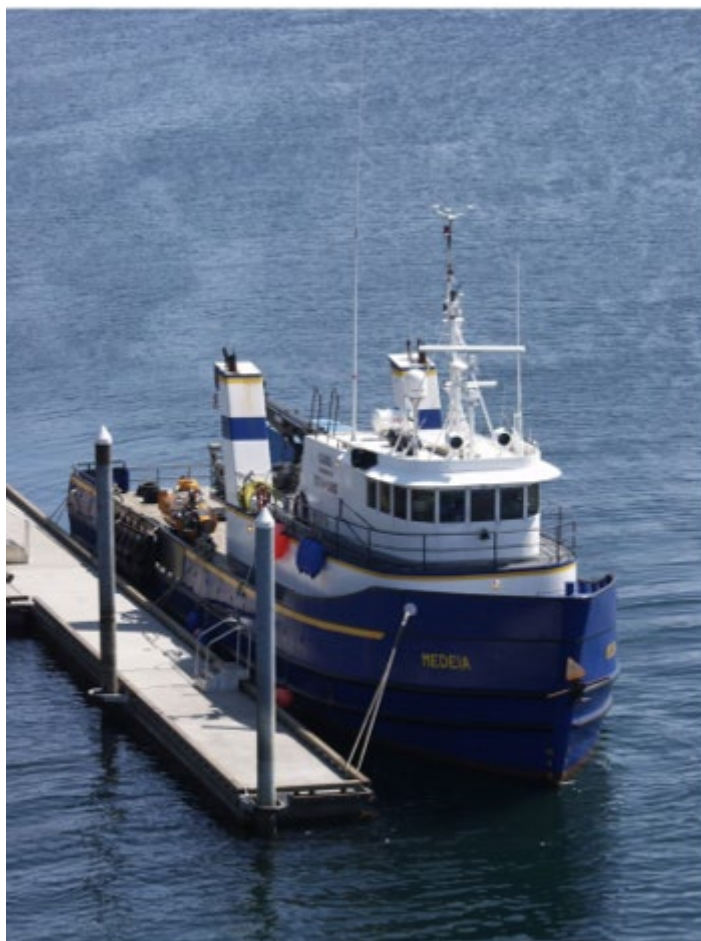




Shipyard Invitation to Bid
ITB 230000012
Vessel Maintenance / Repair/ Upgrade



Alaska Department of Fish and Game Research Vessel Medeia

INVITATION TO BID (ITB) NUMBER

2300000012



RETURN THIS BID TO THE ISSUING OFFICE AT:

Alaska Department of Fish and Game
Division of Administrative Services
Procurement Office
PO Box 115526
1255 West 8th St
Juneau, AK 99801

THIS IS NOT AN ORDER

DATE ITB ISSUED: 11/22/2022

ITB TITLE: R/V Medeia Shipyard Services

SEALED BIDS MUST BE SUBMITTED TO THE ABOVE ADDRESS AND MUST BE TIME AND DATE STAMPED BY THE PURCHASING SECTION PRIOR TO 2:00 PM ON 12/13/2022, AT WHICH TIME THEY WILL BE PUBLICLY OPENED.

DELIVERY DATE: March 2023

IMPORTANT NOTICE: If you received this solicitation from the State's "Online Public Notice" web site, you must register with the Procurement Officer listed on this document to receive notification of subsequent amendments. Failure to contact the Procurement Officer may result in the rejection of your offer.

BIDDER'S NOTICE: By signature on this form, the bidder certifies that:

- (1) **The bidder has a valid Alaska business license, or will obtain one prior to award of any contract resulting from this ITB.** If the bidder possesses a valid Alaska business license, the license number must be written below or one of the following forms of evidence must be submitted with the bid:
 - a canceled check for the business license fee;
 - a copy of the business license application with a receipt date stamp from the State's business license office;
 - a receipt from the State's business license office for the license fee;
 - a copy of the bidder's valid business license;
 - a sworn notarized affidavit that the bidder has applied and paid for a business license;
- (2) the price(s) submitted was arrived at independently and without collusion and that the bidder is complying with:
 - the laws of the State of Alaska;
 - the applicable portion of the Federal Civil Rights Act of 1964;
 - the Equal Employment Opportunity Act and the regulations issued thereunder by the State and Federal Government; and
 - all terms and conditions set out in this Invitation to Bid (ITB).

If a bidder fails to comply with (1) at the time designated in the ITB for opening the state will disallow the Alaska Bidder Preference. If a bidder fails to comply with (2) of this paragraph, the state may reject the bid, terminate the contract, or consider the contractor in default. Bids must be also submitted under the name as appearing on the bidder's current Alaska business license in order to receive the Alaska Bidder Preference.

Kristie Ely

Procurement Specialist IV

(907) 465-6178 P

(907) 465-6181 F

Kristie.ely@alaska.gov

COMPANY SUBMITTING BID

AUTHORIZED SIGNATURE

PRINTED NAME

DATE

ALASKA BUSINESS LICENSE NUMBER

FEDERAL TAX ID NUMBER

TELEPHONE NUMBER

*DOES YOUR BUSINESS QUALIFY FOR THE
ALASKA BIDDER PREFERENCE?

[] YES

[] NO

*DOES YOUR BUSINESS QUALIFY FOR THE
ALASKA VETERAN PREFERENCE?

[] YES

[] NO

*SEE ITB FOR EXPLANATION OF CRITERIA
TO QUALIFY

E-MAIL ADDRESS

INSTRUCTIONS TO BIDDERS:

1. INVITATION TO BID (ITB) REVIEW: Bidders shall carefully review this ITB for defects and questionable or objectionable material. Bidders' comments concerning defects and questionable or objectionable material in the ITB must be made in writing and received by the purchasing authority at least ten (10) days before the bid opening date. This will allow time for an amendment to be issued if one is required. It will also help prevent the opening of a defective bid, upon which award cannot be made, and the resultant exposure of bidders' prices. Bidders' original comments should be sent to the purchasing authority listed on the front of this ITB.

2. BID FORMS: Bidders shall use this and attached forms in submitting bids. A photocopied bid may be submitted.

3. SUBMITTING BIDS: Envelopes containing bids must be sealed, marked, and addressed as shown in the example below. Do not put the ITB number and opening date on the envelope of a request for bid information. Envelopes with ITB numbers annotated on the outside will not be opened until the scheduled date and time.

Bidder's Return Address

Alaska Department of Fish and Game
Division of Administrative Services
Procurement Office
PO Box 115526
1255 West 8th St
Juneau, AK 99801

ITB No.: 230000012

Opening Date: 12/09/2022

ELECTRONIC BID SUBMISSION: Bids may be emailed to dfg.contracting@alaska.gov, no later than the date and time listed on page one of this ITB as the deadline for receipt of bids, and must contain the ITB number in the subject line of the email. Emailed bids must be submitted as an attachment in PDF format. The entire bid, including all amendments, must be received no later than the deadline for receipt of bids. It is the bidder's responsibility to contact the issuing office at (907)465-6178 to confirm that the entire bid has been received. Failure to follow the above instructions may result in the bid being found non-responsive and rejected.

4. PRICES: The bidder shall state prices in the units of issue on this ITB. Prices quoted for commodities must be in U.S. funds and include applicable federal duty, brokerage fees, packaging, and transportation cost to the FOB point so that upon transfer of title the commodity can be utilized without further cost. Prices quoted for services must be quoted in U.S. funds and include applicable federal duty, brokerage fee, packaging, and transportation cost so that the services can be provided without further cost. Prices quoted in bids must be exclusive of federal, state, and local taxes. If the bidder believes that certain taxes are payable by the State, the bidder may list such taxes separately, directly below the bid price for the affected item. The State is exempt from Federal Excise Tax except the following:

10. Coal - Internal Revenue Code of 1986 (IRC), Section 4121 - on the purchase of coal;
11. "Gas Guzzler" - IRC, Section 4064 - on the purchase of low m.p.g. automobiles, except that police and other emergency type vehicles are not subject to the tax;
12. Air Cargo - IRC, Section 4271 - on the purchase of property transportation services by air;
13. Air Passenger - IRC, Section 4261 - on the purchase of passenger transportation services by air carriers.
14. Leaking Underground Storage Tank Trust Fund Tax (LUST) - IRC, Section 4081 - on the purchase of Aviation gasoline, Diesel Fuel, Gasoline, and Kerosene.

5. VENDOR TAX ID NUMBER: If goods or services procured through this ITB are of a type that is required to be included on a Miscellaneous Tax Statement, as described in the Internal Revenue Code, a valid tax identification number must be provided to the State of Alaska before payment will be made.

6. FILING A PROTEST: A bidder may protest the award of a contract or the proposed award of a contract for supplies, services, or professional services. The protest must be filed in writing and include the following information: (1) the name, address, and telephone number of the protester; (2) the signature of the protester or the protester's representative; (3) identification of the contracting agency and the solicitation or contract at issue; (4) a detailed statement of the legal and factual grounds of the protest, including copies of relevant documents; and (5) the form of relief requested. Protests will be treated in accordance with Alaska Statutes (AS) 36.30.560-36.30.610.

CONDITIONS

AUTHORITY: This ITB is written in accordance with AS 36.30 and 2 AAC 12.

- 1. COMPLIANCE:** In the performance of a contract that results from this ITB, the contractor must comply with all applicable federal, state, and borough regulations, codes, and laws; and be liable for all required insurance, licenses, permits and bonds; and pay all applicable federal, state, and borough taxes.
- 2. SUITABLE MATERIALS, ETC.:** Unless otherwise specified, all materials, supplies or equipment offered by a bidder shall be new, unused, and of the latest edition, version, model or crop and of recent manufacture.
- 3. SPECIFICATIONS:** Unless otherwise specified in the ITB, product brand names or model numbers specified in this ITB are examples of the type and quality of product required and are not statements of preference. If the specifications describing an item conflict with a brand name or model number describing the item, the specifications govern. Reference to brand name or number does not preclude an offer of a comparable or better product, if full specifications and descriptive literature are provided for the product. Failure to provide such specifications and descriptive literature may be cause for rejection of the offer.
- 4. FIRM OFFER:** For the purpose of award, offers made in accordance with this ITB must be good and firm for a period of ninety (90) days from the date of bid opening.
- 5. EXTENSION OF PRICES:** In case of error in the extension of prices in the bid, the unit prices will govern; in a lot bid, the lot prices will govern.
- 6. BID PREPARATION COSTS:** The State is not liable for any costs incurred by the bidder in bid preparation.
- 7. CONSOLIDATION OF AWARDS:** Due to high administrative costs associated with processing of purchase orders, a single low bid of \$50 or less may, at the discretion of the State, be awarded to the next low bidder receiving other awards for consolidation purposes. This paragraph is not subject to the protest terms enumerated in "INSTRUCTION TO BIDDERS", "FILING A PROTEST" above.
- 8. CONTRACT FUNDING:** Bidders are advised that funds are available for the initial purchase and/or the first term of the contract. Payment and performance obligations for succeeding purchases and/or additional terms of the contract are subject to the availability and appropriation of funds.
- 9. CONFLICT OF INTEREST:** An officer or employee of the State of Alaska may not seek to acquire, be a party to, or possess a financial interest in, this contract if (1) the officer or employee is an employee of the administrative unit that supervises the award of this contract; or (2) the officer or employee has the power to take or withhold official action so as to affect the award or execution of the contract.
- 10. ASSIGNMENT(S):** Assignment of rights, duties, or payments under a contract resulting from this ITB is not permitted unless authorized in writing by the State of Alaska, Department of Administration, Division of General Services. Bids that are conditioned upon the State's approval of an assignment will be rejected as nonresponsive.
- 11. SUBCONTRACTOR(S):** Within five (5) working days of notice from the state, the apparent low bidder must submit a list of the subcontractors that will be used in the performance of the contract. The list must include the name of each subcontractor and the location of the place of business for each subcontractor and evidence of each subcontractor's valid Alaska business license.
- 12. FORCE MAJEURE (Impossibility to perform):** The contractor is not liable for the consequences of any failure to perform, or default in performing, any of its obligations under this Agreement, if that failure or default is caused by any unforeseeable Force Majeure, beyond the control of, and without the fault or negligence of, the contractor. For the purposes of this Agreement, Force Majeure will mean war (whether declared or not); revolution; invasion; insurrection; riot; civil commotion; sabotage; military or usurped power; lightning; explosion; fire; storm; drought; flood; earthquake; epidemic; quarantine; strikes; acts or restraints of governmental authorities affecting the project or directly or indirectly prohibiting or restricting the furnishing or use of materials or labor required; inability to secure materials, machinery, equipment or labor because of priority, allocation or other regulations of any governmental authorities.
- 13. LATE BIDS:** Late bids are bids received after the time and date set for receipt of the bids. Late bids will not be accepted.
- 14. CONTRACT EXTENSION:** Unless otherwise provided in this ITB, the State and the successful bidder/contractor agree: (1) that any holding over of the contract excluding any exercised renewal options, will be considered as a month-to-month extension, and all other terms and conditions shall remain in full force and effect and (2) to provide written notice to the other party of the intent to cancel such month-to-month extension at least thirty (30) days before the desired date of cancellation.
- 15. DEFAULT:** In case of default by the contractor, for any reason whatsoever, the State of Alaska may procure the goods or services from another source and hold the contractor responsible for any resulting excess cost and may seek other remedies under law or equity.
- 16. DISPUTES:** Any dispute arising out of this agreement shall be resolved under the laws of Alaska. Any appeal of an administrative order or any original action to enforce any provision of this agreement or to obtain any relief from or remedy in connection with this agreement may be brought only in the superior court for the State of Alaska.
- 17. CONSUMER ELECTRICAL PRODUCT:** AS 45.45.910 requires that "...a person may not sell, offer to sell, or otherwise transfer in the course of the person's business a consumer electrical product that is manufactured after August 14, 1990, unless the product is clearly marked as being listed by an approved third party certification program." Electrical consumer products manufactured before August 14, 1990, must either be clearly marked as being third party certified or be marked with a warning label that complies with AS 45.45.910(e). Even exempted electrical products must be marked with the warning label. By signature on this bid the bidder certifies that the product offered is in compliance with the law. A list of approved third party certifiers, warning labels and additional information is available from: Department of Labor and Workforce Development, Labor Standards & Safety Division, Mechanical Inspection Section, P.O. Box 107020, Anchorage, Alaska 99510-7020, (907)269-4925.
- 18. SEVERABILITY:** If any provision of the contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions will not be affected; and, the rights and obligations of the parties will be construed and enforced as if the contract did not contain the particular provision held to be invalid.

