

SOLICITATION / CONTRACT / ORDER FOR COMMERCIAL ITEMS
OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30

1. REQUISITION NUMBER
 PRSAR100282
 PAGE 1 OF 3

2. CONTRACT NO. 3. AWARD/EFFECTIVE DATE 04/09/2010 4. ORDER NUMBER DTMA2P10084 5. SOLICITATION NUMBER DTMA2Q10024 6. SOLICITATION ISSUE DATE 03/09/2010

7. FOR SOLICITATION INFORMATION CALL:
 a. NAME Eileen Williams b. TELEPHONE NUMBER (No collect calls) (757) 322-5824 ext. 8. OFFER DUE DATE/ LOCAL TIME 03/16/2010 4:00 pm

9. ISSUED BY DOT/Maritime Administration, Atlantic Division Acquisition
 Office of Acquisition, MRG-7200
 7737 Hampton Boulevard, Building 19, Suite 300
 Norfolk, VA 23505
 TEL: (757) 441-3245 ext.
 FAX: (757) 441-6080 ext.
 CODE 00092
 10. THIS ACQUISITION IS
 UNRESTRICTED OR SET ASIDE: 0.00% FOR:
 SMALL BUSINESS EMERGING SMALL BUSINESS
 HUBZONE SMALL BUSINESS 8(A)
 SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS
 NAICS:
 SIZE STANDARD:

11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED
 SEE SCHEDULE
 12. DISCOUNT TERMS
 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)
 13b. RATING
 14. METHOD OF SOLICITATION
 RFQ IFB RFP

15. DELIVER TO DOT/Maritime Administration, Atlantic Division Operations
 EMPIRE STATE, SUNY Maritime College, 6 Pennyfield Avenue
 Bronx, NY 10465
 Attn: Thomas Dowd
 CODE 7118
 16. ADMINISTERED BY DOT/Maritime Administration, Atlantic Division Acquisition
 Office of Acquisition, MRG-7200, 7737 Hampton Boulevard, Building 19, Suite 300
 Norfolk, VA 23505
 CODE 00092

17a. CONTRACTOR/OFFEROR ACM CONSTRUCTION AND MARINE GROUP LC
 240-A W 24TH ST
 NORFOLK, VA 23517-1304
 TELEPHONE NO.(757) 623-0000 ext.
 CODE * FACILITY CODE
 18a. PAYMENT WILL BE MADE BY DOT/ Enterprise Services Center (ESC) OFO/FAA, Oklahoma City
 MARAD A/P Branch, AMZ-150 PO Box 25710
 Oklahoma City, OK 73125
 CODE AMZ150

17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER
 18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED SEE ADDENDUM

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	(Use Reverse and/or Attach Additional Sheets as Necessary)				

25. ACCOUNTING AND APPROPRIATION DATA See Line Item Detail 26. TOTAL AWARD AMOUNT (For Govt. Use Only) \$ 15,800.00

27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4. FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA ARE ARE NOT ATTACHED
 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA ARE ARE NOT ATTACHED

28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _____ COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.
 29. AWARD OF CONTRACT: REF. _____ ACM Const revise quo _____ OFFER
 DATED 03/17/2010. YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS: 0001-0002

30a. SIGNATURE OF OFFEROR/CONTRACTOR
 31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)
Eileen M Williams
 30b. NAME AND TITLE OF SIGNER (Type or print) Eileen M. Williams 30c. DATE SIGNED 04/09/2010
 31b. NAME OF CONTRACTING OFFICER (Type or print) Eileen M. Williams 31c. DATE SIGNED 04/09/2010

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT

32a. QUANTITY IN COLUMN 21 HAS BEEN

RECEIVED INSPECTED ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: _____

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
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32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE
	32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE

33. SHIP NUMBER <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	37. CHECK NUMBER
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38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY
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41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT	42a. RECEIVED BY <i>(Print)</i>	
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER	41c. DATE	42b. RECEIVED AT <i>(Location)</i>
		42c. DATE REC'D <i>(YY/MM/DD)</i>
		42d. TOTAL CONTAINERS

Line Item Summary	Document Number DTMA2P10084	Title TSES Eng Rm Exhaust Fans O/H	Page 3 of 3
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Total Funding: \$15,800.00

FYs	Fund	Budget Org	Sub	Object Class	Sub	Program	Cost Org	Sub	Proj/Job No.	Sub	Reporting Category
See Line Item(s)											
Division	Closed FYs	Cancelled Fund									

Line Item Number	Description	Delivery Date (Start Date to End Date)	Quantity	Unit of Issue	Unit Price	Total Cost (Includes Discounts)
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Duns #18-749-2959

