

ITB 2015-1200-2766
TECHNICAL SPECIFICATIONS

P/V CAMA'I
SHIPYARD
FY-2015

STATE OF ALASKA
DEPARTMENT OF PUBLIC SAFETY
DIVISION OF ALASKA WILDLIFE TROOPERS
VESSEL SECTION
5700 EAST TUDOR ROAD
ANCHORAGE, ALASKA 99507

(907) 269-0389 OFFICE
(907) 269-5616 FAX



LENGTH 69.0 Feet
BREADTH 24.0 Feet
DEPTH 8.8 Feet

GROSS TONS – 52.0

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GENERAL REQUIREMENTS

INVITATION OT BID (ITB)

The intent of this Invitation to Bid (ITB) is to have the Department of Public Safety, Division of Alaska Wildlife Troopers Patrol Vessel (P/V) Cama'i enter a shipyard environment and a dry-dock belonging to or leased by the Contractor for purposes listed within these Specifications.

The Bidder is to enter an itemized price for each Task/ Subtask of this ITB in the appropriate space provided in the **Bid Schedule, pages 12 through 16** of the ITB main document. Bidders are also instructed to fill-in the space for the extended price for each Task, the Redelivery/ Tax fee, if applicable, the Inter Port Differential Cost, and the Grand Total. This requirement is an attempt to eliminate "hidden costs" for the benefit of both parties.

The Bidder shall carefully review the scope of work and requirements for this project described in this specification. The Bidder shall allow for the need to double shift the shipyard crew and possibly work through weekends to complete this work on time.

It is expected that the Bidder will include in the Bid Schedule any State taxes that may apply to this shipyard project. (There are no State taxes applicable in Alaska.) Any taxes would be based on the tax percentage requirement compared to the total of the bid cost to meet the Tasks of these specifications as written and clarified.

If there is a State tax that applies and the Contractor chooses to re-deliver the vessel in International Waters to forego taxation, it is expected that the Bidder will include the cost of the Re-delivery fee in lieu of the taxes.

If there are no taxes or Re-delivery fees, it is expected that the Bidder will not apply any costs for this item in their bid.

WORK SCOPE

The successful Contractor shall supply all labor, materials, and facilities to provide services as described in the Tasks and Subtasks of this ITB. This includes all ancillary support of tasks such as: removing interferences, tank cleaning, gas freeing spaces, disposal of waste, access (such as scaffolding), protection of adjacent surfaces or equipment, and re-installing equipment/ components previously removed as interferences.

All work shall be conducted while the vessel is at the Contractor's facility. Contractor shall comply with all relevant State and Federal environmental and worker safety regulations.

Contractor shall ensure the safety of the vessel during all aspects of work. Contractor shall provide specific Fire Safety procedures for this project, to the satisfaction of the Owner's Representative.

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QUALITY ASSURANCE

All work in this specification must be conducted to a high marine quality, similar to requirements in 46 CFR Subchapter T for USCG inspected small passenger vessels and ABS guide for shipbuilding and repair quality standard for hull structures during construction. Contractor shall be responsible for conducting all quality control inspections. Once the Contractor has inspected and approved the work, a final inspection shall be conducted by the Owner's Representative. The State will not pay for any work that is not inspected and approved by the Owner's Representative. Any work that fails to meet the expected quality standard shall be removed and replaced at no cost to the State.

The State reserves the right to inspect Contractor progress and work quality at any time.

CHANGE ORDERS

During the course of the shipyard period, any change orders shall be processed by first negotiating a firm bid quote agreeable to both parties with justifiable man-hours and/ or materials at current price/ cost as set by the contract. No additional work shall be conducted until a signed Change Order from the Owner's Representative is obtained.

Attached is a copy of a sample form that will be used to address these conditions, changes, and additional work as found or required. This form will be required throughout the shipyard period for any deviations to the Task Specifications, slippage of the re-delivery date, or any cost change to the contract. Change Orders shall be numbered consecutively and specifically for this project. Each Change Order shall be filled out to address the problem and its correction.

Where additional time and expenditures are required, the Contractor shall state the exact costs and the exact extended time required. The Change Order is to be signed by the Contractor's Representative. The Change Order, as a condition report, is to be presented as needed to the Owner's Representative. At that time, the Owner's Representative will seek approval from the Director's Office.

****NOTE****

At **NO TIME** will the Contractor act on any Change Order unless the Director's Office has signed the appropriate box for APPROVAL. At **NO TIME** shall the Contractor assume or commence work on verbal approval. The CONTRACTOR must have a signed Change Order stating the work is approved.

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PRE-SHIPYARD MEETING

The Contractor and Owner's Representatives shall conduct a meeting immediately after the Vessel arrives at the Contractor's facility to identify the Owner's Representative, to discuss the work to be covered, and to establish a firm re-delivery date of the vessel. At this meeting the Contractor shall identify the designated Vessel's "Superintendent" and provide a reasonable schedule that shows the Contractor can complete the work in the Contract period. The Contractor provided schedule shall also indicate when each Contingent Item must be activated to permit completion during the Contract period.

The Owner shall provide the Contractor with amounts of fuel, lube oil, water and other characteristics stowed aboard the Vessel, at the planned pre-shipyard meeting.

PROGRESS MEETINGS

The Contractor and Owner's Representatives shall conduct a progress meeting at a mutually agreed upon time each week during the Contract period. At these meetings the Contractor shall present his schedule to complete all work tasks and give a brief progress report on each task. At this time all coordination, interferences, and quality issues should be resolved.

The Contractor shall supplement the weekly meetings with a brief daily meeting with the Owner's Representative. The Contractor's project superintendent shall meet with the Owner's Representative on a daily basis to briefly discuss that day's work plan, any problems, and any required coordination between vessel and contractor personnel.

ARRIVAL AT CONTRACTOR'S FACILITY AND DELIVERY

The vessel is available to depart the homeport of Kodiak, Alaska four (4) days prior to the day of arrival. The anticipated arrival date at the Contractor's facility is October 27, 2014 and will then be available for official entrance into the Contractor's facility on October 26, 2014. The arrival at the Contractor's facility depends on the location of the facility, and weather encountered en route.

RE-DELIVERY OF THE VESSEL

SHALL BE NO MORE THAN TWENTY-ONE (21) DAYS FROM THE OFFICIAL ARRIVAL AT THE CONTRACTOR'S FACILITY. For the purpose of this specification, the Contract period shall be considered to start on the date the vessel arrives at the Contractor's facility until the vessel is re-delivered to the Owner.