SPECIAL CONDITIONS:

- 1. ORDER DOCUMENTS:** Except as specifically allowed under this ITB, an ordering agency will not sign any vendor contract. The State is not bound by a vendor contract signed by a person who is not specifically authorized to sign for the State under this ITB. The State of Alaska Purchase Order, Contract Award and Delivery Order are the only order documents that may be used to place orders against the contract(s) resulting from this ITB.
- 2. BILLING INSTRUCTIONS:** Invoices must be billed to the ordering agency's address shown on the individual Purchase Order, Contract Award or Delivery Order, not to the Division of General Services. The ordering agency will make payment after it receives the merchandise or service and the invoice. Questions concerning payment must be addressed to the ordering agency.
- 3. CONTINUING OBLIGATION OF CONTRACTOR:** Notwithstanding the expiration date of a contract resulting from this ITB, the contractor is obligated to fulfill its responsibilities until warranty, guarantee, maintenance and parts availability requirements have completely expired.

PREFERENCES:

- 1. ALASKA BIDDER PREFERENCE:** Award will be made to the lowest responsive and responsible bidder after an Alaska bidder preference of five percent (5%) has been applied. The preference will be given to a person who: (1) holds a current Alaska business license at the time designated in the invitation to bid for bid opening; (2) submits a bid for goods or services under the name on the Alaska business license; (3) has maintained a place of business within the state staffed by the bidder, or an employee of the bidder, for a period of six months immediately preceding the date of the bid; (4) is incorporated or qualified to do business under the laws of the state, is a sole proprietorship and the proprietor is a resident of the state, is a limited liability company organized under AS 10.50 and all members are residents of the state, or is a partnership under AS 32.06 or AS 32.11 and all partners are residents of the state; and, (5) if a joint venture, is composed entirely of ventures that qualify under (1) - (4) of this subsection. AS 36.30.170, AS 36.30.321(a) and AS 36.30.990[25]
- 2. ALASKA VETERAN PREFERENCE:** If a bidder qualifies for the Alaska bidder preference under AS 36.30.321(a) and AS 36.30.990[25] and is a qualifying entity as defined in AS 36.30.321(f), they will be awarded an Alaska veteran preference of five percent (5%). The preference will be given to a (1) sole proprietorship owned by an Alaska veteran; (2) partnership under AS 32.06 or AS 32.11 if a majority of the partners are Alaska veterans; (3) limited liability company organized under AS 10.50 if a majority of the members are Alaska veterans; or (4) corporation that is wholly owned by individuals and a majority of the individuals are Alaska veterans, and may not exceed \$5,000. The bidder must also add value by actually performing, controlling, managing, and supervising the services provided, or for supplies, the bidder must have sold supplies of the general nature solicited to other state agencies, other governments, or the general public - AS 36.30.321(i).
- 3. USE OF LOCAL FOREST PRODUCTS:** In a project financed by state money in which the use of timber, lumber and manufactured lumber is required, only timber, lumber and manufactured lumber products originating in this state from Alaska forests shall be used unless the use of those products has been determined to be impractical, in accordance with AS 36.15.010 and AS 36.30.322.
- 4. LOCAL AGRICULTURAL AND FISHERIES PRODUCTS PREFERENCE:** When agricultural, dairy, timber, lumber, or fisheries products are purchased using state money, a seven percent (7%) preference shall be applied to the price of the products harvested in Alaska, or in the case of fisheries products, the products harvested or processed within the jurisdiction of Alaska, in accordance with AS 36.15.050.
- 5. ALASKA PRODUCT PREFERENCE:** A bidder that designates the use of an Alaska Product which meets the requirements of the ITB specification and is designated as a Class I, Class II or Class III Alaska Product by the Department of Community & Economic Development shall receive a preference in the bid evaluation in accordance with AS 36.30.332 and 3 AAC 92.010.
- 6. EMPLOYMENT PROGRAM PREFERENCE:** If a bidder qualifies for the Alaska bidder preference under AS 36.30.321(a) and AS 36.30.990[25], and is offering goods or services through an employment program as defined under 36.30.990(11), they will be awarded an Employment Program Preference of fifteen percent (15%) in accordance with AS 36.30.321(b).
- 7. ALASKANS WITH DISABILITIES PREFERENCE:** If a bidder qualifies for the Alaska bidder preference under AS 36.30.321(a) and AS 36.30.990[25], and is a qualifying entity as defined in AS 36.30.321(d), they will be awarded an Alaskans with Disabilities Preference of ten percent (10%) in accordance with AS 36.30.321(d). A bidder may not receive both an Employment Program Preference and an Alaskans with Disabilities Preference.
- 8. PREFERENCE QUALIFICATION LETTER:** Regarding preferences 6 and 7 above, the Division of Vocational Rehabilitation in the Department of Labor and Workforce Development maintains lists of Alaskan; [1] employment programs that qualify for preference, and [2] individuals who qualify for preference as Alaskan's with disabilities. In accordance with AS 36.30.321(i), in order to qualify for one of these preferences, a bidder must add value by actually performing, controlling, managing, and supervising the services provided, or for supplies, a bidder must have sold supplies of the general nature solicited to other state agencies, governments, or the general public.

As evidence of an individual's or a business' right to a certain preference, the Division of Vocational Rehabilitation will issue a certification letter. To take advantage of the preferences 6 or 7 above, an individual or business must be on the appropriate Division of Vocational Rehabilitation list at the time the bid is opened, and must attach a copy of their certification letter to their bid. The bidder's failure to provide this certification letter with their bid will cause the State to disallow the preference.

ALASKA BUSINESS LICENSE AND OTHER REQUIRED LICENSES: Prior to the award of a contract, a bidder must hold a valid Alaska business license. However, in order to receive the Alaska Bidder Preference and other related preferences, such as the Alaska Veteran and Alaskans with Disabilities Preference; a bidder must hold a valid Alaska business license at the time designated for bid opening. Bidders should contact the Department of Commerce, Community and Economic Development, Division of Corporations, Business, and Professional Licensing, P. O. Box 110806, Juneau, Alaska 99811-0806, for information on these licenses.

Acceptable evidence that the bidder possesses a valid Alaska business license may consist of any one of the following:

- (a) copy of an Alaska business license;
- (b) certification on the bid that the bidder has a valid Alaska business license and has included the license number in the bid (see front page);
- (c) a canceled check for the Alaska business license fee;
- (d) a copy of the Alaska business license application with a receipt stamp from the state's occupational licensing office; or
- (e) a sworn and notarized affidavit that the bidder has applied and paid for the Alaska business license.

You are not required to hold a valid Alaska business license at the time bids are opened if you possess one of the following licenses and are offering services or supplies under that specific line of business:

- fisheries business licenses issued by Alaska Department of Revenue or Alaska Department of Fish and Game,
- liquor licenses issued by Alaska Department of Revenue for alcohol sales only,
- insurance licenses issued by Alaska Department of Commerce, Community and Economic Development, Division of Insurance, or
- Mining licenses issued by Alaska Department of Revenue.

At the time designated for bid opening, all bidders must hold any other necessary applicable professional licenses required by Alaska Statute.

ALASKA BIDDER PREFERENCE: An Alaska Bidder Preference of five percent will be applied prior to evaluation. The preference will be given to a bidder who:

- (1) Holds a current Alaska business license at the time designated for bid opening;
- (2) Submits a proposal for goods or services under the name appearing on the bidder's current Alaska business license;
- (3) Has maintained a place of business within the state staffed by the bidder, or an employee of the bidder, for a period of six months immediately preceding the date of the bid;
- (4) Is incorporated or qualified to do business under the laws of the state, is a sole proprietorship and the proprietor is a resident of the state, is a limited liability company (LLC) organized under AS 10.50 and all members are residents of the state, or is a partnership under AS 32.06 or AS 32.11 and all partners are residents of the state; and
- (5) If a joint venture, is composed entirely of ventures that qualify under (1)-(4) of this subsection.

ALASKA BIDDER PREFERENCE AFFIDAVIT

In order to receive the Alaska Bidder Preference, the bid must also include a statement certifying that the bidder is eligible to receive the Alaska Bidder Preference.

If the bidder is a LLC or partnership as identified in (4) of this subsection, the affidavit must also identify each member or partner and include a statement certifying that all members or partners are residents of the state.

If the bidder is a joint venture which includes a LLC or partnership as identified in (4) of this subsection, the affidavit must also identify each member or partner of each LLC or partnership that is included in the joint venture and include a statement certifying that all of those members or partners are residents of the state.

BIDDERS WITH DISABILITIES: The State of Alaska complies with Title II of the Americans with Disabilities Act of 1990. Individuals with disabilities who may need auxiliary aids, services, and/or special modifications to participate in this procurement should contact the Contracting Officer one of the following numbers no later than 10 days prior to bid opening to make any necessary arrangements.

Telephone: (907) 465-4131

Fax: (907) 465-6181

TDD: (907) 465-3646

COMPLIANCE WITH ADA: By signature of their bid the bidder certifies that they comply with the Americans with Disabilities Act of 1990 and the regulations issued thereunder by the federal government.

Services or activities furnished to the general public on behalf of the state must be fully accessible. This is intended to ensure that agencies are in accordance with 28 CFR Part 35 Section 35.130 and that services, programs or activities furnished to the public through a contract do not subject qualified individuals with a disability to discrimination based on the disability.

