

# PROJECT DESCRIPTION

## AURORA HARBOR DRIVE DOWN FLOAT

### 1. PURPOSE

The City and Borough of Juneau (CBJ) seeks to construct a 48-foot-wide by 120-foot-long, vehicle accessible drive-down float and vehicle bridge and to add two new 5-ton electric cranes at the Aurora Harbor Small Boat Basin with funding from the Maritime Administration (MARAD) through a Port Infrastructure & Development Program (PIDP) grant. This project will provide critically important improvements to serve the transportation and safety needs of the seafood and maritime industries of Juneau.

### 2. NEED

CBJ Docks & Harbor has been pursuing opportunities for the expansion of maritime transportation and commercial fisheries amenities for many years, including improvements to the downtown small boat harbors since 2011.

The current state of the marine facility at Aurora Harbor leads to issues of overcrowding, safety concerns, and inefficiencies in the transport of goods and maintenance of vessels. To reach the dock in its current state, vessel operators must climb a steep gangway to transport goods and supplies by hand. At low tide, this gangway can have an incline as steep as 29 degrees. This renders it inaccessible to users who would need ADA accommodations and poses severe safety concerns, especially during inclement weather and when carrying goods by hand. Crane operations are currently only available from the crane dock, which must be reached by vessel operators via a steep 27-foot-long ladder.

In 2024, CBJ Docks & Harbors applied for a MARAD PIDP grant to construct a vehicle-accessible drive down float. This float and associated infrastructure will serve the commercial fishing fleet and improve freight transportation, thus improving safety, reducing overcrowding, and increasing the efficiency of transporting goods between vessels and the road system. The proposed drive-down float will allow for vehicles to directly access the vessels utilizing Aurora Harbor, facilitating a more streamlined transfer of goods and supplies year-round. Adding two electric cranes to the drive-down float will also increase capacity and improve safety of cargo loading. This will address overcrowding and ensure timely loading operations for commercial fishing and other vessels.

### 3. LOCATION

Latitude	Longitude	USGS Quad
58.303964°	-134.432239°	Juneau B-2

Section(s)	Township	Range	Meridian
22	041 S	067 E	Copper River Meridian

Tide Station	Station Datums (elevation, ft.)		
	MLLW	HTL	MHW
NOAA station 9452210 Juneau, Alaska	(0)	20.6'	15.34'

## 4. DRIVING INSTRUCTIONS

To reach the project site from Juneau International Airport, drive southeast on Yandukin Drive towards Crest Street for 0.8 miles, then merge onto Egan Drive. Follow Egan Drive for 6.3 miles, then turn right onto Harris Harbor Way. The Aurora Harbor Small Boat Basin (current site name) is behind the Juneau Harbormaster’s Office building.

## 5. ADJACENT LAND OWNERSHIP

	Parcel Tax ID	Owner	Legal Description	Site Address	Mailing Address
<b>Project Site</b>	1C020-K01-0021	CBJ Lands and Resources	Aurora Harbor	1435 Harbor Way	155 Heritage Way Juneau, AK 99801
<b>Adjacent</b>	1C030-K51-0011	CBJ Docks and Harbors; Juneau Marine Services Inc.	TIDELANDS ADDITION BL 51 LTS 2	1423 Harbor Way	155 Heritage Way Juneau, AK 99801, 809 W 12 <sup>th</sup> Street Juneau, AK 99801
<b>Adjacent</b>	1C030-K51-0020	University of Alaska Southeast	TIDELANDS ADDITION BL 51 LT 2B	-	11120 Glacier Highway Juneau, AK 99801
<b>Adjacent</b>	1C030-K52-0010	CBJ Lands and Resources	HIGHLANDS BL O, USS 752 FR, U	1255 Glacier Ave, 1415 Glacier Ave, 1619 Glacier Ave, 1639 Glacier Ave,	155 Heritage Way Juneau, AK 99801
<b>Adjacent</b>	1C020-K01-0022	CBJ Lands and Resources	ATS 1624 TR C	1435 Harbor Way	155 Heritage Way Juneau, AK 99801

## 6. DESCRIPTION

The project entails replacement of an existing gangway and float with a new modern drive down float with transfer bridge and approach dock extension and widening. The existing gangway, floats, and piles will be removed, and the existing approach dock will be extended and widened. The drive down float will be installed following completion of the approach dock extension and widening. The vehicular transfer bridge will be installed on the float. Temporary piles will be installed to assist in installation of permanent piles to support the dock and anchor the floats. The new drive down float will have water, fire suppression, and electrical utilities installed.

