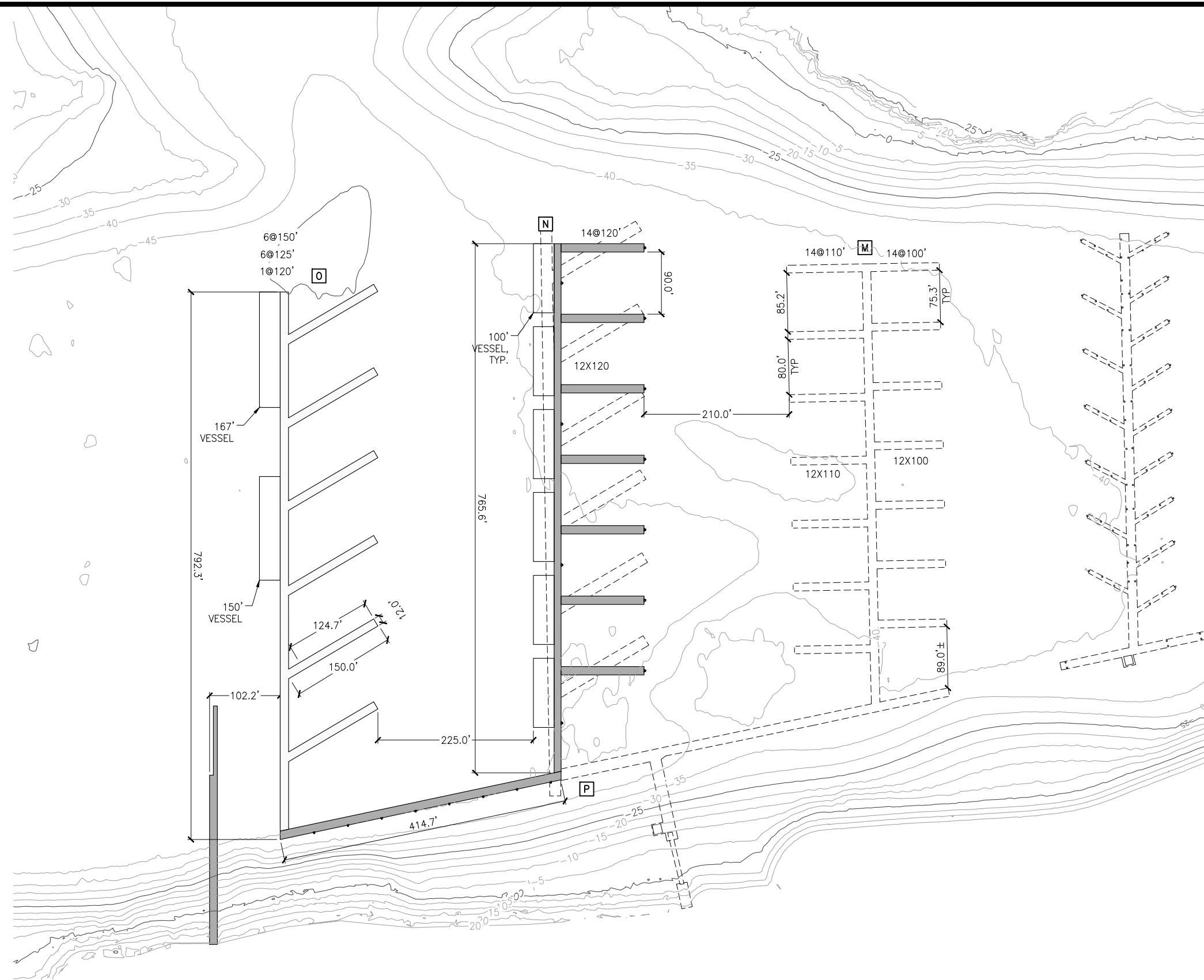
**KODIAK HERMAN HARBOR
FLOATS REPLACEMENT**

CONCEPT 6 (EE-L)

DESIGNED BY: KJ	DATE: 11/2/22	SHEET ID:
CHECKED BY: DK	PROJECT NO: 221115	



0 40 80 160 240 FT



PND Engineers, Inc. is not responsible for safety programs, methods or procedures of operation, or the construction of the design shown on these drawings. Where specifications are general or not called out, the specifications shall conform to standards of industry. Drawings are for use on this project only and are not intended for reuse without written approval from PND. Drawings are also not to be used in any manner that would constitute a detriment directly or indirectly to PND.

REV	DATE	DESCRIPTION

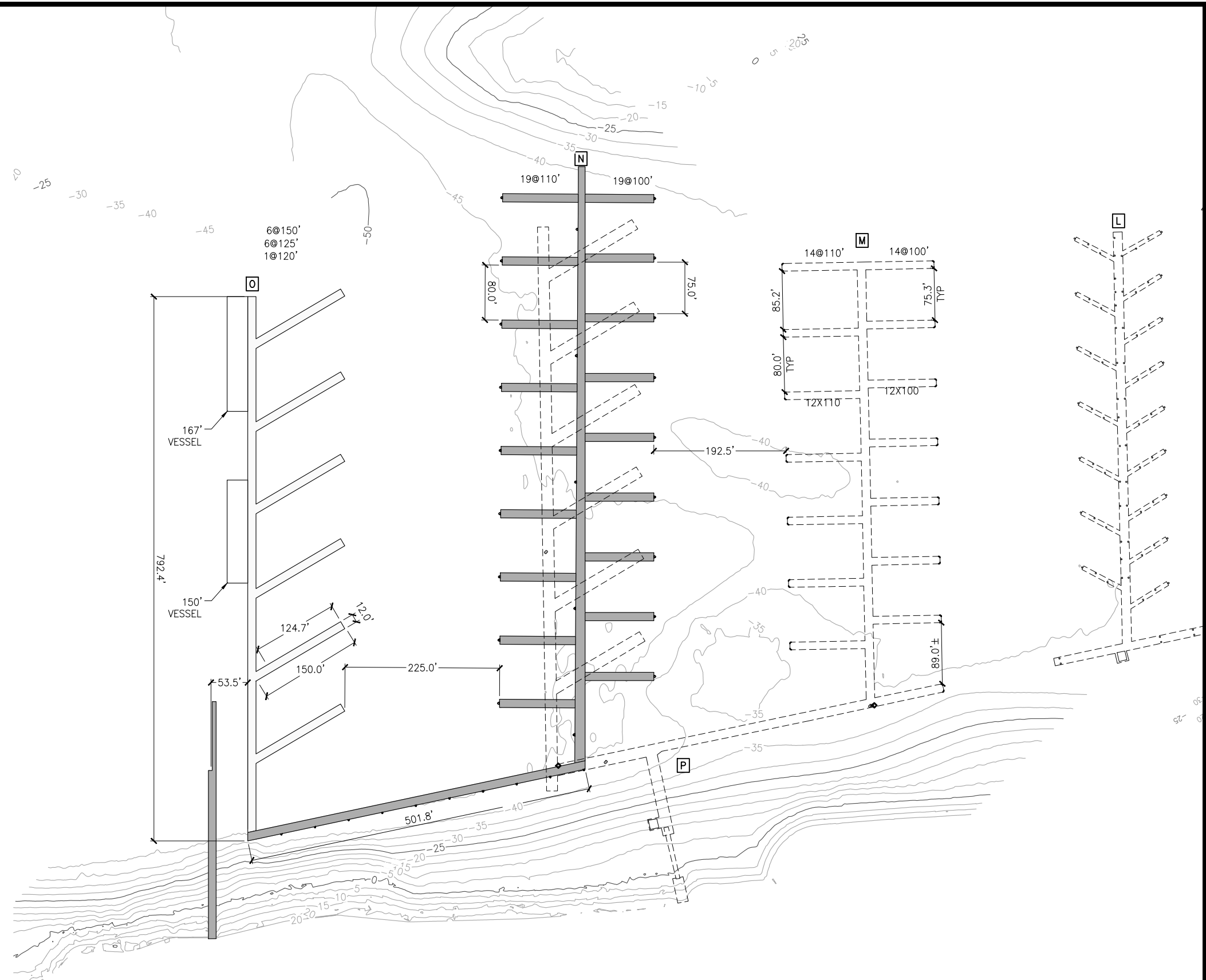
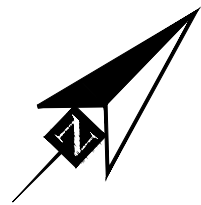
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**KODIAK HERMAN HARBOR
FLOATS REPLACEMENT**

CONCEPT 1 (M-O)

PROJECT:		KODIAK HERMAN HARBOR FLOATS REPLACEMENT	
TITLE:		CONCEPT 1 (M-O)	
DESIGNED BY:	KJ	DATE:	11/2/22
CHECKED BY:	DK	PROJECT NO:	221115
SHEET ID:			7 of 10



PND Engineers, Inc. is not responsible for safety programs, methods or procedures of operation, or the construction of the design shown on these drawings. Where specifications are general or not called out, the specifications shall conform to standards of industry. Drawings are for use on this project only and are not intended for reuse without written approval from PND. Drawings are also not to be used in any manner that would constitute a detriment directly or indirectly to PND.

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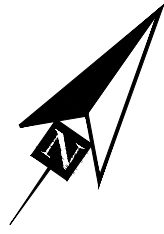
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**KODIAK HERMAN HARBOR
FLOATS REPLACEMENT**

CONCEPT 2 (M-O)

PROJECT:		KODIAK HERMAN HARBOR FLOATS REPLACEMENT	
TITLE:		CONCEPT 2 (M-O)	
DESIGNED BY:	KJ	DATE:	11/2/22
CHECKED BY:	DK	PROJECT NO:	221115
SHEET ID:			8 OF 10



0 25 50 100 150 FT



CONCEPT
11/02/2022

PND Engineers, Inc. is not responsible for safety programs, methods or procedures of operation, or the construction of the design shown on these drawings. Where specifications are general or not called out, the specifications shall conform to standards of industry. Drawings are for use on this project only and are not intended for reuse without written approval from PND. Drawings are also not to be used in any manner that would constitute a detriment directly or indirectly to PND.

REV	DATE	DESCRIPTION

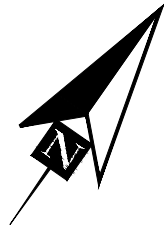
1506 West 36th Avenue
Anchorage, Alaska 99503
Phone: 907.561.1011
www.pndengineers.com
AK. LIC# AECC250



PROJECT: **KODIAK HERMAN HARBOR
FLOATS REPLACEMENT**

TITLE: **ST PAUL DRIVE DOWN CONCEPT 1**

DESIGNED BY: KJ	DATE: 11/2/22	SHEET ID: 9 of 10
CHECKED BY: DK	PROJECT NO: 221115	



0 25 50 100 150 FT



CONCEPT
11/02/2022

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REV	DATE	DESCRIPTION

1506 West 36th Avenue
Anchorage, Alaska 99503
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PROJECT: **KODIAK HERMAN HARBOR
FLOATS REPLACEMENT**

