

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30				1. REQUISITION NUMBER 91110 40929399		PAGE 1 OF 27	
2. CONTRACT NO.		3. AWARD/EFFECTIVE DATE		4. ORDER NUMBER		5. SOLICITATION NUMBER N65540-04-Q-0281	
7. FOR SOLICITATION INFORMATION CALL:		a. NAME STACEY THOMPSON		b. TELEPHONE NUMBER (No Collect Calls) 215-897-7160 215-897-7059 (FAX)		6. SOLICITATION ISSUE DATE 04-JUN-16 8. OFFER DUE DATE/LOCAL TIME 0400 04-JUL-06/ PM	
9. ISSUED BY CONTRACTING OFFICER NSWC CARDEROCK DIVISION 5001 S. BROAD STREET PHILADELPHIA PA 19112-1403 ATTN: STACEY THOMPSON 215-897-7160		CODE N65540		10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED <input type="checkbox"/> SET ASIDE: % FOR <input type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> SMALL DISADV. BUSINESS <input type="checkbox"/> 8(A) SIC: SIZE STANDARD:		11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input type="checkbox"/> SEE SCHEDULE 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) <input type="checkbox"/> 13b. RATING 14. METHOD OF SOLICITATION <input type="checkbox"/> RFQ <input type="checkbox"/> IFB <input type="checkbox"/> RFP	
15. DELIVER TO RECEIVING OFFICER, FISC, NSWC CARDEROCK DIVISION 1601 LANGLEY AVENUE PHILA. PA 19112-5051 ATTN: NAVAL BUSINESS CENTER		CODE N65540		16. ADMINISTERED BY CODE N65540			
17a. CONTRACTOR/OFFEROR CODE FACILITY CODE TELEPHONE NO.		18a. PAYMENT WILL BE MADE BY CODE		17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER <input type="checkbox"/>		18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED <input checked="" type="checkbox"/> SEE ADDENDUM	
19. ITEM NO. 0001		20. SCHEDULE OF SUPPLIES/SERVICES REQN. NO. 91110 /40929399 ITEM NAME: PROPULSION MOTOR FLEXIBLE COUPLING LOW SPEED FLEXIBLE ELEMENT COUPLING AS SPECIFIED HEREIN (Attach Additional Sheets as Necessary)		21. QUANTITY 1		22. UNIT EA	
				23. UNIT PRICE		24. AMOUNT	
25. ACCOUNTING AND APPROPRIATION DATA						26. TOTAL AWARD AMOUNT (For Govt. Use Only) <input checked="" type="checkbox"/>	
27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3, AND 52.212-5 ARE ATTACHED. ADDENDA <input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.		27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4, FAR 52.212-5 IS ATTACHED. ADDENDA <input type="checkbox"/> ARE <input type="checkbox"/> 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. <input type="checkbox"/>		29. AWARD OF CONTRACT: REFERENCE OFFER DATED _____ . YOUR OFFER ON SOLICITATION (BLOCK 5). INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS: <input type="checkbox"/>	
30a. SIGNATURE OF OFFEROR/CONTRACTOR				31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)			
30b. NAME AND TITLE OF SIGNER (TYPE OR PRINT)		30c. DATE SIGNED		31b. NAME OF CONTRACTING OFFICER (TYPE OR PRINT)		31c. DATE SIGNED	
32a. QUANTITY IN COLUMN 21 HAS BEEN <input type="checkbox"/> RECEIVED <input type="checkbox"/> INSPECTED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED				33. SHIP NUMBER <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		34. VOUCHER NUMBER	
32b. SIGNATURE OF AUTHORIZED GOVT. REPRESENTATIVE		32c. DATE		36. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		35. AMOUNT VERIFIED CORRECT FOR	
41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT				38. S/R ACCOUNT NUMBER		39. S/R VOUCHER NUMBER	
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER		41c. DATE		42a. RECEIVED BY (Print)		37. CHECK NUMBER	
				42b. RECEIVED AT (Location)		40. PAID BY	
				42c. DATE REC'D (YY/MM/DD)		42d. TOTAL CONTAINERS	

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SECTION B SUPPLIES/SERVICES

ITEM	SUPPLIES/SERVICES	QUANTITY	U-PRICE	AMOUNT
0002	REQN. NO. 91110 /41608695 ITEM NAME: DRIVE END FLANGE ADAPTER. THE ADAPTER SHALL INTERFACE WITH THE GOVERNMENT FURNISHED PROPULSION MOTOR AT ITS DRIVING END. IT SHALL BE PROVIDED WITH UNDERSIZED BOLT HOLES (2.75" DIAMETER) AT ITS PROPULSION MOTOR INTERFACE. THE HOLES WILL BE TAPER REAMED (1/8" ON DIA METER PER INCH OF BOLT HOLE LENGTH; WITH THE BOLT HEAD, LARGE END, LOCATED AT THE FLANGE ADAPTER) TO 2.906" AT THE INTERFACE PLANE WITH THE PRO PULSION MOTOR SHAFT FLANGE BY THE GOVERNMENT AT FINAL ASSEMBLY IN THE FIELD. THE ADAPTER SHALL BE PROVIDED WITH A MALE SPIGOT THAT IS SIGOT THAT IS CONCENTRIC WITH ITS AXIS OF ROTATION AND WILL IFT INSIDE A RABBET AT THE MATING FLANGE INTERFACE	1	EA	
0003	REQN. NO. 91110 /41608701 ITEM NAME: DRIVEN END FLANGE ADAPTER. THE ADAPTER SHALL INTERFACE WITH THE GOVERNMENT FURNISHED DYNAMOMETER AT ITS DRIVEN END. IT SHALL BE PROVIDED WITH UNDERSIZED BOLT HOLES (3.375") AT ITS DYNAMO- METER INTERFACE. THE HOLES WILL BE TAPER REAMED (1/8" ON DIAMETER PER INCH OF BOLT HOLE LENGHT; WITH THE BOLT HEAD, LARGE END, LOCATED AT T HE FLANGE ADAPTER) TO 3.500" AT THE INTERFACE PLANE WITH THE DYNAMOMETER SHAFT FLANGE BY THE GOVERNMENT AT FINAL ASSEMBLY IN THE FIELD. THE ADAPTER SHALL BE PROVIDED WITH A MALE SPIGOT THAT IS CONCENTRIC WITH ITS AXIS OF ROTATION AND WILL FIT INSIDE A RABBET AT THE MATING FLANGE INTERFACE.	1	EA	
0004	REQN. NO. 91110 /41608706 ITEM NAME: FLANGE SPACERS, 0.125" THICK, PEELABLE SHIM. ONE SPACER IS TO BE INCORPORATED INTO THE ORIGINAL COUPLING ASSEMBLY. THE THE SECOND	2	EA	

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SECTION B SUPPLIES/SERVICES

ITEM	SUPPLIES/SERVICES	QUANTITY	UI	U-PRICE	AMOUNT
	SPACER MAY BE USED AS REQUIRED. SEE SKETCH SK050-0 1 ATTACHED FOR THE AXIAL LOCATIONS OF THE INSTALLED AND SECOND FLANGE SPACERS. THE BOLT HOLES IN THE FLANGE SPACERS SHALL LOCATE THEM RADIALLY IN THE COUPLING ASSEMBLY.				
0005	REQN. NO. 91110 /41608710 ITEM NAME: REPLACEMENT SHEAR PINS (OR REPLACEMENT COUPLING SHEAR SECTION).	1	EA		
0006	REQN. NO. 91110 /41608713 ITEM NAME: BEARING TO MAINTAIN ALIGNMENT OF DISCONNECTED COUPLING PARTS DURING COASTDOWN FOLLOWING FAILURE OF THE SHEAR PINS OR SHEAR SECTION	1	EA		
0007	REQN. NO. 91110 /41608715 ITEM NAME: FASTENERS FOR ALL BOLTED INTERFACES, EXCLUDING THE FASTENERS AT THE FLANGE ADAPTER SURFACES THAT INTERFACE WITH THE GOVERNMENT FURNISHED EQUIPMENT, WHICH WILL BE FURNISHED BY THE GOVERNMENT. THE CONTRACTOR SHALL ALSO PROVIDE TWO SPARE NUTS AND BOLTS FOR EACH FLANGE CONNECTION	1	LT		
0008	REQN. NO. 91110 /41608717 ITEM NAME: THE CONTRACTOR SHALL FURNISH COUPONS (METALLURGICAL TEST SAMPLES) FROM THE TORQUE METER SPACER TUBE (PART OF THE SPACER PIECE - MEASUREMENT SECTION, COMPONENT 1 ON SKETCH NO. SK050- 01) TESTED TO DETERMINE THE SHEAR MODULUS AND POISSON'S RATIO OF THE SPACER TUBE MATERIAL IN ACCORDANCE WITH PARAGRAPHS 3.2.3 AND 3.2.4, RESPECTIVELY. THE CONTRACTOR SHALL FURNISH AN UNCERTAINTY ANALYSIS FOR THE SHER MODULUS AND POISSON'S RATIO FOR THE SPACEER TUBE MATERIAL AS DESCRIBED IN SECTION 5 OF THIS	3	EA		

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SECTION B SUPPLIES/SERVICES

ITEM	SUPPLIES/SERVICES	QUANTITY	U-PRICE	AMOUNT
0009	SPECIFICATION IN ACCORDANCE WITH PARAGRAPH 3.2.6. THE CONTRACTOR SHALL ALSO SUPPLY THREE COUPONS TO THE GOVERNMENT SUITABLE FOR INDEPENDENT TESTING OF SHEAR MODULUS AND POISSON'S RATIO BY THE GOVERNMENT IN ACCORDANCE WITH PARAGRAPHS 3.2.3 AND 3.2.4 REQN. NO. 91110 /41608720 ITEM NAME: TECHNICAL DATA (SECTION 5)	1		LT

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SECTION F TIME OF DELIVERY

DELIVERIES SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS

ITEM	QUANTITY	DELIVERY REQUIRED
0001	1 EA	90 DAYS AFTER DATE OF ORDER
0002	1 EA	↓
0003	1 EA	
0004	2 EA	
0005	1 EA	
0006	1 EA	
0007	1 LT	
0008	3 EA	
0009	1 LT	

52.212-4 CONTRACT TERMS AND CONDITIONS--COMMERCIAL ITEMS (OCT 2003)

(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. 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 52.233-1, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising

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under the contract.

(e) Definitions. The clause at FAR 52.202-1, 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 of any excusable delay, setting forth 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
- (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.

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(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 immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(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

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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.

(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. 327, 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; 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 52.212-5.
- (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 require-

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ments 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.

(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.

52.212-5 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS--COMMERCIAL ITEMS (MAY 2004)

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clause, which is incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items: 52.233-3, Protest after Award (AUG 1996) (31 U.S.C. 3553).

(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: [Contracting Officer check as appropriate.]

- ___ (1) 52.203-6, Restrictions on Subcontractor Sales to the Government (JUL 1995), with Alternate I (OCT 1995) (41 U.S.C. 253g and 10 U.S.C. 2402).
- ___ (2) 52.219-3, Notice of Total HUBZone Set-Aside (JAN 1999) (15 U.S.C. 657a).
- ___ (3) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (JAN 1999) (if the offeror elects to waive the preference, it shall so indicate in its offer) (15 U.S.C. 657a).
- ___ (4) (i) 52.219-5, Very Small Business Set-Aside (JUNE 2003) (Pub. L. 103-403, section 304, Small Business Reauthorization and Amendments Act of 1994).
 ___ (ii) Alternate I (MAR 1999) of 52.219-5.
 ___ (iii) Alternate II (JUNE 2003) of 52.219-5.
- ___ (5) (i) 52.219-6, 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.
- ___ (6) (i) 52.219-7, 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.
- ___ (7) 52.219-8, Utilization of Small Business Concerns (MAY 2004) (15 U.S.C. 637 (d)(2) and (3)).
- ___ (8) (i) 52.219-9, Small Business Subcontracting Plan (JAN 2002) (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.

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- ___ (9) 52.219-14, Limitations on Subcontracting (DEC 1996)
(15 U.S.C. 637(a)(14)).
- ___ (10) (i) 52.219-23, Notice of Price Evaluation Adjustment
for Small Disadvantaged Business Concerns (JUNE 2003)
(Pub. L. 103-355, section 7102, and 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.
- ___ (11) 52.219-25, Small Disadvantaged Business Participation
Program--Disadvantaged Status and Reporting (OCT 1999)
(Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- ___ (12) 52.219-26, Small Disadvantaged Business Participation
Program--Incentive Subcontracting (OCT 2000) (Pub. L.
103-355, section 7102, and 10 U.S.C. 2323).
- ___ (13) 52.219-27, Notice of Total Service-Disabled Veteran-
Owned Small Business Set-Aside (MAY 2004)
- ___ (14) 52.222-3, Convict Labor (JUNE 2003) (E.O. 11755).
- ___ (15) 52.222-19, Child Labor--Cooperation with Authorities
and Remedies (JAN 2004) (E.O. 13126).
- ___ (16) 52.222-21, Prohibition of Segregated Facilities
(FEB 1999).
- ___ (17) 52.222-26, Equal Opportunity (APR 2002) (E.O. 11246).
- ___ (18) 52.222-35, Equal Opportunity for Special Disabled
Veterans, Veterans of the Vietnam Era, and Other
Eligible Veterans (DEC 2001) (38 U.S.C. 4212).
- ___ (19) 52.222-36, Affirmative Action for Workers with
Disabilities (JUN 1998) (29 U.S.C. 793).
- ___ (20) 52.222-37, Employment Reports on Special Disabled
Veterans, Veterans of the Vietnam Era, and Other
Eligible Veterans (DEC 2001) (38 U.S.C. 4212).
- ___ (21) (i) 52.223-9, Estimate of Percentage of Recovered
Material Content for EPA-Designated Products
(AUG 2000) (42 U.S.C. 6962(c)(3)(A)(ii)).
(ii) Alternate I (AUG 2000) of 52.223-9 (42 U.S.C.
6962(i)(2)(C)).
- ___ (22) 52.225-1, Buy American Act--Supplies (JUNE 2003)
(41 U.S.C. 10a-10d).
- ___ (23) (i) 52.225-3, Buy American Act--Free Trade
Agreements--Israeli Trade Act (JAN 2004) (41 U.S.C.
10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note),
Pub. L. 108-77, 108-78).
(ii) Alternate I (JAN 2004) of 52.225-3.
(iii) Alternate II (JAN 2004) of 52.225-3.
- ___ (24) 52.225-5, Trade Agreements (JAN 2004) (19 U.S.C.
2501, et seq., 19 U.S.C. 3301 note).
- ___ (25) 52.225-13, Restrictions on Certain Foreign Purchases
(DEC 2003) (E.o.s, proclamations, and statutes
administered by the Office of Foreign Assets Control
of the Department of the Treasury).
- ___ (26) 52.225-15, Sanctioned European Union Country End
Products (FEB 2000) (E.O. 12849).
- ___ (27) 52.225-16, Sanctioned European Union Country Services
(FEB 2000) (E.O. 12849).
- ___ (28) 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)).
- ___ (29) 52.232-30, Installment Payments for Commercial Items
(OCT 1995) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).
- ___ (30) 52.232-33, Payment by Electronic Funds Transfer--
Central Contractor Registration (OCT 2003) (31 U.S.C.
3332).
- ___ (31) 52.232-34, Payment by Electronic Funds Transfer--Other
than Central Contractor Registration (MAY 1999)

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(31 U.S.C. 3332).

___ (32) 52.232-36, Payment by Third Party (MAY 1999) (31 U.S.C. 3332).

___ (33) 52.239-1, Privacy or Security Safeguards (AUG 1996) (5 U.S.C. 552a).

___ (34) (i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (APR 2003) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631).

(ii) Alternate I (APR 1984) 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:

[Contracting Officer check as appropriate.]

___ (1) 52.222-41, Service Contract Act of 1965, as Amended (MAY 1989) (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.).

___ (3) 52.222-43, Fair Labor Standards Act and Service Contract Act--Price Adjustment (Multiple Year and Option Contracts) (MAY 1989) (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 (February 2002) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

___ (5) 52.222-47, SCA Minimum Wages and Fringe Benefits Applicable to Successor Contract Pursuant to Predecessor Contractor Collective Bargaining Agreements (CBA) (May 1989) (41 U.S.C. 351, et seq.).

(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

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is not required to flow down any FAR clause, other than those in paragraphs (i) through (vi) of this paragraph in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause--

(i) 52.219-8, 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 \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (April 2002) (E.O. 11246).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (December 2001) (38 U.S.C. 4212).

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

(v) 52.222-41, Service Contract Act of 1965, as Amended (May 1989), flow down required for all subcontracts subject to the Service Contract Act of 1965 (41 U.S.C. 351, et seq.).

(vi) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (April 2003) (46 U.S.C. Appx 1241 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.

252.212-7001 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS APPLICABLE TO DEFENSE ACQUISITIONS OF COMMERCIAL ITEMS (MAY 2004)

(a) The contractor agrees to comply with the following Federal Acquisition Regulation (FAR) clause which, if checked, is included in this contract by reference to implement a provision of law applicable to acquisitions of commercial items or components.

___ 52.203-3 Gratuities (APR 1984) (10 U.S.C. 2207)

(b) The Contractor agrees to comply with any clause that is checked on the following list of Defense FAR Supplement clauses which, if checked, is included in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items or components.

___ 252.205-7000 Provision of Information to Cooperative Agreement Holders (DEC 1991) (10 U.S.C. 2416).

___ 252.219-7003 Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (DoD Contracts) (APR 1996) (15 U.S.C. 637).

___ 252.219-7004 Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (Test Program) (JUN 1997) (15 U.S.C. 637 Note).

___ 252.225-7001 Buy American Act and Balance of Payments Program (APR 2003) (41 U.S.C. 10a-10d, E.O. 10582).

___ 252.225-7012 Preference for Certain Domestic Commodities (MAY 2004) (10 U.S.C. 2533a).

___ 252.225-7014 Preference for Domestic Specialty Metals (APR 2003) (10 U.S.C. 2533a).

___ 252.225-7015 Restriction on Acquisition of Hand or Measuring Tools (APR 2003) (10 U.S.C. 2533a).

___ 252.225-7016 Restriction on Acquisition of Ball and Roller Bearings (MAY 2004) (___ Alternate I) (APR 2003)

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- (10 U.S.C. 2534 and Section 8099 of Pub. L. 104-61) and similar sections in subsequent DoD appropriations acts).
- 252.225-7021 Trade Agreements (JAN 2004) (19 U.S.C. 2501-2518 and 19 U.S.C. 3301 note).
- 252.225-7027 Restriction on Contingent Fees for Foreign Military Sales (APR 2003) (22 U.S.C. 2779).
- 252.225-7028 Exclusionary Policies and Practices of Foreign Governments (APR 2003) (22 U.S.C. 2755).
- 252.225-7036 Buy American Act--Free Trade Agreements--Balance of Payments Program (JAN 2004) (___ Alternate I) (JAN 2004) (41 U.S.C. 10a-10d and 19 U.S.C. 3301 note).
- 252.225-7038 Restriction on Acquisition of Air Circuit Breakers (APR 2003) (10 U.S.C. 2534(a)(3)).
- 252.226-7001 Utilization of Indian Organizations, Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns (OCT 2003) (Section 8021 of Pub. L. 107-248).
- 252.227-7015 Technical Data--Commercial Items (NOV 1995) (10 U.S.C. 2320).
- 252.227-7037 Validation of Restrictive Markings on Technical Data (SEP 1999) (10 U.S.C. 2321).
- 252.232-7003 Electronic Submission of Payment Requests (JAN 2004) (10 U.S.C. 2227)
- 252.243-7002 Requests for Equitable Adjustment (MAR 1998) (10 U.S.C. 2410).
- 252.247-7023 Transportation of Supplies by Sea (MAY 2002) (___ Alternate I) (MAR 2000) (___ Alternate II) (MAR 2000) (Alternate III) (MAY 2002) (10 U.S.C. 2631).
- 252.247-7024 Notification of Transportation of Supplies by Sea (MAR 2000) (10 U.S.C. 2631).
- (c) In addition to the clauses listed in paragraph (e) of the Contract Terms and Conditions Required to Implement Statutes or Executive Orders--Commercial Items clause of this contract (FAR 52.212-5), the Contractor shall include the terms of the following clauses, if applicable, in subcontracts for commercial items or commercial components, awarded at any tier under this contract:
- 252.225-7014 Preference for Domestic Specialty Metals, Alternate I (APR 2003) (10 U.S.C. 2533a).
- 252.247-7023 Transportation of Supplies by Sea (MAY 2002) (10 U.S.C. 2631)
- 252.247-7024 Notification of Transportation of Supplies by Sea (MAR 2000) (10 U.S.C. 2631).

52.212-1 INSTRUCTIONS TO OFFERORS--COMMERCIAL ITEMS (JAN 2004)

(a) North American Industry Classification System (NAICS) code and small business size standard. The NAICS code and small business size standard for this acquisition appear in Block 10 of the solicitation cover sheet (SF 1449). However, the small business size standard for a concern which submits an offer in its own name, but which proposes to furnish an item which it did not itself manufacture, is 500 employees.

(b) Submission of offers. Submit signed and dated offers to the office specified in this solicitation at or before the exact time specified in this solicitation. Offers may be submitted on the SF 1449, letterhead stationery, or as otherwise specified in the solicitation. As a minimum, offers must show--

- (1) The solicitation number;
- (2) The time specified in the solicitation for receipt of offers;
- (3) The name, address, and telephone number of the

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offeror;

(4) A technical description of the items being offered in sufficient detail to evaluate compliance with the requirements in the solicitation. This may include product literature, or other documents, if necessary;

(5) Terms of any express warranty;

(6) Price and any discount terms;

(7) "Remit to" address, if different than mailing address;

(8) A completed copy of the representations and certifications at FAR 52.212-3;

(9) Acknowledgment of Solicitation Amendments;

(10) Past performance information, when included as an evaluation factor, to include recent and relevant contracts for the same or similar items and other references (including contract numbers, points of contact with telephone numbers and other relevant information); and

(11) If the offer is not submitted on the SF 1449, include a statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation. Offers that fail to furnish required representations or information, or reject the terms and conditions of the solicitation may be excluded from consideration.

(c) Period for acceptance of offers. The offeror agrees to hold the prices in its offer firm for 30 calendar days from the date specified for receipt of offers, unless another time period is specified in an addendum to the solicitation.

(d) Product samples. When required by the solicitation, product samples shall be submitted at or prior to the time specified for receipt of offers. Unless otherwise specified in this solicitation, these samples shall be submitted at no expense to the Government, and returned at the sender's request and expense, unless they are destroyed during preaward testing.

(e) Multiple offers. Offerors are encouraged to submit multiple offers presenting alternative terms and conditions or commercial items for satisfying the requirements of this solicitation. Each offer submitted will be evaluated separately.

(f) Late submissions, modifications, revisions, and withdrawals of offers. (1) Offerors are responsible for submitting offers, and any modifications, revisions, or withdrawals, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that offers or revisions are due.

(2)(i) Any offer, modification, revision, or withdrawal of an offer received at the Government office designated in the solicitation after the exact time specified for receipt of offers is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and--

(A) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of offers; or

(B) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or

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(C) If this solicitation is a request for proposals, it was the only proposal received.

(ii) However, a late modification of an otherwise successful offer, that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(3) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the offer wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(4) If an emergency or unanticipated event interrupts normal Government processes so that offers cannot be received at the Government office designated for receipt of offers by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation or other notice of an extension of the closing date, the time specified for receipt of offers will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(5) Offers may be withdrawn by written notice received at any time before the exact time set for receipt of offers. Oral offers in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile offers, offers may be withdrawn via facsimile received at any time before the exact time set for receipt of offers, subject to the conditions specified in the solicitation concerning facsimile offers. An offer may be withdrawn in person by an offeror or its authorized representative if, before the exact time set for receipt of offers, the identity of the person requesting withdrawal is established and the person signs a receipt for the offer.

(g) Contract award (not applicable to Invitation for Bids). The Government intends to evaluate offers and award a contract without discussions with offerors. Therefore, the offeror's initial offer should contain the offeror's best terms from a price and technical standpoint. However, the Government reserves the right to conduct discussions if later determined by the Contracting Officer to be necessary. The Government may reject any or all offers if such action is in the public interest; accept other than the lowest offer; and waive informalities and minor irregularities in offers received.

(h) Multiple awards. The Government may accept any item or group of items of an offer, unless the offeror qualifies the offer by specific limitations. Unless otherwise provided in the Schedule, offers may not be submitted for quantities less than those specified. The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit prices offered, unless the offeror specifies otherwise in the offer.

(i) Availability of requirements documents cited in the solicitation. (1)(i) The GSA Index of Federal Specifications, Standards and Commercial Item Descriptions, FPMR Part 101-29, and copies of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained for a fee by submitting a request to--

GSA Federal Supply Service Specifications Section
Suite 8100
470 East L'Enfant Plaza, SW
Washington, DC 20407

Telephone (202) 619-8925

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Facsimile (202) 619-8978.

(ii) If the General Services Administration, Department of Agriculture, or Department of Veterans Affairs issued this solicitation, a single copy of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained free of charge by submitting a request to the addressee in paragraph (i)(1)(i) of this provision. Additional copies will be issued for a fee.

(2) The DoD Index of Specifications and Standards (DoDISS) and documents listed in it may be obtained from the--

Department of Defense Single Stock Point (DoDSSP)
Building 4, Section D
700 Robbins Avenue
Philadelphia, PA 19111-5094

Telephone (215) 697-2667/2179
Facsimile (215) 697-1462.

(i) Automatic distribution may be obtained on a subscription basis.

(ii) Order forms, pricing information, and customer support information may be obtained--

(A) By telephone at (215) 697-2667/2179; or

(B) Through the DoDSSP Internet site at

<http://dodssp.daps.mil>.

(3) Nongovernment (voluntary) standards must be obtained from the organization responsible for their preparation, publication, or maintenance.

(j) Data Universal Numbering System (DUNS) Number. (Applies to all offers exceeding \$25,000, and offers of \$25,000 or less if the solicitation requires the Contractor to be registered in the Central Contractor Registration (CCR) database. The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" or "DUNS +4" followed by the DUNS or DUNS +4 number that identifies the offeror's name and address. The DUNS +4 is the DUNS number plus a 4-character suffix that may be assigned at the discretion of the offeror to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see FAR Subpart 32.11) for the same parent concern. If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one. An offeror within the United States may contact Dun and Bradstreet by calling 1-866-705-5711 or via the internet at <http://www.dnb.com>. An offeror located outside the United States must contact the local Dun and Bradstreet office for a DUNS number.

(k) Central Contractor Registration. Unless exempted by an addendum to this solicitation, by submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the CCR database prior to award, during performance and through final payment of any contract resulting from this solicitation. If the Offeror does not become registered in the CCR database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror. Offerors 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.

(l) Debriefing. If a post-award debriefing is given to requesting offerors, the Government shall disclose the following information, if applicable:

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(1) The agency's evaluation of the significant weak or deficient factors in the debriefed offeror's offer.

(2) The overall evaluated cost or price and technical rating of the successful and the debriefed offeror and past performance information on the debriefed offeror.

(3) The overall ranking of all offerors, when any ranking was developed by the agency during source selection.

(4) A summary of the rationale for award;

(5) For acquisitions of commercial items, the make and model of the item to be delivered by the successful offeror.

(6) Reasonable responses to relevant questions posed by the debriefed offeror as to whether source-selection procedures set forth in the solicitation, applicable regulations, and other applicable authorities were followed by the agency.

52.212-3 OFFEROR REPRESENTATIONS AND CERTIFICATIONS-COMMERCIAL ITEMS (MAY 2004)--ALTERNATE I (APR 2002)

(a) Definitions. As used in this provision:

"Emerging small business" means a small business concern whose size is no greater than 50 percent of the numerical size standard for the NAICS code designated.

"Forced or indentured child labor" means all work or service--

(1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or

(2) Performed by any person under the age of 18 pursuant to a contract the enforcement of which can be accomplished by process or penalties.

"Service-disabled veteran-owned small business concern"--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and size standards in this solicitation.

"Veteran-owned small business concern" means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern" means a small business concern--

(1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more

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women; and

(2) Whose management and daily business operations are controlled by one or more women.

"Women-owned business concern" means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Taxpayer Identification Number (TIN) (26 U.S.C. 6109, 31 U.S.C. 7701). (Not applicable if the offeror is required to provide this information to a central contractor registration database to be eligible for award.)

(1) All offerors must submit the information required in paragraphs (b)(3) through (b)(5) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the Internal Revenue Service (IRS).

(2) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(3) Taxpayer Identification Number (TIN).

- TIN: _____.
- TIN has been applied for.
- TIN is not required because:

Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

Offeror is an agency or instrumentality of a foreign government;

Offeror is an agency or instrumentality of the Federal Government.

(4) Type of organization.

- Sole proprietorship;
- Partnership;
- Corporate entity (not tax-exempt);
- Corporate entity (tax-exempt);
- Government entity (Federal, State, or local);
- Foreign government;
- International organization per 26 CFR 1.6049-4;
- Other _____.

(5) Common parent.

- Offeror is not owned or controlled by a common parent;
- Name and TIN of common parent:
Name _____
TIN _____.

(c) Offerors must complete the following representations when the resulting contract will be performed in the United States or its outlying areas. Check all that apply.

(1) Small business concern. The offeror represents as part of its offer that it is, is not a small business concern.

(2) Veteran-owned small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents as part of its offer that it is, is not a veteran-owned

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small business concern.

(3) Service-disabled veteran-owned small business concern. [Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (c)(2) of this provision.] The offeror represents as part of its offer that it [] is, [] is not a service-disabled veteran-owned small business concern.

(4) Small disadvantaged business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents, for general statistical purposes, that it [] is, [] is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(5) Women-owned small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents that it [] is, [] is not a women-owned small business concern. Note: Complete paragraphs (c)(6) and (c)(7) only if this solicitation is expected to exceed the simplified acquisition threshold.

(6) Women-owned business concern (other than small business concern). [Complete only if the offeror is a women-owned business concern and did not represent itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents that it [] is a women-owned business concern.

(7) Tie bid priority for labor surplus area concerns. If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price:

(8) