

EXHIBIT B-1**MINIMUM VESSEL TECHNICAL AND OPERATING REQUIREMENTS**

1) MINIMUM VESSEL OPERATING REQUIREMENTS	1
A) Operational Standards	1
B) Minimum Vessel Design Elements.....	1
C) Licenses and Certifications.....	2
D) General	2
2) MINIMUM VESSEL TECHNICAL REQUIREMENTS	3
A) Vessel Improvements.....	3
B) Fuels, Lubricants, and Refrigerants.....	3
C) Marine Sanitation Devices.....	3
D) Vessel Discharges	3
E) Fuel-Air Separators	4
3) MINIMUM VESSEL ENGINE REQUIREMENTS	4
A) Vessel Engine Requirements for Required Vessels	4
B) Vessel Nos. 1, 2, and 3	4
C) Vessel No. 4	5
D) Special Use Vessels	5
4) VESSEL BOARDING PROCEDURES	5
A) Passenger Loading and Unloading	5
B) Gangways	6
C) Safety Precautions	6
5) VESSEL ACCESS BY PERSONS WITH DISABILITIES.....	6
A) Passenger Vessel Boarding Systems	6
B) Interior Spaces.....	6
C) Information Features and Announcements	7
6) VESSEL PUBLIC ADDRESS, AUDIO, AND VIDEO SYSTEMS	7
A) Public Address System	7
B) Safety and Orientation Message	7
C) Environmental Education	7

1) MINIMUM VESSEL OPERATING REQUIREMENTS

A) Operational Standards

- (1) *Minimum Operational Standards.* In addition to the Minimum Vessel and Engine Requirements found in the Contract (Section 8(e)) and those specified in the Water Ferry Transportation Standards (10-FER) found on the NPS Commercial Services website (link found above), the following requirements apply to all of the vessels the Concessioner uses to provide the required services under this Contract, including vessels the Concessioner uses to replace or substitute any of its vessels.
- (2) *Exemptions or Additions to Water Ferry Transportation Standards (10-FER).* Where standards for the Area differ from the Service standards, these differences are listed below as exemptions or additions.

Standard Number	Standard Name	Exemption / Addition	Details of Exemption or Addition
39-46	Walkways/Stairs, Railings, Walls and Ceilings, Windows, Doors, Lighting, Furnishings, Floors	Addition	The Concessioner must ensure a daily and semi-monthly cleaning program for the interior and exterior of the vessels, excluding the hull. The Concessioner must not use detergents or any chemical harmful to the water environment if water is to be washed overboard.
47	Public Restrooms	Addition	Vessel restrooms must be cleaned prior to each departure.
58	Availability	Addition	Additional requirements related to the availability and method of purchasing tickets outlined in Exhibit B, Section 4(A).
59	Knowledge of Ticketing Staff	Addition	Additional requirements outlined in Exhibit B, Section 4(A).
87-90	Retail	Exemption	No retail sales permitted.

B) Minimum Vessel Design Elements

- (1) *Minimum Fleet Size and Vessel Passenger Capacities.* At minimum, the Concessioner must provide a total of four (4) passenger vessels with the following capacities for the required services in the Contract. All passenger capacities must be certified by the U.S. Coast Guard.
 - (a) Alcatraz Passenger Ferry Service. Two (2) vessels with a minimum passenger capacity of 700-passengers each.
 - (b) Park Cruise, Angel Island, and Backup Services. Two (2) vessels with a minimum passenger capacity of 500-passengers each. In general, the Concessioner must use these vessels to provide the Park Cruise and Angel Island Hop service, and for backup Alcatraz passenger ferry service in the event one of the 700-passenger vessels is out-of-service.
 - (c) Additional Vessels. The Concessioner must request, and the Service must approve in advance, the use of all additional vessels the Concessioner desires to use to provide the services required by the Contract.
- (2) *Design.* The Concessioner's vessels must meet the following design requirements as of the **effective date of the Contract and throughout the term of the Contract.**
 - (a) Maximum Length. Overall length or Length Overall ("LOA") of no more than 150 feet.
 - (b) Maximum Width. Overall width of no more than 60 feet.
 - (c) Maximum Draft. Draft of no more than 9 feet.
 - (d) Speed. Vessels must be capable of sustaining a cruising speed of 12 knots for a minimum of one-hour.
 - (e) Berthing. Vessels must be capable of accessing, docking, and safely loading and unloading passengers at all docks and piers assigned to or used by the Concessioner during all normal tidal conditions.