TITLE: **ST PAUL DRIVE DOWN CONCEPT 2**

DESIGNED BY: KJ	DATE: 11/2/22	SHEET ID:
CHECKED BY: DK	PROJECT NO: 221115	

Appendix B. Detailed Construction Cost Estimates

City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 1 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
	St. Herman Harbor Float Replacement (Concept 1)	1.00	LS	\$40,146,969.89	\$40,146,969.89
1.1	Mobilization and Demobilization	1.00	LS	\$1,750,000.00	\$1,750,000.00
1.1.1	Season 1	1.00	LS	\$950,000.00	\$950,000.00
1.1.1.1	Season 1 Mobilization	1.00	LS	\$700,000.00	\$700,000.00
1.1.1.2	Season 1 Demobilization	1.00	LS	\$250,000.00	\$250,000.00
1.1.2	Season 2	1.00	LS	\$800,000.00	\$800,000.00
1.1.2.1	Season 2 Mobilization	1.00	LS	\$350,000.00	\$350,000.00
1.1.2.2	Season 2 Demobilization	1.00	LS	\$450,000.00	\$450,000.00
1.2	Demolition and Disposal	1.00	LS	\$450,000.00	\$450,000.00
1.3	EE-L Float Replacement, New JJJ and KK Float	1.00	LS	\$26,229,536.68	\$26,229,536.68
1.3.1	Furnish New Piling	1.00	LS	\$1,475,400.00	\$1,475,400.00
1.3.2.1	Furnish New Piling 16"Ø x 0.5"t x 60' Piling	69.00	EA	\$6,600.00	\$455,400.00
1.3.2.2	Furnish New Piling 18"Ø x 0.5"t x 60' Piling	136.00	EA	\$7,500.00	\$1,020,000.00
1.3.2	Headwalk Floats	1.00	LS	\$3,323,184.00	\$3,323,184.00
1.3.2.1	Provide and Install Headwalk Floats (10'x822')	8,220.00	SF	\$173.00	\$1,422,060.00
1.3.2.2	Provide and Install Headwalk Floats (12'x764')	9,168.00	SF	\$168.00	\$1,540,224.00
1.3.2.3	Provide and Install Headwalk Finger Floats (14) 3.5'x20'	980.00	SF	\$205.00	\$200,900.00
1.3.2.4	Install Piling (16x0.5)	32.00	EA	\$5,000.00	\$160,000.00
1.3.3	EE Floats	1.00	LS	\$257,200.00	\$257,200.00
1.3.3.1	Provide and Install Mainwalk Floats (10'x140')	1,400.00	SF	\$173.00	\$242,200.00
1.3.3.2	Install Piling (16x0.5)	3.00	EA	\$5,000.00	\$15,000.00
1.3.4	E Floats	1.00	LS	\$979,670.00	\$979,670.00
1.3.4.1	Provide and Install Mainwalk Floats (10'x300')	3,000.00	SF	\$173.00	\$519,000.00
1.3.4.2	Provide and Install E Finger Floats (18) 3.5'x26'	1,638.00	SF	\$205.00	\$335,790.00
1.3.4.3	Provide and Install E End Finger Floats (2) 8'x26'	416.00	SF	\$180.00	\$74,880.00
1.3.4.4	Install Piling (16x0.5)	10.00	EA	\$5,000.00	\$50,000.00
1.3.5	F Floats	1.00	LS	\$979,670.00	\$979,670.00
1.3.5.1	Provide and Install Mainwalk Floats (10'x300')	3,000.00	SF	\$173.00	\$519,000.00
1.3.5.2	Provide and Install F Finger Floats (18) 3.5'x26'	1,638.00	SF	\$205.00	\$335,790.00
1.3.5.3	Provide and Install F End Finger Floats (2) 8'x26'	416.00	SF	\$180.00	\$74,880.00
1.3.5.4	Install Piling (16x0.5)	10.00	EA	\$5,000.00	\$50,000.00
1.3.6	G Floats	1.00	LS	\$871,310.00	\$871,310.00
1.3.6.1	Provide and Install Mainwalk Floats (10'x267')	2,670.00	SF	\$173.00	\$461,910.00
1.3.6.2	Provide and Install G Finger Floats (12) 4'x30'	1,440.00	SF	\$200.00	\$288,000.00
1.3.6.3	Provide and Install G End Finger Floats (2) 8'x30'	480.00	SF	\$180.00	\$86,400.00
1.3.6.4	Install Piling (16x0.5)	7.00	EA	\$5,000.00	\$35,000.00
1.3.7	H Floats	1.00	LS	\$843,630.00	\$843,630.00
1.3.7.1	Provide and Install Mainwalk Floats (10'x251')	2,510.00	SF	\$173.00	\$434,230.00
1.3.7.2	Provide and Install H Finger Floats (12) 4'x30'	1,440.00	SF	\$200.00	\$288,000.00
1.3.7.3	Provide and Install H End Finger Floats (2) 8'x30'	480.00	SF	\$180.00	\$86,400.00
1.3.7.4	Install Piling (16x0.5)	7.00	EA	\$5,000.00	\$35,000.00
1.3.8	New I Floats	1.00	LS	\$818,780.00	\$818,780.00
1.3.8.1	Provide and Install Mainwalk Floats (10'x218')	2,180.00	SF	\$173.00	\$377,140.00
1.3.8.2	Provide and Install I Finger Floats (4) 5'x40'	800.00	SF	\$190.00	\$152,000.00
1.3.8.3	Provide and Install I Finger Floats (4) 4'x36'	576.00	SF	\$200.00	\$115,200.00
1.3.8.4	Provide and Install I End Finger Float (1) 8'x40'	320.00	SF	\$180.00	\$57,600.00
1.3.8.5	Provide and Install I End Finger Float (1) 8'x36'	288.00	SF	\$180.00	\$51,840.00
1.3.8.6	Install Piling (18x0.5)	13.00	EA	\$5,000.00	\$65,000.00
1.3.9	New JJ Floats	1.00	LS	\$861,340.00	\$861,340.00
1.3.9.1	Provide and Install Mainwalk Floats (10'x218')	2,180.00	SF	\$173.00	\$377,140.00
1.3.9.2	Provide and Install JJ Finger Floats (8) 5'x40'	1,600.00	SF	\$190.00	\$304,000.00
1.3.9.3	Provide and Install JJ End Finger Floats (2) 8'x40'	640.00	SF	\$180.00	\$115,200.00
1.3.9.4	Install Piling (18x0.5)	13.00	EA	\$5,000.00	\$65,000.00
1.3.10	New JJJ Floats	1.00	LS	\$626,740.00	\$626,740.00
1.3.10.1	Provide and Install Mainwalk Floats (10'x218')	2,180.00	SF	\$173.00	\$377,140.00
1.3.10.2	Provide and Install JJJ Finger Floats (4) 5'x40'	800.00	SF	\$190.00	\$152,000.00
1.3.10.3	Provide and Install JJJ End Finger Float (1) 8'x40'	320.00	SF	\$180.00	\$57,600.00
1.3.10.4	Install Piling (18x0.5)	8.00	EA	\$5,000.00	\$40,000.00

City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 1 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.3.11	New J Floats	1.00	LS	\$1,864,630.00	\$1,864,630.00
1.3.11.1	Provide and Install Mainwalk Floats (10'x491')	4,910.00	SF	\$173.00	\$849,430.00
1.3.11.2	Provide and Install J Finger Floats (20) 5'x40'	4,000.00	SF	\$190.00	\$760,000.00
1.3.11.3	Provide and Install K End Finger Floats (2) 8'x40'	640.00	SF	\$180.00	\$115,200.00
1.3.11.4	Install Piling (18x0.5)	28.00	EA	\$5,000.00	\$140,000.00
1.3.12	New K Floats	1.00	LS	\$2,204,560.00	\$2,204,560.00
1.3.12.1	Provide and Install Mainwalk Floats (10'x532')	5,320.00	SF	\$173.00	\$920,360.00
1.3.12.2	Provide and Install K Finger Floats (18) 6'x50'	5,400.00	SF	\$188.00	\$1,015,200.00
1.3.12.3	Provide and Install K End Finger Floats (2) 8'x50'	800.00	SF	\$180.00	\$144,000.00
1.3.12.4	Install Piling (18x0.5)	25.00	EA	\$5,000.00	\$125,000.00
1.3.13	New KK Floats	1.00	LS	\$2,259,910.00	\$2,259,910.00
1.3.13.1	Provide and Install Mainwalk Floats (10'x541')	5,390.00	SF	\$173.00	\$932,470.00
1.3.13.2	Provide and Install KK Finger Floats (8) 6'x60'	2,880.00	SF	\$188.00	\$541,440.00
1.3.13.3	Provide and Install KK Finger Floats (9) 6'x50'	2,700.00	SF	\$188.00	\$507,600.00
1.3.13.4	Provide and Install K End Finger Float (1) 8'x60'	480.00	SF	\$180.00	\$86,400.00
1.3.13.5	Provide and Install K End Finger Float (1) 8'x50'	400.00	SF	\$180.00	\$72,000.00
1.3.13.6	Install Piling (18x0.5)	24.00	EA	\$5,000.00	\$120,000.00
1.3.14	New L Floats	1.00	LS	\$2,597,290.00	\$2,597,290.00
1.3.14.1	Provide and Install Mainwalk Floats (10'x625')	6,250.00	SF	\$173.00	\$1,081,250.00
1.3.14.2	Provide and Install L Finger Floats (18) 6'x60'	6,480.00	SF	\$188.00	\$1,218,240.00
1.3.14.3	Provide and Install L End Finger Floats (2) 8'x60'	960.00	SF	\$180.00	\$172,800.00
1.3.14.4	Install Piling (18x0.5)	25.00	EA	\$5,000.00	\$125,000.00
1.3.15	Access Trestles and Gangways	1.00	LS	\$945,800.00	\$945,800.00
1.3.15.1	Provide and Install Gangway Landing Floats	480.00	SF	\$210.00	\$100,800.00
1.3.15.2	Provide and Install New 110' Gangway	3.00	EA	\$200,000.00	\$600,000.00
1.3.15.3	Provide and install new 100' Trestle	1.00	LS	\$180,000.00	\$180,000.00
1.3.15.4	Install new Trestle Landing Platform	1.00	LS	\$65,000.00	\$65,000.00
1.3.16	Provide and Install New Anodes	207.00	EA	\$1,500.00	\$310,500.00
1.3.17	On-Float Utilities	1.00	LS	\$4,903,380.00	\$4,903,380.00
1.3.17.1	Potable Water System	1.00	LS	\$1,113,440.00	\$1,113,440.00
1.3.17.1.1	4" HDPE Water Line	5,687.00	LF	\$120.00	\$682,440.00
1.3.17.1.2	Valves	21.00	EA	\$1,500.00	\$31,500.00
1.3.17.1.3	Water Pedestal	193.00	EA	\$1,500.00	\$289,500.00
1.3.17.1.4	Hot Box	2.00	EA	\$25,000.00	\$50,000.00
1.3.17.1.5	Flex Line	4.00	EA	\$15,000.00	\$60,000.00
1.3.17.2	Electrical System	1.00	LS	\$2,900,000.00	\$2,900,000.00
1.3.17.3	Fire Water System	1.00	LS	\$324,636.22	\$889,940.00
1.3.17.3.1	4" HDPE Water Line	5,687.00	LF	\$120.00	\$682,440.00
1.3.17.3.2	Valves	24.00	EA	\$1,500.00	\$36,000.00
1.3.17.3.3	Fire Standpipe	39.00	EA	\$1,500.00	\$58,500.00
1.3.17.3.4	Hot Box	2.00	EA	\$25,000.00	\$50,000.00
1.3.17.3.5	Flex Line	4.00	EA	\$15,000.00	\$60,000.00
1.3.17.3.6	FD Connection	2.00	EA	\$1,500.00	\$3,000.00
1.3.18	Dredging	134.54	CY	\$48.63	\$6,542.68
1.3.19	Ladders and Safety Equipment	1.00	LS	\$100,000.00	\$100,000.00
1.4	Contractor Indirects	1.00	LS	\$730,000.00	\$730,000.00
1.4.1	Marine Mammal Observation	150.00	Day	\$1,200.00	\$180,000.00
1.4.2	Field Personnel Housing, Per Diem, Transportation	200.00	Day	\$2,000.00	\$400,000.00
1.4.3	Survey	100.00	Day	\$1,500.00	\$150,000.00
1.5	Concept Level Contingency (30%)	1.00	LS	\$8,747,861.00	\$8,747,861.00
	Subtotal Construction				\$37,907,397.69

City of Kodiak, St. Herman Harbor Float Replacement
 Conceptual Level Cost Estimate
 Concept 1 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.6	Engineering and Project Management	1.00	LS	\$2,239,572.20	\$2,239,572.20
1.6.1	Design Engineering (6%)	1.00	LS	\$1,749,572.20	\$1,749,572.20
1.6.2	Permitting	1.00	LS	\$30,000.00	\$30,000.00
1.6.3	Site Survey	1.00	LS	\$60,000.00	\$60,000.00
1.6.4	Geotechnical Investigation and Dredge Sampling	1.00	LS	\$60,000.00	\$60,000.00
1.6.5	Bid Support	1.00	LS	\$40,000.00	\$40,000.00
1.6.6	Construction Administration and Inspection	1.00	LS	\$300,000.00	\$300,000.00
Engineering, Permitting and Project Management					\$2,239,572.20
Total Conceptual Project Cost					\$40,146,969.89