### 6.1 MOBILIZATION

Mobilization to the project site will depend on the contractor selected to perform the work. Major materials and equipment associated with construction will most likely be mobilized to the project site from Seattle or Southeast Alaska. Vessels will follow transit routes similar to those shown in Figure 1. Construction equipment is expected to consist of a crane barge and one or two materials barge(s), as well as a tug and a skiff.



**Figure 1: Vessel Transit Route**

## 6.2 EXISTING INFRASTRUCTURE DEMOLITION

The existing 14' by 100' HDPE pipe pontoon float will be removed in its entirety. The 6' x 70' gangway will be removed including all associated hardware and appurtenances. Three (3) 16" steel pipe mooring piles will be demolished and disposed of or recycled. All other miscellaneous associated pile mounted appurtenances will also be demolished and disposed of. Lastly, the bullrail, scuppers, railing, kiosk, and bench from the approach dock will all be demolished and salvaged.

## 6.3 APPROACH DOCK EXTENSION AND WIDENING

Installation of new infrastructure will begin at the existing approach dock and extend offshore. A new approach dock extension will be installed consisting of a steel substructure with timber glulam stringers and timber decking, supported by 16" diameter steel piles. The existing approach dock will be widened with similar construction to accommodate vehicular traffic and a widened concrete abutment with armor rock embankment will be installed.

All piles will be driven with a vibratory hammer from a barge-based crane. It is anticipated that the largest size vibratory hammer used for the project will be an APE 200-6 or comparable vibratory hammer from another manufacturer, such as ICE. Following vibratory installation, the permanent piles will be proofed with an impact hammer in order to achieve design bearing capacity. It is anticipated that a Delmag D-62 diesel hammer or equivalent will be used for the impact pile driving.

The contractor will install temporary template piles (up to 16" diameter pipe piles or equivalent) to facilitate accurate installation of permanent piles as detailed within the piledriving quantity summary within Table 2. Temporary piles will be removed following permanent pile installation. Temporary piles will be installed and removed using vibratory methods only.

## 6.4 ARMOR ROCK EMBANKMENT AND CIP CONCRETE ABUTMENT

The existing CIP concrete abutment will be widened to accommodate construction of the new dock. Concrete forms will be constructed, and CIP concrete will be placed into the forms. After curing, forms will be removed, and armor rock will be placed around the toe of the abutment for scour protection.

## 6.5 NEW PILE, FLOAT, AND TRANSFER BRIDGE INSTALLATION

The new piles, floats, and transfer bridge will be mobilized to site on a materials barge. Float units will be offloaded directly into the water. Individual float modules will be connected together for installation.

In order to ensure piles for the floats are installed accurately, the contractor will install temporary template piles as described above. Once floats are in position, permanent float piles will be driven with a vibratory hammer to the greatest extent possible to achieve the specified minimum embedment. In the event that insufficient overburden exists, permanent piles will be proofed with an impact hammer in order to achieve design bearing capacity.

Following float installation, the prefabricated vehicular transfer bridge will be set in place to connect the approach dock extension to the float.

## 6.6 UTILITIES

Installation of water, fire suppression, and electrical utilities will commence following the construction of the new infrastructure.

The fire suppression piping (4" HDPE) will be installed above the water and mounted on and along the approach dock, transfer bridge and floats. The potable water piping (2" HDPE) will be connected to an existing submarine line and extended along the seafloor and then transitioned by a hose connection to where it will be mounted directly to the floats. Fire and water standpipes will be installed each at 2 locations on the new float. Fire extinguisher and life ring cabinets will also be installed at regular intervals along the new float. A total of 1.5 cubic yards (CY) of pre-cast concrete sash weights will be installed to anchor the water line to the seafloor. No trenching or fill placement below the HTL will occur with installation of new water or fire utilities.

An electrical system consisting of luminaires and power pedestals will be installed on the floats to provide for adequate lighting and power.

## 6.7 DEMOBILIZATION

Project equipment will be demobilized to the port of origin according to the contractor's needs and means.