PREFERENCE QUALIFICATION: In order to qualify for an Alaska Veterans Preference, Employment Program Preference, or Alaskans with Disabilities Preference, a bidder must add value by actually performing; controlling, managing, and supervising the services provided, or a bidder must have sold supplies of the general nature solicited to other state agencies, governments, or the general public.

CONTRACT PERFORMANCE LOCATION: By signature on their bid, the bidder certifies that all services provided under this contract by the contractor and all subcontractors shall be performed in the United States.

If the bidder cannot certify that all work will be performed in the United States, the bidder must contact the procurement officer in writing to request a waiver at least 10 days prior to the deadline for receipt of bids.

The request must include a detailed description of the portion of work that will be performed outside the United States, where, by whom, and the reason the waiver is necessary.

Failure to comply with these requirements may cause the state to reject the bid as non-responsive or cancel the contract.

HUMAN TRAFFICKING: By signature on their bid, the bidder certifies that the bidder is not established and headquartered or incorporated and headquartered in a country recognized as Tier 3 in the most recent United States Department of State's Trafficking in Persons Report.

The most recent United States Department of State's Trafficking in Persons Report can be found at the following website: <http://www.state.gov/g/tip/>

Failure to comply with this requirement will cause the state to reject the bid as non-responsive, or cancel the contract

NOTICE OF INTENT TO AWARD: After the responses to this ITB have been opened and evaluated, a tabulation of the bids will be prepared. This tabulation, called a Notice of Intent to Award, serves two purposes. It lists the name of each company or person that offered a bid and the price they bid. It also provides notice of the state's intent to award a contract(s) to the bidder(s) indicated. A copy of the Notice of Intent will be mailed to each company or person who responded to the ITB. Bidders identified as the apparent low responsive bidders are instructed not to proceed until a Purchase Order, Contract Award, Lease, or some other form of written notice is given by the contracting officer. A company or person who proceeds prior to receiving a Purchase Order, Contract Award, Lease, or some other form of written notice from the contracting officer does so without a contract and at their own risk.

PAYMENT FOR STATE PURCHASES: Payment for agreements under \$500,000 for the undisputed purchase of goods or services provided to a state agency, will be made within 30 days of the receipt of a proper billing or the delivery of the goods or services to the location(s) specified in the agreement, whichever is later. A late payment is subject to 1.5% interest per month on the unpaid balance. Interest will not be paid if there is a dispute or if there is an agreement that establishes a lower interest rate or precludes the charging of interest.

SHIPPING DAMAGE: The state will not accept or pay for damaged goods. The contractor must file all claims against the carrier(s) for damages incurred to items in transit from the point of origin to the ultimate destination. The state will provide the contractor with written notice when damaged goods are received. The state will deduct the cost of the damaged goods from the invoice prior to payment. The contractor must file all claims against the carrier(s) for reimbursement of the loss.

INDEMNIFICATION: The contractor shall indemnify, hold harmless, and defend the contracting agency from and against any claim of, or liability for error, omission or negligent act of the contractor under this agreement. The contractor shall not be required to indemnify the contracting agency for a claim of, or liability for, the independent negligence of the contracting agency. If there is a claim of, or liability for, the joint negligent error or omission of the contractor and the independent negligence of the Contracting agency, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. "Contractor" and "Contracting agency", as used within this and the following article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term "independent negligence" is negligence other than in the Contracting agency's selection, administration, monitoring, or controlling of the contractor and in approving or accepting the contractor's work.

INSURANCE: Without limiting contractor's indemnification, it is agreed that contractor shall purchase at its own expense and maintain in force at all times during the performance of services under this agreement the following policies of insurance. Where specific limits are shown, it is understood that they shall be the minimum acceptable limits. If the contractor's policy contains higher limits, the state shall be entitled to coverage to the extent of such higher limits. Certificates of Insurance must be furnished to the contracting officer prior to beginning work and must provide for a notice of cancellation, non-renewal, or material change of conditions in accordance with policy provisions. Failure to furnish satisfactory evidence of insurance or lapse of the policy is a material breach of this contract and shall be grounds for termination of the contractor's services. All insurance policies shall comply with and be issued by insurers licensed to transact the business of insurance under AS 21.

Proof of insurance is required for the following:

Workers' Compensation Insurance: The contractor shall provide and maintain, for all employees engaged in work under this contract, coverage as required by AS 23.30.045, and; where applicable, any other statutory obligations including but not limited to Federal U.S.L. & H. and Jones Act requirements. The policy must waive subrogation against the state.

Commercial General Liability Insurance: covering all business premises and operations used by the contractor in the performance of services under this agreement with minimum coverage limits of \$300,000 combined single limit per occurrence.

Commercial Automobile Liability Insurance: covering all vehicles used by the contractor in the performance of services under this agreement with minimum coverage limits of \$300,000 combined single limit per occurrence.

Failure to supply satisfactory proof of insurance within the time required will cause the state to declare the bidder non-responsible and to reject the bid.

FIRM, UNQUALIFIED AND UNCONDITIONAL OFFER: Bidders must provide enough information with their bid to constitute a definite, firm, unqualified and unconditional offer. To be responsive a bid must constitute a definite, firm, unqualified and unconditional offer to meet all of the material terms of the ITB. Material terms are those that could affect the price, quantity, quality, or delivery. Also included as material terms are those which are clearly identified in the ITB and which, for reasons of policy, must be complied with at risk of bid rejection for non-responsiveness.

ALTERATIONS: The contractor must obtain the written approval from the contracting officer prior to making any alterations to the specifications contained in this ITB. The state will not pay for alterations that are not approved in advance and in writing by the contracting officer.

PARTS BOOKS AND MAINTENANCE MANUALS: Parts books and maintenance manuals must be provided at the same time that the equipment is delivered. The cost of the parts books and maintenance manuals is to be included in the bid price of the equipment.

WORKMANSHIP & MATERIALS: All work must be performed in a thorough and workmanlike manner and in accordance with current industry practices. The contractor will be held responsible for the quality of the service, maintenance and inspections. Service, maintenance and inspections that are improperly done will be done over, by the contractor, at the contractor's risk and expense.

METHOD OF AWARD: Award will be made as one lot to the lowest responsive and responsible bidder. In order to be considered responsive, bidders must bid on all items.

LOCATION OF WORK: The R/V Medeia is homeported in Juneau, Alaska. Given that the services being requested in this ITB are unavailable in Juneau, it is understood that the vessel will be required to leave Juneau to in order to complete the project. With the unpredictable weather in the Gulf of Alaska during wintertime, the vessel is unable to travel north of Southeast Alaska for this project. All proposed locations of work must be south of Juneau. Bids requiring the vessel to travel north of Juneau will be deemed non-responsive.

BIDDER QUALIFICATIONS: The State intends to contract directly with a full-service shipyard facility to complete the project. Bids which offer other arrangements or brokerage services through a 3rd party shall be rejected as non-responsive.

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- ❖ Paint Specifications
- ❖ Work Item Detail
- ❖ Bid Schedule
- ❖ Separately attached: References, Drawings and Photographs

GENERAL TERMS AND CONDITIONS

The following specifications and Work Items, together with attached photos and drawings, are intended to enable qualified shipyards to properly bid the specified work. See the Vessel Description Section for specifications regarding the *R/V Medeia*.

Work Standards

All work is to be performed by qualified journeymen. Bidders are presumed to warranty that all work will be of sufficiently high quality to meet standards of the American Bureau of Shipping or other recognized classification societies. Owner Representative will inspect all work items for approval upon completion. ADF&G Representative may, at their sole discretion, obtain ABS inspections for any Work Item(s).

Work Scope

The Contractor shall supply all necessary manpower, labor, supervision, expendable supplies, materials, equipment, and expertise necessary to successfully and safely perform the work defined in each of the Work Items. The Contractor's responsibility shall include mobilization, all necessary environmental and personnel safeguards, **and cleanup of the site (leaving the vessel in better shape than before the work)**. During the work period, the Contractor shall allow for ADF&G and regulatory agencies to inspect all work, without claiming for delay or impact.

The Contractor shall provide all necessary services to complete all items as set forth in the specifications. These services include, but are not limited to: all necessary rolling stock including cranes, man-lifts, fork-lifts, trucks; all necessary staging, ventilation, and lighting; all necessary power and hand tools including expendable supplies for such tools, all necessary safety equipment and testing including maintaining safe for entry certificates (Confined Space), and all environmental equipment, testing, and safeguards.

Work Schedule

Prior to starting work on this Contract, the Contractor shall supply ADF&G Representative a brief schedule showing when the Contractor intends to complete all work Items and when the vessel shall go on and off the dock. Overtime work shall not be scheduled for work Items. If the Contractor modifies this schedule for their own purpose, they shall credit ADF&G for the cost of any impacts caused by the delay.

Bid Submittal

All bids prices are to include materials, labor, overhead, taxes, costs for disposals, and any other costs associated with this work. All bids, invoices, and any discussions during the work period including change orders will be in U.S. Dollars. Bids are to be itemized, at least to the level of one price for each Work Item, as described below. Contractor is to itemize and submit Bid Prices on the attached Work Item Bid Schedule sheet (In U.S. Dollars). ADF&G (State of Alaska, Department of Fish and Game) estimates that there is sufficient funding to accomplish all the listed work, but reserves the right to delete any Work Item or Items should funding be insufficient for all quoted work, or at State's sole option work may be deleted for any reason. Bids may be either Flat Rate per Work Item or may be submitted as Not-to-Exceed figures.

For each Item, bidders should specify which method is being used.

Security

It is understood that the selected bidder will be responsible for any damage to the vessel, direct or collateral, that may occur pursuant to this work. Contractor shall have care, custody and control of the vessel throughout the contract performance period. Vessel security shall be provided to protect the vessel from damage, fire, theft or vandalism.

Force Majeure

It is agreed that *force majeure* (an unexpected or uncontrollable event) specifically excludes rain, snow, temperatures between 20 degrees F. and 90 degrees F., and winds less than 50 knots.

Inter-Port Differential

For the purposes of evaluating the Bid Proposals, ADF&G will consider the differences in all roundtrip vessel operational costs from Juneau, Alaska to the responding Bidder's locations. This shall be factored into each Bid Proposal total amount. The Inter-Port Differential shall be calculated in accordance with Alaska Statute. For this bid \$22.93 /U.S. per mile.

Pre-Bid Vessel Inspection & Owner Representative Contact

Prospective bidders may contact the Department of Fish and Game at dfg.contracting@alaska.gov to schedule an inspection the R/V Medeia at its homeport of Juneau, Alaska, prior to the submittal of their bid. (At the bidders' expense)

For Technical questions regarding the vessel, specific Work Items described herein including bidding questions or Contracting Procedures related to the ADF&G R/V Medeia ITB # 230000012 Email: dfg.contracting@alaska.gov

Change Orders

Should change orders become necessary, Bidder agrees that any such order shall be in writing, in US Dollars, signed by both parties, and that any quote for such an order shall be inclusive as above, and will include any fees for delay and disruption. No work on change orders shall commence unless approved by Owner Representative.

Period of Performance

Work can be scheduled to begin between February 20, 2022 and Feb 27, 2022. Twenty-Nine (29) calendar days will be allowed for completion after the start date is determined. (With a final completion date of no later than March 27, 2022) Upon day 30, liquidated damages shall accrue at the rate of \$2,500.00 per day. In the event of the issuance of change orders, any alteration of this schedule shall be designated in the change order and approved by Owner Representative.

Specific delivery date of the vessel shall be agreed upon prior to contract signing. The State agrees to make a good faith effort to arrive prior to the agreed upon date but shall be held harmless for delays beyond the State's control.

Invoice

The Contractor agrees to provide Owner Representative two (2) copies of a Progress Review Invoice prior to the vessel's departure from the shipyard. The Progress Review Invoice shall be formatted per the outline of the Work Item Bid Schedule.

Hazardous Materials and Confined Space Work:

It should be anticipated that due to the nature of this project there will be hazardous materials to be disposed of. The State will not be responsible for any costs associated with the collection or disposal of any hazardous materials generated by this project.