City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 2 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
	St. Herman Harbor Float Replacement (Concept 2)	1.00	LS	\$39,324,838.49	\$39,324,838.49
1.1	Mobilization and Demobilization	1.00	LS	\$1,750,000.00	\$1,750,000.00
1.1.1	Season 1	1.00	LS	\$950,000.00	\$950,000.00
1.1.1.1	Season 1 Mobilization	1.00	LS	\$700,000.00	\$700,000.00
1.1.1.2	Season 1 Demobilization	1.00	LS	\$250,000.00	\$250,000.00
1.1.2	Season 2	1.00	LS	\$800,000.00	\$800,000.00
1.1.2.1	Season 2 Mobilization	1.00	LS	\$350,000.00	\$350,000.00
1.1.2.2	Season 2 Demobilization	1.00	LS	\$450,000.00	\$450,000.00
1.2	Demolition and Disposal	1.00	LS	\$450,000.00	\$450,000.00
1.3	EE-L Float Replacement, New JJJ and KK Float	1.00	LS	\$25,625,028.30	\$25,625,028.30
1.3.1	Furnish New Piling	1.00	LS	\$1,432,500.00	\$1,432,500.00
1.3.1.1	Furnish New Piling 16"Ø x 0.5"t x 60' Piling	75.00	EA	\$6,600.00	\$495,000.00
1.3.1.2	Furnish New Piling 18"Ø x 0.5"t x 60' Piling	125.00	EA	\$7,500.00	\$937,500.00
1.3.2	Headwalk Floats	1.00	LS	\$1,016,338.68	\$3,142,360.00
1.3.2.1	Provide and Install Headwalk Floats (10'x777')	7,770.00	SF	\$173.00	\$1,344,210.00
1.3.2.2	Provide and Install Headwalk Floats (12'x725')	8,700.00	SF	\$168.00	\$1,461,600.00
1.3.2.3	Provide and Install Headwalk Finger Floats (13) 3.5'x20'	910.00	SF	\$205.00	\$186,550.00
1.3.2.4	Install Piling (16x0.5)	30.00	EA	\$5,000.00	\$150,000.00
1.3.3	EE Floats	1.00	LS	\$257,200.00	\$257,200.00
1.3.3.1	Provide and Install Mainwalk Floats (10'x140')	1,400.00	SF	\$173.00	\$242,200.00
1.3.3.2	Install Piling (16x0.5)	3.00	EA	\$5,000.00	\$15,000.00
1.3.4	E Floats	1.00	LS	\$774,335.00	\$774,335.00
1.3.4.1	Provide and Install Mainwalk Floats (10'x300')	3,000.00	SF	\$173.00	\$519,000.00
1.3.4.2	Provide and Install E Finger Floats (9) 3.5'x26'	819.00	SF	\$205.00	\$167,895.00
1.3.4.3	Provide and Install E End Finger Float (1) 8'x26'	208.00	SF	\$180.00	\$37,440.00
1.3.4.4	Install Piling (16x0.5)	10.00	EA	\$5,000.00	\$50,000.00
1.3.5	F Floats	1.00	LS	\$979,670.00	\$979,670.00
1.3.5.1	Provide and Install Mainwalk Floats (10'x300')	3,000.00	SF	\$173.00	\$519,000.00
1.3.5.2	Provide and Install F Finger Floats (18) 3.5'x26'	1,638.00	SF	\$205.00	\$335,790.00
1.3.5.3	Provide and Install F End Finger Floats (2) 8'x26'	416.00	SF	\$180.00	\$74,880.00
1.3.5.4	Install Piling (16x0.5)	10.00	EA	\$5,000.00	\$50,000.00
1.3.6	G Floats	1.00	LS	\$901,030.00	\$901,030.00
1.3.6.1	Provide and Install Mainwalk Floats (10'x279')	2,790.00	SF	\$173.00	\$482,670.00
1.3.6.2	Provide and Install G Finger Floats (16) 3.5'x26'	1,456.00	SF	\$205.00	\$298,480.00
1.3.6.3	Provide and Install G End Finger Floats (2) 8'x26'	416.00	SF	\$180.00	\$74,880.00
1.3.6.4	Install Piling (16x0.5)	9.00	EA	\$5,000.00	\$45,000.00
1.3.7	H Floats	1.00	LS	\$843,630.00	\$843,630.00
1.3.7.1	Provide and Install Mainwalk Floats (10'x251')	2,510.00	SF	\$173.00	\$434,230.00
1.3.7.2	Provide and Install H Finger Floats (12) 4'x30'	1,440.00	SF	\$200.00	\$288,000.00
1.3.7.3	Provide and Install H End Finger Floats (2) 8'x30'	480.00	SF	\$180.00	\$86,400.00
1.3.7.4	Install Piling (16x0.5)	7.00	EA	\$5,000.00	\$35,000.00
1.3.8	New I Floats	1.00	LS	\$730,080.00	\$730,080.00
1.3.8.1	Provide and Install Mainwalk Floats (10'x216')	2,160.00	SF	\$173.00	\$373,680.00
1.3.8.2	Provide and Install I Finger Floats (10) 4'x30'	1,200.00	SF	\$200.00	\$240,000.00
1.3.8.3	Provide and Install I End Finger Float (2) 8'x30'	480.00	SF	\$180.00	\$86,400.00
1.3.8.4	Install Piling (16x0.5)	6.00	EA	\$5,000.00	\$30,000.00
1.3.9	New JJ Floats	1.00	LS	\$739,981.49	\$739,981.49
1.3.9.1	Provide and Install Mainwalk Floats (10'x214')	2,140.00	SF	\$173.00	\$370,220.00
1.3.9.2	Provide and Install JJ Finger Floats (4) 4'x36'	576.00	SF	\$200.00	\$115,200.00
1.3.9.3	Provide and Install JJ Finger Floats (5) 4'x30'	600.00	SF	\$200.00	\$120,000.00
1.3.9.4	Provide and Install JJ End Finger Float (1) 8'x36'	288.00	SF	\$178.34	\$51,361.49
1.3.9.5	Provide and Install JJ End Finger Float (1) 8'x30'	240.00	SF	\$180.00	\$43,200.00
1.3.9.6	Install Piling (18x0.5)	8.00	EA	\$5,000.00	\$40,000.00
1.3.10	New JJJ Floats	1.00	LS	\$861,340.00	\$861,340.00
1.3.10.1	Provide and Install Mainwalk Floats (10'x218')	2,180.00	SF	\$173.00	\$377,140.00
1.3.10.2	Provide and Install JJJ Finger Floats (8) 5x40'	1,600.00	SF	\$190.00	\$304,000.00
1.3.10.3	Provide and Install JJJ End Finger Floats (2) 8'x40'	640.00	SF	\$180.00	\$115,200.00
1.3.10.4	Install Piling (18x0.5)	13.00	EA	\$5,000.00	\$65,000.00

**City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 2 (EE-L)**

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.3.11	New J Floats	1.00	LS	\$1,864,630.00	\$1,864,630.00
1.3.11.1	Provide and Install Mainwalk Floats (10'x491')	4,910.00	SF	\$173.00	\$849,430.00
1.3.11.2	Provide and Install J Finger Floats (20) 5'x40'	4,000.00	SF	\$190.00	\$760,000.00
1.3.11.3	Provide and Install K End Finger Floats (2) 8'x40'	640.00	SF	\$180.00	\$115,200.00
1.3.11.4	Install Piling (18x0.5)	28.00	EA	\$5,000.00	\$140,000.00
1.3.12	New K Floats	1.00	LS	\$2,114,020.00	\$2,114,020.00
1.3.12.1	Provide and Install Mainwalk Floats (10'x534')	5,340.00	SF	\$173.00	\$923,820.00
1.3.12.2	Provide and Install K Finger Floats (9) 6'x50'	2,700.00	SF	\$188.00	\$507,600.00
1.3.12.3	Provide and Install K Finger Floats (11) 5'x40'	2,200.00	SF	\$190.00	\$418,000.00
1.3.12.4	Provide and Install K End Finger Float (1) 8'x50'	400.00	SF	\$180.00	\$72,000.00
1.3.12.5	Provide and Install K End Finger Float (1) 8'x40'	320.00	SF	\$180.00	\$57,600.00
1.3.12.6	Install Piling (18x0.5)	27.00	EA	\$5,000.00	\$135,000.00
1.3.13	New KK Floats	1.00	LS	\$2,335,160.00	\$2,335,160.00
1.3.13.1	Provide and Install Mainwalk Floats (10'x572')	5,720.00	SF	\$173.00	\$989,560.00
1.3.13.2	Provide and Install KK Finger Floats (19) 6'x50'	5,700.00	SF	\$188.00	\$1,071,600.00
1.3.13.3	Provide and Install K End Finger Floats (2) 8'x50'	800.00	SF	\$180.00	\$144,000.00
1.3.13.4	Install Piling (18x0.5)	26.00	EA	\$5,000.00	\$130,000.00
1.3.14	New L Floats	1.00	LS	\$2,393,110.00	\$2,393,110.00
1.3.14.1	Provide and Install Mainwalk Floats (10'x591')	5,910.00	SF	\$173.00	\$1,022,430.00
1.3.14.2	Provide and Install L Finger Floats (16) 6'x60'	5,760.00	SF	\$188.00	\$1,082,880.00
1.3.14.3	Provide and Install L End Finger Floats (2) 8'x60'	960.00	SF	\$180.00	\$172,800.00
1.3.14.4	Install Piling (18x0.5)	23.00	EA	\$5,000.00	\$115,000.00
1.3.15	Access Trestles and Gangways	1.00	LS	\$945,800.00	\$945,800.00
1.3.15.1	Provide and Install Gangway Landing Floats	480.00	SF	\$210.00	\$100,800.00
1.3.15.2	Provide and Install New 110' Gangway	3.00	EA	\$200,000.00	\$600,000.00
1.3.15.3	Provide and install new 100' Trestle	1.00	LS	\$180,000.00	\$180,000.00
1.3.15.4	Install new Trestle Landing Platform	1.00	LS	\$65,000.00	\$65,000.00
1.3.16	Provide and Install New Anodes	204.00	EA	\$1,500.00	\$306,000.00
1.3.17	On-Float Utilities	1.00	LS	\$4,890,420.00	\$4,890,420.00
1.3.17.1	Potable Water System	1.00	LS	\$1,108,460.00	\$1,108,460.00
1.3.17.1.1	4" HDPE Water Line	5,608.00	LF	\$120.00	\$672,960.00
1.3.17.1.2	Valves	21.00	EA	\$1,500.00	\$31,500.00
1.3.17.1.3	Water Pedestal	196.00	EA	\$1,500.00	\$294,000.00
1.3.17.1.4	Hot Box	2.00	EA	\$25,000.00	\$50,000.00
1.3.17.1.5	Flex Line	4.00	EA	\$15,000.00	\$60,000.00
1.3.17.2	Electrical System	1.00	LS	\$2,900,000.00	\$2,900,000.00
1.3.17.3	Fire Water System	1.00	LS	\$324,636.22	\$881,960.00
1.3.17.3.1	4" HDPE Water Line	5,608.00	LF	\$120.00	\$672,960.00
1.3.17.3.2	Valves	24.00	EA	\$1,500.00	\$36,000.00
1.3.17.3.3	Fire Standpipe	40.00	EA	\$1,500.00	\$60,000.00
1.3.17.3.4	Hot Box	2.00	EA	\$25,000.00	\$50,000.00
1.3.17.3.5	Flex Line	4.00	EA	\$15,000.00	\$60,000.00
1.3.17.3.6	FD Connection	2.00	EA	\$1,500.00	\$3,000.00
1.3.18	Dredging	282.99	CY	\$48.63	\$13,761.81
1.3.19	Ladders and Safety Equipment	1.00	LS	\$100,000.00	\$100,000.00
1.4	Contractor Indirects	1.00	LS	\$730,000.00	\$730,000.00
1.4.1	Marine Mammal Observation	150.00	Day	\$1,200.00	\$180,000.00
1.4.2	Field Personnel Housing, Per Diem, Transportation	200.00	Day	\$2,000.00	\$400,000.00
1.4.3	Survey	100.00	Day	\$1,500.00	\$150,000.00
1.5	Concept Level Contingency (30%)	1.00	LS	\$8,566,508.49	\$8,566,508.49
Subtotal Construction					\$37,121,536.79

City of Kodiak, St. Herman Harbor Float Replacement
 Conceptual Level Cost Estimate
 Concept 2 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.6	Engineering and Project Management	1.00	LS	\$2,203,301.70	\$2,203,301.70
1.6.1	Design Engineering (6%)	1.00	LS	\$1,713,301.70	\$1,713,301.70
1.6.2	Permitting	1.00	LS	\$30,000.00	\$30,000.00
1.6.3	Site Survey	1.00	LS	\$60,000.00	\$60,000.00
1.6.4	Geotechnical Investigation and Dredge Sampling	1.00	LS	\$60,000.00	\$60,000.00
1.6.5	Bid Support	1.00	LS	\$40,000.00	\$40,000.00
1.6.6	Construction Administration and Inspection	1.00	LS	\$300,000.00	\$300,000.00
Engineering, Permitting and Project Management					\$2,203,301.70
Total Conceptual Project Cost					\$39,324,838.49

City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 3 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
	St. Herman Harbor Float Replacement (Concept 3)	1.00	LS	\$39,875,580.57	\$39,875,580.57
1.1	Mobilization and Demobilization	1.00	LS	\$1,750,000.00	\$1,750,000.00
1.1.1	Season 1	1.00	LS	\$950,000.00	\$950,000.00
1.1.1.1	Season 1 Mobilization	1.00	LS	\$700,000.00	\$700,000.00
1.1.1.2	Season 1 Demobilization	1.00	LS	\$250,000.00	\$250,000.00
1.1.2	Season 2	1.00	LS	\$800,000.00	\$800,000.00
1.1.2.1	Season 2 Mobilization	1.00	LS	\$350,000.00	\$350,000.00
1.1.2.2	Season 2 Demobilization	1.00	LS	\$450,000.00	\$450,000.00
1.2	Demolition and Disposal	1.00	LS	\$450,000.00	\$450,000.00
1.3	EE-L Float Replacement, New JJ and KK Float	1.00	LS	\$26,299,509.24	\$26,299,509.24
1.3.1	Furnish New Piling	1.00	LS	\$1,479,300.00	\$1,479,300.00
1.3.1.1	Furnish New Piling 16"Ø x 0.5"t x 60' Piling	73.00	EA	\$6,600.00	\$481,800.00
1.3.1.2	Furnish New Piling 18"Ø x 0.5"t x 60' Piling	133.00	EA	\$7,500.00	\$997,500.00
1.3.2	Headwalk Floats	1.00	LS	\$1,016,338.68	\$3,211,022.00
1.3.2.1	Provide and Install Headwalk Floats (10'x809')	8,090.00	SF	\$173.00	\$1,399,570.00
1.3.2.2	Provide and Install Headwalk Floats (12'x722')	8,664.00	SF	\$168.00	\$1,455,552.00
1.3.2.3	Provide and Install Headwalk Finger Floats (14) 3.5'x20'	980.00	SF	\$205.00	\$200,900.00
1.3.2.4	Install Piling (16x0.5)	31.00	EA	\$5,000.00	\$155,000.00
1.3.3	EE Floats	1.00	LS	\$262,390.00	\$262,390.00
1.3.3.1	Provide and Install Mainwalk Floats (10'x143')	1,430.00	SF	\$173.00	\$247,390.00
1.3.3.2	Install Piling (16x0.5)	3.00	EA	\$5,000.00	\$15,000.00
1.3.4	E Floats	1.00	LS	\$979,670.00	\$979,670.00
1.3.4.1	Provide and Install Mainwalk Floats (10'x300')	3,000.00	SF	\$173.00	\$519,000.00
1.3.4.2	Provide and Install E Finger Floats (18) 3.5'x26'	1,638.00	SF	\$205.00	\$335,790.00
1.3.4.3	Provide and Install E End Finger Floats (2) 8'x26'	416.00	SF	\$180.00	\$74,880.00
1.3.4.4	Install Piling (16x0.5)	10.00	EA	\$5,000.00	\$50,000.00
1.3.5	F Floats	1.00	LS	\$892,380.00	\$892,380.00
1.3.5.1	Provide and Install Mainwalk Floats (10'x274')	2,740.00	SF	\$173.00	\$474,020.00
1.3.5.2	Provide and Install F Finger Floats (16) 3.5'x26'	1,456.00	SF	\$205.00	\$298,480.00
1.3.5.3	Provide and Install F End Finger Floats (2) 8'x26'	416.00	SF	\$180.00	\$74,880.00
1.3.5.4	Install Piling (16x0.5)	9.00	EA	\$5,000.00	\$45,000.00
1.3.6	G Floats	1.00	LS	\$820,995.00	\$820,995.00
1.3.6.1	Provide and Install Mainwalk Floats (10'x249')	2,490.00	SF	\$173.00	\$430,770.00
1.3.6.2	Provide and Install G Finger Floats (6) 4'x30'	720.00	SF	\$200.00	\$144,000.00
1.3.6.3	Provide and Install G Finger Floats (7) 3.5'x26'	637.00	SF	\$205.00	\$130,585.00
1.3.6.4	Provide and Install G End Finger Float (1) 8'x30'	240.00	SF	\$180.00	\$43,200.00
1.3.6.5	Provide and Install G End Finger Float (1) 8'x26'	208.00	SF	\$180.00	\$37,440.00
1.3.6.6	Install Piling (16x0.5)	7.00	EA	\$5,000.00	\$35,000.00
1.3.7	H Floats	1.00	LS	\$843,630.00	\$843,630.00
1.3.7.1	Provide and Install Mainwalk Floats (10'x251')	2,510.00	SF	\$173.00	\$434,230.00
1.3.7.2	Provide and Install H Finger Floats (12) 4'x30'	1,440.00	SF	\$200.00	\$288,000.00
1.3.7.3	Provide and Install H End Finger Floats (2) 8'x30'	480.00	SF	\$180.00	\$86,400.00
1.3.7.4	Install Piling (16x0.5)	7.00	EA	\$5,000.00	\$35,000.00
1.3.8	New I Floats	1.00	LS	\$730,080.00	\$730,080.00
1.3.8.1	Provide and Install Mainwalk Floats (10'x216')	2,160.00	SF	\$173.00	\$373,680.00
1.3.8.2	Provide and Install I Finger Floats (10) 4'x30'	1,200.00	SF	\$200.00	\$240,000.00
1.3.8.3	Provide and Install I End Finger Floats (2) 8'x30'	480.00	SF	\$180.00	\$86,400.00
1.3.8.4	Install Piling (16x0.5)	6.00	EA	\$5,000.00	\$30,000.00
1.3.9	New JJ Floats	1.00	LS	\$818,780.00	\$818,780.00
1.3.9.1	Provide and Install Mainwalk Floats (10'x218')	2,180.00	SF	\$173.00	\$377,140.00
1.3.9.2	Provide and Install JJ Finger Floats (4) 5'x40'	800.00	SF	\$190.00	\$152,000.00
1.3.9.3	Provide and Install JJ Finger Floats (4) 4'x36'	576.00	SF	\$200.00	\$115,200.00
1.3.9.4	Provide and Install JJ End Finger Float (1) 8'x40'	320.00	SF	\$180.00	\$57,600.00
1.3.9.5	Provide and Install JJ End Finger Float (1) 8'x36'	288.00	SF	\$180.00	\$51,840.00
1.3.9.6	Install Piling (18x0.5)	13.00	EA	\$5,000.00	\$65,000.00