- (f) Navigation. Vessels must be capable of safely navigating the ferry and Park Cruise routes.
- (g) Views. Windows must maximize views.
- (3) *Interior Cabin Space*. The Concessioner's vessels must meet the following interior space requirements as of the **effective date of the Contract and throughout the term of the Contract**.
 - (a) Climate Control. Vessels must include heated interior cabin spaces providing passengers with warmth and shelter from the elements.
 - (b) Minimum Seating. Each vessel must include interior seating for 40% of the vessel's total passenger capacity, while complying with any additional requirements specified by the U.S. Coast Guard. Specifically, for vessels with the minimum passenger capacities required under the Contract, the following interior seating will be required, based on the application of the 40% seating requirement or as specified by the U.S. Coast Guard:
 - 700-passenger vessels: 280 seats
 - 500-passenger vessels: 200 seats
 - (c) Park Cruise Seating and Other Requirements. The Park Cruise vessel must ensure 85% of all seating is flexible non-fixed ergonomically contoured seats including full back support. The non-fixed seating will have access to chargers, including at some tabletops equipped with charging outlets.
 - (d) Onboard Food and Beverage Facilities. Vessels must have a dedicated snack bar to provide visitors with convenient access to food and beverage items. Water free of charge must be available onboard to all passengers at all times, either through a water bottle refilling station or by other means. The designated snack bar space for serving customers must be no less than 100 square feet, unless approved by the Service.
 - (e) Onboard Solid Waste Receptacles. The Concessioner must provide receptacles for trash, recyclables, and compost throughout the vessels' passenger spaces. At a minimum, each passenger deck must have one receptacle of each type located in a covered area. Additionally, the food service area must have an additional two receptacles of each type.

C) Licenses and Certifications

- (1) *U.S. Coast Guard Requirements*. The Concessioner must ensure each vessel has a current, valid U.S. Coast Guard Certificate of Inspection and Stability Letter and that each vessel receives all inspections, licenses, and certifications in accordance with all Applicable Laws.
- (2) *Maritime Transportation Security Act of 2002*. The Concessioner must conduct a vessel security assessment, and develop and submit to the U.S. Coast Guard a vessel security plan following published U.S. Coast Guard guidelines. The Concessioner must submit to the Service a copy of this vessel security plan.
- (3) *Environmental Protection Agency ("EPA") Vessel Permits*. The Concessioner must obtain an EPA Vessel General Permit or Small Vessel General Permit (as applicable for the vessel being used) for each vessel **within 12 months of the Contract effective date, and must maintain such Permit for each vessel throughout the term of the Contract**. If the Concessioner replaces any of its vessels, each replacement vessel must have a valid Vessel General Permit or Small Vessel General Permit (whichever is applicable) **within 12 months** from the first day the vessel is put into service, and the Concessioner must maintain such Permit for each vessel throughout the term of the Contract.

D) General

- (1) *Operations during Inclement Weather*. The Concessioner must notify the Service when a Small Craft Advisory, Gale Warning, Storm Warning, or Special Marine Warning is issued by the National Weather Service for the area in which it operates. The Concessioner and Service may work together to reach a decision as to whether to operate during times when the National Weather Service for the area has issued weather warnings or when the Service believes operation will be a risk to the safety and security of visitors.

- (2) *Vessel Control*. The Concessioner must own or control – such as by a vessel lease or rental agreement/contract - all vessels used to provide the required services of the Contract. The Concessioner must have written approval of the Service prior to changing any of the vessels.