The Contractor shall be held liable for delivery of the vessel on a fixed delivery date established at the pre-shipyard meeting. For each day the vessel is not re-delivered back to the State, after the date established above, the Contractor shall be assessed a 1,591 dollars per calendar day penalty, which covers the crew costs, for the first five (5) days of delay. For each day thereafter, the Contractor shall be assessed a 3,182 dollars per calendar day penalty, which also covers additional Owner's Representative costs. However, if events occur that are unrelated to Change Orders, such as weather caused delays, the re-delivery date may be changed upon mutual agreement between the Owner's Representative and the contractor.

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The Bidder shall review all the Task Specifications for this shipyard project. The Bidder shall allow for the need to double shift the shipyard crew and possibly work through weekends to complete this work on time.

If during the shipyard period a required change order or additional order causes the re-delivery date of the vessel to change, the Contractor shall justify the delay by notifying the Owner in writing using a Change Order. The correspondence shall state the change order cause, effect and the new delivery date of the vessel. The Change Order has to be approved by the Owner's Representative prior to commencement of any work.

It is expected that the Bidder will include in the Bid Schedule any State taxes that may apply to this shipyard project. (There are no State taxes applicable in Alaska.) Any taxes would be based on the tax percentage requirement compared to the total of the bid cost to meet the Tasks of these specifications as written and clarified.

Where State law requires, bidders shall include the cost of re-delivery fees in International waters. Where re-delivery to International water is unavailable and a State tax for the shipyard must be imposed, the bidder will provide the tax rate based on the summary of the items listed in the Bid Schedule.

If there is a State Tax that applies and the Contractor chooses to re-deliver the vessel in International waters to forego taxation, it is expected that the Bidder will include the cost of the re-delivery fee in lieu of the taxes. If there are no taxes or re-delivery fees, it is expected that the Bidder will not apply any costs for this item in the bid.

REQUIREMENTS

The successful Contractor shall supply all labor, materials, and facilities to provide services as described in the Tasks and subtasks of this ITB. This includes all ancillary support of tasks such as tank cleaning, gas freeing spaces, disposal of waste, access (such as scaffolding), and protection of adjacent surfaces or equipment.

CONDITION FOUND REPORTS

The Contractor shall provide written documentation of any and all readings and measurements taken and any abnormalities concerning all Tasks with a "Condition Found Report". With abnormalities found, a written correction and firm price quote will be noted on the report. Summary reports shall be used to document all Contractor tasks completed during the shipyard period. A summary report shall be generated after each task is completed and signed off by the Contractor and the Owner.

DAMAGE TO VESSEL

The Cama'i is an aluminum hull vessel. The Owner will reject any dissimilar metal installations that are susceptible to galvanic corrosion. All rejected dissimilar metal installations shall be corrected at no additional cost to the Owner.

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The Contractor is responsible for any and all damage to the vessel and its systems while at the shipyard facility. The vessel shall be insured to cover any and all damage incurred during the shipyard period as a result of neglect or normal work. The vessel is to be cleaned prior to completion of the shipyard period. All dirt, grease, paint over-spray and other items are to be removed and if, in the process of cleaning the vessel, damage is incurred, the Contractor shall be responsible for correcting damages.

WORK STANDARDS

All work is to be done in accordance with normal marine practices for a vessel of its size and service. All state and federal rules and regulations will be followed accordingly. The vessel follows the USCG standard for Uninspected Fishing Vessels. ABS and / or DNV rules apply for hull and machinery repairs.

OUTSIDE VENDORS

The Owner may choose to have other work done by other vendors. Prior notification will be given to the Contractor regarding this work to make sure there is no interference.

ENVIRONMENTAL PROTECTION

The Contractor shall provide and maintain all environmental protection required to meet local, State, and Federal requirements for all work specified in this contract. The Contractor shall also provide environmental protection if it is required for painting, or for vendors, or for any other work items. Protection shall be in place during the entire shipyard period.

The cost for environmental protection shall be included in the cost for each work item. The owner will not pay for additional charges for environmental protection, unless they are clearly addressed in the Contract or they are the subject of a written and approved change order.

VESSEL CREW WORKING ONBOARD VESSEL

The Contractor shall arrange and schedule the majority of the work in this contract so that the vessel's crew may work onboard the vessel. The vessel crew will require: access to the vessel, adequate vessel habitability, temporary vessel services (as defined in Task One of this specification) to conduct their work. Contractor and Owner's Representative shall coordinate activities to minimize interference between Contractor and vessel crews. Contractor shall provide at least three days advance notice to the Owner's Representative if the Contractor requires the vessel crew not work onboard the vessel.

VESSEL CREW LIVING ONBOARD VESSEL

The Contractor shall assume that the vessel's crew will not be living on board the vessel during the Contract period.

TASK 1.0 TEMPORARY SERVICES

The Temporary Services described in this Section shall be provided for all days of this contract, including when berthed or dry-docked and for all lay-days.

1.01 MOORING

Immediately upon the arrival of the vessel at the Contractor's facility, the Contractor shall provide adequate moorage, mooring fenders, and mooring lines to secure the 69-foot vessel pier-side throughout the shipyard contract period. The vessel is to be moored to the assigned berth so that the vessel's crew, shipyard workers and their materials and equipment have easy access. Appropriate marine fenders shall be strategically placed so wearing or damage to the vessel does not occur. TIRES SHALL NOT BE USED AS FENDERS.

If the Contractor intends to moor the vessel alongside a pier with tidal fluctuations, the Contractor shall ensure that the vessel can safely move up and down through any expected tidal range, without mooring line adjustment. The Skipper of the vessel will make the final determination that adequate mooring lines have been provided.

1.02 SHORE POWER

Immediately upon the arrival of the vessel at the Contractor's facility, the Contractor shall provide shore power hook up for the vessel. The Contractor shall supply 240 VAC three phase, 4 wire single phase, 100 amp service. Electrical shore power is required at all times, including while out of the water, except when the vessel is being shifted.

1.03 TELEPHONE

The Contractor shall provide a telephone service line hooked into the vessel's standard telephone system. Telephone service is required at all times, including while the vessel is out of the water, except when the vessel is being shifted. The telephone service shall provide local, toll free and long distance incoming and outgoing access; however outgoing long distance shall require the use of a calling card. This item shall be bid as a lump sum and shall include the hookup charge, daily rate, and a disconnect fee, including additional disconnect/ hook-up fees if required when shifting the vessel. The Owner will not be responsible for any long distance charges accrued on this telephone service.