It should be anticipated that due to the nature of this project there will be work in confined spaces. The State will not be responsible for any additional cost associated with this confined space work.

R/V Medeia Vessel Description

The *Research Vessel (R/V) Medeia* is owned and operated by the State of Alaska, Department of Fish and Game, Southeast Region and is engaged in the support of scientific commercial fisheries research within Southeast Alaska. The vessel is versatile and adaptable to accommodate a wide variety of deck equipment and machinery in various configurations.

Official Number:	653322
Vessel Name:	<i>R/V Medeia</i>
Dimensions:	
Length Overall	110'
Length Waterline	97'
Breadth	26'3"
Depth	9'6"
Tonnage	
Gross Tons	304.96
Net Tons	76.24
Builder	Universal Iron Works, Houma, LA, U.S.A.
Area of Operation	Southeast Alaska-Inland, Near Coastal and Ocean Waters
Machinery	
Engine type	Twin Detroit Diesel 16V92, Starboard Main – model 8163-7000, s/n 16FF1025 installed 3/15/01, current hours: 15,056 Port Main – model V1692, s/n unknown, Installed 1/13/19, current hours: 2332
Reduction Gears	Twin Disc Model MG-530, Port - Serial No 3P3461, BOM No. 37408 with a reduction ratio of 4.04:1. Starboard - Serial No. 3K5848, BOM No. 35978 with a reduction ratio of 4.04:1.
Type of Proplution	Twin 600 HP Diesel Engines
Electrical System	200 amp, 208 V; 30 amp, 480v
Propeller information	62" Bronze
Etc.	
Etc.	
Electrical	
Power	Port Auxillary-Lugger M99C2 99kw, model 6068TF275, s/n PE 6068T896349 Installed 1/13/19, current hours: 5608 Starboard Auxillary – Lugger MP 99C 99kw, model 6068TF250, s/n PE6068T089280, rebuilt 2/2022, current hours: 25995 (350 hrs after rebuild) Hydraulic Auxillary – Lugger LT1066T, model 6068TF275, s/n PE6068T754315
Shore tie adapter	Hubble 5100P9W 100 A 120/208VAC 3ø 15HP
Tank Capacities	
Diesel Oil	20000 gal
Fresh Water	8000 gal
Hydraulic Oil.	400 gal
Lube Oil	400 gal

CONSOLIDTED LIST OF REFERENCES

The below-listed documents form a part of this specifications to the extend specified herein. All Medeia drawings, technical publications, and standard specifications will be provided to the contractor by ADF&G at an appropriate time, or upon request, free of charge. Other government documents may be assessed- free of charge- from a public notice request submitted to ADF&G. Contact information or PDF documents will be provided for respective projects.

MEDEIA DRAWINGS

- *1-1 Medeia Docking Plan
- *1-2 Medeia Electrical Service – Shore Tie
- *2-1 Medeia Outboard Profile
- *3-1 Medeia Bilge and Ballast Piping
- *4-1, 4-2, Medeia Zinc Locations and Types
- *5-1, 5-2 Medeia Rudder Fabrication
- *6-1 Medeia Shafting Installation
- *6-2 Medeia Propeller Shaft Specs
- *8-1 Medeia Outboard Profile
- *11-1 hold plan
- *11-2 Medeia Black Water System
- *11-3 TW-200 LP Mechanical Assembly Drawing
- *11-4 BWL schematic
- *11-5 Tortuga Cut Sheet
- *11-6 Quote
- *11-7 TW-200LP TWCP-BWL 120V
- *11-8 Medeia TW-200LP Steel 4 View Drawing
- *13-1 Medeia Crane Knuckle Boom Cylinder.
- *13-2 Main Boom Lift Cylinder
- *13-3 Counterbalance Valve
- *13-4 Crane Diagram
- *13-5 Service and Crane Repair Manual
- *13-6 Medeia Crane Load Chart
- *13-7 Crane Diagram Parts Identification
- *14-1 MG-530 Twin Disc Service Ref
- *14-2 MG-530 Twin Disc Service Ref. Fig 6-28
- *14-3 MG-530 Twin Disc Service Ref. Fig 8-37
- *14-4 MG-530 Twin Disc Service Ref. Fig 6-27
- *14-5 MG-530 Twin Disc Service Ref. All included diagrams
- *14-6 MG-530 Exploded View
- *14-7 MG-530 Diagram
- *16-1 Hydraulic Engine Exhaust Elbo
- *22-1 Trans. Frs & Long'L Section
- *22-2 Small Vessel Transverse Frames
- *22-3 General Scanting
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MEDEIA PHOTOS

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- *3-1 Sea Chest
- *3-2 Sea Chest Outboard Interior
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- *3-5 Sea Chest 3 Inch Gate Valve
- *5-1 Port Rudder Collar
- *5-2 Port Rudder Shoe Flange
- *5-3, 5-4 Rudder Shoe Attachment
- *5-5, 5-6 Rudder Shoe Shaft 1, 2
- *5-7 Rudder Upper Collar
- *6-1 Stbd Stuffing Box
- *6-2 Port Stuffing Box
- *6-3 Stbd Prop
- *6-4 Removable Rudder
- *6-5 Shaft Coupler
- *6-6 Packing Gland
- *6-7 Shaft Removal
- *6-8 Shaft Install
- *8-1 Stbd D-Rail FWD
- *8-2 Stbd D-Rail Aft
- *8-3 Stbd Stern
- *8-4 Port Stern Corner
- *8-5 Port Aft
- *8-6 Stbd Stern Corner
- *8-7 Touchup Area Examplel
- *8-8 Port Outboard Aft
- *9-1, 9-2 Fairing Block Outside Hull 1, 2
- *9-3 Transducer Wires
- *9-4, 9-5 New Transducer
- *9-6, 9-7 Housing Inside Fuel Tank
- *9-8 Transducer Wiring in Wheelhouse
- *10-1 Lower Clad Weld Spot
- *10-2 Upper and Lower Clad Weld Spot
- *10-3 Pumps in Front of Work Area
- *11-1 Alternate Space
- *11-2 Wide View
- *11-3 Current Tank Dimensions
- *11-4 Tanks and Under Table
- *11-5 Top of Holding Tank
- *11-6 Under Table Dimensions
- *11-7 Under Table

- *11-8 Old Sewer Pump
- *Ultrasonic Testing Report 1992
- *Elander Ultrasonic Reports 2006
- *Elander Ultrasonic Reports 2011
- *Elander Ultrasonic Report 2014
- *Elander Ultrasonic Report 2020
- *13-1 Crane Knuckle
- *14-1 Medeia Port Reduction Gear MG-530
- *15-1, 15-2 Sonar Tube
- *16-1 Port Silencer
- *16-2 Port Silencer 2
- *16-3 Port Exhaust
- *16-4 Port Exhaust 2
- *16-5 Stbd Exhaust
- *18-1 Entry Overhead 1
- *18-2 Entry Overhead 2
- *18-3 Entry
- *18-4 Stairs
- *16-6 Stbd Exhaust 2
- *16-7 Hydraulic Engine Exhaust
- *17-1 Angle Insert Area
- *19-1 Stern Light
- *19-2 Stern Light 2
- *19-3 Nav Light Power Cables
- *19-4 Lower Breakdown Light
- *19-5 Port Side Upper Mast
- *19-6 Stbd Nav Light
- *19-7 Stbd Nav Light Inboard
- *19-8 Port Nav Light
- *19-9 Port Nav Light Inboard
- *19-10 Port Nav Light 2
- *19-11 Upper Mast Port Side
- *19-12 Mast
- *19-13 Nav Light Switch Panel
- *20-1 Aft of Steering Station
- *20-2 Port Aft Connection to Stack
- *20-3 Stbd Aft Corner
- *20-4, 20-5 Port Aft L, 2
- *20-6 Stbd Aft Removable Section
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- *20-8 Bottom Attachment Example
- *22-1 Hydraulics Exhaust Elbow
- *22-1 Hydraulics Manifold 1
- *22-2 Hydraulics Manifold 2
- *22-3 Hydraulic Pumps

OTHER REFERENCES

* 16-1 MaximSilencer_M42

*ch37_installation_manual_e4__11-21-11.pdf

CONSOLIDATED LIST OF ADF&G FURNISHED PROPERTY/PARTS

The Following is a list of property/parts, which ADF&G will furnish. This list supersedes any other material obligations indicated or implied by reference drawings.

WORK ITEM	MTI	ITEM DESCRIPTION	NSN/PN	QTY.	ESTIMATED COST (\$/UNIT)
9 Transducer Replacement		Furuno SS 266 Transducer		1	985.00
11 Install MSDS System		Type II MSDS System		1	42000.00
13 Crane Service		8" Knuckle Cylinder		1	7950.00
13 Crane Service		6" boom cylinder		2	6000.00
14 Marine Gear Seal Replacement		Seal kit		2	2712.22
16 Replace Engine Silencer		M42 Engine Silencer		2	2600.00
19 Navigation Lights		Navigation Lights			8000.00
20 Replace Aft Deck Handrails		80' 1" aluminum sched 40 pipe; 80' 1 1/4" aluminum shed 40 pipe			1400.00

Item's listed are ADF&G property and if damaged in the installation process is to be replaced at the expense of the shipyard

R/V Medeia Paint Specifications

Surface Preparations

The following shall apply to any painting work associated with ANY Work Items described herein.

- Surface preparation shall be defined by the Steel Structures Painting Council (SSPC). Visual Standard SSPC-VIS-1-89 will be used to judge the adequacy of surface preparations.
- Degrease surfaces to SSPC-SP1 Solvent Cleaning.
- Remove all loosely adhering and flaking material and feather back all edges. Spot power tool clean to SSPC-SP15 damaged or corroded areas. A sharp, angular surface profile of 2-3 mils is recommended.
- All sharp edges, weld splatter, temporary fittings, etc. shall be removed so that no projections, burrs or sharp edges exist which would penetrate the coating film.
- Surface preparation for new work may be accomplished before or after fabrication at the discretion of the Contractor.
- 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.
- 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 ADF&G Representative.
- Faying surface of steel to steel, except when closed by continuous welding, shall receive two coats of primer on each surface prior to connection.
- Scuppers and drains shall be sealed or extended as required to prevent moisture or water contamination on coated surfaces during the drying period.
- New and exposed steel surface shall not 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 prior to applying primer.

Application and Curing

At the time of application, all paint coatings shall be applied to clean steel, dry, and free of rust and any other foreign contaminants.

*Coatings shall not be applied during the performance of nearby work, such as sandblasting, which is deemed likely by ADF&G's Representative to contaminate the coating application process. All coatings shall be applied in a controlled environment, conformed to the manufacturer's application specifications.

*For each coat applied, the Contractor shall take readings and produce a record of the ambient, surface, and dew point temperature. Take wet and dry film thickness measurements during the application process as outlined below. To be presented to ADF&G's Representative within 24 hours of application.

- 1) Ambient temperature readings before starting the coat application,
- 2) Upon completion of the application, and
- 3) For every four (4) hours in between (if applicable to the coat).
- 4) Document wet and dry film thicknesses throughout the application process.

5) Construct a map or Blueprint reflecting those readings (noting compliance or non-compliance)

The Contractor shall provide ADF&Gs Representative with documentation of the temperature, wet and dry film thickness records, including notations regarding compliance and non-compliance within 24 hours of the coating event. Results must be reviewed with ADF&Gs Representative prior to application of the sequential coat(s).

Extraordinary care shall be taken to ensure that surfaces to be painted are thoroughly dry and remain dry throughout the coating and curing process. Spaces shall be heated and dehumidified to levels in accordance with the paint manufacturer's preparation and application guidelines. All surrounding areas and equipment will be properly protected against said work.

Compliance with Paint Manufacturer's Guidelines and Recommendations

A copy of the paint manufacturer's preparation and applications guidelines applicable to each material being applied shall be provided to ADF&G's Representative prior to application.

* All primers and paints will be applied in accordance with manufactures' specifications.