## 7. QUANTITIES

**Table 1. Fill in tidal waters**

	Project Total	Below HTL (EL = 20.6')	Below MHW (EL = 15.3')	Below MLLW (EL = 0')
<b>Footprint (Acres)</b>	0.008	0.008	0	0
<b>Concrete Sash Weights</b>	1.5 CY	1.5 CY	1.5 CY	1.5 CY
<b>Armor Rock</b>	8 CY	8 CY	0 CY	0 CY
<b>CIP Concrete Abutment</b>	4 CY	4 CY	0 CY	0 CY

**Table 2. Piles driven in tidal waters**

	Construction Method	Project Total	Below HTL (EL = 20.6')	Below MHW (EL = 15.3')	Below MLLW (EL = 0')
24" Float Anchor Piles	Vibratory Installation	6	6	6	6
	Impact Installation*				
16" Dock Support Piles	Vibratory Installation	29	29	27	23
	Impact Installation*				
16" Bridge Abutment Support Piles	Vibratory Installation	5	5	5	5
	Impact Installation*				
16" Template Piles	Vibratory Installation & Removal	12	12	12	12
16" Float Support Piles	Vibratory Removal	3	3	3	3

\*Vibratory hammers will be used whenever feasible for driving piles. Impact driving may be used to proof indicated piles.

**Table 3. Project Element Quantities**

Item	Dimensions	Surface Area (SF)
Dock Extension	60' x 70'	4,200
Dock Widening	16' x 112'	1,792
Transfer Bridge	17' x 140'	2,380
Drive Down Float	48' x 120'	5,760
2" HDPE Pipe	140'	24

**Table 4. Project Demolition**

Item	Dimensions	Surface Area (SF)
Gangway	5' x 70'	350
HDPE Pipe Pontoon Float	14' x 100'	1,400

## 8. SCHEDULE AND DURATION:

The project will be completed during the summer and fall of 2027. Approximately 6 months of on-site construction are anticipated, with 10-hour workdays.

## 9. CONSTRUCTION SEQUENCE

Phase	Tasks
Mobilize to Site	<ul style="list-style-type: none"> <li>The contractor will mobilize the necessary equipment and personnel.</li> </ul>

Phase	Tasks
<b>Demolish Existing Gangway and Float</b>	<ul style="list-style-type: none"> <li>• The existing gangway will be disconnected from the existing approach dock and removed. Existing float anchor piles will be removed and then float will be removed.</li> </ul>
<b>Extend and Widen Approach Dock and Install Abutment</b>	<ul style="list-style-type: none"> <li>• A template will be temporarily installed.</li> <li>• Construct cast in place widened abutment and place armor rock embankment.</li> <li>• Approach dock and abutment piles will be driven and proofed.</li> <li>• Pile caps and superstructure will be installed.</li> </ul>
<b>Install Drive Down Float</b>	<ul style="list-style-type: none"> <li>• Individual float units will be bolted together.</li> <li>• Float anchor piles will be installed and proofed.</li> <li>• Float mooring frames/pile caps will be installed.</li> <li>• Template piles will be removed</li> </ul>
<b>Install Transfer Bridge</b>	<ul style="list-style-type: none"> <li>• The transfer bridge will be lifted into place and installed.</li> </ul>
<b>Demobilization</b>	<ul style="list-style-type: none"> <li>• All demolished existing materials staged on the uplands will be removed from the site.</li> </ul>

## 10. MITIGATION

### 10.1 AVOIDANCE

Impacts to WOTUS could not be entirely avoided for this project because this project is a dock and is dependent on marine access.

### 10.2 MINIMIZATION

The dock was designed to have the smallest footprint needed to meet its purpose. The contractor will comply with local, state, and federal water quality standards.

Incorporation of proposed mitigation measures will avoid and minimize impacts to WOTUS to the extent possible.

### 10.3 COMPENSATION

The project results in a very small loss of WOTUS. The loss does not impact any important habitats, and the project is being constructed in a previously disturbed area. As such, no compensatory mitigation is proposed.

## PROJECT AVOIDANCE AND MINIMIZATION MEASURES

### AURORA HARBOR DRIVE DOWN FLOAT

Impacts to Waters of the U.S. (WOTUS) could not be entirely avoided, as the nature of this project is dependent on maritime access.

The size of the construction footprint was minimized to the smallest footprint possible to provide a safe and functional dock while meeting the goal of providing critically important improvements and infrastructure to support the transportation and safety needs of the seafood and maritime industries of Juneau.