1.04 POTABLE WATER

Contractor shall provide a 1½" fire hose with potable water, so that the vessel's crew may fill the vessel's potable water tanks after work is completed, but prior to the vessel departing the shipyard.

1.05 SHIPS'S SERVICE AIR

Contractor shall provide an air hose for ship's service air with a pressure of 125 PSI minimum and a volume of 10.0 CFM.

1.06 GANGWAY

The Contractor shall provide an OSHA approved gangway system to provide personnel access to the main deck of the vessel and adequately safeguard the passage of persons coming and going from the vessel. Vessel access is required at all times, including while the vessel is out of the water, except when the vessel is being shifted.

1.07 FIRE PROTECTION

The Contractor shall provide one 2½" fire hose to the vessel's main deck to charge the vessel's fire-fighting system. In addition, the Contractor shall provide at least one shore based fire station, with a stowed 2½" hose and nozzle that is capable of spraying a large stream of water anywhere on the vessel. Fire main pressure is required at all times, including while the vessel is out of the water, except when the vessel is being shifted.

In addition to fire main pressure, the Contractor shall provide a fire and safety plan to the Skipper of the vessel during the Pre-shipyard meeting. This plan shall include 24 hour per day phone numbers for all safety, fire, and emergency response personnel. The plan shall also detail the yard's fire-fighting and safety procedures and capabilities. Emergency services response is required 24 hours per day, seven days per week. Emergency contact information shall be prominently posted by Contractor, on laminated or waterproof paper, at the entry point of the vessel's wheel-house.

1.08 DECK COVERING

Immediately upon the arrival of the vessel to the Contractor's facility, the Contractor shall provide and maintain, during the entire shipyard period, a protective covering to all inside main deck areas, the passageways, and the wheel-house deck. At the end of the shipyard period, the Contractor shall remove and discard the protective covering. Any areas soiled during the shipyard period are the sole responsibility of, and shall be cleaned and / or repaired by, the Contractor.

1.09 GARBAGE

The Contractor shall provide for one (1) standard size Dumpster with regular dumping service for use by the vessel's crew, at a convenient location for use during the entire shipyard period.

1.10 PARKING

The Contractor shall provide two (2) assigned parking spaces for use by the crew's rental vehicles at a location convenient for use during the entire shipyard period.

1.11 TOILET FACILITIES

The Contractor shall provide one (1) each portable toilet on the vessel's main deck during the entire Contract period. Contractor shall provide regular cleaning services for the portable toilet, minimum of once per week.

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1.12 TANK ACCESS AND TESTING

The Contractor shall open the following tanks and voids, test the air quality of these spaces, and re-installing all covers after work in this specification is completed.

1. Fuel Oil Tanks to be cleaned and inspected as required in Task Seven
2. Starboard Void #1 (void forward of Crew Staterooms)
3. Void #3 (void forward of Engine Room)
4. Engine Room

Contractor shall remove applicable quick access covers and/ or bolt down covers on the voids, tanks, and spaces listed above. Contractor shall ventilate and provide a Chemist's "Safe for Entry Certificate/ Safe for Hot-work Certificate" for the tanks, and spaces listed above. This item includes the cost of the Marine Chemist, travel, per diem, and any safety covers/protection, if required. The Contractor shall maintain the voids, tanks and spaces Safe for Entry/ Safe for Hot Work certificates during the contract period unless otherwise indicated in writing by the Owner. If a transfer of the vessel requires new inspections by a Marine Chemist, then Contractor is responsible for re-certifying the spaces. At the completion of the contract, or earlier if requested by Owner, Contractor shall reinstall covers with new gasket and existing hardware and visually ensure tanks and voids are properly sealed.

The Contractor is responsible for keeping all water and dirt out of open voids and tanks. Should water or dirt enter these spaces, the Contractor shall remove it at no additional cost to the owner. The Contractor shall provide suitable safety guards around open covers.

TASK 2.0 MISCELLANEOUS ACCOUNTS

The Contractor shall provide the materials, equipment and labor for each of the following subtasks, including any removal of items in providing the following services. The Bidder shall provide cost information for each subtask in the ITB Bid Schedule.

2.01 VESSEL ACCOUNT

At the arrival of the shipyard, the Contractor shall set up a \$1,500 account at a local ship chandlery/ commercial marine supply shop so that vessel crew members can procure materials (such as zinc's and other minor needs) during the Contract period. The ITB Bid Schedule shall reflect a time and material bid item, with a not to exceed amount of \$1,500. The Owner will be invoiced only for cost of actual charges on the vessel chandlery account, plus a markup fee not to exceed 15 percent.

2.02 WELDING ACCOUNT

The Contractor shall provide the services of a Certified Marine Aluminum Welder and all necessary welding equipment, supplies, and support systems. This item shall be bid as a unit price in dollars per hour for a welder. For purposes of bid comparison, the hourly rate bid on the ITB will be multiplied by fifteen (15), however the actual quantity of welding hours will be determined during the Contract period. The Owner shall be invoiced only for the actual number of hours of welding, multiplied by the hourly rate shown in the ITB.

The intent of this item is to assist the vessel's crew accomplish small miscellaneous work projects that may arise during the shipyard period. The Vessel Captain has authority to direct projects from this account.

2.03 GENERAL PAINTING ACCOUNT

This Section not used.

2.04 CRANE SERVICE ACCOUNT

The Contractor shall provide the services of a crane or boom truck to lift gear off and on the vessel. Lifting device shall be large enough to pick a five (5) Ton load from the main deck of the vessel while it is moored at the Contractor's facility and in Dry Dock.

The intent of this item is to assist the vessel's crew in removing and installing large and or bulky items on and off the vessel. The Owner's Representative has the authority to direct projects from this account.

This item shall be bid as a unit price in dollars per hour for crane/ boom truck and qualified operator. For the purposes of bid comparison, the hourly rate bid on the ITB will be multiplied by ten (10), however the actual quantity of use hours will be determined during the Contract period.

TASK 3.0 DRY DOCKING

3.01 DRY DOCKING

REFERENCES

3A) Kvichalk Drawing 6461-232 Rev B Graving Arrangement

SCOPE

This work consists of safely lifting the vessel from the water, safely launching the vessel, and allows for the necessary time for the vessel to sit on the lifting facility (Lay Days), in order to complete all related definite bid items. The ITB Bid Schedule shall include all fees and costs associated with dry-docking, lay-days, and moving the vessel in and out of the dry dock, including tug fees if required, as defined in this section.