**City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 3 (EE-L)**

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.3.10	New JJJ Floats	1.00	LS	\$859,484.00	\$859,484.00
1.3.10.1	Provide and Install Mainwalk Floats (10'x218')	2,180.00	SF	\$173.00	\$377,140.00
1.3.10.2	Provide and Install JJJ Finger Floats (8) 5x40'	1,600.00	SF	\$188.84	\$302,144.00
1.3.10.3	Provide and Install JJJ End Finger Floats (2) 8'x40'	640.00	SF	\$180.00	\$115,200.00
1.3.10.4	Install Piling (18x0.5)	13.00	EA	\$5,000.00	\$65,000.00
1.3.11	New J Floats	1.00	LS	\$1,843,870.00	\$1,843,870.00
1.3.11.1	Provide and Install Mainwalk Floats (10'x479')	4,790.00	SF	\$173.00	\$828,670.00
1.3.11.2	Provide and Install J Finger Floats (20) 5'x40'	4,000.00	SF	\$190.00	\$760,000.00
1.3.11.3	Provide and Install K End Finger Floats (2) 8'x40'	640.00	SF	\$180.00	\$115,200.00
1.3.11.4	Install Piling (18x0.5)	28.00	EA	\$5,000.00	\$140,000.00
1.3.12	New K Floats	1.00	LS	\$2,133,050.00	\$2,133,050.00
1.3.12.1	Provide and Install Mainwalk Floats (10'x545')	5,450.00	SF	\$173.00	\$942,850.00
1.3.12.2	Provide and Install K Finger Floats (9) 6'x50'	2,700.00	SF	\$188.00	\$507,600.00
1.3.12.3	Provide and Install K Finger Floats (11) 5'x40'	2,200.00	SF	\$190.00	\$418,000.00
1.3.12.4	Provide and Install K End Finger Float (1) 8'x50'	400.00	SF	\$180.00	\$72,000.00
1.3.12.5	Provide and Install K End Finger Float (1) 8'x40'	320.00	SF	\$180.00	\$57,600.00
1.3.12.6	Install Piling (18x0.5)	27.00	EA	\$5,000.00	\$135,000.00
1.3.13	New KK Floats	1.00	LS	\$2,665,620.82	\$2,665,620.82
1.3.13.1	Provide and Install Mainwalk Floats (10'x595')	5,950.00	SF	\$173.00	\$1,029,350.00
1.3.13.2	Provide and Install KK Finger Floats (20) 6'x60'	7,200.00	SF	\$188.00	\$1,353,600.00
1.3.13.3	Provide and Install KK End Finger Floats (2) 8'x50'	800.00	SF	\$178.34	\$142,670.82
1.3.13.4	Install Piling (18x0.5)	28.00	EA	\$5,000.00	\$140,000.00
1.3.14	New L Floats	1.00	LS	\$2,488,280.00	\$2,488,280.00
1.3.14.1	Provide and Install Mainwalk Floats (10'x604')	6,040.00	SF	\$173.00	\$1,044,920.00
1.3.14.2	Provide and Install L Finger Floats (17) 6'x60'	6,120.00	SF	\$188.00	\$1,150,560.00
1.3.14.3	Provide and Install L End Finger Floats (2) 8'x60'	960.00	SF	\$180.00	\$172,800.00
1.3.14.4	Install Piling (18x0.5)	24.00	EA	\$5,000.00	\$120,000.00
1.3.15	Access Trestles and Gangways	1.00	LS	\$945,800.00	\$945,800.00
1.3.15.1	Provide and Install Gangway Landing Floats	480.00	SF	\$210.00	\$100,800.00
1.3.15.2	Provide and Install New 110' Gangway	3.00	EA	\$200,000.00	\$600,000.00
1.3.15.3	Provide and install new 100' Trestle	1.00	LS	\$180,000.00	\$180,000.00
1.3.15.4	Install new Trestle Landing Platform	1.00	LS	\$65,000.00	\$65,000.00
1.3.16	Provide and Install New Anodes	210.00	EA	\$1,500.00	\$315,000.00
1.3.17	On-Float Utilities	1.00	LS	\$4,903,020.00	\$4,903,020.00
1.3.17.1	Potable Water System	1.00	LS	\$1,119,260.00	\$1,119,260.00
1.3.17.1.1	4" HDPE Water Line	5,623.00	LF	\$120.00	\$674,760.00
1.3.17.1.2	Valves	21.00	EA	\$1,500.00	\$31,500.00
1.3.17.1.3	Water Pedestal	202.00	EA	\$1,500.00	\$303,000.00
1.3.17.1.4	Hot Box	2.00	EA	\$25,000.00	\$50,000.00
1.3.17.1.5	Flex Line	4.00	EA	\$15,000.00	\$60,000.00
1.3.17.2	Electrical System	1.00	LS	\$2,900,000.00	\$2,900,000.00
1.3.17.3	Fire Water System	1.00	LS	\$324,636.22	\$883,760.00
1.3.17.3.1	4" HDPE Water Line	5,623.00	LF	\$120.00	\$674,760.00
1.3.17.3.2	Valves	24.00	EA	\$1,500.00	\$36,000.00
1.3.17.3.3	Fire Standpipe	40.00	EA	\$1,500.00	\$60,000.00
1.3.17.3.4	Hot Box	2.00	EA	\$25,000.00	\$50,000.00
1.3.17.3.5	Flex Line	4.00	EA	\$15,000.00	\$60,000.00
1.3.17.3.6	FD Connection	2.00	EA	\$1,500.00	\$3,000.00
1.3.18	Dredging	146.77	CY	\$48.63	\$7,137.43
1.3.19	Ladders and Safety Equipment	1.00	LS	\$100,000.00	\$100,000.00
1.4	Contractor Indirects	1.00	LS	\$730,000.00	\$730,000.00
1.4.1	Marine Mammal Observation	150.00	Day	\$1,200.00	\$180,000.00
1.4.2	Field Personnel Housing, Per Diem, Transportation	200.00	Day	\$2,000.00	\$400,000.00
1.4.3	Survey	100.00	Day	\$1,500.00	\$150,000.00
1.5	Concept Level Contingency (30%)	1.00	LS	\$8,463,392.77	\$8,463,392.77
Subtotal Construction					\$36,674,702.02

City of Kodiak, St. Herman Harbor Float Replacement
 Conceptual Level Cost Estimate
Concept 3 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.6	Engineering and Project Management	1.00	LS	\$2,182,678.55	\$2,182,678.55
1.6.1	Design Engineering (6%)	1.00	LS	\$1,692,678.55	\$1,692,678.55
1.6.2	Permitting	1.00	LS	\$30,000.00	\$30,000.00
1.6.3	Site Survey	1.00	LS	\$60,000.00	\$60,000.00
1.6.4	Geotechnical Investigation and Dredge Sampling	1.00	LS	\$60,000.00	\$60,000.00
1.6.5	Bid Support	1.00	LS	\$40,000.00	\$40,000.00
1.6.6	Construction Administration and Inspection	1.00	LS	\$300,000.00	\$300,000.00
Engineering, Permitting and Project Management					\$2,182,678.55
Total Conceptual Project Cost					\$38,857,380.57

City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 4 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
	St. Herman Harbor Float Replacement (Concept 4)	1.00	LS	\$40,029,443.24	\$40,029,443.24
1.1	Mobilization and Demobilization	1.00	LS	\$1,750,000.00	\$1,750,000.00
1.1.1	Season 1	1.00	LS	\$950,000.00	\$950,000.00
1.1.1.1	Season 1 Mobilization	1.00	LS	\$700,000.00	\$700,000.00
1.1.1.2	Season 1 Demobilization	1.00	LS	\$250,000.00	\$250,000.00
1.1.2	Season 2	1.00	LS	\$800,000.00	\$800,000.00
1.1.2.1	Season 2 Mobilization	1.00	LS	\$350,000.00	\$350,000.00
1.1.2.2	Season 2 Demobilization	1.00	LS	\$450,000.00	\$450,000.00
1.2	Demolition and Disposal	1.00	LS	\$450,000.00	\$450,000.00
1.3	EE-L Float Replacement, New JJ and KK Float	1.00	LS	\$26,366,267.09	\$26,366,267.09
1.3.1	Furnish New Piling	1.00	LS	\$1,493,400.00	\$1,493,400.00
1.3.2.1	Furnish New Piling 16"Ø x 0.5"t x 60' Piling	74.00	EA	\$6,600.00	\$488,400.00
1.3.2.2	Furnish New Piling 18"Ø x 0.5"t x 60' Piling	134.00	EA	\$7,500.00	\$1,005,000.00
1.3.2	Headwalk Floats	1.00	LS	\$3,237,468.00	\$3,237,468.00
1.3.2.1	Provide and Install Headwalk Floats (10'x809')	8,090.00	SF	\$173.00	\$1,399,570.00
1.3.2.2	Provide and Install Headwalk Floats (12'x728')	8,736.00	SF	\$168.00	\$1,467,648.00
1.3.2.3	Provide and Install Headwalk Finger Floats (15) (3.5'x20')	1,050.00	SF	\$205.00	\$215,250.00
1.3.2.4	Install Piling (16x0.5)	31.00	EA	\$5,000.00	\$155,000.00
1.3.3	EE Floats	1.00	LS	\$317,560.00	\$317,560.00
1.3.3.1	Provide and Install Mainwalk Floats (10'x172')	1,720.00	SF	\$173.00	\$297,560.00
1.3.3.4	Install Piling (16x0.5)	4.00	EA	\$5,000.00	\$20,000.00
1.3.4	E Floats	1.00	LS	\$979,670.00	\$979,670.00
1.3.4.1	Provide and Install Mainwalk Floats (10'x300')	3,000.00	SF	\$173.00	\$519,000.00
1.3.4.2	Provide and Install E Finger Floats (18) 3.5'x26'	1,638.00	SF	\$205.00	\$335,790.00
1.3.4.3	Provide and Install E End Finger Floats (2) 8'x26'	416.00	SF	\$180.00	\$74,880.00
1.3.4.4	Install Piling (16x0.5)	10.00	EA	\$5,000.00	\$50,000.00
1.3.5	F Floats	1.00	LS	\$892,380.00	\$892,380.00
1.3.5.1	Provide and Install Mainwalk Floats (10'x274')	2,740.00	SF	\$173.00	\$474,020.00
1.3.5.2	Provide and Install F Finger Floats (16) 3.5'x26'	1,456.00	SF	\$205.00	\$298,480.00
1.3.5.3	Provide and Install F End Finger Floats (2) 8'x26'	416.00	SF	\$180.00	\$74,880.00
1.3.5.4	Install Piling (16x0.5)	9.00	EA	\$5,000.00	\$45,000.00
1.3.6	G Floats	1.00	LS	\$820,995.00	\$820,995.00
1.3.6.1	Provide and Install Mainwalk Floats (10'x249')	2,490.00	SF	\$173.00	\$430,770.00
1.3.6.2	Provide and Install G Finger Floats (6) 4'x30'	720.00	SF	\$200.00	\$144,000.00
1.3.6.3	Provide and Install G Finger Floats (7) 3.5'x26'	637.00	SF	\$205.00	\$130,585.00
1.3.6.4	Provide and Install G End Finger Float (1) 8'x30'	240.00	SF	\$180.00	\$43,200.00
1.3.6.5	Provide and Install G End Finger Float (1) 8'x26'	208.00	SF	\$180.00	\$37,440.00
1.3.6.6	Install Piling (16x0.5)	7.00	EA	\$5,000.00	\$35,000.00
1.3.7	H Floats	1.00	LS	\$886,830.00	\$886,830.00
1.3.7.1	Provide and Install Mainwalk Floats (10'x251')	2,510.00	SF	\$173.00	\$434,230.00
1.3.7.2	Provide and Install H Finger Floats (12) 4'x30'	1,440.00	SF	\$200.00	\$288,000.00
1.3.7.3	Provide and Install H End Finger Floats (2) 8'x30'	720.00	SF	\$180.00	\$129,600.00
1.3.7.4	Install Piling (16x0.5)	7.00	EA	\$5,000.00	\$35,000.00
1.3.8	New I Floats	1.00	LS	\$730,080.00	\$730,080.00
1.3.8.1	Provide and Install Mainwalk Floats (10'x216')	2,160.00	SF	\$173.00	\$373,680.00
1.3.8.2	Provide and Install I Finger Floats (10) 4'x30'	1,200.00	SF	\$200.00	\$240,000.00
1.3.8.3	Provide and Install I End Finger Floats (2) 8'x30'	480.00	SF	\$180.00	\$86,400.00
1.3.8.4	Install Piling (16x0.5)	6.00	EA	\$5,000.00	\$30,000.00
1.3.9	New JJ Floats	1.00	LS	\$824,540.00	\$824,540.00
1.3.9.1	Provide and Install Mainwalk Floats (10'x218')	2,180.00	SF	\$173.00	\$377,140.00
1.3.9.2	Provide and Install JJ Finger Floats (4) 5'x40'	800.00	SF	\$190.00	\$152,000.00
1.3.9.3	Provide and Install JJ Finger Floats (4) 4'x36'	576.00	SF	\$200.00	\$115,200.00
1.3.9.4	Provide and Install JJ End Finger Float (1) 8'x40'	320.00	SF	\$180.00	\$57,600.00
1.3.9.5	Provide and Install JJ End Finger Float (1) 8'x40'	320.00	SF	\$180.00	\$57,600.00
1.3.9.6	Install Piling (18x0.5)	13.00	EA	\$5,000.00	\$65,000.00