2) MINIMUM VESSEL TECHNICAL REQUIREMENTS

A) Vessel Improvements

- (1) The Concessioner must, **upon the effective date of the Contract** and throughout the term of the Contract, meet the following requirements:
 - (a) All vessels must have dripless seal graphite collar drive trains, which have no lubricants.
 - (b) All vessels must have electric brushless drive motors.
 - (c) All required vessels must have evaporator systems to collect engine room bilge waters for clean air evaporation, leaving solids, debris, and oils behind as solid waste.
 - (d) All other onboard equipment requiring oil or lubricants must use only recyclable fluids, with catch basins and dams under all potential leak or drip areas.
 - (e) On all required vessels, exterior bulkheads above the waterline must be finished with a no-paint vinyl wrap surface.
 - (f) The Concessioner must use only biodegradable and environmentally preferable products for vessel cleaning and maintenance.
 - (g) All product Safety Data Sheets for vessel cleaning, maintenance, and operation must be EPA or green seal certified, U.S. Coast Guard approved, and marine friendly.

B) Fuels, Lubricants, and Refrigerants

- (1) The Concessioner must use Ultra Low Sulfur Diesel in all vessel diesel engines throughout the term of the Contract. All vessels will operate on 100% renewable diesel when running diesel engines or generators. The Concessioner must use environmentally acceptable lubricants for oil to sea interfaces unless technically infeasible to do so.
- (2) The Concessioner must recycle 100% of its used oils and lubricants.
- (3) Environmentally preferable alternative refrigerants including 407C type refrigerant must be used in all HVAC systems (Concessioner must not use R-22 Freon).

C) Marine Sanitation Devices

- (1) Type III MSDs meeting all applicable EPA and U.S. Coast Guard certifications and requirements must be available on all vessels and must have sufficient capacity to hold all sewage and graywater generated onboard each vessel. The sewage and graywater holding tanks must have a combined capacity of no less than the following amounts for each size vessel required under the Contract:
 - (a) 700-passenger vessels: 1,000 gallons (per vessel)
 - (b) 500-passenger vessels: 500 gallons (per vessel)
- (2) The Concessioner may use an alternative to Type III MSDs that are certified by the U.S. Coast Guard and EPA, as long as the alternative is capable of retaining all sewage and graywater generated onboard the vessel for pump-out at landside waste disposal facilities.

D) Vessel Discharges

- (1) *Compliance with the National Pollutant Discharge Elimination System (NPDES)*. The Concessioner will comply with all applicable NPDES permit conditions, including those specified in the Vessel General Permit for commercial vessels greater than 79 feet in length and the Small Vessel General Permit for vessels less than 79 feet in length, as applicable to the vessel being used.
- (2) *Sewage*. The Concessioner is prohibited from discharging any treated or untreated sewage (“blackwater”) overboard into any waters and at any time. The Concessioner is required to retain all sewage waste onboard within the appropriate EPA and U.S. Coast Guard certified MSDs and pump off the vessel into the appropriate waste discharge facilities meeting all Applicable Laws.

- (3) *Graywater and Bilgewater.* The Concessioner is prohibited from discharging any graywater (i.e., water from sinks, etc.) or bilgewater into any waters at any time and must retain all graywater and bilgewater onboard the vessel in the appropriate holding tanks for pump-out and proper disposal at landside facilities. The Concessioner must comply with this requirement as of the effective date of the Contract and throughout the term of the Contract.
- (4) *Signage.* The Concessioner must equip all vessels with signage prohibiting the discharge of oil in accordance with all Applicable Laws, including, without limitation, the Federal Water Pollution Control Act. The Concessioner also must equip vessels with required International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978/Marine Pollution, signage concerning discharge of solid waste.

E) Fuel-Air Separators

The Concessioner must provide fuel/air separators for vessel fuel vent lines in accordance with Applicable Laws.

3) MINIMUM VESSEL ENGINE REQUIREMENTS

A) Vessel Engine Requirements for Required Vessels

- (1) **Beginning on the effective date of the Contract**, and until Vessels No. 1, 2, 3, and 4 are in place as required in Section B(2) below, the Concessioner must use its Tier 3 powered San Francisco Spirit and Islander and Tier 2 powered Ranger and Entertainer during this grace period.
- (2) Vessels No. 1, 2, 3, and 4, described below, will have at least eight (8) square feet of solar collectors on the pilothouses or as extensions of the solar canopies, and water will be passed through the collectors on the way to onboard electrically powered instantaneous hot water heaters.

B) Vessel Nos. 1, 2, and 3

For the purposes of this Exhibit B-1 (Vessel Operating Requirements), Vessel No. 1 is the Alcatraz Clipper, Vessel No. 2 is the Alcatraz Flyer, and Vessel No. 3 is the Discover Zero unless any or all vessels are no longer available. In that circumstance, the Concessioner must submit a written proposal to the Service to use a different vessel to serve as a required vessel. The proposed vessel(s) must meet the minimum requirements as described here, in Section 8(e) of the Contract, and Exhibit B (Operating Plan). For the specific brand names included below, the Concessioner must use those or equivalent items.

- (1) *Vessel No. 3.* The Concessioner must shorten the overall length of Vessel No. 3 to a maximum of 150 feet upon Contract effective date.
- (2) The following upgrades must be completed for Vessel Nos. 1, 2, and 3, **within one hundred and eight (180) days of the Contract effective date:**
 - (a) Primary System. Each vessel's primary system components must include shore power connectors, solar power, wind power, EPA Tier 3 generator, inverter, direct-current (DC) bus, large lithium-ion battery based Energy Storage System, and propulsion motors. Each vessel's system must use shore power, onboard solar panels, onboard wind turbines, and emergency power from Tier 3 generators which provide power to battery systems via an inverter rack and a direct-current (DC) bus that is maintained at a nominal 700 volts. The bus will be split into a port and starboard side with each propulsion engine powered by its respective buses. House loads will be powered by either side of bus.
 - (b) Shore Power Connections. Each vessel must have shore power connection panels installed on both port and starboard sides of the vessel to support four high capacity plugs for up to 1 megawatt of direct current charging as well as a standard 480 volt alternating current shore power connection.
 - (c) Operation in Route. Each vessel must operate on battery power (zero emissions) for the entirety of the required routes to and from Alcatraz Island and minimize the use of diesel generators on the Park Cruise and Island Hop route to the greatest extent possible.
 - (d) Solar Power. Vessels Nos. 1 and 2 must have solar panels which produce up to 21 kW. Vessel No. 3 must have solar panels which produce up to 11.2 kW.

- (e) Wind Power. Vessel Nos. 1 and 2 must have an axis wind generator which generates up to one (1) kW of electricity.
- (f) Diesel Engines. Each vessel must have two Baudoin 6M26.3, 600 HP variable speed, EPA Tier 3 diesel engines powering two Baldor Reliance IDDRPM447004 700 HP variable speed induction generators.
- (g) Electric Propulsion Induction Motors. Each vessel must have two Baldor Reliance IDDRPM447004 700 HP variable speed electric propulsion induction motors.
- (h) Onboard Batteries. Each vessel must have sufficient onboard batteries to power fully electric trips as specified in the Operating Plan. Batteries must consist of lithium ion, Trident SMAR-11N Energy Storage System from Spear Power Systems.
 - Vessel Nos. 1 and 2 must have 16 racks, with a nominal capacity of 1446 kWh upon installation and 1,186 kWh capacity after 10-years.
 - Vessel No. 3 must have 18 racks, with a nominal capacity of 1,607 kWh and 1,334 kWh at the end of the 10-year useful lives.
- (i) Mitigation of Human Health Hazards. The Concessioner must install rigging systems in and above the battery compartments, install a gas detection system, and properly dispose of the batteries at the end of their useful life.
- (j) Mitigation of Fire Hazards. The Concessioner must install a battery management system (BMS) to control the charging rate to ensure batteries do not overcharge or overheat (thermal runaway). The BMS will automatically stop charging batteries if overcharged or overheat. Thermal runaway will be contained to one cell and ducting will collect and safely release outside the vessel any toxic gases produced from the thermal runaway. The Concessioner must install a water based fire suppression system in the battery compartments and install thermal insulation around the battery compartments to provide time to safely extinguish a battery room fire.