The Contractor shall provide labor, material, and equipment, for dry-docking and un-docking the vessel to accomplish all work described herein. The Contractor is responsible for all docking and un-docking activities and shall thoroughly review the vessel's docking plan with regard to blocking in way of the keel, transducers, keel-coolers, propellers, anodes, rolling chocks, and other sensitive areas.

It is the Contractor's responsibility to plan for a dry dock period of adequate length to accomplish all work items, both Definite and Contingent, so that all work occurs during the same dry-dock period.

The Contractor shall own or be the primary or secondary lessee of the haul out facility. If the Contractor is the secondary lessee, a statement indicating that shall be included in the bid and a copy of the lease contract shall accompany the bid. The secondary lease shall indicate that the Contractor is the primary party responsible for all rights and responsibilities.

Contractor may drydock the vessel using a Graving Dock, Drydock, Synchrolift, Marine Travelift, or an alternate lifting method as indicated below. Contractor shall not use a marine tidal grid or homebuilt trailer for purposes of dry docking the vessel.

Graving Dock, Drydock, or Synchrolift Facility:

The Contractor shall provide the Owner a certificate for the dry dock/lifting facility (i.e. American Bureau of Shipping). Mechanical lifting facilities shall provide certificates indicating size, type, and age of any cables used for lifting or hauling the vessel.

The Contractor shall provide a diver to inspect the vessel to ensure that the vessel is properly landed on the docking blocks and that all appendages and sensitive areas are free and clear prior to lifting the vessel.

Marine Travelift:

Mechanical lifting facilities shall provide a plan of action for approval by the Owner's Representative including number of lifting straps to be used, location of straps on hull, and certificates indicating size, type, and age of any rigging used for lifting or hauling the vessel. If vessel is lifted using straps, a minimum of four straps shall be used and the straps shall be tied together longitudinally and secured to the vessel to alleviate vessel slippage during the lift and transport to and from blocking area. This is due to the fact that Intersleek bottom paint is applied to the underwater hull.

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Other Lifting and Hauling Methods:

In the case of lifting or moving the vessel by a device not solely designed and dedicated to the lifting of marine vessels (like a crane or railroad), the Contractor shall provide a suitable written plan of action to the Owner's Representative for approval, stating specifically the equipment to be used, loads placed on the vessel, allowable equipment loads, and factors of safety, stamped by a professional engineer. This plan shall also include the rating and condition of all specific lifting and rigging gear and moving components, equipment certifications, a calculation of stress on the vessel's structure, and a drawing showing the location of lifting gear in relation to the vessel structure. The written plan must be submitted at least 7 days prior to this planned activity.

3.02 BLOCKING PLAN

Irrespective of the device used to lift the vessel, Contractor shall develop a blocking plan to safely support the vessel when out of the water in accordance with Reference 3A) and to meet the requirements of this section. The Contractor shall provide the Owner with calculations which demonstrate the pressure that the keel blocks will exert on the vessel's hull and the associated load rating of the lift facility. Special attention shall be paid to the pressure under the keel of this vessel.

- a) Keel blocks shall be sized and spaced in accordance with Reference 3A). Keel blocks shall support the vessel over the entire length of the keel.
- b) Individual blocks shall contact the vessel by at least 75% of the block's bearing area. A block's bearing area shall be assumed to be the entire upper face of the block, unless otherwise stated in the bearing calculations presented at the dry dock meeting. Blocking shall be considered inadequate if two total keel blocks fail to contact the vessel properly. Shoring of blocks is not acceptable. The Contractor shall immediately re-float the vessel if these requirements are not met.
- c) Block faces must be wood and must be smooth and level (plus or minus 1/4 inch) along the entire bearing length. If necessary, two inches of soft wood crush caps may be installed on blocks along the entire bearing length of vessel.
- d) All docking plugs, sea chests, transducers and other penetrations indicated on the docking plan must be well clear of blocking.

The Contractor shall lift the vessel such that work can occur on all parts of the vessel, including removing and installing both rudders, propellers, and shafts. The vessel shall be lifted such that it is protected from work, dirt, and overspray from adjacent vessels. If the Cama'i is impacted from adjacent vessels or vessel work, the Contractor shall remedy any impact, prior to launching.

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3.03 DRY DOCK MEETING

A dry-dock meeting shall take place at least one (1) day prior to the vessel being dry-docked. At this time the Dock Master will present his blocking plan and calculations (including lifting strengths, blocking plan, block and/or lifting pressures, and vessel structural stresses) and describe his plan for docking the vessel including: schedule, weather, the use of engines, tugs, communications, and other relevant items. The Contractor shall assume that the crew and the vessels propulsion engines will not be available. The Contractor shall present a plan for all waterborne movements of the vessel for review and approval by the Owner. If appropriate, the Contractor shall present, in detail, the plan for land transfer of the vessel.

The Contractor shall notify the Owner a minimum of 48 hours prior to dry-docking/ un-docking the vessel. The Contractor shall not initiate docking activities without the expressed permission of the Owner. The Contractor may not undock and re-dock the vessel during the period that the work is in progress on the underwater hull items.

3.04 LAY DAYS

Lay Days is defined as space rental and all necessary expenses to provide a suitable place to perform required construction work on the vessel, while it is out of the water.

Lay Days for the time required to complete all Definite Bid items are not included in this section and shall be included in the price for Dry Docking, as required in Task Three.

Lay Days shall not be charged for the day of lifting and the day of launching the vessel

Contractor shall price the Contingent Items to include cost of any additional Lay Days, if required. If a Contingent Item of work is activated, the Contractor shall add the required additional Lay Days to dry-dock period at no additional cost or impact to the Owner, other than the Contingent Item bid cost.

At the dry dock meeting (above) the Contractor' plan for work shall include the number of Lay Days required by the Contractor to perform the Definite Items and each Contingent item. The plan shall also indicate when each Contingent Item must be activated to permit completion within the dry dock period.

This item shall be bid as a unit price in dollars per one Lay Day. Using this daily price, the Owner may elect to extend the dry dock period for up to ten (10) consecutive days, as necessary to accomplish the Owner's unforeseen or delayed work. Owner is not responsible for Lay Days that are the result of Contractor's unforeseen or delayed work.