City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 4 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.3.10	New JJJ Floats	1.00	LS	\$861,340.00	\$861,340.00
1.3.10.1	Provide and Install Mainwalk Floats (10'x218')	2,180.00	SF	\$173.00	\$377,140.00
1.3.10.2	Provide and Install JJJ Finger Floats (8) 5'x40'	1,600.00	SF	\$190.00	\$304,000.00
1.3.10.3	Provide and Install JJJ End Finger Floats (2) 8'x40'	640.00	SF	\$180.00	\$115,200.00
1.3.10.4	Install Piling (18x0.5)	13.00	EA	\$5,000.00	\$65,000.00
1.3.11	New J Floats	1.00	LS	\$1,864,630.00	\$1,864,630.00
1.3.11.1	Provide and Install Mainwalk Floats (10'x491')	4,910.00	SF	\$173.00	\$849,430.00
1.3.11.2	Provide and Install J Finger Floats (20) 5'x40'	4,000.00	SF	\$190.00	\$760,000.00
1.3.11.3	Provide and Install K End Finger Floats (2) 8'x40'	640.00	SF	\$180.00	\$115,200.00
1.3.11.4	Install Piling (18x0.5)	28.00	EA	\$5,000.00	\$140,000.00
1.3.12	New K Floats	1.00	LS	\$2,133,050.00	\$2,133,050.00
1.3.12.1	Provide and Install Mainwalk Floats (10'x545')	5,450.00	SF	\$173.00	\$942,850.00
1.3.12.2	Provide and Install K Finger Floats (9) 6'x50'	2,700.00	SF	\$188.00	\$507,600.00
1.3.12.3	Provide and Install K Finger Floats (11) 5'x40'	2,200.00	SF	\$190.00	\$418,000.00
1.3.12.4	Provide and Install K End Finger Float (1) 8'x50'	400.00	SF	\$180.00	\$72,000.00
1.3.12.5	Provide and Install K End Finger Float (1) 8'x40'	320.00	SF	\$180.00	\$57,600.00
1.3.12.6	Install Piling (18x0.5)	27.00	EA	\$5,000.00	\$135,000.00
1.3.13	New KK Floats	1.00	LS	\$2,425,780.00	\$2,425,780.00
1.3.13.1	Provide and Install Mainwalk Floats (10'x586')	5,860.00	SF	\$173.00	\$1,013,780.00
1.3.13.2	Provide and Install KK Finger Floats (20) 6'x50'	6,000.00	SF	\$188.00	\$1,128,000.00
1.3.13.3	Provide and Install KK End Finger Floats (2) 8'x50'	800.00	SF	\$180.00	\$144,000.00
1.3.13.4	Install Piling (18x0.5)	28.00	EA	\$5,000.00	\$140,000.00
1.3.14	New L Floats	1.00	LS	\$2,609,400.00	\$2,609,400.00
1.3.14.1	Provide and Install Mainwalk Floats (10'x632')	6,320.00	SF	\$173.00	\$1,093,360.00
1.3.14.2	Provide and Install L Finger Floats (18) 6'x60'	6,480.00	SF	\$188.00	\$1,218,240.00
1.3.14.3	Provide and Install L End Finger Floats (2) 8'x60'	960.00	SF	\$180.00	\$172,800.00
1.3.14.4	Install Piling (18x0.5)	25.00	EA	\$5,000.00	\$125,000.00
1.3.15	Access Trestles and Gangways	1.00	LS	\$945,800.00	\$945,800.00
1.3.15.1	Provide and Install Gangway Landing Floats	480.00	SF	\$210.00	\$100,800.00
1.3.15.2	Provide and Install New 110' Gangway	3.00	EA	\$200,000.00	\$600,000.00
1.3.15.3	Provide and install new 100' Trestle	1.00	LS	\$180,000.00	\$180,000.00
1.3.15.4	Install new Trestle Landing Platform	1.00	LS	\$65,000.00	\$65,000.00
1.3.16	Provide and Install New Anodes	212.00	EA	\$1,500.00	\$318,000.00
1.3.17	On-Float Utilities	1.00	LS	\$4,920,360.00	\$4,920,360.00
1.3.17.1	Potable Water System	1.00	LS	\$1,128,680.00	\$1,128,680.00
1.3.17.1.1	4" HDPE Water Line	5,689.00	LF	\$120.00	\$682,680.00
1.3.17.1.2	Valves	21.00	EA	\$1,500.00	\$31,500.00
1.3.17.1.3	Water Pedestal	203.00	EA	\$1,500.00	\$304,500.00
1.3.17.1.4	Hot Box	2.00	EA	\$25,000.00	\$50,000.00
1.3.17.1.5	Flex Line	4.00	EA	\$15,000.00	\$60,000.00
1.3.17.2	Electrical System	1.00	LS	\$2,900,000.00	\$2,900,000.00
1.3.17.3	Fire Water System	1.00	LS	\$891,680.00	\$891,680.00
1.3.17.3.1	4" HDPE Water Line	5,689.00	LF	\$120.00	\$682,680.00
1.3.17.3.2	Valves	24.00	EA	\$1,500.00	\$36,000.00
1.3.17.3.3	Fire Standpipe	40.00	EA	\$1,500.00	\$60,000.00
1.3.17.3.4	Hot Box	2.00	EA	\$25,000.00	\$50,000.00
1.3.17.3.5	Flex Line	4.00	EA	\$15,000.00	\$60,000.00
1.3.17.3.6	FD Connection	2.00	EA	\$1,500.00	\$3,000.00
1.3.18	Dredging	102.49	CY	\$48.63	\$4,984.09
1.3.19	Ladders and Safety Equipment	1.00	LS	\$100,000.00	\$100,000.00
1.4	Contractor Indirects	1.00	LS	\$730,000.00	\$730,000.00
1.4.1	Marine Mammal Observation	150.00	Day	\$1,200.00	\$180,000.00
1.4.2	Field Personnel Housing, Per Diem, Transportation	200.00	Day	\$2,000.00	\$400,000.00
1.4.3	Survey	100.00	Day	\$1,500.00	\$150,000.00
1.5	Concept Level Contingency (30%)	1.00	LS	\$8,485,400.13	\$8,485,400.13
Subtotal Construction					\$37,781,667.22

City of Kodiak, St. Herman Harbor Float Replacement
 Conceptual Level Cost Estimate
 Concept 4 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.6	Engineering and Project Management	1.00	LS	\$2,247,776.03	\$2,247,776.03
1.6.1	Design Engineering (6%)	1.00	LS	\$1,757,776.03	\$1,757,776.03
1.6.2	Permitting	1.00	LS	\$30,000.00	\$30,000.00
1.6.3	Site Survey	1.00	LS	\$60,000.00	\$60,000.00
1.6.4	Geotechnical Investigation and Dredge Sampling	1.00	LS	\$60,000.00	\$60,000.00
1.6.5	Bid Support	1.00	LS	\$40,000.00	\$40,000.00
1.6.6	Construction Administration and Inspection	1.00	LS	\$300,000.00	\$300,000.00
Engineering, Permitting and Project Management					\$2,247,776.03
Total Conceptual Project Cost					\$40,029,443.24

City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 5 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
	St. Herman Harbor Float Replacement (Concept 5)	1.00	LS	\$39,861,186.57	\$39,861,186.57
1.1	Mobilization and Demobilization	1.00	LS	\$1,750,000.00	\$1,750,000.00
1.1.1	Season 1	1.00	LS	\$950,000.00	\$950,000.00
1.1.1.1	Season 1 Mobilization	1.00	LS	\$700,000.00	\$700,000.00
1.1.1.2	Season 1 Demobilization	1.00	LS	\$250,000.00	\$250,000.00
1.1.2	Season 2	1.00	LS	\$800,000.00	\$800,000.00
1.1.2.1	Season 2 Mobilization	1.00	LS	\$350,000.00	\$350,000.00
1.1.2.2	Season 2 Demobilization	1.00	LS	\$450,000.00	\$450,000.00
1.2	Demolition and Disposal	1.00	LS	\$450,000.00	\$450,000.00
1.3	EE-L Float Replacement, New JJ and KK Float	1.00	LS	\$26,019,401.89	\$26,019,401.89
1.3.1	Furnish New Piling	1.00	LS	\$1,475,100.00	\$1,475,100.00
1.3.2.1	Furnish New Piling 16"Ø x 0.5"t x 60' Piling	86.00	EA	\$6,600.00	\$567,600.00
1.3.2.2	Furnish New Piling 18"Ø x 0.5"t x 60' Piling	121.00	EA	\$7,500.00	\$907,500.00
1.3.2	Headwalk Floats	1.00	LS	\$1,016,338.68	\$3,218,452.00
1.3.2.1	Provide and Install Headwalk Floats (10'x805')	8,050.00	SF	\$173.00	\$1,392,650.00
1.3.2.2	Provide and Install Headwalk Floats (12'x722')	8,664.00	SF	\$168.00	\$1,455,552.00
1.3.2.3	Provide and Install Headwalk Finger Floats 15 (3.5'x20')	1,050.00	SF	\$205.00	\$215,250.00
1.3.2.4	Install Piling (16x0.5)	31.00	EA	\$5,000.00	\$155,000.00
1.3.3	EE Floats	1.00	LS	\$1,024,117.91	\$317,560.00
1.3.3.1	Provide and Install Mainwalk Floats (10'x172')	1,720.00	SF	\$173.00	\$297,560.00
1.3.3.4	Install Piling (16x0.5)	4.00	EA	\$5,000.00	\$20,000.00
1.3.4	E Floats	1.00	LS	\$979,670.00	\$979,670.00
1.3.4.1	Provide and Install Mainwalk Floats (10'x300')	3,000.00	SF	\$173.00	\$519,000.00
1.3.4.2	Provide and Install E Finger Floats (18) 3.5'x26'	1,638.00	SF	\$205.00	\$335,790.00
1.3.4.3	Provide and Install E End Finger Floats (2) 8'x26'	416.00	SF	\$180.00	\$74,880.00
1.3.4.4	Install Piling (16x0.5)	10.00	EA	\$5,000.00	\$50,000.00
1.3.5	F Floats	1.00	LS	\$894,110.00	\$894,110.00
1.3.5.1	Provide and Install Mainwalk Floats (10'x275')	2,750.00	SF	\$173.00	\$475,750.00
1.3.5.2	Provide and Install F Finger Floats (16) 3.5'x26'	1,456.00	SF	\$205.00	\$298,480.00
1.3.5.3	Provide and Install F End Finger Floats (2) 8'x26'	416.00	SF	\$180.00	\$74,880.00
1.3.5.4	Install Piling (16x0.5)	9.00	EA	\$5,000.00	\$45,000.00
1.3.6	G Floats	1.00	LS	\$820,995.00	\$820,995.00
1.3.6.1	Provide and Install Mainwalk Floats (10'x249')	2,490.00	SF	\$173.00	\$430,770.00
1.3.6.2	Provide and Install G Finger Floats (6) 4'x30'	720.00	SF	\$200.00	\$144,000.00
1.3.6.3	Provide and Install G Finger Floats (7) 3.5'x26'	637.00	SF	\$205.00	\$130,585.00
1.3.6.4	Provide and Install G End Finger Float (1) 8'x30'	240.00	SF	\$180.00	\$43,200.00
1.3.6.5	Provide and Install G End Finger Float (1) 8'x26'	208.00	SF	\$180.00	\$37,440.00
1.3.6.6	Install Piling (16x0.5)	7.00	EA	\$5,000.00	\$35,000.00
1.3.7	H Floats	1.00	LS	\$730,080.00	\$730,080.00
1.3.7.1	Provide and Install Mainwalk Floats (10'x216')	2,160.00	SF	\$173.00	\$373,680.00
1.3.7.2	Provide and Install H Finger Floats (10) 4'x30'	1,200.00	SF	\$200.00	\$240,000.00
1.3.7.3	Provide and Install H End Finger Floats (2) 8'x30'	480.00	SF	\$180.00	\$86,400.00
1.3.7.4	Install Piling (16x0.5)	6.00	EA	\$5,000.00	\$30,000.00
1.3.8	New I Floats	1.00	LS	\$730,080.00	\$730,080.00
1.3.8.1	Provide and Install Mainwalk Floats (10'x216')	2,160.00	SF	\$173.00	\$373,680.00
1.3.8.2	Provide and Install I Finger Floats (10) 4'x30'	1,200.00	SF	\$200.00	\$240,000.00
1.3.8.3	Provide and Install I End Finger Floats (2) 8'x30'	480.00	SF	\$180.00	\$86,400.00
1.3.8.4	Install Piling (16x0.5)	6.00	EA	\$5,000.00	\$30,000.00
1.3.9	New JJ Floats	1.00	LS	\$752,000.00	\$752,000.00
1.3.9.1	Provide and Install Mainwalk Floats (10'x204')	2,040.00	SF	\$173.00	\$352,920.00
1.3.9.2	Provide and Install JJ Finger Floats (8) 4'x36'	1,152.00	SF	\$200.00	\$230,400.00
1.3.9.3	Provide and Install JJ End Finger Floats (2) 8'x36'	576.00	SF	\$180.00	\$103,680.00
1.3.9.4	Install Piling (16x0.5)	13.00	EA	\$5,000.00	\$65,000.00
1.3.10	New JJJ Floats	1.00	LS	\$861,340.00	\$861,340.00
1.3.10.1	Provide and Install Mainwalk Floats (10'x218')	2,180.00	SF	\$173.00	\$377,140.00
1.3.10.2	Provide and Install JJJ Finger Floats (8) 5'x40'	1,600.00	SF	\$190.00	\$304,000.00
1.3.10.3	Provide and Install JJJ End Finger Float (2) 8'x40'	640.00	SF	\$180.00	\$115,200.00
1.3.10.4	Install Piling (18x0.5)	13.00	EA	\$5,000.00	\$65,000.00