The following best management practices (BMPs) will be incorporated by the applicant in order to minimize impacts to WOTUS:

#### Terrestrial Wildlife

1. Wetlands, vegetated areas, and project construction and storage areas will be clearly delineated at the beginning of the project to prevent unnecessary impacts to habitat.
2. CBJ and its contractors will comply with the U.S. Army Corps of Engineers (USACE) and Alaska Department of Environmental Conservation (ADEC) permits that will be required for impacts to waters of the U.S. under Sections 404 and 401 of the Clean Water Act (CWA).
3. Any signs of Muridae rodent infestation, including tracks, dropping, chew marks, or nests in or around project-related CBJ facilities will be reported to Alaska Department of Fish and Game (ADF&G) within 30 days of detection to initiate the coordination of eradication efforts (ADF&G 2008b).

#### Aquatic Species

4. CBJ and its contractors will comply with the NMFS consultations regarding impacts to ESA-listed species and EFH.
5. All trash bins will be properly secured with locked or secured lids that cannot blow open. Ropes, nets, and other materials that could blow away will be stored securely, preventing trash from entering marine waters.
  - a. All construction materials that form closed loops (e.g., plastic packing bands, rubber bands, and all other loops) will be cut prior to proper disposal to prevent creating entanglement hazards.
  - b. CBJ will not allow the use of plastic monofilament netting (erosion control matting) or similar material as part of erosion control activities.
6. In-water work activities will only take place when environmental conditions (daylight, weather, etc.) allow the entirety of shut-down zone to be observed.
7. In-water work will stop if a protected species approaches or enters a shutdown zone to avoid unauthorized take.
8. A minimum of one qualified protected species observer (PSO) will be on duty continuously during all in-water or over-water construction activities in accordance with the project's permits.
9. All vessels engaged in project construction activities will transit at speeds below 10 knots.
  - a. Vessel operators will watch for protected species while underway, will stay at least 100 m from any protected species, and will avoid maneuvers that disrupt their behavior.
  - b. Vessels will travel using established navigation channels or commonly recognized vessel traffic corridors and avoid alongshore travel in shallow water (< 20 meters) whenever practicable.

- c. Vessels will avoid changes in speed and course when within 300 m of a protected species, unless doing so is necessary for maritime safety.
  - d. Vessels will comply with special mitigation measures for ESA species, listed below.
  - e. Vessel operators will not allow dangling lines or debris to enter the water and pose an entanglement risk.
10. Soft start procedures will be used prior to impact pile driving activities, as specified in the project permits.
  11. Any unauthorized “take” of a protected species will be followed up by permit-specified mitigation and reporting.
  12. Stranded, injured, sick, or dead protected species not associated with the project or illegal activities related to protected species will be reported as specified in the project permits.

### **Threatened & Endangered Species, Other Special Status Species, & Critical Habitat**

13. CBJ and its contractors will comply with the requirements of the project’s NMFS ESA consultation.
14. CBJ and its contractors will comply with North Pacific right whale protection regulations.
  - a. Vessels will not approach within 500 yards of North Pacific right whales, including by interception (50 CFR 224.103(c)).
    - i. If a North Pacific right whale is sighted within 500 yards, vessels underway will steer a course away and leave the area at slow safe speed.
    - ii. This section does not apply where compliance would create an imminent and serious threat to a person, vessel, or aircraft.
    - iii. This section does not apply to the extent that a vessel is restricted in her ability to maneuver and, because of the restriction, cannot comply.
  - b. Vessels will avoid transiting through North Pacific right whale critical habitat (50 CFR 226.215).
    - i. If project activities require transiting through critical habitat, specified mitigation protocols will be followed, in accordance with project permits.
  - c. Observations of North Pacific right whales will be reported to NMFS within 24 hours, in accordance with project permits.
15. CBJ and its contractors will comply with Steller sea lion protection regulations.
  - a. Vessels will not approach within 3 nautical miles (nm) of Steller sea lion rookery sites listed in (50 CFR 224.103(d)).
    - i. The nearest known haulout to the project area with a direct water connection is just over 38 km away at Benjamin Island (Fritz et al. 2015).
  - b. Vessels will avoid approaching within 3,000 ft of any unlisted Steller sea lion haulout or rookery
  - c. This section does not apply to an emergency situation in which compliance with that provision presents a threat to the health, safety, or life of a person or presents a significant threat to the vessel or property (50 CFR 224.103(d)(2)(iv)).
16. CBJ and its contractors will comply with Alaska humpback whale regulations unless local regulations are more restrictive.
  - a. Vessels will not approach, by any means, including by interception (i.e., placing a vessel in the path of an oncoming humpback whale), within 100 yards of any humpback whale (50 CFR 224.103(b), 50 CFR 223.214).
    - i. Vessel operators and crew will not cause a vessel or other object to approach within 100 yards of a humpback whale.
    - ii. Vessel operators and crew will not disrupt the normal behavior or prior activity of a whale by any other act or omission.