TASK 4.0 HULL SERVICES

4.01 BEARING READINGS, PACKING REPLACEMENT, PROPELLER, RUDDER, & SHAFT WORK

PROPELLERS

The Contractor shall remove each of the vessel's two propellers and securely mount them on shipping pallets. Once mounted, propellers shall be enclosed in a plywood box for shipping to the satisfaction of the Owner's Representative. Contractor shall ship propellers to Sound Propeller in Seattle, Washington for reconditioning and re-balancing. Prior to returning the propellers to the vessel, 100% of the surfaces of both propellers shall be cleaned. After cleaning, the hubs and 10" up the blades shall be checked for cracks by means of an approved non-destructive test with dye penetrate. Contractor shall provide a Condition Found Report detailing the condition of the propellers including the actual propeller pitch, propeller balance, and the results of the dye penetrate test. In the CFR, the Contractor shall propose a method and cost to repair any deficiencies found. All required refurbishment work on the propellers shall be handled as a Change Order.

Following refurbishment, Contractor shall ship propellers back to shipyard. For shipping, propellers shall be securely mounted on shipping pallets and enclosed in a plywood box.

After re-installation of shafts as required by this Section, Contractor shall install propellers on the vessel by first checking the fit up of the taper using blue compound to demonstrate a minimum hub/shaft contact area of 80%. If a propeller fails testing, it shall be lapped with grinding compound and retested for fit up using blue compound. Once a contact area of 80% has been achieved, the Contractor shall provide a CFR to the Owner detailing the final contact area. Following approval of blue test, Contractor shall seating propellers and installing new Owner supplied zinc nuts. Owner's Representative shall witness taper blue fit.

Owner has indicated that the propeller is 5-Bladed, 30 inches in diameter, and 33½ inches pitch.

Contact: Sound Propeller
7916 8th Avenue South
Seattle, Washington 98109
(206) 788-4202

RUDDERS

Contractor shall remove the two existing rudders (one port and one starboard). Rudders are composite rudder blades with a stainless steel shaft. Contractor shall carefully disassemble and remove the rudder tiller arms. Tiller arms, tiller key and steering linkages shall be cleaned and stored for reinstallation.

After removal, Contractor shall inspect the rudder bearings, thrust plates and tiller arms and provide the Owner's Representative with a CFR identifying any deficiencies. Condition Found Report shall also include two outside diameter (OD) measurements of the rudder shaft in way of each rudder bearing (one measurement oriented fore and aft and one measurement oriented port and starboard). Any repairs to the rudder will be handled as a Change Order.

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Contractor shall measure two internal diameters (ID) (one measurement fore and aft, and a second measurement port and starboard to match the rudder shaft OD measurements) of each rudder bearing for each rudder shaft. Contractor shall provide a CFR to the Owner's Representative detailing the rudder bearing internal diameters along with a comparison to the rudder shaft diameter measurements previously taken. Any rudder bearing replacements shall be handled as a Change Order.

Following the installation of new shafts, as described in this Section, Contractor shall re-install both the port and starboard rudder using existing thrust plates and tiller arms.

SHAFTING

Contractor shall tag, remove, inspect, and store the SPURS line cutter from both the port and starboard shaft. Contractor shall provide a CFR detailing the condition of the SPURS line cutters. Any replacement parts required shall be handled as a change order.

Contractor shall remove both port and starboard 3' propulsion shaft and move to a clean workshop.

Both port and starboard shafts shall be mounted on a lathe to measure run-out and shaft outside diameters in way of cutlass bearings. Contractor shall provide a CFR to the Owner's Representative with shaft run-out measurements and shaft diameters prior to re-installation.

Contractor shall remove and dispose the existing cutlass bearing from both the port and starboard the strut barrels. Contractor shall supply and install two new Johnson Cutlass Non-Metallic Bearings, Code Laura, with 3.0" ID and 12" length, one for the port strut barrel and one for the starboard strut barrel. Prior to re-installation of shafts, Contractor shall measure the ID of both port and starboard cutlass bearings. Bearing internal diameters shall be taken in both the vertical and athwartship direction at both ends of the bearings (four measurements per bearing). Contractor shall provide a CFR with bearing dimensions and a comparison to the shaft diameters.

Prior to re-installation of shafts, Contractor shall remove and re-install both port and starboard gears as required by Section 6.

Contractor shall supply and install new Packless Sealing System (PSS) Drip-less shaft seals for both port and starboard shafts. New dripless shaft seals shall be a PSS shaft seal for a 3" diameter shaft, similar to the existing shaft seal.

Contractor shall re-install 3" propulsion shafts, and any associated equipment (including the previously removed SPURS line cutters). All coupler bolts shall be new. Contractor shall align propeller shaft prior to vessel launch and provide a CFR to the Owner's Representative. 24 hours after vessel launch, Contractor shall re-align propulsion shaft and provide a CFR to the Owner's Representative which details the amount of misalignment after vessel launch.

4.02 KEEL COOLER MAINTENANCE

This Section not used.

4.03 OILY WATER AND WASTE OIL REMOVAL

This Section not used.

4.04 BILGE CLEANING

This Section not used.

4.05 SERVICE SEA VALVES

APPLICABLE DOCUMENTS

– None –

SCOPE

The Contractor shall tag and remove each of the 13 sea valves listed in this section and move them to a clean workshop.

For each removed valve that is less than 3" NPS, Contractor shall procure a new valve of identical model, material, and performance.

For each valve 3" NPS and greater in size, Contractor shall disassemble, clean, visually inspect, and "Prussian Blue" test each valve to ensure 100% seat contact. Owner's Representative shall witness the results of all blue testing. If the valve passes testing, it shall be reassembled with new cloth-inserted gaskets and valve stem packing material. If a valve fails testing, it shall be lapped with grinding compound for a minimum of 30 minutes and retested with "Prussian Blue". Following inspection and blue testing, Contractor shall provide a CFR to the Owner detailing the condition of all valves.

The repair of valves that fail the second "Prussian Blue" test shall be handled by Change Order. In the CFR, the Contractor shall propose a method and cost to repair or replace defective valves. In general, valves greater than 3" shall be repaired with new parts and valves less than 3" shall be replaced with a new valve of identical model, material, and performance. The cost to reassemble valves with new gaskets and stem packing material shall not be included in the Change Order; this effort is assumed to be included in the normal scope of work for this section.

After all valves are purchased or repaired and reassembled, the Contractor shall move the valves back to the vessel and re-install the valves in the vessel. All non-threaded valves shall be installed with new gaskets and new marine grade stainless steel nuts, bolts, and washers using marine grade never-seize on all fasteners.

QUALITY ASSURANCE

The Contractor shall insure that the Owner's Representative inspects all phases of this task and that all materials are of good marine grade.

DOCUMENTATION

The Contractor shall provide a CFR documenting the condition of all valves and copies of any purchase orders associated with new valves or valve repair components.