Correction of Damage Resulting from Paint Overspray and Grit Blasting

Any paint overspray shall be immediately and carefully removed in accordance with manufacturer's guidelines.

Contractor shall take all necessary steps to prevent intrusion of and/or damage caused by blasting medium or any other contaminants such as painting overspray to the following equipment; stern tubes, transducers, hull penetrations, antennae, light fixtures, doors, windows, wires, cables, winches, tank vents, cabin vents, hatches, etc.

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

Welded and other affected Areas

Where any coating has been damaged by welding, burning, disassembly or other cause, the Contractor shall repair the damage area by abrasive blasting or power sanding the surface, cleaning the surface in accordance with manufacturer's recommendations, and applying a full paint coating system. Surrounding area and equipment will be properly protected during the performance of this work.

Work Item List

1. Dry docking.
2. Power wash/scrape hull.
3. Sea chest, valves, and strainer.
4. Zincs.
5. Rudder removal, inspection, installation.
6. Propeller and tail shafts removal, inspections, and installation.
7. Main engines alignment.
8. Painting specifications and coatings.
9. Transducer replacement.
10. Clad welding on port engine room shell plate.
11. Install USCG approved type II marine sanitation device.
12. Ultrasonic hull survey.
13. Crane service.
14. Replace port and starboard reduction gear oil seals.
15. Inspect and paint sonar tube/service sonar.
16. Replace main engine silencers.
17. Weld angle into top of D-rail

Contingent Work Items

18. Paint overhead decking and walls surrounding main entry.
19. Retrofit navigation lights system.
20. Replace wheelhouse aft deck handrails.
21. Service tank floats.
22. Drawings for future bow thruster hydraulics.

Work Item Detail

The Contractor shall provide a fixed cost for all labor, material, and equipment to accomplish each of the following work items:

Work Item 1: Dry- Docking

1. Scope

Contractor shall dry-dock the Medeia to complete the work items detailed in ITB 2300000XX.
Contractor shall also provide power and gangway access to the Medeia while in dry-dock and dockside.

2. References

Drawings:

1-1 Medeia Docking Plan

1-2 Medeia Electrical Service – Shore Tie

Photos:

1-1, 1-2, 1-3 Medeia Underwater

1-4, 1-5 Shore Power Adapter

3. Requirements

The Contractor shall provide a fixed cost for all 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, un-docking, and mooring activities. The vessel shall be docked or lifted in accordance with the attached Docking Plan.

A dry-dock meeting shall take place prior to the vessel being dry-docked. At this time the Dock-Master will present his blocking plan, pressure calculations, describe his plan for docking the vessel to include schedule of events for, rough weather, the use of engines, tugs, communication with ADF&G, and other relevant items. The Contractor shall notify ADF&G Representative a minimum of 48 hours prior to dry-docking and un-docking the vessel. The Contractor shall not initiate docking activities without the express permission of ADF&G Representative.

During the entire contract period while dockside and ashore (dry-docked), the vessel shall be supplied with 240-volt, three phase, 100-amp service converted to 208V 3-phase through the vessel isolation transformer. Assume a 50-amp continuous draw for the power. Owner will supply a 200-amp to 100-amp plug adapter to make it easier to tie into ship's 200-amp service cable. (See Photo Work Item 1 Shore Power Adapter 1, and Photo Work Item 1 Shore Power Adapter 2)

Contractor will provide a gangway for access from the dry-dock or ground to the vessel's main deck with adequate safety netting and lighting.

Provide a safe lay berth at the Contractor's facility throughout the contract performance period. Contractor to ensure suitable mooring lines are available and tended while the vessel is pier-side and that all necessary safety precautions are taken.

Work Item 2: Scrape & Power Wash, Hull and Sea Chest

1. Scope

The Contractor shall provide a fixed cost for all labor, material, and equipment to scrape (from waterline to bottom of keel) and pressure wash the entire exterior of the vessel from keel to the top of the wheelhouse.

2. References

Drawing:

2-1 Medeia Outboard Profile

3. Requirements

Use of fresh water and no less than 3000psi to remove marine growth and dilapidated or failing coatings (hand scrape as needed) to include the inside of the sea chest, sea chest grates and sonar tube. Please note protection of exposed ends of the stern tube, sonar tube, fathometer transducer, and other sensitive areas is required.

****Proper disposal of all wastewater, particulates and residues is the contractor's responsibility. ****

Work Item 3: Sea Chest, Valves and Strainer

1. Scope

Disassemble and inspect the main sea chest valve (NIBCO 3" O.S.Y. valve). Replace: valve stem packing, disc rubbers, and all gaskets associated with valve.

Valve interior should be painted with AP epoxy paint and spindle greased before reassembling.

Disassemble and inspect the two (2) 1-1/4" bronze gate valves attached to sea chest (serving sanitation system supply and spare). Provide Owner Representative a written report of condition for the Sea Chest and Valves and any deficiencies noted.

2. References

Drawing:

3-1 Medeia Bilge and Ballast Piping

Photos:

3-1 Sea Chest

3-2 Sea Chest Outboard Interior

3-3, 3-4 Sea Chest Inboard

3-5 Sea Chest 3 Inch Gate Valve

Work Item 4: Zincs

1. Scope

The Contractor shall provide a fixed cost for all labor, material, and equipment to remove inspect and/or replace all anodes and issue a written report to ADF&G Representative identifying zincs that are reduced more than 50%. Owner Representative will make final determination of hull zincs to actually be replaced.

2. References

Drawings:

4-1, 4-2, Medeia Zinc Locations and Types

Photos:

Work Item 4 – underwater hull

3. Requirements

Contractor shall ensure zincs are firmly secured to the hull and zincs have a positive bonding connection established. Deteriorated or missing shot studs will be replaced under a separate change order. All zincs shall be masked off to prevent them from being painted.

For the purpose of this Bid, Contractor shall provide Work Item Bids for replacement of ALL zincs, as indicated below. Contractor shall provide a credit on Bid Items for any zincs not requiring replacement. There are 42 zincs total. (27) - **Z-22**, (12) - **Z-19**, (2) - **Z-4**, and (1) - **KK-2**.

4.3.1- Install Hull Z – 22 Zincs - Contractor shall remove old zincs and install 27 new Z - 22 Hull zincs.

4.3.2- Install Hull Z-19 Zincs* - Contractor shall remove old zincs and install 12 new Z-19 Hull zincs.

4.3.3- Install Sea Chest Z – 4 - Contractor shall remove old sea chest zinc and install one (1) new Z - 4 Sea Chest zinc.

4.3.4- Install Freezer Keel Cooler Zincs - Contractor shall remove old zinc and replace with new, one (1) KK2 Keel Cooler zinc, on the aft end of keel cooler and one (1) Z-4 zinc, on the hull, next to forward end of keel cooler.

4.3.5- Install Rudder Zincs - Contractor shall remove and replace with new, four (4) Z-22 Rudder zincs.

Note: See Work Item 8.0 re: underwater hull paint.

Work Item 5: Rudder Removal Inspection and Installation

1. Scope

The work item describes the requirements for the contractor to remove, inspect, and assemble rudders and rudder shoes. Including testing of the Steering System.

2. References

Drawings:

5-1, 5-2 Medeia Rudder Fabrication

R/V Medeia Shipyard ITB 230000012

Photos:

Photo 5-1 Port Rudder Collar

Photo 5-2 Port Rudder Shoe Flange

Photo 5-3, 5-4 Rudder Shoe Attachment

Photo 5-5, 5-6 Rudder Shoe Shaft 1, 2

Photo 5-7 Rudder Upper Collar

Rudder Bearing Specifications (one each per rudder):

Upper Support Bearing - 6-1/8" OD x 5" ID x 8" LG

Intermediate Bearing - 6-1/8" OD x 5" ID x 6" LG

Shoe Support Bearing Housing – 8" OD x 6-7/8" ID x 3" LG

Note: For the purpose of this Bid, the Contractor shall assume that the rudder bearings do not require replacement. Additional rudder work, if required, will be handled by change order. The rudder shoes were modified to be bolt on/off in 2017.

3. Requirements

5.3.1- Remove Rudders

The Contractor shall remove both rudders. The bolted-on rudder shoes will have to be removed for full access to the rudders and propellers. Clean all parts as necessary, and perform a general inspection of rudders, integral stock, flanges, pintles and shoes.

5.3.2- Rudder Upper Stocks, Bearing and Tiller Arms Clearances

The contractor shall remove and inspect the rudder upper stocks, tiller arms and carrier washers, and inspect the rudder tubes.

Inside and outside diameters (ID's) and (OD's) of all rudder bearings shall be measured. Measure all outside diameters (OD's) of rudder stock surfaces in way of bearings. Measurements shall occur in two directions, port/starboard and forward/aft. Bearings and shaft areas longer than 6" shall be measured in two locations at the top and bottom of contact areas.

The tiller arm ID's shall also be measured. Tiller arm, tiller arm key, and steering linkage shall be examined for excessive play. Provide ADF&G's Representative with a written report detailing the examination and findings.

5.3.3- Reassemble and Install Rudders and Rudder Shoes

Contractor shall reassemble all components, the rudder, and rudder shoes with the bolt on/off rudder shoes. Contractor will prepare and paint all disturbed painted steel work surfaces with anti-corrosion primer and appropriate finish paints.

The rudder and rudder shoe bolts will be coated with a coating to prevent the bolts from loosening and preventing line or netting from catching on the bolts or bolt heads.

5.3.4- Test Steering System

The vessel shall not undock, or operate, under its own power until dockside trials are complete. With Owner Representative present, test steering system (both ends) full over to full over. Record the time

required to perform this from an average of three (3) tests. Ensure that rudder angle indicators properly display actual rudder position throughout the full range of rudder travel. Provide written findings to ADF&G Representative.

Contractor will be present for in-water sea trials to verify repairs made and proper underway operation of the steering system. This shall be conducted in conjunction with In-Water Sea Trial tests required for all applicable Work Items.

Work Item 6: Propeller and Tailshafts Removal, Inspection and Installation

1. Scope

The work item describes the requirements for the contractor to remove, inspect, and assembler rudders and rudder shows. Including testing of the Steering System.

2. References

Drawings:

6-1 Medeia Shafting Installation

6-2 Medeia Propeller Shaft Specs

Photos:

6-1 Stbd Stuffing Box

6-2 Port Stuffing Box

6-3 Stbd Prop

6-4 Removable Rudder

6-5 Shaft Coupler

6-6 Packing Gland

6-7 Shaft Removal

6-8 Shaft Install

Note: The propellers are repaired with each haul out. In 2017, the Starboard tail shaft and bearings were replaced with new material. Measurements for the tail shafts and bearings will be taken upon removal of shafts. The Port tail shaft and bearings were replaced in 2020. The stuffing box packing will need to be fit with 1 1/8" inch packing.

3. Requirements

6.3.1- Remove Propeller Tail Shafts, Check Bearings Clearances, Inspection of Flanges and Couplings

- Open stuffing boxes, measure and record tail shaft positions and remove tail shaft tapered couplings. Provide clearance chart and report to Owner Representative.
- Remove propeller shafts, with or without propellers fitted, from stern tubes.
- Clean, inspect, measure, and record exposed strut and stern tube bearings. Prepare clearance chart and report to Owner Representative.
- Clean and inspect 5-inch x 24 foot Aquamet (or stainless) tail shaft in lathe, inspect key and keyways, and stress areas with dye penetrant

- Inspect stuffing boxes, glands, and gland studs.
- Remove propellers from shafts (see Work Item 6.3.2 below)
- Test fit couplings and propellers on the Starboard and Port tail shaft's, record and report contact area to Owner Representative.
- Re-install both tail shafts, with or without propeller fitted, in stern tube, secure couplings with failsafe locking device, fit new 1 1/8" packing and adjust glands.
- Provide a spare set of packing rings for each tail shaft, to be stowed in the vicinity of the packing gland.
- The vessel shall not undock, or operate, under its own power until dockside trials are complete.