City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 5 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.3.11	New J Floats	1.00	LS	\$1,864,630.00	\$1,864,630.00
1.3.11.1	Provide and Install Mainwalk Floats (10'x491')	4,910.00	SF	\$173.00	\$849,430.00
1.3.11.2	Provide and Install J Finger Floats (20) 5'x40'	4,000.00	SF	\$190.00	\$760,000.00
1.3.11.3	Provide and Install K End Finger Floats (2) 8'x40'	640.00	SF	\$180.00	\$115,200.00
1.3.11.4	Install Piling (18x0.5)	28.00	EA	\$5,000.00	\$140,000.00
1.3.12	New K Floats	1.00	LS	\$2,133,050.00	\$2,133,050.00
1.3.12.1	Provide and Install Mainwalk Floats (10'x545')	5,450.00	SF	\$173.00	\$942,850.00
1.3.12.2	Provide and Install K Finger Floats (9) 6'x50'	2,700.00	SF	\$188.00	\$507,600.00
1.3.12.3	Provide and Install K Finger Floats (11) 5'x40'	2,200.00	SF	\$190.00	\$418,000.00
1.3.12.4	Provide and Install K End Finger Float (1) 8'x50'	400.00	SF	\$180.00	\$72,000.00
1.3.12.5	Provide and Install K End Finger Float (1) 8'x40'	320.00	SF	\$180.00	\$57,600.00
1.3.12.6	Install Piling (18x0.5)	27.00	EA	\$5,000.00	\$135,000.00
1.3.13	New KK Floats	1.00	LS	\$2,443,080.00	\$2,443,080.00
1.3.13.1	Provide and Install Mainwalk Floats (10'x596')	5,960.00	SF	\$173.00	\$1,031,080.00
1.3.13.2	Provide and Install KK Finger Floats (20) 6'x50'	6,000.00	SF	\$188.00	\$1,128,000.00
1.3.13.3	Provide and Install K End Finger Floats (2) 8'x50'	800.00	SF	\$180.00	\$144,000.00
1.3.13.4	Install Piling (18x0.5)	28.00	EA	\$5,000.00	\$140,000.00
1.3.14	New L Floats	1.00	LS	\$2,523,000.00	\$2,523,000.00
1.3.14.1	Provide and Install Mainwalk Floats (10'x632')	6,320.00	SF	\$173.00	\$1,093,360.00
1.3.14.2	Provide and Install L Finger Floats (18) 6'x60'	6,480.00	SF	\$188.00	\$1,218,240.00
1.3.14.3	Provide and Install L End Finger Floats (2) 8'x60'	480.00	SF	\$180.00	\$86,400.00
1.3.14.4	Install Piling (18x0.5)	25.00	EA	\$5,000.00	\$125,000.00
1.3.15	Access Trestles and Gangways	1.00	LS	\$945,800.00	\$945,800.00
1.3.15.1	Provide and Install Gangway Landing Floats	480.00	SF	\$210.00	\$100,800.00
1.3.15.2	Provide and Install New 110' Gangway	3.00	EA	\$200,000.00	\$600,000.00
1.3.15.3	Provide and install new 100' Trestle	1.00	LS	\$180,000.00	\$180,000.00
1.3.15.4	Install new Trestle Landing Platform	1.00	LS	\$65,000.00	\$65,000.00
1.3.16	Provide and Install New Anodes	211.00	EA	\$1,500.00	\$316,500.00
1.3.17	On-Float Utilities	1.00	LS	\$4,905,840.00	\$4,905,840.00
1.3.17.1	Potable Water System	1.00	LS	\$397,094.99	\$1,119,920.00
1.3.17.1.1	4" HDPE Water Line	5,641.00	LF	\$120.00	\$676,920.00
1.3.17.1.2	Valves	21.00	EA	\$1,500.00	\$31,500.00
1.3.17.1.3	Water Pedestal	201.00	EA	\$1,500.00	\$301,500.00
1.3.17.1.4	Hot Box	2.00	EA	\$25,000.00	\$50,000.00
1.3.17.1.5	Flex Line	4.00	EA	\$15,000.00	\$60,000.00
1.3.17.2	Electrical System	1.00	LS	\$2,900,000.00	\$2,900,000.00
1.3.17.3	Fire Water System	1.00	LS	\$324,636.22	\$885,920.00
1.3.17.3.1	4" HDPE Water Line	5,641.00	LF	\$120.00	\$676,920.00
1.3.17.3.2	Valves	24.00	EA	\$1,500.00	\$36,000.00
1.3.17.3.3	Fire Standpipe	40.00	EA	\$1,500.00	\$60,000.00
1.3.17.3.4	Hot Box	2.00	EA	\$25,000.00	\$50,000.00
1.3.17.3.5	Flex Line	4.00	EA	\$15,000.00	\$60,000.00
1.3.17.3.6	FD Connection	2.00	EA	\$1,500.00	\$3,000.00
1.3.18	Dredging	166.87	CY	\$48.63	\$8,114.89
1.3.19	Ladders and Safety Equipment	1.00	LS	\$100,000.00	\$100,000.00
1.4	Contractor Indirects	1.00	LS	\$730,000.00	\$730,000.00
1.4.1	Marine Mammal Observation	150.00	Day	\$1,200.00	\$180,000.00
1.4.2	Field Personnel Housing, Per Diem, Transportation	200.00	Day	\$2,000.00	\$400,000.00
1.4.3	Survey	100.00	Day	\$1,500.00	\$150,000.00
1.5	Concept Level Contingency (30%)	1.00	LS	\$8,684,820.57	\$8,684,820.57
Subtotal Construction					\$37,634,222.46

City of Kodiak, St. Herman Harbor Float Replacement
 Conceptual Level Cost Estimate
 Concept 5 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.6	Engineering and Project Management	1.00	LS	\$2,226,964.11	\$2,226,964.11
1.6.1	Design Engineering (6%)	1.00	LS	\$1,736,964.11	\$1,736,964.11
1.6.2	Permitting	1.00	LS	\$30,000.00	\$30,000.00
1.6.3	Site Survey	1.00	LS	\$60,000.00	\$60,000.00
1.6.4	Geotechnical Investigation and Dredge Sampling	1.00	LS	\$60,000.00	\$60,000.00
1.6.5	Bid Support	1.00	LS	\$40,000.00	\$40,000.00
1.6.6	Construction Administration and Inspection	1.00	LS	\$300,000.00	\$300,000.00
Engineering, Permitting and Project Management					\$2,226,964.11
Total Conceptual Project Cost					\$39,861,186.57

City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 6 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
	St. Herman Harbor Float Replacement (Concept 6)	1.00	LS	\$39,621,201.49	\$39,621,201.49
1.1	Mobilization and Demobilization	1.00	LS	\$1,750,000.00	\$1,750,000.00
1.1.1	Season 1	1.00	LS	\$950,000.00	\$950,000.00
1.1.1.1	Season 1 Mobilization	1.00	LS	\$700,000.00	\$700,000.00
1.1.1.2	Season 1 Demobilization	1.00	LS	\$250,000.00	\$250,000.00
1.1.2	Season 2	1.00	LS	\$800,000.00	\$800,000.00
1.1.2.1	Season 2 Mobilization	1.00	LS	\$350,000.00	\$350,000.00
1.1.2.2	Season 2 Demobilization	1.00	LS	\$450,000.00	\$450,000.00
1.2	Demolition and Disposal	1.00	LS	\$450,000.00	\$450,000.00
1.3	EE-L Float Replacement, New JJ and KK Float	1.00	LS	\$26,067,545.21	\$26,067,545.21
1.3.1	Furnish New Piling	1.00	LS	\$1,434,300.00	\$1,434,300.00
1.3.1.1	Furnish New Piling 16"Ø x 0.5"t x 60' Piling	73.00	EA	\$6,600.00	\$481,800.00
1.3.1.2	Furnish New Piling 18"Ø x 0.5"t x 60' Piling	127.00	EA	\$7,500.00	\$952,500.00
1.3.2	Headwalk Floats	1.00	LS	\$3,326,324.00	\$3,326,324.00
1.3.2.1	Provide and Install Headwalk Floats (10'x835')	8,350.00	SF	\$173.00	\$1,444,550.00
1.3.2.2	Provide and Install Headwalk Floats (12'x764')	9,168.00	SF	\$168.00	\$1,540,224.00
1.3.2.3	Provide and Install Headwalk Finger Floats 13 (3.5'x20')	910.00	SF	\$205.00	\$186,550.00
1.3.2.4	Install Piling (16x0.5)	31.00	EA	\$5,000.00	\$155,000.00
1.3.3	EE Floats	1.00	LS	\$257,200.00	\$257,200.00
1.3.3.1	Provide and Install Mainwalk Floats (10'x140')	1,400.00	SF	\$173.00	\$242,200.00
1.3.3.4	Install Piling (16x0.5)	3.00	EA	\$5,000.00	\$15,000.00
1.3.4	E Floats	1.00	LS	\$979,670.00	\$979,670.00
1.3.4.1	Provide and Install Mainwalk Floats (10'x300')	3,000.00	SF	\$173.00	\$519,000.00
1.3.4.2	Provide and Install E Finger Floats (18) 3.5'x26'	1,638.00	SF	\$205.00	\$335,790.00
1.3.4.3	Provide and Install E End Finger Floats (2) 8'x26'	416.00	SF	\$180.00	\$74,880.00
1.3.4.4	Install Piling (16x0.5)	10.00	EA	\$5,000.00	\$50,000.00
1.3.5	F Floats	1.00	LS	\$892,380.00	\$892,380.00
1.3.5.1	Provide and Install Mainwalk Floats (10'x274')	2,740.00	SF	\$173.00	\$474,020.00
1.3.5.2	Provide and Install F Finger Floats (16) 3.5'x26'	1,456.00	SF	\$205.00	\$298,480.00
1.3.5.3	Provide and Install F End Finger Floats (2) 8'x26'	416.00	SF	\$180.00	\$74,880.00
1.3.5.4	Install Piling (16x0.5)	9.00	EA	\$5,000.00	\$45,000.00
1.3.6	G Floats	1.00	LS	\$820,995.00	\$820,995.00
1.3.6.1	Provide and Install Mainwalk Floats (10'x249')	2,490.00	SF	\$173.00	\$430,770.00
1.3.6.2	Provide and Install G Finger Floats (6) 4'x30'	720.00	SF	\$200.00	\$144,000.00
1.3.6.3	Provide and Install G Finger Floats (7) 3.5'x26'	637.00	SF	\$205.00	\$130,585.00
1.3.6.4	Provide and Install G End Finger Float (1) 8'x30'	240.00	SF	\$180.00	\$43,200.00
1.3.6.5	Provide and Install G End Finger Float (1) 8'x26'	208.00	SF	\$180.00	\$37,440.00
1.3.6.6	Install Piling (16x0.5)	7.00	EA	\$5,000.00	\$35,000.00
1.3.7	H Floats	1.00	LS	\$843,630.00	\$843,630.00
1.3.7.1	Provide and Install Mainwalk Floats (10'x251')	2,510.00	SF	\$173.00	\$434,230.00
1.3.7.2	Provide and Install H Finger Floats (12) 4'x30'	1,440.00	SF	\$200.00	\$288,000.00
1.3.7.3	Provide and Install H End Finger Floats (2) 8'x30'	480.00	SF	\$180.00	\$86,400.00
1.3.7.4	Install Piling (16x0.5)	7.00	EA	\$5,000.00	\$35,000.00
1.3.8	New I Floats	1.00	LS	\$730,080.00	\$730,080.00
1.3.8.1	Provide and Install Mainwalk Floats (10'x216')	2,160.00	SF	\$173.00	\$373,680.00
1.3.8.2	Provide and Install I Finger Floats (10) 4'x30'	1,200.00	SF	\$200.00	\$240,000.00
1.3.8.3	Provide and Install I End Finger Floats (2) 8'x30'	480.00	SF	\$180.00	\$86,400.00
1.3.8.4	Install Piling (16x0.5)	6.00	EA	\$5,000.00	\$30,000.00
1.3.9	New JJ Floats	1.00	LS	\$818,780.00	\$818,780.00
1.3.9.1	Provide and Install Mainwalk Floats (10'x218')	2,180.00	SF	\$173.00	\$377,140.00
1.3.9.2	Provide and Install JJ Finger Floats (4) 5'x40'	800.00	SF	\$190.00	\$152,000.00
1.3.9.3	Provide and Install JJ Finger Floats (4) 4'x36'	576.00	SF	\$200.00	\$115,200.00
1.3.9.4	Provide and Install JJ End Finger Float (1) 8'x40'	320.00	SF	\$180.00	\$57,600.00
1.3.9.5	Provide and Install JJ End Finger Float (1) 8'x36'	288.00	SF	\$180.00	\$51,840.00
1.3.9.6	Install Piling (18x0.5)	13.00	EA	\$5,000.00	\$65,000.00