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SEA VALVES

Overboard Valves:

- 1 ea. - 1½" check valve Washing Machine
- 1 ea. - 1½" check valve Head Sink
- 1 ea. - 1½" check valve Galley Sink
- 1 ea. - 1½" check valve Shower Drain
- 2 ea. - 1½" ball valve Generators Raw Water dump

Sea Valves:

- 2 ea. - 2½" ball valve Main Engines Raw Water cooling sea suction
- 2 ea. - 2" ball valve Generators Raw Water cooling sea suction
- 1 ea. - 1½" ball valve Fire Pump Raw Water sea suction
- 1 ea. - 1½" ball valve Bilge Pump Raw Water sea suction
- 1 ea. - 2" ball valve Watermaker Raw Water sea suction

4.06 FUEL VALVES

This Section not used.

4.07 BOW THRUSTER TUNNEL

This Section not used.

4.08 INSPECTION AND REPLACEMENT OF HULL ZINC'S

APPLICABLE DOCUMENTS

– None –

SCOPE

The Contractor shall replace all hull zincs with new Owner supplied zincs. All zincs are to be removed and replaced with a zinc of appropriate size and weight. The majority of the zincs are the **bolt on** type. The Contractor shall utilize all new marine quality stainless steel hardware when installing new hull zincs. Conductivity testing will be done on each zinc and witnessed by the Owner's Representative. After completion of testing, Contractor shall provide the Owner's Representative with a CFR detailing the results of the conductivity testing.

There are 2 each twenty pound bolt-on hull zincs and 2 each twelve pound tear-drop shaped zincs to be replaced. The tear-drop zinc tabs will need to be drilled out to the proper size to facilitate bolting on new zincs in the location where the old zincs were removed.

QUALITY ASSURANCE

The Contractor shall insure that the Owner's Representative inspects all phases of this Task and all materials are of good marine grade.

DOCUMENTATION

The Contractor shall provide a CFR documenting the results of all conductivity tests.

4.09 TANKS AND VOIDS VENT CHECK VALVES

This Section not used.

4.10 COMPASS SWINGING AND ADJUSTING

This Section not used.

TASK 5.0 HULL PAINTING

5.01 REFERENCE

Not Used.

5.02 PREREQUISITES TO PREPARING AND COATING

Welds and piping system joints or connections requiring pressure or water testing or visual inspection shall not be coated until after all tests and inspections are complete and the weld, piping joint or connection has been accepted by the Owner.

Prior to the application of coatings, all surfaces shall be dry and free of foreign matter such as dirt, dust, crayon marks, grease, mill scale, residual abrasive, rust, salt deposits and weld spatter.

Scuppers and drains shall be sealed or extended as required to prevent moisture or water contamination on coated surfaces during the drying period.

Prior to any surface preparation or coating, all adjacent surfaces, fittings, ducts, wiring, components, equipment, etc. shall be fully protected to the satisfaction of the Owner's Representative. Protection shall be specifically provided for all bearings, shafts, stocks, transducers, keel coolers, zincs, and any other underwater appendages that may be damaged or affected by preparation or paint. Protection shall be provided for windows, doors, hinges/ dogs, hoses, hydraulic fittings, and any machinery or electronic components on the exterior of the vessel that may be damaged or affected by preparation or paint. The Contractor shall protect all interior portions of the vessel at all times from blast grit, dust, and paint. The protection of ventilation systems shall be specifically addressed by the Contractor prior to preparation or painting.

Protection from sand blasting shall be inspected and approved by the Owner's Representative prior to blasting.

Any delays or damage to the vessel or its systems as a result of poor protection shall be addressed in accordance with Section 5.04 of this specification. The Contractor shall provide all labor, material, and equipment to complete preparation and painting of the vessel as follows:

5.03 PREPARATION AND COATING REQUIRED

The vessel shall be prepared and painted in accordance with this section. Paint color, type, thickness, etc. shall be in accordance with Task Five (5). Paint Schedule (below), unless otherwise indicated.

5.03-A Exterior Hull: Keels to top of bottom paint including inside Sea Chests and Gratings

REQUIRED SURFACES

The surfaces applicable to this item are:

All hull surfaces from the top of the boot strip down to the keel, including rudders, struts, keels, sea chest, bow thruster tunnel and grating, etc.

PREPARATION

Prior to surface preparation, all adjacent or sensitive surfaces shall be fully protected in accordance with this specification. For example: shaft and rudder bearings, sea chests, etc.

All required surfaces shall be washed immediately after vessel is hauled with fresh water high pressure wash (3500-5000 psi) to remove all salts, contaminants, oils etc. This includes any marine growth and dirt along the waterline of the vessel, propeller, rudder, and strut surfaces, etc. After washing, Contractor shall inspect the hull (with Owner's Representative) and report any deficiencies.

Contractor shall abrasive blast per SSPC-SP 10 "Near White Metal Blast" the all required surfaces to bare aluminum.

SURFACE COATING

Contractor shall apply two coats of anti-corrosive paint and two coats of anti-foulant in accordance with the Paint schedule in Section 5.05.

Note: International Paint Representative to be on site during total bottom coatings application.

5.03-B Exterior Hull: Port and Starboard Slashes

REQUIRED SURFACES

The surfaces applicable to this item are:

All hull surfaces from the top of the boot strip down to the keel, to the bulwark cap.

PREPARATION

Prior to surface preparation, all sensitive surfaces below, adjacent to, or up to 10 feet above the area of work shall be fully protected with plywood or rubber in accordance with this specification and to the satisfaction of the Owner's Representative. Any hydraulic rams or valves shall be carefully removed and stored or completely covered with wood and sealed to prevent any ingress of blasting grit and damage to sealing surfaces. Sensitive areas to be protected include vent check valves, such as air intakes, lights, wiring, hoses, doors, and windows, etc.

All required surfaces shall be washed immediately after vessel is hauled with fresh water high pressure wash (3500-5000 psi) to remove all salts, contaminants, oils etc. This includes any marine growth and dirt along the waterline of the vessel. After washing, Contractor shall inspect the hull (with Owner's Representative) and report any deficiencies.

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Contractor shall carefully measure and record the location of the existing slashes on both port and starboard sides of the vessel. Contractor shall bead to bare aluminum the port and starboard slashes.

SURFACE COATING

Contractor shall re-apply the port and starboard slashes with a coating system in accordance with the paint specification in Section 5.05 Paint Schedule.