0001	Reconditioning of Port Engine Room Exhaust Fan	(04/12/2010 to 04/21/2010)	1.00	JOB	\$7,900.000	\$ 7,900.00
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Please see attached Statement of Work

Ref Req No: PRSAR100282

Funding Information:

2010 - - X1750 - SMR120 - SM - D107 - 0 - 0000 - 160000 - - - - -
25711 - 6100 - 6600 -
\$7,900.00

0002	Reconditioning of Starboard Engine Room Exhaust Fan	(04/12/2010 to 04/21/2010)	1.00	JOB	\$7,900.000	\$ 7,900.00
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Please se attached Statement of Work

Ref Req No: PRSAR100282

Funding Information:

2010 - - X1750 - SMR120 - SM - D107 - 0 - 0000 - 160000 - - - - -
25711 - 6100 - 6600 -
\$7,900.00

Total Cost: \$15,800.00

NOTE: In order for invoices to be processed for payment, it must include your Federal ID#, Purchase Order #, and Invoice #; without these numbers your invoice will be returned and payment will be delayed.

TOTAL COST: \$15,800.00

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COMMERCIAL CLAUSES

1 52.212-04 CONTRACT TERMS AND CONDITIONS--COMMERCIAL ITEMS MARCH
2009

(a) Inspection/Acceptance. The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. If repair/replacement or reperformance will not correct the defects or is not possible, the Government may seek an equitable price reduction or adequate consideration for acceptance of nonconforming supplies or services. The Government must exercise its post-acceptance rights—

- (1) within a reasonable time after the defect was discovered or should have been discovered; and
- (2) before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) Assignment. The Contractor or its assignee may assign its rights to receive payment due as a result of performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C. 3727). However, when a third party makes payment (e.g., use of the Governmentwide commercial purchase card), the Contractor may not assign its rights to receive payment under this contract.

(c) Changes. Changes in the terms and conditions of this contract may be made only by written agreement of the parties.

(d) Disputes. This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR 52.233-01, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.

(e) Definitions. The clause at FAR 52.202-01, Definitions, is incorporated herein by reference.

(f) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement or any excusable delay, setting for the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(g) Invoice. (1) The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized) to the address designated in the contract to receive invoices. An invoice must include-

- (i) Name and address of the Contractor;
- (ii) Invoice date and number;
- (iii) Contract number, contract line item number and, if applicable, the order number;
- (iv) Description, quantity, unit of measure, unit price and extended price of the items delivered;
- (v) Shipping number and date of shipment, including the bill of lading number and weight of shipment if shipped on Government bill of lading;
- (vi) Terms of any discount for prompt payment offered;
- (vii) Name and address of official to whom payment is to be sent;
- (viii) Name, title, and phone number of person to notify in event of defective invoice; and

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(ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision, contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer-Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer-Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(2) Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) prompt payment regulations at 5 CFR part 1315.

(h) Patent indemnity. The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.

(i) Payment.-(1) Items accepted. Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract.

(2) Prompt payment. The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and prompt payment regulations at 5 CFR part 1315.

(3) Electronic Funds Transfer (EFT). If the Government makes payment by EFT, see 52.212-5(b) for the appropriate EFT clause.

(4) Discount. In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

(5) Overpayments. If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall—

(i) Remit the overpayment amount to the payment office cited in the contract along with a description of the overpayment including the—

(A) Circumstances of the overpayment (e.g., duplicate payment, erroneous payment, liquidation errors, date(s) of overpayment);

(B) Affected contract number and delivery order number, if applicable;

(C) Affected contract line item or subline item, if applicable; and

(D) Contractor point of contact.

(ii) Provide a copy of the remittance and supporting documentation to the Contracting Officer.

(6) Interest. (i) All amounts that become payable by the Contractor to the Government under this contract shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 611 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in (i)(6)(v) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid.

(ii) The Government may issue a demand for payment to the Contractor upon finding a debt is due under the contract.

(iii) Final decisions. The Contracting Officer will issue a final decision as required by 33.211 if—

(A) The Contracting Officer and the Contractor are unable to reach agreement on the existence or amount of a debt within 30 days;

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(B) The Contractor fails to liquidate a debt previously demanded by the Contracting Officer within the timeline specified in the demand for payment unless the amounts were not repaid because the Contractor has requested an installment payment agreement; or

(C) The Contractor requests a deferment of collection on a debt previously demanded by the Contracting Officer (see 32.607-2).

(iv) If a demand for payment was previously issued for the debt, the demand for payment included in the final decision shall identify the same due date as the original demand for payment.

(v) Amounts shall be due at the earliest of the following dates:

(A) The date fixed under this contract.

(B) The date of the first written demand for payment, including any demand for payment resulting from a default termination.

(vi) The interest charge shall be computed for the actual number of calendar days involved beginning on the due date and ending on—

(A) The date on which the designated office receives payment from the Contractor;

(B) The date of issuance of a Government check to the Contractor from which an amount otherwise payable has been withheld as a credit against the contract debt; or

(C) The date on which an amount withheld and applied to the contract debt would otherwise have become payable to the Contractor.

(vii) The interest charge made under this clause may be reduced under the procedures prescribed in 32.608-2 of the Federal Acquisition Regulation in effect on the date of this contract.

(j) Risk of loss. Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.

(k) Taxes. The contract price includes all applicable Federal, State, and local taxes and duties.

(l) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

(m) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(n) Title. Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.

(o) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

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(p) Limitation of liability. Except as otherwise provided by an express warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.

(q) Other compliances. The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.

(r) Compliance with laws unique to Government contracts. The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C. 3701, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections; Section 1553 of the American Recovery and Reinvestment Act of 2009 relating to whistleblower protections for contracts funded under that Act; 49 U.S.C. 40118, Fly American; and 41 U.S.C. 423 relating to procurement integrity.

(s) Order of precedence. Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order:

- (1) The schedule of supplies/services.
- (2) The Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause.
- (3) The clause at 52.212-05.
- (4) Addenda to this solicitation or contract, including any license agreements for computer software.
- (5) Solicitation provisions if this is a solicitation.
- (6) Other paragraphs of this clause.
- (7) The Standard Form 1449.
- (8) Other documents, exhibits, and attachments.
- (9) The specification.

(t) Central Contractor Registration (CCR). (1) Unless exempted by an addendum to this contract, the Contractor is responsible during performance and through final payment of any contract for the accuracy and completeness of the data within the CCR database, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(2)(i) If a Contractor has legally changed its business name, "doing business as" name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in FAR Subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of Subpart 42.12; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (t)(2)(i) of this clause, or fails to perform the agreement at paragraph (t)(2)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(3) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the "Suspension of payment" paragraph of the EFT clause of this contract.

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(4) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at <http://www.ccr.gov> or by calling 1-888-227-2423 or 269-961-5757.

2 52.212-05 **CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS-- COMMERCIAL ITEMS** **FEBRUAR Y 2010**

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses, which are incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

- (1) 52.222-50, Combating Trafficking in Persons (FEB 2009) (22 U.S.C. 7104(g)).
 ___ Alternate I (AUG 2007) of 52.222-50 (22 U.S.C. 7104(g)).
- (2) 52.233-03, Protest After Award (AUG 1996) (31 U.S.C. 3553).
- (3) 52.233-04, Applicable Law for Breach of Contract Claim (OCT 2004) (Pub. L. 108-77, 108-78)

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

___ (1) 52.203-06, Restrictions on Subcontractor Sales to the Government (Sept 2006), with Alternate I (Oct 1995) (41 U.S.C. 253g and 10 U.S.C. 2402).

___ (2) 52.203-13, Contractor Code of Business Ethics and Conduct (DEC 2008) (Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)).

___ (3) 52.203-15, Whistleblower Protections Under the American Recovery and Reinvestment Act of 2009 (MAR 2009) (Section 1553 of Pub. L. 111-5). (Applies to contracts funded by the American Recovery and Reinvestment Act of 2009.)

___ (4) 52.204-11, American Recovery and Reinvestment Act—Reporting Requirements (MAR 2009) (Pub. L. 111-5).

___ (5) 52.219-03, Notice of Total HUBZone Small Business Set-Aside (Jan 1999) (15 U.S.C 657a).

___ (6) 52.219-04, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (JULY 2005) (if the offeror elects to waive the preference, it shall so indicate in its offer) (15 U.S.C 657a).

___ (7) [Reserved]

___ (8)(i) 52.219-06, Notice of Total Small Business Set-Aside (June 2003) (15 U.S.C. 644).

___ (ii) Alternate I (Oct 1995) of 52.219-6.

___ (iii) Alternate II (Mar 2004) of 52.219-6.

___ (9)(i) 52.219-07 Notice of Partial Small Business Set-Aside (June 2003) (15 U.S.C. 644).

___ (ii) Alternate I (Oct 1995) of 52.219-7.

___ (iii) Alternate II (Mar 2004) of 52.219-7.

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- ___ (10) 52.219-08, Utilization of Small Business Concerns (May 2004) (15 U.S.C. 637 (d)(2) and (3)).
- ___ (11(i) 52.219-09, Small Business Subcontracting Plan (APR 2008) (15 U.S.C. 637(d)(4)).
- ___ (ii) Alternate I (Oct 2001) of 52.219-9.
- ___ (iii) Alternate II (Oct 2001) of 52.219-9.
- ___ (12) 52.219-14, Limitations on Subcontracting (Dec 1996) (15 U.S.C. 637(a)(14)).
- ___ (13) 52.219-16, Liquidated Damages—Subcontracting Plan (JAN 1999) (15 U.S.C. 637(d)(4)(F)(i)).
- ___ (14)(i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (OCT 2008) (10 U.S.C. 2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).
- ___ (ii) Alternate I (June 2003) of 52.219-23.
- ___ (15) 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (APR 2008) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- ___ (16) 52.219-26, Small Disadvantaged Business Participation Program--Incentive Subcontracting (Oct 2000) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- ___ (17) 52.219-27, Notice of Total Service-Disabled Veteran-Owned Small Business Set-Aside (May 2004) (15 U.S.C. 657 f).
- ___ (18) 52.219-28, Post Award Small Business Program Rerepresentation (APR 2009) (15 U.S.C. 632(a)(2)).
- X___ (19) 52.222-03, Convict Labor (June 2003) (E.O. 11755).
- X___ (20) 52.222-19, Child Labor-Cooperation with Authorities and Remedies (AUG 2009) (E.O. 13126).
- X___ (21) 52.222-21, Prohibition of Segregated Facilities (Feb 1999).
- X___ (22) 52.222-26, Equal Opportunity (MAR 2007) (E.O. 11246).
- X___ (23) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (SEPT 2006) (38 U.S.C. 4212).
- X___ (24) 52.222-36, Affirmative Action for Workers with Disabilities (Jun 1998) (29 U.S.C. 793).
- X___ (25) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (SEPT 2006) (38 U.S.C. 4212).
- ___ (26) 52.222-54, Employment Eligibility Verification (JAN 2009). (Executive Order 12989). (Not applicable to the acquisition of commercially available off-the-shelf items or certain other types of commercial items as prescribed in 22.1803.)
- ___ (27)(i) 52.223-09, Estimate of Percentage of Recovered Material Content for EPA-Designated Items (MAY 2008) (42 U.S.C. 6962(c)(3)(A)(ii)).
- ___ (ii) Alternate I (MAY 2008) of 52.223-09 (42 U.S.C. 6962(i)(2)(C)).

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___ (28) 52.223-15, Energy Efficiency in Energy-Consuming Products (DEC 2007) (42 U.S.C. 8259b).

___(29)(i) 52.223-16, IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products (DEC 2007) (E.O. 13423).

___(ii) Alternate I (DEC 2007) of 52.223-16.

___ (30) 52.225-01, Buy American Act—Supplies (Feb 2009) (41 U.S.C. 10a-10d).

___ (31)(i)52.225-03, Buy American Act—Free Trade Agreements—Israeli Trade Act (JUNE 2009) (41 U.S.C. 10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note, 19 U.S.C. 3805 note, Pub. L. 108-77, 108-78, 108-286, 108-302, 109-53, 109-169, 109-283, and 110-138.

___ (ii) Alternate I (Jan 2004) of 52.225-3.

___ (iii) Alternate II (Jan 2004) of 52.225-3.

___ (32) 52.225-05, Trade Agreements (AUG 2009) (19 U.S.C. 2501, et seq., 19 U.S.C. 3301 note).

___(33) 52.225-13, Restrictions on Certain Foreign Purchases (JUNE 2008) (E.O's, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).

___ (34) 52.226-04, Notice of Disaster or Emergency Area Set-Aside (NOV 2007) (42 U.S.C. 5150).

___ (35) 52.226-05, Restrictions on Subcontracting Outside Disaster or Emergency Area (NOV 2007) (42 U.S.C. 5150).

___ (36) 52.232-29, Terms for Financing of Purchases of Commercial Items (Feb 2002) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).

___ (37) 52.232-30, Installment Payments for Commercial Items (Oct 1995) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).

X___ (38) 52.232-33, Payment by Electronic Funds Transfer-Central Contractor Registration (Oct 2003) (31 U.S.C. 3332).

___ (39) 52.232-34, Payment by Electronic Funds Transfer-Other than Central Contractor Registration (May 1999) (31 U.S.C. 3332).

___ (40) 52.232-36, Payment by Third Party (FEB 2010) (31 U.S.C. 3332).

___ (41) 52.239-01, Privacy or Security Safeguards (Aug 1996) (5 U.S.C. 552a).

___ (42)(i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) (46 U.S.C. Appx 1241(b) and 10 U.S.C. 2631).

___ (ii) Alternate I (Apr 2003) of 52.247-64.

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

X___ (1) 52.222-41, Service Contract Act of 1965 (NOV 2007) (41 U.S.C. 351, et seq.).

___ (2) 52.222-42, Statement of Equivalent Rates for Federal Hires (May 1989) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

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___ (3) 52.222-43, Fair Labor Standards Act and Service Contract Act--Price Adjustment (Multiple Year and Option Contracts) (SEP 2009) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

___ (4) 52.222-44, Fair Labor Standards Act and Service Contract Act--Price Adjustment (SEP 2009) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

___ (5) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment—Requirements (NOV 2007) (41 U.S.C. 351, et seq.).

___ (6) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services— Requirements (FEB 2009) (41 U.S.C. 351, et seq.).

___ (7) 52.226-06, Promoting Excess Food Donation to Nonprofit Organizations (MAR 2009) (Pub. L. 110-247).

___ (8) 52.237-11, Accepting and Dispensing of \$1 Coin (SEPT 2008) (31 U.S.C. 5112(p)(1)).

(d) Comptroller General Examination of Record. The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records--Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e)(1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c) and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in paragraphs (e)(1) in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause--

(i) 52.203-13, Contractor Code of Business Ethics and Conduct (DEC 2008) (Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)).

(ii) 52.219-08, Utilization of Small Business Concerns (May 2004) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$550,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(iii) [Reserved]

(iv) 52.222-26, Equal Opportunity (MAR 2007) (E.O. 11246).

(v) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (SEPT 2006) (38 U.S.C. 4212).

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(vi) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793).

(vii) [Reserved]

(viii) 52.222-41, Service Contract Act of 1965 (NOV 2007)(41 U.S.C. 351, et seq.).

(ix) 52.222-50, Combating Trafficking in Persons (FEB 2009) (22 U.S.C. 7104(g)).

___Alternate I (AUG 2007) of 52.222-50 (22 U.S.C. 7104(g)).

(x) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements (NOV 2007) (41 U.S.C. 351, et seq.).

(xi) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services-Requirements (FEB 2009) (41 U.S.C. 351, et seq.).

(xii) 52.222-54, Employment Eligibility Verification (JAN 2009)

(xiii) 52.226-06, Promoting Excess Food Donation to Nonprofit Organizations (MAR 2009) (Pub. L. 110-247). Flow down required in accordance with paragraph (e) of FAR clause 52.226-06.

(xiv) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631). Flow down required in accordance with paragraph (d) of FAR clause 52.247-64.

(2) While not required, the contractor may include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(End of Clause)

3 CONTRACTOR POLICY TO BAN TEXT MESSAGING WHILE DRIVING

CONTRACTOR POLICY TO BAN TEXT MESSAGING WHILE DRIVING

a) Definitions. The following definitions are intended to be consistent with the definitions in DOT Order 3902.10 and the E.O. For clarification purposes, they may expand upon the definitions in the E.O.

"Driving"-

(1) Means operating a motor vehicle on a roadway, including while temporarily stationary because of traffic, a traffic light, stop sign, or otherwise.

(2) It does not include being in your vehicle (with or without the motor running) in a location off the roadway where it is safe and legal to remain stationary.

"Text messaging" means reading from or entering data into any handheld or other electronic device, including for the purpose of short message service texting, e-mailing, instant messaging, obtaining navigational information, or engaging in any other form of electronic data retrieval or electronic data communication. (See definition in DOT Order 3902.10)

(b) In accordance with Executive Order 13513, Federal Leadership on Reducing Text Messaging While Driving, October 1, 2009, and DOT Order 3902.10, Text Messaging While Driving, December 30, 2009, contractors and subcontractors are encouraged to:

(1) Adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers including policies to ban text messaging while driving--

(i) Company-owned or -rented vehicles or Government-owned, leased or rented vehicles; or

(ii) Privately-owned vehicles when on official Government business or when performing any work for or on behalf of the Government.

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- (2) Conduct workplace safety initiatives in a manner commensurate with the size of the business, such as-
- (i) Establishment of new rules and programs or re-evaluation of existing programs to prohibit text messaging while driving; and
 - (ii) Education, awareness, and other outreach to employees about the safety risks associated with texting while driving.
- (c) Subcontracts. The Contractor shall insert the substance of this clause, including this paragraph (c), in all subcontracts that exceed the micro-purchase threshold, other than subcontracts for the acquisition of commercially available off-the-shelf items.

4 CONTRACTING OFFICER TECHNICAL REPRESENTATIVE

MR. LOUIS MARTUCCI is hereby appointed as Contracting Officer Technical Representative, at (757) 286-4837; email: louis.martucci@dot.gov. Contractor shall follow technical guidance within the contract and any technical questions shall be directed to Mr. Martucci while on the ship.

All contractual issues shall be directed to Ms. Eileen Williams, Contracting Officer, 757-322-5824; email: eileen.williams@dot.gov with a copy provided to the COTR.

5 INVOICE INSTRUCTIONS MARAD

The Contractor may submit invoices in either electronic or paper format. Electronic submission is preferred.

- (1) Electronic invoices shall be addressed to MARADInvoices@faa.gov, with copy to MARADSARInvoices@dot.gov

Electronic invoices shall conform to the following criteria, or be subject to rejection:

- a. Invoice and supporting documentation shall be in Adobe Acrobat (pdf) format.
- b. The e-mail subject shall include the contract/purchase order number and invoice number.
- c. The transmitting e-mail shall include the following information: Name of the Contractor; Invoice date and number; Invoice amount; Contract number and, if applicable, the order or modification number; Terms of any discount for prompt payment offered; Payment instructions (i.e., financial institution, ABA routing #, account #)

- (2) Paper invoices shall be submitted to one of the following addresses. Multiple copies are not required.

MARAD A/P SAR Invoices Branch
AMZ-150
PO Box 25710
Oklahoma City, OK 73125

If a street address is required for delivery (i.e., Federal Express), the following address may be used in lieu of the post office box:

MARAD A/P SAR Invoices Branch
AMZ-150
6500 S MacArthur Blvd.
Oklahoma City, OK 73169

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6 DOL WAGE DETERMINATION

Department of Labor Service Contract Act (SCA) Wage Determination is applicable to the performance for these services: WD#2376 (REV 8) DTD 07/29/2009, was first posted on www.dol.gov on 08/04/2009.

Each service employee employed in the performance of this contract by the Contractor or any subcontractor shall be paid not less than the minimum monetary wages and shall be furnished fringe benefits in accordance with the wages and fringe benefits determined by the Secretary of Labor, or authorized representative, as specified in any wage determination attached to this contract.

The wage determination may be viewed online Ser
<http://www.wdol.gov/wdol/scafiles/std/05-2376.txt>

7 STATEMENT OF WORK (SOW)

TS EMPIRE STATE

CONTRACT DTMA2P10084

PORT and STBD ENGINE ROOM EXHAUST FAN
RECONDITIONING

1.ABSTRACT:

The intent of this item is to accomplish a complete overhaul of the Port and Stbd Engine Room Exhaust Fan to the satisfaction of the attending MARAD Surveyor.

2.REFERENCES:

2.1 NAMEPLATE DATA:

Peerless Electric Co.
440 Volt, 17.5hp, 24/12 Amp, 1150/575 rpm
60Hz, Class B Insulation, 3 Phase
Frame Size: PS326UV
Peerless Dwg #C-10755

2.2 Quantity: Two (2) vane axial fan assembly

2.3 Technical Manual NO. 30, available onboard

3.LOCATION:

3.1 Vessel Location: SUNY Maritime College, #6 Pennyfield Ave, Bronx, NY

4.OWNER FURNISHED EQUIPMENT/MATERIAL/SERVICES:

4.1 Service air and/or electrical power (120VAC) if arranged with C/E 24 hours in advance.

5.0 Statement of Work.

5.1 The Contractor will supply all labor, materials, parts and services required to perform the following repairs unless otherwise stated in this statement of

work.

5.2 The contractor will comply with all requirements of equipment tag out program as established by the C/E and Vessel's SOP's. The Chief Engineer will administer the program. Prior to the start of work, the contractor shall contact the MARAD Surveyor and/or the Chief Engineer to coordinate the implementation of the Tag Out Program for the entire performance period of this item. The prime contractor shall be responsible for compliance by both prime and subcontractor personnel.

5.3 The Contractor will remove interference items as required and tag showing system, location, and name of the ship. Disconnect the motor electrically and mechanically. Remove motor and fan assembly and Transport to Contractor's shop.

5.4 The Contractor will perform the following electrical tests and record results;

5.4.1 Voltage Surge Comparison in accordance with the manufacturers instructions for the tester and the following.

Test voltage to be applied shall be 1.4 times voltage computed in the following table.

E = Operating voltage of equipment under test

	Armature Circuit	Field Circuits	
Motors rated above 250v	2E + 1000	10E but not more than 3500v nor	
	less more than 1500v		
Motors rated not More than 250v or 0.5 hp except those listed below	900	900	
Bracket fan motors	600		
Motors rated not more than 35v	500	500	

5.4.2 Direct Current Hi-Pot Test

Et = Maximum voltage to be applied

E = Operating voltage of equipment under test

Et = 1.6(2E + 1000)

5.4.3 Locked-Rotor Test.

5.5 The Contractor will completely disassemble the motor and fan, thoroughly clean and examine all parts.

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Protect machined surfaces. Inspect and test the armature for defective bars.

5.5.1 Inspect and dimensionally measure end bells, frame, shaft, sleeve, bearings, keyways, and running surfaces for wear, eccentricity, and other defects. Record as found readings.

5.5.2 If further repairs are found to be necessary submit condition report and consult with the MARAD Surveyor for instructions before proceeding. Additional repairs deemed necessary by the Surveyor shall be the subject of a Delivery Order.

5.5.3 The windings and rotor are to be baked to remove all moisture

5.5.4 The windings shall then be impregnated and with Class F insulating varnish and baked IAW latest IEEE STD 45 regulations.

5.5.5 All surfaces of the fan and fan housing and motor frame exterior shall be grit blasted to bare metal. Apply one (1) coat primer and one (1) finish coat to match surrounding areas for units located within the interior of the ship. Units exposed to weather deck areas shall receive two coats of primer and one finish coat. All coatings will be provided by the vessel.

5.5.6 Dynamically balance the rotor and the fan as a unit. Final balance weight adjustments shall be made to the fan. The Surveyor and C/E shall witness final balancing. Contractor will provide Surveyor with balancing report. Final unbalance shall not exceed the manufacturer's specifications for a new unit or, in the absence of this, value determined by:

5.5.6.1 For speeds in excess of 1000 RPM;
4 x weight of rotor and fan (lbs.)
Unbalance (oz ins)= Max. operating RPM of unit

5.5.6.2 For speeds between 150 and 1000 RPM:

4000 x weight of rotor and fan (lbs.)
Unbalance (oz ins)= (Max. operating RPM of Unit squared)

5.5.6.3 For speed below 150 RPM:

Unbalance (ounce inches) = 0.177 x wt of rotor & fan (lbs.)

5.5.7 Dress all bearing housings to accept new bearings.

5.5.8 Install new bearings and grease seals as original and lubricate. Renew internal leads and connections as required. Completely reassemble the motor. Renew assembly hardware and gaskets on covers, inspection plates, and between the external connection box and frame.

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5.5.9 Perform the following shop test and prove all work satisfactory to the MARAD Surveyor:

5.5.9.1 Perform a 500 volt megger insulation and continuity test on all windings. Record results. Measure and record air gaps. Inspect shaft for freedom of rotation. Turn by hand at least three turns. Measure resistance value of each winding temperature detector using a low voltage ohmmeter. Test equipment at operating speed(s) for a minimum of 15 minutes. Measure and record voltage and current.

5.5.9.2 Repeat electrical tests 5.4.1, 5.4.2 and 5.4.3 above. Record results.

5.5.10 Upon completion of all repairs, inspection and approval by the Surveyor and/or C/E, return assembly to the ship, reinstall, connect, and align in accordance with equipment instruction manual. Test under actual operating conditions for minimum of one hour after temperatures stabilize. Record current, voltage, speed and frame and bearing temperature rise at 15 minute intervals. Prove all work satisfactory to the Surveyor and C/E.

5.5.11 Submit "as released" report including test results to the Surveyor.

5.5.12 All interferences shall be reinstalled as original.

5.5.13 Clean, prime and paint all new and disturbed areas to match the surroundings. Vessel to supply primer and paint.

5.5.14 Specific motors to be dealt with, equipment instruction manual(s) and drawing(s) shall be available to Contractor but not to be removed from vessel.

TS EMPIRE STATE

**PORT and STBD ENGINE ROOM EXHAUST FAN
RECONDITIONING**

1. ABSTRACT:

The intent of this item is to accomplish a complete overhaul of the Port and Stbd Engine Room Exhaust Fan to the satisfaction of the attending MARAD Surveyor.

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60Hz, Class B Insulation, 3 Phase
Frame Size: PS326UV
Peerless Dwg #C-10755

2.2 Quantity: Two (2) vane axial fan assembly

2.3 Technical Manual NO. 30, available onboard

3. LOCATION:

3.1 Vessel Location: SUNY Maritime College, #6 Pennyfield Ave, Bronx, NY

4. OWNER FURNISHED EQUIPMENT/MATERIAL/SERVICES:

4.1 Service air and/or electrical power (120VAC) if arranged with C/E 24 hours in advance.

5.0 Statement of Work.

5.1 The Contractor will supply all labor, materials, parts and services required to perform the following repairs unless otherwise stated in this statement of work.

5.2 The contractor will comply with all requirements of equipment tag out program as established by the C/E and Vessel's SOP's. The Chief Engineer will administer the program. Prior to the start of work, the contractor shall contact the MARAD Surveyor and/or the Chief Engineer to coordinate the implementation of the Tag Out Program for the entire performance period of this item. The prime contractor shall be responsible for compliance by both prime and subcontractor personnel.

5.3 The Contractor will remove interference items as

required and tag showing system, location, and name of the ship. Disconnect the motor electrically and mechanically. Remove motor and fan assembly and Transport to Contractor's shop.

5.4 The Contractor will perform the following electrical tests and record results;

5.4.1 Voltage Surge Comparison in accordance with the manufacturers instructions for the tester and the following.

Test voltage to be applied shall be 1.4 times voltage computed in the following table.

E = Operating voltage of equipment under test

	Armature Circuit	Field Circuits
Motors rated above 250v	$2E + 1000$	10E but not more than 3500v nor less more than 1500v
Motors rated not More than 250v or 0.5 hp except those listed below	900	900
Bracket fan motors	600	
Motors rated not more than 35v	500	500

5.4.2 Direct Current Hi-Pot Test

Et = Maximum voltage to be applied

E = Operating voltage of equipment under test

Et = $1.6(2E + 1000)$

5.4.3 Locked-Rotor Test.

5.5 The Contractor will completely disassemble the motor and fan, thoroughly clean and examine all parts. Protect machined surfaces. Inspect and test the armature for defective bars.

5.5.1 Inspect and dimensionally measure end bells, frame, shaft, sleeve, bearings, keyways, and running surfaces for wear, eccentricity, and other defects. Record as found readings.

5.5.2 If further repairs are found to be necessary submit

condition report and consult with the MARAD Surveyor for instructions before proceeding. Additional repairs deemed necessary by the Surveyor shall be the subject of a Delivery Order.

5.5.3 The windings and rotor are to be baked to remove all moisture

5.5.4 The windings shall then be impregnated and with Class F insulating varnish and baked IAW latest IEEE STD 45 regulations.

5.5.5 All surfaces of the fan and fan housing and motor frame exterior shall be grit blasted to bare metal. Apply one (1) coat primer and one (1) finish coat to match surrounding areas for units located within the interior of the ship. Units exposed to weather deck areas shall receive two coats of primer and one finish coat. All coatings will be provided by the vessel.

5.5.6 Dynamically balance the rotor and the fan as a unit. Final balance weight adjustments shall be made to the fan. The Surveyor and C/E shall witness final balancing. Contractor will provide Surveyor with balancing report. Final unbalance shall not exceed the manufacturer's specifications for a new unit or, in the absence of this, value determined by:

5.5.6.1 For speeds in excess of 1000 RPM;

$$\text{Unbalance (oz ins)} = \frac{4 \times \text{weight of rotor and fan (lbs.)}}{\text{Max. operating RPM of unit}}$$

5.5.6.2 For speeds between 150 and 1000 RPM:

$$\text{Unbalance (oz ins)} = \frac{4000 \times \text{weight of rotor and fan (lbs.)}}{(\text{Max. operating RPM of Unit squared})}$$

5.5.6.3 For speed below 150 RPM:

$$\text{Unbalance (ounce inches)} = 0.177 \times \text{wt of rotor \& fan (lbs.)}$$

5.5.7 Dress all bearing housings to accept new bearings.

5.5.8 Install new bearings and grease seals as original and lubricate. Renew internal leads and connections as required. Completely reassemble the motor. Renew assembly hardware and gaskets on covers, inspection plates, and between the external connection box and frame.

5.5.9 Perform the following shop test and prove all work satisfactory to the MARAD Surveyor:

- 5.5.9.1 Perform a 500 volt megger insulation and continuity test on all windings. Record results. Measure and record air gaps. Inspect shaft for freedom of rotation. Turn by hand at least three turns. Measure resistance value of each winding temperature detector using a low voltage ohmmeter. Test equipment at operating speed(s) for a minimum of 15 minutes. Measure and record voltage and current.
- 5.5.9.2 Repeat electrical tests 5.4.1, 5.4.2 and 5.4.3 above. Record results.
- 5.5.10 Upon completion of all repairs, inspection and approval by the Surveyor and/or C/E, return assembly to the ship, reinstall, connect, and align in accordance with equipment instruction manual. Test under actual operating conditions for minimum of one hour after temperatures stabilize. Record current, voltage, speed and frame and bearing temperature rise at 15 minute intervals. Prove all work satisfactory to the Surveyor and C/E.
- 5.5.11 Submit "as released" report including test results to the Surveyor.
- 5.5.12 All interferences shall be reinstalled as original.
- 5.5.13 Clean, prime and paint all new and disturbed areas to match the surroundings. Vessel to supply primer and paint.
- 5.5.14 Specific motors to be dealt with, equipment instruction manual(s) and drawing(s) shall be available to Contractor but not to be removed from vessel.