City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 6 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.3.10	New JJJ Floats	1.00	LS	\$861,340.00	\$861,340.00
1.3.10.1	Provide and Install Mainwalk Floats (10'x218')	2,180.00	SF	\$173.00	\$377,140.00
1.3.10.2	Provide and Install JJJ Finger Floats (8) 5x40'	1,600.00	SF	\$190.00	\$304,000.00
1.3.10.3	Provide and Install JJJ End Finger Floats (2) 8'x40'	640.00	SF	\$180.00	\$115,200.00
1.3.10.4	Install Piling (18x0.5)	13.00	EA	\$5,000.00	\$65,000.00
1.3.11	New J Floats	1.00	LS	\$1,864,630.00	\$1,864,630.00
1.3.11.1	Provide and Install Mainwalk Floats (10'x491')	4,910.00	SF	\$173.00	\$849,430.00
1.3.11.2	Provide and Install J Finger Floats (20) 5'x40'	4,000.00	SF	\$190.00	\$760,000.00
1.3.11.3	Provide and Install J End Finger Floats (2) 8'x40'	640.00	SF	\$180.00	\$115,200.00
1.3.11.4	Install Piling (18x0.5)	28.00	EA	\$5,000.00	\$140,000.00
1.3.12	New K Floats	1.00	LS	\$2,221,860.00	\$2,221,860.00
1.3.12.1	Provide and Install Mainwalk Floats (10'x542')	5,420.00	SF	\$173.00	\$937,660.00
1.3.12.2	Provide and Install K Finger Floats (18) 6'x50'	5,400.00	SF	\$188.00	\$1,015,200.00
1.3.12.3	Provide and Install K End Finger Floats (2) 8'x50'	800.00	SF	\$180.00	\$144,000.00
1.3.12.4	Install Piling (18x0.5)	25.00	EA	\$5,000.00	\$125,000.00
1.3.13	New KK Floats	1.00	LS	\$2,263,370.00	\$2,263,370.00
1.3.13.1	Provide and Install Mainwalk Floats (10'x541')	5,410.00	SF	\$173.00	\$935,930.00
1.3.13.2	Provide and Install KK Finger Floats (8) 6'x60'	2,880.00	SF	\$188.00	\$541,440.00
1.3.13.3	Provide and Install KK Finger Floats (9) 6'x50'	2,700.00	SF	\$188.00	\$507,600.00
1.3.13.4	Provide and Install KK End Finger Float (1) 8'x60'	480.00	SF	\$180.00	\$86,400.00
1.3.13.5	Provide and Install KK End Finger Float (1) 8'x50'	400.00	SF	\$180.00	\$72,000.00
1.3.13.6	Install Piling (18x0.5)	24.00	EA	\$5,000.00	\$120,000.00
1.3.14	New L Floats	1.00	LS	\$2,488,280.00	\$2,488,280.00
1.3.14.1	Provide and Install Mainwalk Floats (10'x604')	6,040.00	SF	\$173.00	\$1,044,920.00
1.3.14.2	Provide and Install L Finger Floats (17) 6'x60'	6,120.00	SF	\$188.00	\$1,150,560.00
1.3.14.3	Provide and Install L End Finger Floats (2) 8'x60'	960.00	SF	\$180.00	\$172,800.00
1.3.14.4	Install Piling (18x0.5)	24.00	EA	\$5,000.00	\$120,000.00
1.3.15	Access Trestles and Gangways	1.00	LS	\$945,800.00	\$945,800.00
1.3.15.1	Provide and Install Gangway Landing Floats	480.00	SF	\$210.00	\$100,800.00
1.3.15.2	Provide and Install New 110' Gangway	3.00	EA	\$200,000.00	\$600,000.00
1.3.15.3	Provide and install new 100' Trestle	1.00	LS	\$180,000.00	\$180,000.00
1.3.15.4	Install new Trestle Landing Platform	1.00	LS	\$65,000.00	\$65,000.00
1.3.16	Provide and Install New Anodes	204.00	EA	\$1,500.00	\$306,000.00
1.3.17	On-Float Utilities	1.00	LS	\$4,907,820.00	\$4,907,820.00
1.3.17.1	Potable Water System	1.00	LS	\$397,094.99	\$1,121,660.00
1.3.17.1.1	4" HDPE Water Line	5,643.00	LF	\$120.00	\$677,160.00
1.3.17.1.2	Valves	21.00	EA	\$1,500.00	\$31,500.00
1.3.17.1.3	Water Pedestal	202.00	EA	\$1,500.00	\$303,000.00
1.3.17.1.4	Hot Box	2.00	EA	\$25,000.00	\$50,000.00
1.3.17.1.5	Flex Line	4.00	EA	\$15,000.00	\$60,000.00
1.3.17.2	Electrical System	1.00	LS	\$2,900,000.00	\$2,900,000.00
1.3.17.3	Fire Water System	1.00	LS	\$324,636.22	\$886,160.00
1.3.17.3.1	4" HDPE Water Line	5,643.00	LF	\$120.00	\$677,160.00
1.3.17.3.2	Valves	24.00	EA	\$1,500.00	\$36,000.00
1.3.17.3.3	Fire Standpipe	40.00	EA	\$1,500.00	\$60,000.00
1.3.17.3.4	Hot Box	2.00	EA	\$25,000.00	\$50,000.00
1.3.17.3.5	Flex Line	4.00	EA	\$15,000.00	\$60,000.00
1.3.17.3.6	FD Connection	2.00	EA	\$1,500.00	\$3,000.00
1.3.18	Dredging	104.59	CY	\$48.63	\$5,086.21
1.3.19	Ladders and Safety Equipment	1.00	LS	\$100,000.00	\$100,000.00
1.4	Contractor Indirects	1.00	LS	\$730,000.00	\$730,000.00
1.4.1	Marine Mammal Observation	150.00	Day	\$1,200.00	\$180,000.00
1.4.2	Field Personnel Housing, Per Diem, Transportation	200.00	Day	\$2,000.00	\$400,000.00
1.4.3	Survey	100.00	Day	\$1,500.00	\$150,000.00
1.5	Concept Level Contingency (30%)	1.00	LS	\$8,393,803.56	\$8,393,803.56
Subtotal Construction					\$37,391,348.78

City of Kodiak, St. Herman Harbor Float Replacement
 Conceptual Level Cost Estimate
 Concept 6 (EE-L)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.6	Engineering and Project Management	1.00	LS	\$2,229,852.71	\$2,229,852.71
1.6.1	Design Engineering (6%)	1.00	LS	\$1,739,852.71	\$1,739,852.71
1.6.2	Permitting	1.00	LS	\$30,000.00	\$30,000.00
1.6.3	Site Survey	1.00	LS	\$60,000.00	\$60,000.00
1.6.4	Geotechnical Investigation and Dredge Sampling	1.00	LS	\$60,000.00	\$60,000.00
1.6.5	Bid Support	1.00	LS	\$40,000.00	\$40,000.00
1.6.6	Construction Administration and Inspection	1.00	LS	\$300,000.00	\$300,000.00
	Engineering, Permitting and Project Management				\$2,229,852.71
	Total Conceptual Project Cost				\$39,621,201.49

City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 1 (M, N, and O)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
	St. Herman Harbor Float Replacement (Concept 1 Large Vessel)	1.00	LS	\$13,897,580.80	\$13,897,580.80
1.1	Mobilization and Demobilization	1.00	LS	\$1,500,000.00	\$1,500,000.00
1.1.1	Season 1	1.00	LS	\$950,000.00	\$950,000.00
1.1.1.1	Season 1 Mobilization	1.00	LS	\$700,000.00	\$700,000.00
1.1.1.2	Season 1 Demobilization	1.00	LS	\$250,000.00	\$250,000.00
1.1.2	Season 2	1.00	LS	\$550,000.00	\$550,000.00
1.1.2.1	Season 2 Mobilization	1.00	LS	\$150,000.00	\$150,000.00
1.1.2.2	Season 2 Demobilization	1.00	LS	\$400,000.00	\$400,000.00
1.2	Demolition and Disposal	1.00	LS	\$45,000.00	\$45,000.00
1.3	M-O Float Expansion, New N Float	1.00	LS	\$8,022,280.00	\$8,022,280.00
1.3.1	Furnish New Piling	1.00	LS	\$1,120,500.00	\$1,120,500.00
1.3.1.1	Furnish New 24Øx0.5tx 80' Piling (Includes 3 Contingency)	83.00	EA	\$13,500.00	\$1,120,500.00
1.3.2	Headwalk Floats	1.00	LS	\$876,640.00	\$876,640.00
1.3.2.1	Provide and Install Headwalk Floats (12'x415')	4,980.00	SF	\$168.00	\$836,640.00
1.3.2.2	Install Piling (24x0.5)	8.00	EA	\$5,000.00	\$40,000.00
1.3.3	O Float	1.00	LS	\$664,000.00	\$664,000.00
1.3.3.1	Remove Piling	64.00	EA	\$1,500.00	\$96,000.00
1.3.3.2	Relocate N Existing Floats to "O" (Move Float 400')	1.00	LS	\$120,000.00	\$120,000.00
1.3.3.3	Install Piling	64.00	EA	\$5,000.00	\$320,000.00
1.3.3.4	Fabricate and Reinstall Moment Frames	32.00	EA	\$4,000.00	\$128,000.00
1.3.4	N Float	1.00	LS	\$3,073,620.00	\$3,073,620.00
1.3.4.1	Provide and Install Mainwalk Float (10'x766')	7,660.00	SF	\$173.00	\$1,325,180.00
1.3.4.2	Provide and Install N Finger Floats (7) 12'x120'	10,080.00	SF	\$168.00	\$1,693,440.00
1.3.4.3	Install Piling (24x0.5)	11.00	EA	\$5,000.00	\$55,000.00
1.3.5	Access Trestles and Gangways	1.00	LS	\$452,000.00	\$452,000.00
1.3.5.1	Provide and Install Gangway Landing Floats	1,200.00	SF	\$210.00	\$252,000.00
1.3.5.2	Provide and Install New 110' Gangway	1.00	EA	\$200,000.00	\$200,000.00
1.3.6	Provide and Install New Anodes	83.00	EA	\$1,500.00	\$124,500.00
1.3.7	On-Float Utilities	1.00	LS	\$1,666,020.00	\$1,666,020.00
1.3.7.1	Potable Water System	1.00	LS	\$315,760.00	\$315,760.00
1.3.7.1.1	4" HDPE Water Line	1,973.00	LF	\$120.00	\$236,760.00
1.3.7.1.2	Valves	2.00	EA	\$1,500.00	\$3,000.00
1.3.7.1.3	Water Pedestal	14.00	EA	\$1,500.00	\$21,000.00
1.3.7.1.4	Hot Box	1.00	EA	\$25,000.00	\$25,000.00
1.3.7.1.5	Flex Line	2.00	EA	\$15,000.00	\$30,000.00
1.3.7.2	Electrical System	1.00	LS	\$1,030,000.00	\$1,030,000.00
1.3.7.3	Fire Water System	1.00	LS	\$320,260.00	\$320,260.00
1.3.7.3.1	4" HDPE Water Line	1,973.00	LF	\$120.00	\$236,760.00
1.3.7.3.2	Valves	4.00	EA	\$1,500.00	\$6,000.00
1.3.7.3.3	Fire Standpipe	13.00	EA	\$1,500.00	\$19,500.00
1.3.7.3.4	Hot Box	1.00	EA	\$25,000.00	\$25,000.00
1.3.7.3.5	Flex Line	2.00	EA	\$15,000.00	\$30,000.00
1.3.7.3.6	FD Connection	2.00	EA	\$1,500.00	\$3,000.00
1.3.9	Ladders and Safety Equipment	1.00	LS	\$45,000.00	\$45,000.00
1.4	Contractor Indirects	1.00	LS	\$453,000.00	\$453,000.00
1.4.1	Marine Mammal Observation	90.00	Day	\$1,200.00	\$108,000.00
1.4.2	Field Personnel Housing, Per Diem, Transportation	120.00	Day	\$2,000.00	\$240,000.00
1.4.3	Survey	70.00	Day	\$1,500.00	\$105,000.00
1.5	Concept Level Construction Contingency (30%)	1.00	LS	\$3,006,084.00	\$3,006,084.00
Construction Subtotal					\$13,026,364.00