Contractor shall re-paint gold trim stripes each side of the vessel and any other trim and draft marks in accordance with Section 5.05 Paint Schedule, except vinyl decals which are addressed in 5.03-C below.

5.03-C Stripes, Trim, and Lettering

Contractor shall remove and re-install vinyl decals and emblems if found to be re-usable as follows: two bow vessel names, one stern name, one stern hailing port, two gold badges. Vinyl decals and emblems will be supplied by the Owner if required to be replaced. **Note:** If the Owner's Representative finds the existing decals and emblems be in good shape, he may direct the Contractor to protect them with tape, etc and repaint slash around them or remove them and them reapply over the new paint.

Contractor shall touch up the paint on any disturbed trim stripes. Per paint schedule. Font selection must be approved by Owner prior to painting or lettering. Instead of painting letters, decals may be applied if approved by the Owner Representative.

5.03-D Spare Paint

The Contractor will supply the following quantities of spare paint to the vessel before the vessel departs the Contractor's facility.

1 gal Rodda 7361 Sky Blue
1 qt Sign Painters 109-L Metallic Gold
1 gal Rodda 74079 Galva-Cling Primer
1 gal Rodda 7181994 Flat Black All Purpose Equipment Enamel

5.04 GENERAL PREPARATION AND PAINTING REQUIREMENTS

REQUIREMENTS DURING COATING APPLICATION AND CURING

All surfaces shall be kept dry, clean and free of rust and foreign matter at the time of application of any coating and throughout the curing period.

Coatings shall be applied under environmental conditions conforming to the manufacturer's recommendations as listed on the manufacturer's published data sheets for the coatings being applied. Coatings shall not be applied at ambient or surface temperatures less than the minimum application temperature recommended by the manufacturer for the particular coating involved. No coating shall be applied when the dew point temperature is equal to or greater than the surface temperature of the surface to be coated.

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For each coat applied, the Contractor shall take readings and produce a record of the ambient, surface, and dew point temperature as measured 1) before starting the coat application, 2) upon completion of the application, and 3) for every 4 hours in between (if applicable to the coat). The Contractor shall also take wet and dry film thickness measurements during and following coating applications and maintain records that map these readings to the coated areas and indicate compliance or non-compliance with intended millage (for wet film) and required millage (for dry film).

All paint coats and required thickness of coatings shall be confirmed through spot checks in the presence of the Owner's Representative after each coat is applied.

The Contractor shall provide a copy of the temperature and wet film thickness records, including notations regarding compliance and non-compliance with requirements, to the Owner's Representative within 24 hours after the coating event. The Contractor shall provide a copy of the dry film thickness measurements, including notations regarding compliance and non-compliance with requirements, to the Owner's Representative and review the results with the Owner's Representative prior to application of the next coat. Timing between coats shall also be specifically addressed at this time.

Should the Contractor choose to paint hull structures or attachments which may be affected by condensation caused by the vessel being waterborne or another reason, extraordinary care shall be exercised to ensure that surfaces to be painted are thoroughly dry and remain dry throughout the coating and curing periods. Spaces shall be heated and dehumidified to levels in accordance with the paint manufacturer's preparation and application guidelines to obtain and maintain proper application and curing temperatures and prevent the onset of condensation.

A copy of the paint manufacturer's preparation and applications guidelines applicable to each coating system shall be provided to the Owner's Representative prior to application of any coatings.

CORRECTION OF DAMAGE FROM PAINT OVERSPRAY

Any paint overspray applied to any of the equipment and surfaces shall be immediately and carefully removed.

CLEANING OF BLASTING GRIT

All affected spaces and surfaces shall be cleaned free of grit and residue immediately after grit blasting and prior to any coating. Sequence of blasting shall be arranged to keep blasting grit off new paint.

Machinery, equipment, and surfaces damaged, marred, or contaminated shall be promptly repaired, replaced, or cleaned to pre-existing condition at the Contractor's expense.

SURFACE PREPARATION

Prior to surface preparation, all adjacent surfaces shall be fully protected in accordance with Subsection 5.02 of this specification.

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During a multi-day blasting effort, the Contractor shall apply an appropriate primer coat to blasted areas immediately upon completion of the day's sand blasting to avoid staining. Under no circumstances shall a freshly blasted steel surface be left more than six (6) hours without primer. Should freshly blasted steel be left unprimed, the Contractor shall re-blast to the originally required quality, removing all traces of rust bloom.

All welds and weld affected or burned areas not sand blasted shall be power ground to bare metal and prepared and painted in accordance with the paint schedule.

DOCUMENTATION

The Contractor shall provide the following documentation and technical information:

A) Paint manufacturer's preparation and applications guidelines shall be available on site for review by Owner's Representative.

B) Paint Application Log. Create and keep on site for review and approval by Owner's Representative and submit to Owner's Representative after completion of painting. The log shall contain the information required in Subsection 5.04 and also specific paint catalog numbers and colors.

5.05 PAINT SCHEDULE

PAINT MANUFACTURER

In order to maintain paint compatibility, all paint used on this project shall be manufactured by the below listed paint manufacturers, unless approved otherwise in writing by the Owner. Paint reducer and accelerator (if necessary) shall also be manufactured by the below listed manufacturers in accordance with manufacturer's guidelines.

International Paint Representative: PCCI attention Barney (Bottom Paint)
Phone: 206-730-0143

Rodda Paint Representative: Matt Gag (Slash Paint)
Phone: 907-357-7401

The Contractor shall use the latest paint products in all phases of this item. All stock utilized shall not be more than 6 months old.

Exterior Hulls: Keels to top of Bottom paint

Apply 1 full coat Intershield 300 - Bronze @ 6.0 MDFT.

Apply 1 full coat Intershield 300 - Aluminum @ 6.0 MDFT.

Apply 1 full coat Interspeed 5640 - Red @ 5.0 MDFT.

Apply 1 full coat Interspeed 5640 - Black @ 5.0 MDFT

Note: After paint has cured completely the vessel will be picked up and shifted forward or aft (Dockmaster's decision) 18 to 20 inches so that the hull areas that were covered by the keel blocks will be exposed and can be blasted and painted according to the specifications.

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EXTERIOR HULL: PORT AND STARBOARD SLASHES

Apply 1 coat 74079 Galva-Cling Primer 2 mils on spots water or bead blasted to exposed metal.
Apply 2 coats Rodda Polycoat High Solids Color 7361 - Sky Blue to entire slash surface area.
1.5 mils each coat and Sign Painters 109-L Metallic Gold for diagonal stripes 2.0 mils each coat.

EXTERIOR DECKS

This Section not used.