6.3.2 Propellers Removal and Inspection

- Remove two 62" propellers, deliver to a qualified propeller shop for inspection and provide a written report on condition, pitch, and balance.
- Consult with Owner Representative regarding required repairs. Any additional repairs will be added as a change order.
- Reinstall propellers with failsafe locking device.

****The vessel shall not undock, or operate, under its own power until dockside trials are complete. ****

Work Item 7: Main Engines Alignment

1. Scope

The contractor shall remove the shaft and re-align the engines after all work has been completed from the outline work list item 16 (Replace Port and Starboard reduction seals) or additional change orders. When shaft is removed, contractor shall work on work item 16.

Note: Both main engines were re-aligned along with rudder and propeller work in yard work in 2020. Engine adjustment brackets are installed to facilitate alignment. Engines are to be re-aligned after all work items have been completed.

2. Requirements

7.2.1- Main Engines Alignment

Following completion of all Work Items the Contractor shall provide a fixed cost for all labor, material, and equipment to check and make adjustment for correct port and starboard main engine alignment and provide Owner Representative a written report of findings.

7.2.2- In-Water Sea Trials

The vessel shall not undock, or operate, under its own power until dockside trials are complete. After completion of all Work Items, the Contractor shall accompany ADF&G Representative on vessel sea trials to verify proper operation of all vessel propulsion and steering systems. Sea trials will require a

minimum of three (3) underway hours to ensure all propulsion machinery preforms appropriately and reaches proper operating temperature.

Work Item 8: Painting

1. Scope

The bottom of the Medeia gets painted every time it gets hauled out, which has been every 3 years. The superstructure of the Medeia was painted in 2020. There are various sections needing touch up painting.

2. References

R/V Medeia Paint Specifications

Drawing:

8-1 Medeia Outboard Profile

Photos:

8-1 Stbd D-Rail FWD

8-2 Stbd D-Rail Aft

8-3 Stbd Stern

8-4 Port Stern Corner

8-5 Port Aft

8-6 Stbd Stern Corner

8-7 Touchup Area Examplel

8-8 Port Outboard Aft

3. Requirements

The underwater coatings of the hull presently have several small areas of wear to bare metal from mooring and scientific equipment retrieval. The bare areas of the underwater hull and new metal works will be coated with 3 coatings of anti-corrosive coating to 6 mils dft. The total underwater hull will be finished with two coats anti-fouling paint to 4 mils dft. The two outboard D rails on each outboard side of the vessel need to be spot prepped and painted from the stern to approximately amidships. The outboard and inboard freeboard to the top rail of the lower deck need to be spot prepped and spot coated.

8.3.1- Keel to D-rail, Underwater Hull Paint

Provide a fixed cost for all labor, material, and equipment to prepare and paint the underwater portion of the vessel from the boot strip D-rail (about one foot above the vessel's water line) to the bottom of the keel. Square footage is approximately 2,264 square feet. Coatings are to be applied to bare metal areas with an epoxy anti-corrosive paint system and anti-fouling paint is to be applied to preserve the entire below water hull as follows:

- Apply 2 coats (contrasting in color) of Ameron Amercoat 241 epoxy anti-corrosive primer to a thickness of 6 mils dft. To all new metal and areas of wear.

- Apply 2 coats of Interspeed 640, BRA 640 RED to a dried thickness of 4 mils. from the Boot Strip D-rail down.
- Apply 1 coat of Ameron Amercoat 241 epoxy anti-corrosive primer to a thickness of 6 mils dft. to the exposed metal of both drive shafts after they are re-installed.
- Apply 1 coat of Interspeed 640, BRA 640 RED to a dried thickness of 4 mils to the exposed metal of both drive shafts after they are re-installed.

8.3.2- D-Rails, Outboard and Inboard Profile Spot Preparation and Spot Coating.

The stern quarters, and starboard side near the crab block, will require additional preparation for priming. The exterior and interior freeboard is to be touch up painted. Remove all loosely adhering and flaking material and feather back all edges. Spot power tool clean to SSPC-SP15 all damaged or corroded areas. A sharp, angular surface profile of 2-3 mils is recommended. The Contractor will prepare the steel and paint all disturbed and undisturbed steel work surfaces with anti-corrosion primer and appropriate finish topcoats paints to appropriate thicknesses.

D-rails

The Contractor shall provide a fixed cost for all labor, material, and equipment to prepare and paint the D-rails from the stern to amidships (from the stern to approximately 60 feet forward), as well as spot coating the interior and exterior freeboard. The D rails to be painted are approximately 60 feet x 1 foot each. There are 2 on each side for a total area of 240 square feet. The areas to spot coat are approximately 100 square feet.

Final determination of surfaces to be prepared and painted shall be designated by ADF&G Representative and are estimated to be as indicated above.

D-rail, Outboard and Inboard Profile Spot prime painting.

Contractor shall spot prime paint all the areas having undergone the surface preparation work described above (an estimated 20% of the total work area), applying coatings of Amercoat 241 primer to reach 6.0 MDFT to all areas.

D-rail, Outboard and Inboard Profile Spot topcoat painting.

After all the D-rails and outboard and inboard profile spots have been primed they shall be painted with two (2) full coats of PPG, Protective and Marine Coating, PSX 700 at 2.0 MDFT for each coat. Primary Colors for the topcoat is Black, group 1fd, for the rails; Cobalt Blue, Group 2fd for the inboard and outboard profiles; and Safety Yellow, group 2fd for the boot stripes. Total area estimated to need black is 300 square feet. Total area estimated to need Cobalt Blue topcoat is 100 square feet. Total area estimated to need Safety Yellow is 3 square feet.

Vessel's markings.

Vessel name on both sides of the bow, the vessel name and hailing port on the stern, and all draft marks. All lettering and numbering shall than be painted with two (2) full coats of PPG, Protective and Marine Coating, PSX 700 topcoat at 2.0 MDFT for each coat. Colors for the topcoat, PPG Protective and Marine Coating, PSX 700 are Safety Yellow, group 2fd, and White, group 1fd.

Work Item 9: Transducer Replacement

1. Scope

Contractor will replace transducer Furuno SS266 with a new Airmar SS260 transducer supplied by ADF&G.

2. Reference

Photos:

9-1, 9-2 Fairing Block Outside Hull 1, 2

9-3 Transducer Wires

9-4, 9-5 New Transducer

9-6, 9-7 Housing Inside Fuel Tank

9-8 Transducer Wiring in Wheelhouse

The main transducer for the vessel's Furuno FCV-1100L sounder has failed and needs to be replaced. The transducer is a Furuno SS 266 and will be replaced with a new nearly identical transducer(Airmar 556TID-HDN) supplied by ADF&G.

The transducer is located in a hull fairing block forward, port side through hull under the port middle fuel tank.

3. Requirements

9.3.1- Remove old transducer and cable and renew coatings inside fairing block

Contractor shall remove the old transducer located in the fairing block, forward, port side through hull under the port middle fuel tank. The fairing block is welded into the inside of the fuel tank and the transducer is accessed from the outside bottom of the hull. There is a 1 ½" pipe conduit welded into the top of the fairing block running vertically up through the fuel tank and up to the wheelhouse deck by the stairs. There is wood paneling and trim that will need to be removed at the top of the stairs to the wheelhouse in order to access the transducer cable coming out of the pipe conduit and to the wheelhouse. After the old transducer and cable are removed, Contractor shall renew all coatings inside the fairing block as specified in the "R/V Medeia Paint Specifications" above. Coatings shall include 3 coats (contrasting in color) of Ameron Amercoat 241 epoxy anti-corrosive primer to a thickness of 6 mils dft.

9.3.2- Install new transducer and cable

After the transducer fairing block has been painted and the paint has had time to cure, Contractor shall install and secure the new Owner Supplied transducer and run the new cable to the wheelhouse. Contractor shall connect all transducer wires to the Sounder FCV 1100L and test functionality of the new transducer. Contractor shall also verify functionality of the sounder during final Sea Trials.

After work is completed, all disturbed areas shall be prepared and painted. All trim and paneling that is removed is to be reinstalled after transducer cable is run to wheelhouse. Any wood damaged during the removal and installation process is to be replaced.

Work Item 10: Clad Welding on Port Engine Room Shell Plate

1. Scope

The Contractor shall clad weld deep pitting near frame 40 in the engine room, port side aft, near the waterline.

2. Reference

Photos:

10-1 Lower Clad Weld Spot

10-2 Upper and Lower Clad Weld Spot

10-3 Pumps in Front of Work Area

3. Requirements

10.1 Prepare, and clad weld pitted shell plate

The Contractor shall prepare the area for welding and clad weld 2 areas on the shell plate in the Engine room outboard of the wash-down pump. The areas consist of one area approximately 10"x1.5" and one area approximately 3"x3". All disturbed areas will be primed with 3 coats of Ameron Amercoat 241 epoxy anti-corrosive primer to manufacturers recommended thicknesses, alternating colors between coats, and painted with 2 coats of PPG - Protective and Marine Coating, PSX700 topcoat, 2.0 MFFT for each coat. Color is white, group1FD PSX700.

Note: Two wash-down pumps are mounted inboard of the work area and may need to be temporarily removed to access the area. If the Contractor can work around the pumps, they can remain in place, but must be covered and protected from any grinding, welding, and painting work.

Work Item 11: Install USCG approved type II Marine Sanitation Device

1. Scope:

Contractor will install the Owner supplied USCG approved type II Marine Sanitation Device System (MSDS). The vessel currently has a type III MSDS system that will need to be integrated into the new type II system. Various sections will need to be removed to fit the new system. Please contact the Owner Representative for more information on the new type II MSDS system. All new and disturbed metal is to be painted.

2. Reference:

Drawing:

11-1 hold plan

11-2 Medeia Black Water System

11-3 TW-200 LP Mechanical Assembly Drawing

11-4 BWL schematic

11-5 Tortuga Cut Sheet

11-6 Quote

Photos:

Photo 11-1 Alternate Space

Photo 11-2 Wide View

Photo 11-3 Current Tank Dimensions

Photo 11-4 Tanks and Under Table

Photo 11-5 Top of Holding Tank

Photo 11-6 Under Table Dimensions

Photo 11-7 Under Table

Photo 11-8 Old Sewer Pump

3. Requirements:

11.3.1 Retrofit old area to accommodate new system

The Contractor shall remove the old sewer pump and mounting bracket and any unneeded plumbing as well as sections of the old holding tank to make room for the new system. The Contractor shall also modify the existing workbench so that the installation and maintenance of the new MSDS system is more accessible. This will involve cutting out part of the existing workbench and installing a new section over the top of the new MSDS system (which will be located underneath the workbench) that is to be removeable and integrated into the existing workbench. The Contractor shall confer with the Owner Representative to determine the best design for the new modifications.

11.3.2 Install new Owner supplied type II MSDS system

- The Contractor shall provide all parts, labor, and materials (unless otherwise noted) to convert the system to the new Type II MSDS. The Owner will supply the new type II MSDS system (Headhunter model TW-200LP Steel). The Contractor shall use the existing 3" inlet plumbing located in the Void Room to tie into the inlet of the new MSDS system (see Drawing 12-2 and Photo 12-5). The 2" vent and overboard discharge lines can also be used to tie into the new system. There is a nearby 208v 3 phase power supply that can be used to supply the 120v system. Contractor is to modify existing power supply and breaker to accommodate and install all new electrical components provided with the new system.

Work Item 12: Ultrasonic Thickness Testing

1. Scope:

A non-destructive evaluation will be performed by using ultrasonic testing (UT) to verify/validate extend of underside corrosion on the hull shell plating and other localized areas of high corrosion.

2. References:

Ultrasonic Testing Report 1992
Elander Ultrasonic Reports 2006
Elander Ultrasonic Reports 2011
Elander Ultrasonic Report 2014
Elander Ultrasonic Report 2020

Contractor shall reference the attached drawings and photo. The attached 1992, 2006, 2011, 2014, and 2020 Hull Ultrasonic Testing Reports provide a baseline for comparison for this Bid Item.