**City of Kodiak, St. Herman Harbor Float Replacement
 Conceptual Level Cost Estimate
 Concept 1 (M, N, and O)**

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.6	Engineering and Project Management	1.00	LS	\$871,216.80	\$871,216.80
1.6.1	Design Engineering (6%)	1.00	LS	\$601,216.80	\$601,216.80
1.6.2	Permitting	1.00	LS	\$30,000.00	\$30,000.00
1.6.3	Site Survey	1.00	LS	\$25,000.00	\$25,000.00
1.6.4	Geotechnical Investigation	1.00	LS	\$30,000.00	\$30,000.00
1.6.5	Bid Support	1.00	LS	\$35,000.00	\$35,000.00
1.6.6	Construction Administration and Inspection	1.00	LS	\$150,000.00	\$150,000.00
Engineering, Permitting and Project Management					\$871,216.80
Total Conceptual Project Cost					\$13,897,580.80

City of Kodiak, St. Herman Harbor Float Replacement
Conceptual Level Cost Estimate
Concept 2 (M, N, and O)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
	St. Herman Harbor Float Replacement (Concept 2 Large Vessel)	1.00	LS	\$16,693,302.61	\$16,693,302.61
1.1	Mobilization and Demobilization	1.00	LS	\$1,500,000.00	\$1,500,000.00
1.1.1	Season 1	1.00	LS	\$950,000.00	\$950,000.00
1.1.1.1	Season 1 Mobilization	1.00	LS	\$700,000.00	\$700,000.00
1.1.1.2	Season 1 Demobilization	1.00	LS	\$250,000.00	\$250,000.00
1.1.2	Season 2	1.00	LS	\$550,000.00	\$550,000.00
1.1.2.1	Season 2 Mobilization	1.00	LS	\$150,000.00	\$150,000.00
1.1.2.2	Season 2 Demobilization	1.00	LS	\$400,000.00	\$400,000.00
1.2	Demolition and Disposal	1.00	LS	\$45,000.00	\$45,000.00
1.3	M-O Float Expansion, New N Float	1.00	LS	\$8,925,151.42	\$10,077,957.80
1.3.1	Furnish New Piling	1.00	LS	\$396,688.11	\$396,688.11
1.3.1.1	Furnish New 24Øx0.5tx 80' Piling (Includes 3 Contingency)	97.00	EA	\$13,500.00	\$302,400.00
1.3.2	Headwalk Float	1.00	LS	\$1,062,032.00	\$1,062,032.00
1.3.2.1	Provide and Install Headwalk Float (12'x502')	6,024.00	SF	\$168.00	\$1,012,032.00
1.3.2.2	Install Piling (24x0.5)	10.00	EA	\$5,000.00	\$50,000.00
1.3.3	O Float	1.00	LS	\$664,000.00	\$664,000.00
1.3.3.1	Remove Piling	64.00	EA	\$1,500.00	\$96,000.00
1.3.3.2	Relocate N Existing Floats to "O" (Move Float 400')	1.00	LS	\$120,000.00	\$120,000.00
1.3.3.3	Install Piling	64.00	EA	\$5,000.00	\$320,000.00
1.3.3.4	Fabricate and Reinstall Moment Frames	32.00	EA	\$4,000.00	\$128,000.00
1.3.4	N Floats	1.00	LS	\$5,661,357.69	\$5,661,357.69
1.3.4.1	Provide and Install Mainwalk Floats (10'x868')	8,680.00	SF	\$173.00	\$1,501,640.00
1.3.4.2	Provide and Install N Finger Floats (9) 12'x110'	11,880.00	SF	\$178.34	\$2,118,661.65
1.3.4.3	Provide and Install N Finger Floats (9) 12'x100'	10,800.00	SF	\$178.34	\$1,926,056.04
1.3.4.4	Install Piling (24x0.5)	23.00	EA	\$5,000.00	\$115,000.00
1.3.5	Access Trestles and Gangways	1.00	LS	\$452,000.00	\$452,000.00
1.3.5.1	Provide and Install Gangway Landing Floats	1,200.00	SF	\$210.00	\$252,000.00
1.3.5.2	Provide and Install New 110' Gangway	1.00	EA	\$200,000.00	\$200,000.00
1.3.6	Provide and Install New Anodes	97.00	EA	\$1,500.00	\$105,000.00
1.3.7	On-Float Utilities	1.00	LS	\$1,736,880.00	\$1,736,880.00
1.3.7.1	Potable Water System	1.00	LS	\$353,440.00	\$353,440.00
1.3.7.1.1	4" HDPE Water Line	2,162.00	LF	\$120.00	\$259,440.00
1.3.7.1.2	Valves	2.00	EA	\$1,500.00	\$3,000.00
1.3.7.1.3	Water Pedestal	24.00	EA	\$1,500.00	\$36,000.00
1.3.7.1.4	Hot Box	1.00	EA	\$25,000.00	\$25,000.00
1.3.7.1.5	Flex Line	2.00	EA	\$15,000.00	\$30,000.00
1.3.7.2	Electrical System	1.00	LS	\$1,030,000.00	\$1,030,000.00
1.3.7.3	Fire Water System	1.00	LS	\$324,636.22	\$353,440.00
1.3.7.3.1	4" HDPE Water Line	2,162.00	LF	\$120.00	\$259,440.00
1.3.7.3.2	Valves	4.00	EA	\$1,500.00	\$6,000.00
1.3.7.3.3	Fire Standpipe	20.00	EA	\$1,500.00	\$30,000.00
1.3.7.3.4	Hot Box	1.00	EA	\$25,000.00	\$25,000.00
1.3.7.3.5	Flex Line	2.00	EA	\$15,000.00	\$30,000.00
1.3.7.3.6	FD Connection	2.00	EA	\$1,500.00	\$3,000.00
1.3.9	Ladders and Safety Equipment	1.00	LS	\$45,000.00	\$45,000.00
1.4	Contractor Indirects	1.00	LS	\$453,000.00	\$453,000.00
1.4.1	Marine Mammal Observation	90.00	Day	\$1,200.00	\$108,000.00
1.4.2	Field Personnel Housing, Per Diem, Transportation	120.00	Day	\$2,000.00	\$240,000.00
1.4.3	Survey	70.00	Day	\$1,500.00	\$105,000.00
1.5	Concept Level Construction Contingency (30%)	1.00	LS	\$3,622,787.34	\$3,622,787.34
Construction Subtotal					\$15,698,745.14

City of Kodiak, St. Herman Harbor Float Replacement
 Conceptual Level Cost Estimate
 Concept 2 (M, N, and O)

1/16/2023

CBS Position Code	Description	Material Quantity	Unit of Measure	Total Unit Cost	Total Cost
1.6	Engineering and Project Management	1.00	LS	\$994,557.47	\$994,557.47
1.6.1	Design Engineering (6%)	1.00	LS	\$724,557.47	\$724,557.47
1.6.2	Permitting	1.00	LS	\$30,000.00	\$30,000.00
1.6.3	Site Survey	1.00	LS	\$25,000.00	\$25,000.00
1.6.4	Geotechnical Investigation	1.00	LS	\$30,000.00	\$30,000.00
1.6.5	Bid Support	1.00	LS	\$35,000.00	\$35,000.00
1.6.6	Construction Administration and Inspection	1.00	LS	\$150,000.00	\$150,000.00
Engineering, Permitting and Project Management					\$994,557.47
Total Conceptual Project Cost					\$16,693,302.61

Appendix C. Site Photos



Photograph No. 1

Description: Gangway to float EE.



Photograph No. 2

Description: Gangway abutment at float EE.



Photograph No. 3

Description: Gangway to float EE.



Photograph No. 4

Description: Float EE looking north.



Photograph No. 5

Description: Boat ramp overview from float EE.



Photograph No. 6

Description: EE Gangway fabrication plate.



Photograph No. 7

Description: Utility enclosure in uplands area adjacent to EE gangway.



Photograph No. 8

Description: Ramp 1 gangway.



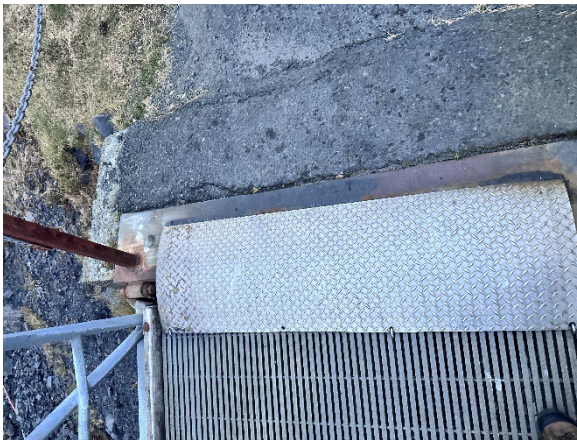
Photograph No. 9

Description: Harbor facilities building.



Photograph No. 10

Description: Ramp 1 abutment.



Photograph No. 11

Description: Ramp 1 shoreside transition plate.



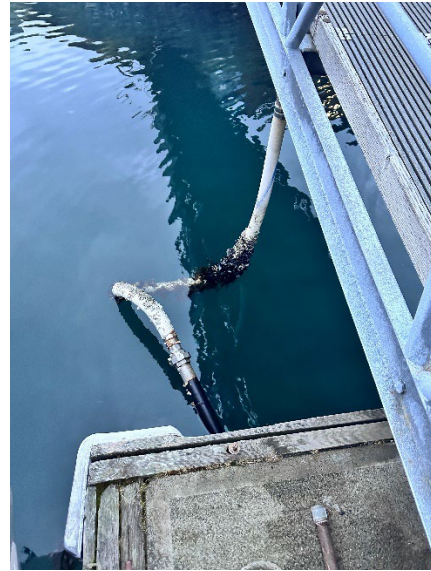
Photograph No. 12

Description: Ramp 1 float transition plate.



Photograph No. 13

Description: Ramp 1.



Photograph No. 14

Description: Utility flex line transition at ramp 1.



Photograph No. 15

Description: S float to E float intersection.



Photograph No. 16

Description: E float.



Photograph No. 17

Description: S float to E float intersection.



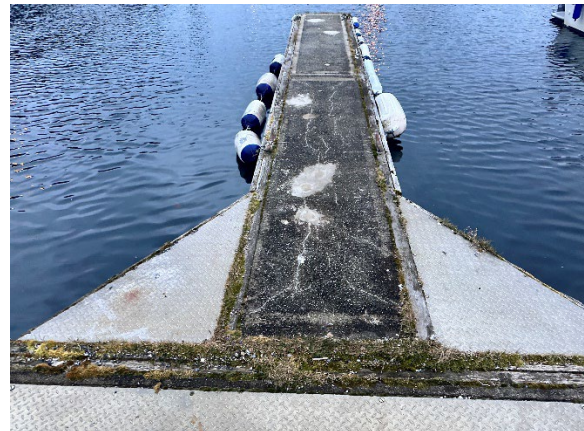
Photograph No. 18

Description: Electrical pedestals at E float.



Photograph No. 19

Description: Typical water service riser along E float.



Photograph No. 20

Description: Finger float on E.



Photograph No. 21

Description: Electrical plug at electrical pedestal.



Photograph No. 22

Description: Electrical pedestal base.



Photograph No. 23

Description: Q float access trestle.



Photograph No. 24

Description: Q float access trestle.



Photograph No. 25

Description: Q float access trestle.



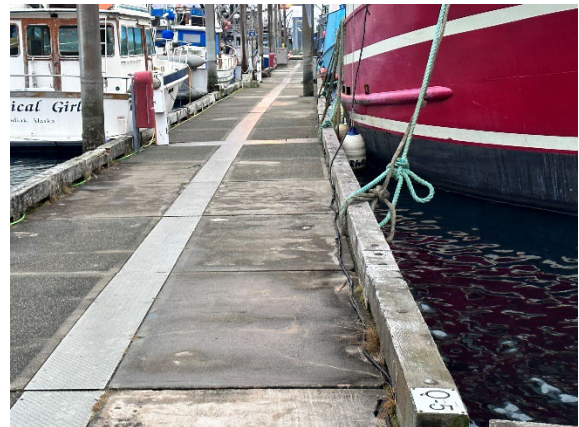
Photograph No. 26

Description: Q mainwalk float.



Photograph No. 27

Description: Electrical box along Q float.



Photograph No. 28

Description: Q float at intersection with K float.



Photograph No. 29

Description: Electrical box along Q float.



Photograph No. 30

Description: Electrical pedestal along new channel transient dock.



Photograph No. 31

Fire standpipe along P float.



Photograph No. 32

Description: Finger float near K.

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