ALL INTERIOR SPACES NOT COVERED WITH INSULATION

This Section not used.

TASK 6.0 TANK CLEANING (CONTINGENT ITEM)

APPLICABLE DOCUMENTS

7A) Kvichak Drawing 6961-350-001 Rev A Fuel System

SCOPE

The Contractor shall provide the materials, equipment and labor to clean the vessel's two (2) 975 gallon Fuel Oil tanks. Fuel Oil tanks are integral with the vessel demi-hulls and accessible from the void forward of the engine room.

Cleaning of the Fuel Oil tanks shall be a multi stage process to permit fuel to be transferred between tanks and shall be coordinated with the vessel's crew. Prior to starting tank cleaning, Contractor shall meet with the Owner's Representative and provide a schedule for tank cleaning. Tank cleaning schedule shall clearly indicated time required for cleaning of first tank, tank inspection, fuel to be shifted to cleaned and inspected tank, cleaning of second tank, and inspection of second tank.

For bidding purposes, the Contractor shall assume that the Owner will shift fuel between port and starboard tanks during the cleaning and inspection process. Contractor shall remove and disposed of any residual fuel oil (up to 5 gallons per tank) remaining after Owner has shifted fuel.

The Owner's Representative shall approve detergent selection prior to start of cleaning process. Detergent water mix must be such that a soapy residue is not left in tank.

Contractor is responsible for the pumping and disposal of any liquid generated during the cleaning. Tanks must be clean and dry when Contractor is finished. The intent is that the FO tanks will be cleaned in a manner that will allow a "Safe for Entry" certificate to be obtained from a Marine Chemist or certified competent person. Air testing by a "competent" person shall only be accepted if the Contractor can fully document this person's qualifications.

Once each tank is cleaned and certified, the Owner and a surveyor will inspect each of the tanks and associated valves. Tank suction/discharge valves shall be functionally checked by sequencing the valves open and closed through two full cycles. Any repair work identified during inspections shall be the subject of a Change Order.

After all work is accomplished, the tanks shall be closed up with new manhole gaskets, stud grommets and new hardware as required by Section 1.12.

Once closed, Fuel Oil tanks shall be air-tested in accordance with ABS tank testing requirements to demonstrate the tank is properly sealed.

TASK 7.0 NEW CHEST FREEZER (CONTINGENT ITEM)

APPLICABLE DOCUMENTS

8A) Kvichak Drawing 6961-350-001-B, 120 / 240 VAC Electrical System

SCOPE

The Contractor shall provide the materials, equipment and labor to install a new 24" Freeman hatch and a new chest freezer in the starboard void #1, located just forward of the crew staterooms.

Contractor shall supply a new Whirlpool 14.8 cu. ft. chest freezer (Model EH155FXBQ) or equal. Freezer shall be 29.375" deep, 46.125" wide, and 34.75" tall.

Contractor shall crop out deck plating in way of the existing starboard void #1 access hatch. New 24" freeman hatch requires a rough opening of approximately 27" x 27". Contractor shall crop out sufficient approximately 30" x 36" of deck plating for installation of the new chest freezer. Contractor shall crop all stiffeners back 3" beyond edge of removed deck plate.

Owner indicates that the vessel has spray in foam on the wet deck only and will not require removal for the work in this section. Contractor shall verify foam is sufficiently distant area of hotwork. Any foam removal required shall be handled as a change order.

Contractor shall provide a properly equipped fire watch during all welding and hotwork. Fire watch shall remain on site after completion of hot work until the affected surface and adjacent materials have cooled significantly to preclude all opportunity for fire.

Contractor shall design and install a new foundation for the chest freezer. Foundation shall be installed on the forward bulkhead of the Starboard Void #1. Final location and details shall be approved by the Owner's Representative prior to installation. New freezer foundation shall provide for mechanical capture of freezer to prevent movement during violent vessel motion, while still allowing reasonably easy access to lid opening.

After cropping out deck plating and fabrication of foundation, but prior to installation of new Freeman hatch, the Contractor shall install and secure the new chest freezer in the starboard void.

After installation of new chest freezer, Contractor shall insert new deck plating, minimum 1/4" plate, leaving a 27" x 27" rough opening for installation of the new 24" freeman hatch. Insert plates shall have a minimum width of 3" with boundary welds at least 3" from bulkheads or framing in accordance with ABS Rules for Materials and Welding – Aluminum and FRP (2-5-A1/3.3).

Contractor shall modify surrounding deck structure as needed to accommodate new Freeman hatch. Structural modifications shall not alter existing transverse frames or bulkheads unless specifically approved by the Owner's Representative. As part of modifications, Contractor shall install new stiffeners in way of previously cropped stiffeners as needed to attach to new framing.

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Contractor shall supply and install a new 24" x 24" Freeman series 2400 hinged hatch. Hatch shall be watertight and quick acting with a knife edge seal. Hatch shall be installed between existing main transverse frames.

Contractor shall install new electrical service from the existing 120V panel, in the Galley hallway, with a new 15 amp breaker. Contractor shall install a new receptacle near the chest freezer and a new 4ft florescent light in the overhead of the void. New cable shall be LSTSGU-4, installed using existing wireways and bulkhead penetrations within the tunnel along vessel centerline, where possible.

Cable shall be identified using an embossed aluminum cable tag with circuit number and cable type at all penetrations to equipment panels, through bulkheads and decks (both sides), at all locations where both sides of a penetration are not readily visible, and at least twice in each compartment. After installation of wire, Contractor shall make all bulkhead penetrations watertight. If required, location and style of any new bulkhead penetrations shall be approved by the Owner's Representative prior to installation.

Contractor shall update the existing 120/240VAC Electrical System drawing, Reference 7A), to include the new chest freezer electrical service.

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TECHNICAL SPECIFICATIONS

ATTACHMENT ONE (1)

STATE OF ALASKA

Department of Public Safety/ Division of Alaska Wildlife Troopers/ Vessel Section

Patrol Vessel CAMA'I – FY-2015 SHIPYARD

Date: _____

Job Order: _____ ☐ Condition Report ☐ Change Order ☐ Addition Order: _____

1. Condition: _____

2. Recommendation: _____

3. Comments: _____

4. Material Costs: _____

5. Labor Costs: _____

6. Est. Time Required: _____

TOTAL COSTS:

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☐ Estimated costs OR ☐ Firm-bid-quote

NOTE: No over-time is authorized or will be paid unless it is specified above

	State's Representative	Shipyard's Representative
Originator		
Recommended / Not Recommended		