C) Vessel No. 4

For purposes of this Exhibit, Vessel No. 4 is the Alcatraz Islander unless such vessel is no longer available. In that circumstance, the Concessioner must submit a written proposal to the Service to use a different vessel to serve as a required vessel. The proposed vessel must meet the minimum requirements as described here, in Section 8(e) of the Contract, and the Operating Plan. For the specific brand names included below, the Concessioner must use those or equivalent items. The following upgrades must be completed for Vessel No. 4 as of the **effective date of the Contract**.

- (1) Vessel must operate on Tier 3 or better diesel engines for the entirety of the routes required.
- (2) Vessel must have two Baudoin 6M26.3 750 HP Tier 3 diesel engines.
- (3) Vessel must have a solar canopy above the upper deck with a total capacity of 2.5 kW.

D) Special Use Vessels

- (1) *M/V Warden Johnston*. The Concessioner committed to investing no less than \$865,000 in the renovation and adaptive reuse of the M/V Warden Johnston as an attraction vessel as well as interpretive use. However, the vessel required significantly more investment to be usable for public access and the Embarkation project required additional funds. The Concessioner will reallocate the \$865,000 to the Embarkation project, specifically the Pier 31 bathrooms.
- (2) *Reserve Vessels*. The Concessioner may use other reserve or special use vessels for services only with prior written approval from the Service.

4) VESSEL BOARDING PROCEDURES

A) Passenger Loading and Unloading

The Concessioner must develop a Passenger Boarding Plan describing passenger queuing, loading, and unloading procedures for all docking facilities. The Concessioner must develop and submit the Passenger Boarding Plan to the Service for review and approval. Specifically, to maximize efficiency in loading and unloading, the Plan must address the number and placement of gangways at the San Francisco

Embarkation Site and on Alcatraz Island. The Concessioner must submit its Plan by the **effective date of the Contract**.

B) Gangways

The Concessioner must handle all gangways and gates as needed to efficiently load and unload the vessels.

C) Safety Precautions

- (1) The Concessioner must observe the following safety precautions:
 - (a) Each time the boat moves away from the dock, all gangways and railing gates must be in the closed position. This includes emergency "pull-away," such as when large wakes approach the docks.
 - (b) The ferry captain will precede each emergency "pull-away" with one long blast and three short blasts of the boat whistle to notify Service Rangers of this unexpected movement.
 - (c) Ferry captains will use docking procedures that minimize bumping the pier.

5) VESSEL ACCESS BY PERSONS WITH DISABILITIES

The Concessioner's vessels must meet the following access requirements **within 60 days of the effective date of the Contract** or as soon as a new vessel is approved for use. The U.S. Access Board is developing guidelines for access to ferries and other passenger vessels. Once finalized, the requirements of the Passenger Vessel Accessibility Guidelines (PVAG) will become minimum requirements of this Contract for the services, facilities, and amenities listed below. The Concessioner should refer to the proposed PVAG guidelines when determining accessibility for vessels used to provide the required services under this Contract.

A) Passenger Vessel Boarding Systems

Vessels must be accessible to persons with disabilities (including people using wheelchairs) from the boarding systems at all embarkation locations. The Concessioner must develop and submit to the Service an Accessible Boarding Plan specific to the needs of guests with disabilities. Plan elements will include descriptions of boarding procedures and waiting areas, safety equipment used to assist a person with a disability, staff training and other protocols for passengers requiring assistance. The Accessible Boarding Plan will be included as a component of the overall Passenger Boarding Plan.