- iii. This section does not apply if the vessel is restricted in its ability to maneuver and, because of the restriction, cannot comply (50 CFR 224.103(b)(2)(ii)).
- b. Observations of humpback whales will be documented and reported as specified in project permits.
- 17. Any clearing required for the project will be implemented using approved measures for preventing impacts to eagles, migratory birds, and their nests.
  - a. Vegetation clearing will not occur between April 15 and July 15 without surveying for migratory bird nests.
  - b. Vegetation clearing will not occur between April 15 and July 15 without surveying for eagle nests.
  - c. If nesting eagles or migratory birds are discovered before or during construction, CBJ will coordinate with USFWS to establish a no-work buffer, if required.
  - d. If injured, sick, or orphaned eagles are discovered in the project area, they will be reported to the nearest USFWS office (Juneau field office, 907-780-1160).
- 18. CBJ and its contractors will comply with recommended northern sea otter mitigation measures.
  - a. Vessels will maintain a minimum distance of 500 m from any rafts of sea otters, unless necessary for maritime safety.
  - b. Vessels will avoid separating individual members from a group of sea otters, encircling sea otters, and impeding movement of sea otters. Vessel operators will change course heading to avoid an interaction and impacts to sea otters in the water.

### **Waters of the U.S.**

- 19. CBJ and its contractors will comply with the USACE and Alaska Department of Environmental Conservation (ADEC) permits that will be required for impacts to wetlands and waters of the U.S. under Sections 404 and 401 of the CWA and Section 10 of the Rivers and Harbors Act (RHA).
- 20. Cathodic protection or other corrosion protection will be utilized to protect steel elements in corrosive environments, as needed.

### **Water Resources & Quality**

- 21. If the upland footprint is greater than one acre, a project Stormwater Pollution Prevention Plan (SWPPP) will be developed per ADEC's Construction General Permit for stormwater discharge to prevent and mitigate construction sources of stormwater erosion and standard erosion and sedimentation BMPs will be utilized.
  - a. Natural vegetative barriers will be maintained through the early delineation of work areas to prevent unnecessary clearing to the extent practicable.
  - b. Erosion control measures will be regularly inspected and maintained whenever damage is discovered.
  - c. Disturbed areas will be stabilized per ADEC's Construction General Permit for stormwater discharge.
- 22. Project vessels will be maintained in a manner to prevent negative impacts to water quality, including proper servicing of mechanical systems and proper stowage of hazardous materials and debris.

### **Floodplains**

- 23. CBJ will comply with the required local floodplain permitting and FEMA processes.

### **Air Quality**

24. Vehicles and construction equipment will avoid the idling of engines and turn off motors when not in use to minimize emissions.
25. Construction vehicles and equipment will stay up to date on maintenance and repairs to maximize engine efficiency and reduce emissions.

### **Hazardous Materials & Waste Management**

26. A Spill Prevention, Control, and Countermeasure (SPCC) Plan will be developed and implemented for the project.
27. Oil booms will be readily available for containment should any releases occur.
28. All hazardous materials and debris will be stored above the high tide line (HTL) and secured to prevent being blown offshore.
29. All chemicals and petroleum products will be properly stored to prevent spills. Petroleum products, cement, chemicals, or other deleterious materials will not be allowed to enter surface waters.
30. The contractor will check for leaks regularly on any equipment, hoses, and fuel storage that occur at the project site.
31. If contaminated soils or groundwater or free phase petroleum are encountered during construction, additional coordination with ADEC and CBJ will be required.

### **Cultural & Tribal Resources**

32. If unanticipated cultural, tribal, or archeological resources are discovered during the project, work in the vicinity will stop until the resources can be evaluated by qualified personnel and appropriate consultations held, including with the Alaska State Historic Preservation Office (SHPO).
  - a. Historical and archaeological resources may be buried deeply or underwater, and fossils are considered cultural resources subject to the Alaska Historic Preservation Act.
33. Periodic updates will be provided to the consulted tribes as requested.

### **Noise & Vibration**

34. Noise levels will be minimized by the use of appropriately sized piles. Properly sized equipment will be used to drive piles.
35. Exceptionally loud activities, including pile driving, will only occur during daylight hours.