3. Requirements:

- All Ultrasonic Thickness Testing shall be conducted in accordance with A.B.S. classification requirements.
- The Ultrasonic survey shall be performed by a certified Ultrasonic Technician.
- Contractor shall provide ADF&G Representative a written report of all recorded thickness values, locations tested, and diminution values.
 - Contractor's report shall provide an interpretation of the exam results, as compared to original baseline values provided by the historical exam records herein. This report shall highlight any areas of special concern noted in the exam.
- This bid item shall consist of Ultrasonic Thickness Testing of two (2) general components of the vessel, A) Hull Shell Plating, (at wind and water line and below waterline); B) localized areas of high corrosions. See Bid Items details below for each of these exam areas.

12.3.1- Ultrasonic thickness testing – Hull shell plate

At the locations selected for this examination, the surface shall be prepared as follows: if paintings are detrimental to proper testing, the area will be chipped to bare metal and/ or, if the paint coatings are adequate for a proper test, a "double Echo" method maybe used. Contractor shall specify method employed of each test location. Disturbed areas shall be prepared and painted following completion of the ultrasonic examination per paint specifications in Work Item 8.

The locations to be included in this examination shall include:

- A)** Three (3) Transverse Bands, located: One (1) midship, one (1) forward of midship, and one (1) aft of midship
- B)** The Shell Plate at the wind and waterline
- C)** The Keel Plate/Keel Coolers (?)
- D)** The Forepeak and Aft Peak Bulkheads
- E)** Interior Decks in 6 Locations.

12.3.2- Ultrasonic thickness testing – high corrosion areas

At the High Corrosion locations selected for this examination, the surface shall be prepared as follows: by chipping to bare metal on the corroded side and surveying both visually and with Ultrasonic thickness testing from the corroded side. Disturbed areas shall be prepared and painted following completion of the ultrasonic examination.

In addition to class requirements, include high corrosion local areas. These areas are, the shell plate under the stern tube, in way of low point in engine room bilge, adjacent to sea chest, keel coolers, keel cooler penetrations, below waterline fire pump, port and starboard coffer dam hull plates, and in way of ballast tanks structure.

Work Item 13: Crane Service

1. Scope:

The deck crane is a 40-foot knuckle-boom Model 1240K, Serial Number MCK1240-92-806, built in 1992, rated at 10 tons, built by North American Crane which is now North Pacific Crane Company, LLC. Manufacturer may be contacted at (253) 922-2272. The 8" knuckle cylinder (see Drawing 13-1) and the (2) 6" boom cylinders(see Drawing 13-2) need to be replaced.

2. References:

Drawings:

13-1 Medeia Crane Knuckle Boom Cylinder.

13-2 Main Boom Lift Cylinder

13-3 Counterbalance Valve

13-4 Crane Diagram

13-5 Service and Crane Repair Manual

13-6 Medeia Crane Load Chart

13-7 Crane Diagram Parts Identification

Photos:

13-1 Crane Knuckle

3. Requirements:

Replace the cylinders and ship old components back to Crane Manufacturer.

Owner will pre-purchase the cylinders and have them shipped to the Contractor 4-6 weeks before the crane service begins. Once, the old cylinders are removed, Contractor shall ship the old cylinders back to North Pacific Crane Company.

13.3.1- Replace Main Boom Lift Cylinder Seals and Knuckle Boom Cylinder Seals and Counterbalance

Contractor to perform the removal of the knuckle boom cylinder, the two main boom lift cylinders and cylinder counterbalance from the deck crane. With cylinders removed, Contractor shall paint the underside of the crane where the knuckle boom was located, as well as area surrounding the knuckle of the crane out to 6 feet on either side of the knuckle, following "R/V Medeia Paint Specifications". After all the noted area has been spot primed and then coated with (2) full coat of primer it shall be painted with two (2) full coats of PPG, Protective and Marine Coating, PSX 700 at 2.0 MDFT for each coat. Color for the topcoat is Black. **At least 48 hours after all the painting has cured**, The Contractor shall re-install the knuckle boom and counterbalance, the knuckle boom cylinder, as well as the two main boom lift cylinders and coordinating parts, reconnect the hoses, and with Owner Representative present, shall test the crane operation, under load, for leaks and cylinder rod slippage.

13.3.2- Torque Test Pedestal and Turret Cap Screws

Contractor to perform torque test (per manufacturer's specifications) of a) the Turret to Swing Bearing Attachment Cap screws (24 total, 1000 FT-LBS), and b) the Pedestal to Swing Bearing Attachment Cap screws (28 total, 900 FT-LBS). Contractor to provide Owner Representative a written report of findings. If any of the Cap screws fail the torque test, Contractor to provide Owner Representative a Change

Order estimate for replacement of all with grade 8 cap screws. If required, replacements are: Turret Attachment Screws 24 – 1" x 6-1/2" NF grade 8 bolts with 24- 1" NF High Nuts and 48 – 1" structural washers; Pedestal Attachment Screws 28 – 1" NF grade 8 and 28 – 1" structural washers.

Work Item 14: Replace Port and Starboard Reduction Gear Oil Seals

1. Scope:

This Work Item (14) requires the replacement of the seals, gaskets and O-rings on the port and starboard main engine Twin Disc reduction gears. **ADF&G will provide the gasket/seal kit parts for the work indicated below.** The port reduction gear is a Twin Disc Model MG-530, Serial No 3P3461, BOM No. 37408 with a reduction ratio of 4.04:1. The starboard reduction gear is also a Twin Disc Model MG-530, Serial No. 3K5848, BOM No. 35978 with a reduction ratio of 4.04:1.

2. References:

Drawings:

- 14-1 MG-530 Twin Disc Service Ref
- 14-2 MG-530 Twin Disc Service Ref. Fig 6-28
- 14-3 MG-530 Twin Disc Service Ref. Fig 8-37
- 14-4 MG-530 Twin Disc Service Ref. Fig 6-27
- 14-5 MG-530 Twin Disc Service Ref. All included diagrams
- 14-6 MG-530 Exploded View
- 14-7 MG-530 Diagram

Photos:

- 14-1 Medeia Port Reduction Gear MG-530

3. Requirements:

The Contractor is to provide a bid estimate for a qualified Twin Disc service technician to replace all seals serving the port and starboard reduction gear. This repair can be performed in-place without removing the reduction gear.

With the propeller shaft removed from the vessel (see Work Item No. 6) and the port reduction gear attached to the main engine block, the Contractor shall remove and replace all gaskets, seals, o-rings and tail shaft seals. Such parts may include, but may not be limited to, the following parts as illustrated in the Twin Disc Service Manual (SM-230 for Models MG 530 and MG-530M Marine Transmissions with Single Reduction, original issue September, 1970), including:

- Medeia Drawing 14-1, Twin Disc Service Ref. Fig. 6-29, Housing Groups Part #: 12 & 24;
- Medeia Drawing 14-2, Twin Disc Service Ref. Fig. 6-28, Lubrication Group Part #: 4, 9, 12, 16, 17 & 31;
- Medeia Drawing 14-3, Twin Disc Service Ref. Fig. 8-37, Output Shaft Part #: 14, 19 & 22; and,
- Medeia Drawing 14-4, Twin Disc Service Ref. Fig. 6-27, Rear External Part #: 4, 11, 14, 17, 19, 21 & 27.
- Medeia Drawing 14-5, Twin Disc Service Ref All included diagrams

****The vessel shall not undock, or operate, under its own power until dockside trials are complete. Contractor will be present for in-water sea trials to verify repairs made and proper operation of the reduction gear. This shall be conducted in conjunction with sea trials tests required for Work Items 5, 6, and 7.****

Work Item 15: Inspect and Paint Sonar Tube

1. Scope:

The vessel has a retractable Furuno sector sonar model CH-37 that was installed in 2005. The tube that houses the retractable sonar needs to be inspected, cleaned, prepped, and painted. In addition, the sonar apparatus needs to be serviced.

2. References:

ch37_installation_manual_e4__11-21-11.pdf

Photos:

15-1, 15-2 Sonar Tube

3. Requirements:

15.3.1- Inspect and Paint Sonar Tube

Remove sonar equipment from the tube and inspect the tube for any high corrosion areas. The inside of the tube shall then be prepped for painting as specified in "R/V Medeia Painting Specifications" noted above. Once prepped, disturbed areas shall be spot coated, and then have 2 full coats of Ameron Amercoat 241 epoxy anti-corrosive primer to manufacturers recommended thicknesses, alternating colors between coats. Following prime coats, area is to be painted with 2 coats of Interspeed 640, BRA 640 RED to a dried thickness of 4 mils. Total area to be painted is estimated to be 30 square feet.

15.3.2- Service Sonar Apparatus

While sonar is removed, contractor is to replace shaft seals and gaskets and dome sonar oil and seals based on manufacturer's recommendations. Owner will supply all seals and sonar oil needed. After sonar tube is painted, Contractor shall re-install all sonar parts and test sonar to make sure it has full functionality. Once installed, the Sound Dome is to be painted with MARINE STAR 20 anti-fouling paint. **Paint only the plastic portion of the dome.** See page 3-5 of the installation manual for reference. Sonar is to be tested during sea trials.

Work Item 16: Replace Main Engine Silencers

1. Scope:

The vessel's main engines are twin, naturally aspirated, Detroit 16V-92s. They currently have Hapco 2448VRS8 silencers mounted to the exhaust on 8" flanges. Flange to flange, the old silencers are 59.75" long by 24" wide. The new silencers are Maxim M42 type 2-SIEO 8" silencers with an alternate configuration, using a side inlet (see Reference 16-1 M-42 Silencer). The inlet of these new silencers are going to be slightly more forward and inboard from the old inlet and will require modification to the 8" outlet of the exhaust manifold from the engines in order to connect to the new silencers. The specs for the new silencers can be found in reference 16-1 MaximSilencer_M42. Modification to the existing heat shield covers will be needed to accommodate the increased size of the cylinder bodies of the new silencers and altered inlet piping dimensions.

2. References:

Reference:

16-1 MaximSilencer_M42

Drawings:

16-1 Hydraulic Engine Exhaust Elbow

Photos:

16-1 Port Silencer

16-2 Port Silencer 2

16-3 Port Exhaust

16-4 Port Exhaust 2

16-5 Stbd Exhaust

16-6 Stbd Exhaust 2

16-7 Hydraulic Engine Exhaust

3. Requirements:

16.3.1 Remove Old Silencers

Contractor shall remove all heat shielding blanket material necessary to access, disconnect and remove old silencers (1 from each main engine) from the engine room. Contractor shall dispose of old silencers. In order to remove the old silencers and install the new ones, the flanged exhaust pipe coming out of the hydraulic engine in the center of the engine room needs to be temporarily removed (see photo 16-4 Hydraulic Engine Exhaust). Owner Representative will provide new gaskets for the 4" hydraulic engine exhaust for replacement of exhaust pipe after new silencers are installed.

16.3.2 Install New Silencers

Contractor is to install new, owner supplied, Maxim M42 type 2-SIEO 8" silencers in location of old silencers. The new silencers are approximately 18" longer than the old ones. To accommodate this longer length, the 8" pipe flange inlet port of each silencer is located on the inboard side of the silencer instead of the end of it. Compared to the old silencers, this moves the silencer's 8" pipe flange inlet forward 4-6" and inboard approximately 17". To make up for this different location, the Contractor will need to extend, on each engine, the current 8" exhaust pipe coming out of the engine exhaust

manifold by 4-6", remove the flanged elbow that was connected to the inlet of the old silencer, and modify the length of the horizontal run coming into the silencer. The old flange can be cut off and rewelded to the length and orientation needed to mate with the 8" pipe flange on the inlet of the silencer. There is also (1) pipe hanger per silencer that is welded to the overhead that will need to be cut off and relocated to support the new placement of the 8" supply exhaust pipe. The outlet side of the new silencer should be able to mate with the existing 8" pipe flange on the outlet side without modification. The old silencers have an estimated weight of 170lbs each and the new silencers have an estimated weight of 304 lbs each. The Contractor shall consult with the Owner Representative to determine if/where an additional support bracket will be needed to support the new silencers. Contractor shall supply new gaskets for the 8" exhaust flanges ((4) per silencer).

16.3.3 Install New Heat Shield Coverings

After Owner Representative inspects the installation of the new silencers, Contractor is to provide and install new heat shield coverings for the main cylinder bodies of the silencers. New heat shield coverings must withstand at least 900 degrees F, and be no more than 1" thick. The insulation from the 8" exhaust piping should be able to be re-used with slight modification. These modifications may include adding a strip of exhaust insulation 6-8" wide to cover the extension, as well as cutting down and mending the existing insulation to cover the shorter horizontal run.

Work List Item 17: Weld angle into top of D-rail.

1. Scope:

During trawling operations, the trawl doors often get hung up on the stern quarter D-rails. This work item is to weld a plate into the top of the D-rail along a small section to create an angle and smooth transition for the trawl doors to rest on both the starboard and port sides.

2. References:

Photos:

17-1 Angle Insert Area

3. Requirements:

21.3.1 Install Wedge along section of port and starboard aft D-rail

On both starboard and port quarters, Contractor is to prepare area and weld a 316 stainless 3/8" x 8" wide x 52" long plate along the top of the upper outboard D-rail that attaches just below the UHMW plastic panel. Contractor shall prepare all disturbed surfaces to be painted as specified in "R/V Medeia Painting Specifications". Once prepped, disturbed areas shall be spot coated, and then have 2 full coats of Ameron Amercoat 241 epoxy anti-corrosive primer to manufacturer's recommended thicknesses, alternating colors between coats. Following prime coats, area is to be painted with matching color to the area with 2 coats of PPG - Protective and Marine Coating, PSX700 topcoat, 2.0 MDFT for each coat. The weld area on top of the plate is cobalt blue and the weld area at the bottom of the plate is black. The stainless plate can remain unpainted.

Contingent Work Items:

Contingent Work List Item 18: Paint Overhead Decking and Walls Surrounding Main Decking

1. Scope:

The underside of the upper aft deck, accessed near the main entrance, as well as the vertical walls, will be cleaned, prepped, and painted via a change order if approved by ADF&G Owner Representative.

2. References:

Photos:

18-1 Entry Overhead 1

18-2 Entry Overhead 2

18-3 Entry

18-4 Stairs

3. Requirements:

Contractor shall prepare all surfaces to be painted as specified in "R/V Medeia Painting Specifications". Once prepped, disturbed areas shall be spot coated, and then have 2 full coats of Ameron Amercoat 241 epoxy anti-corrosive primer to manufacturers recommended thicknesses, alternating colors between coats. Following prime coats, area is to be painted with 2 coats of PPG - Protective and Marine Coating, PSX700 topcoat, 2.0 MDFT for each coat. Color is white, group1FD PSX700. Care shall be taken when applying paint to the inside of angled members and other difficult areas to ensure that specified DFT is achieved. Approximate surface area for this work item is 200 square feet.

Contingent Work List Item 19: Retrofit Navigation Lights System

1. Scope:

Contractor shall upgrade the vessel's current navigation light system to include a navigation light monitoring system with a redundant navigational light system via a change order if approved by ADF&G Owner Representative. Owner shall provide the main components of the system, but the contractor will need to provide the wiring. The current system is 110v; the new system is a 12v system.

2. References:

Photos:

19-1 Stern Light

19-2 Stern Light 2

19-3 Nav Light Power Cables

19-4 Lower Breakdown Light

19-5 Port Side Upper Mast
19-6 Stbd Nav Light
19-7 Stbd Nav Light Inboard
19-8 Port Nav Light
19-9 Port Nav Light Inboard
19-10 Port Nav Light 2
19-11 Upper Mast Port Side
19-12 Mast
19-13 Nav Light Switch Panel

3. Requirements:

19.3.1- Remove Current Navigation Lights, Wiring, and Switch Panel

Contractor shall remove and dispose of all wiring of old navigation lights.

19.3.2- Install new navigation lights, wiring, and switch panel

Owner shall supply the new navigation light fixtures and navigation light control monitoring system. Contractor shall provide all wiring, electrical, and installation work. Lights to include the following navigational light fixtures: Port, Starboard, Bow, Stern, Anchor, Trawling, and Red Breakdown lights, with appropriate visibility for 110' vessel as specified by USCG regulations. Contractor shall consult with Owner Representative to determine installation location for the control panel for the new system. There is a 12v panel in the wheelhouse that can be used to power the new system.

Contingent Work List Item 20: Replace Wheelhouse Aft Deck Handrails

1. Scope:

Contractor will replace the upper aft deck handrails via a change order if approved by ADF&G Owner Representative. The wheelhouse forward deck handrails were replaced in 2008 by welding stainless mounting tabs to the deck and bolting new aluminum handrails to them. Contractor is to remove the old aft area handrails and replicate the forward mounting system for the aft area of the wheelhouse deck. Owner will provide up to 80' of 1 ¼" schedule 40 aluminum pipe and up to 80' of 1" schedule 40 aluminum pipe, fourteen pre-cut 3/8" thick aluminum uprights (3"x36" flat bar) and fourteen 3/8"x 6" high x 3" wide 316 stainless tabs. Contractor shall provide all other needed materials.

2. References:

Photos:

20-1 Aft of Steering Station

20-2 Port Aft Connection to Stack

20-3 Stbd Aft Corner

20-4, 20-5 Port Aft L, 2

20-6 Stbd Aft Removable Section

20-7 Example 1

20-8 Bottom Attachment Example

3. Requirements:

20.3.1 Remove old handrails

Remove all the old steel handrails on the aft deck and dispose of old materials. There are two deck cameras and two deck flood lights, one on each side facing the aft deck, that will need to be temporarily removed.

20.3.2 Install new handrails

Install new handrails consisting of 4 sections total: starboard side "L" shape, port side "L" shape, top of stairs, and rear steering station "L" shape. Each new section will have a top rail made of 1 ¼" schedule 40 aluminum pipe, and two lower fence rails made of 1" schedule 40 aluminum pipe. The sections are to be welded together using 3/8" x 36" longx3" wide 6061 aluminum flatbar uprights. The uprights are to be mounted to the deck by through bolting into 3/8" x 6" high x 3" wide 316 stainless tabs that are to be welded into the deck. It is estimated that the top rails will use a total of 34' of pipe and the lower two fence rails will use a total of 70' of pipe. Based on the forward deck handrail design, the new aft deck sections will require about 14 upright sections and tabs. The steering station "L" shape section can use an aluminum upright with a stainless tab welded to the deck on the forward part of the rail, but on the aft starboard outboard side of the "L" it will need to be bolted to the starboard exhaust stack. This will require using a mild steel ½" x 2" wide x 40" long doubler strip to be welded to the stack. The doubler strip is to have threaded holes that the rail can bolt into. The 2 cameras and deck flood lights are to be re-installed at their same locations. The camera mounts, mounted using pipe clamps, can be re-used, but the deck lights may need new mounting hardware.

20.3.3 Install new removeable handrails

In addition to replacing the existing steel handrails with aluminum ones as stated above, contractor shall fabricate 2 removeable handrail panels for the starboard aft section of rail. The handrails shall be of the same height as the other handrail sections. The removeable outboard aft section of handrail is to be 56" wide and is to be mounted using marine grade stainless bolts onto to the starboard aft corner on one side and bolt on to a stainless steel tab on the inboard bottom. The 2nd removable handrail panel is to be 24" wide and shall be designed to be removed quickly. It shall be mounted adjacent to the 56" panel, but it is to be mounted by having the legs slide down into slightly oversized 316" schedule 40 stainless steel pipe inserts 4" tall, that are to be welded into the deck. It shall have quick release pins through the legs and pipe mounts so that it can quickly be removed by sliding out the quick release pins and lifting the panel out.

20.3.4 Paint all disturbed areas

Once all panels have been installed, contractor is to paint all the new welds and disturbed areas. The aluminum rails and stainless tabs beyond any welds into ferrous metals don't need to be painted. Contractor shall prepare all surfaces to be painted as specified in "R/V Medeia Painting Specifications".

Once prepped, disturbed areas shall be spot coated, and then have 2 full coats of Ameron Amercoat 241 epoxy anti-corrosive primer to manufacturer's recommended thicknesses, alternating colors between coats. Following prime coats, area is to be painted with 2 coats of PPG - Protective and Marine Coating, PSX700 topcoat, 2.0 MDFT for each coat. The doubler plate on the stack will need white topcoat, and the welds around the tabs will need cobalt blue on the outboard side of the weld and grey on the inboard side.

Contingent Work List Item 21: Service Tank Vent Float Valves

1. Scope:

Contractor will service tank vent float valves via a change order if approved by ADF&G Owner Representative.

2. Requirements:

Remove screens and check integrity of ball float valves for fuel, ballast, water, and other tanks. Estimate a total of 21 vents. Replace float valves as needed. Touch up paint as needed.

Contingent Work List Item 22: Design Hydraulics System for Future Bow Thruster

Drawings:

- 22-1 Trans. Frs & Long'L Section
- 22-2 Small Vessel Transverse Frames
- 22-3 General Scanting
- 22-4 Lines
- 22-5 Medeia Outboard Profile

Photos:

- 22-1 Hydraulics Exhaust Elbow
- 22-1 Hydraulics Manifold 1

22-2 Hydraulics Manifold 2

22-3 Hydraulic Pumps

1. Scope:

Contractor will design and provide drawings for integrating future bow thruster hydraulics into existing hydraulic system via a change order if approved by ADF&G Owner Representative.

2. Requirements:

Inspect existing hydraulic system and determine the best way to integrate a new hydraulically driven bow thruster (to be installed later) into existing system. Provide drawings and recommended parts list to ADF&G Owner Representative.

ALASKA DEPARTMENT OF FISH AND GAME INVITATION TO BID # 200000020
R/V MEDEIA
BID SCHEDULE

Prices include all labor and materials in U.S. Dollars

Work Item	Work Item Price	Work Item Total
1 Dry Docking		\$
2 Power Wash Hull		\$
3 Sea Chest, Strainer And Valves		\$
4 Zincs		
4.1 Install (24) Z-22 Hull Zincs	\$	
4.2 Install (2) Hub Zincs	\$	
4.3 Install (1) Z-3 Sea Chest Zinc	\$	
4.4 Install (2) X-47-3 Keel Cooler Zincs	\$	
4.5 Install (4) Rudder Zincs	\$	
Total for Work Item #4 Zincs		\$
5 Rudder Removal, Inspection, Stocks and Flanges		\$
6 Propeller Tail Shafts, Bearing and Glands Inspection		\$
7 Main Engine Alignment		\$
8 Paint		
8.1 Keel to D-Rail Underwater	\$	
8.2 D-Rail to Freeboard In/Out Profile	\$	
Total for Work Item #8 Paint		\$
9 Transducer Replacement		\$
10 Clad Welding on Shell Plate		\$
11 Install USCG approved type II marine sanitation device.		\$
12 Ultrasonic Hull Survey		\$
13 Crane Service		\$
14 Replace Port/Starboard Reduction Gear Seals		\$
15 Sonar Tube/Sonar Service		\$
16 Replace Main Engine Silencers		\$
17 Weld in angled into top of D-rail		\$
Subtotal		\$
Contingent Work Items		
18 Paint Overhead Decking/Walls Near Entrance		
19 Retrofit Navigation Light System		
20 Replace Wheelhouse Aft Deck Handrails		\$
21 Service tank vent float valves		\$
22 Drawings for bow thruster hydraulics		\$
		\$
		\$
Subtotal		\$

Bidder Name: _____ **Proposed Work Dates From:** / /2023 to / /2023

Ordering Address: _____

Contact _____

Phone _____

Email _____

Fax _____

Award will be made to the lowest responsive and responsible bidder based on the total of all Work Items and the inter-port differential (described in General Terms and Conditions).