B) Interior Spaces

- (1) *Restrooms*. Onboard toilets, water closets, toilet compartments (stalls), and urinals must be accessible to persons with disabilities.
- (2) *Drinking Water*. Onboard drinking fountains must be accessible to persons with disabilities, or the Concessioner must provide drinking water directly to persons with disabilities.
- (3) *Climate-controlled Interior Seating Areas*. The heated, interior vessel assembly areas and transportation seating areas must be accessible to persons with disabilities.
- (4) *Food and Beverage Service*. The Concessioner must provide access to food and beverage services onboard to disabled persons. The Concessioner's staff will make menus and food and beverage delivery available to persons with disabilities.
- (5) *Access between Passenger Decks*. The Concessioner must provide an accessible route between decks to ensure restrooms, drinking water, climate-controlled interior seating areas, and food and beverage service are available, enabling disabled persons to access all these critical services/amenities wherever they are located onboard. In providing access between decks, the Concessioner must utilize the appropriate elevator system such as a Limited Use-Limited Application Elevators, or Platform Lifts, if necessary.
- (6) *Wheelchairs*. The Concessioner must provide tie-downs for wheelchairs onboard all vessels.

C) Information Features and Announcements

- (1) *Interpretive and Informational Features and Services.* The Concessioner must provide to the public interpretive and informational signs with visual and tactile characters as well as Assistive Listening Systems upon visitor request.
- (2) *Emergency Plan and Safety Plan Announcement.* The Concessioner must make the emergency plan included in safety announcements accessible to persons with disabilities. The emergency plan and safety announcement must be available in multiple formats (e.g., open captioned, American Sign Language, compatible with assistive listening devices, Braille, large print, etc.).

6) VESSEL PUBLIC ADDRESS, AUDIO, AND VIDEO SYSTEMS**A) Public Address System**

- (1) *General.* The Concessioner must ensure its public address system, including a playback device, allows for the playback of onboard interpretive programming, safety, orientation, and other messages.
- (2) *Park Cruise Public Address System.* The Concessioner must install 60 JBL speakers or equivalent, no more than 8' apart, for the operation of the public address system on the Park Cruise vessel. The public address system must provide adequate audio volume for all visitors regardless of the type of engines being used (e.g., electric or diesel).

B) Safety and Orientation Message

- (1) *General.* The Concessioner must develop and provide a brief, universally accessible orientation message. This orientation message will be available to visitors to download through the Concessioner's app in the same 20 languages as provided on its website. The orientation and safety message must include: interpretive and safety information on each vessel departing from the San Francisco Embarkation Site, including the following information, in addition to the requirements in the Water Ferry Transportation Standards (10-FER):
 - (a) Audio or video orientation providing a basic overview of Alcatraz Island's historical significance.
 - (b) Destination information: availability of audio tour in multiple languages; orientation film; stores and restroom locations; eating, drinking, and smoking policies; closing times and return trips; availability of accessible transportation on island; and where to find listing and location of daily programs.

C) Environmental Education

- (1) *General.* The Concessioner must provide visitor education related to environmental sustainability, with messaging that focuses on minimizing waste generation onboard the vessel and in the Area. The goal of this information is to assist passengers in becoming aware of their environmental footprint and Concessioner's practices to minimize impacts to the environment. At a minimum, the Concessioner must convey these messages by posting signs and informational material in common areas of the vessels, and incorporating environmental information into orientation and safety messages.
- (2) *Visitor Educational Displays.* The Concessioner must install on each vessel, **no later than the first anniversary of the Contract effective date**, and must maintain on each vessel throughout the term of the Contract, changing visitor displays and live descriptions at key demonstration and educational locations, including a viewing window or TV feed of each vessel's electric propulsion and batteries, and a mounted sample of vessel rooftop solar panels with live displays showing where the lighting is powered from and how much power is generated from solar.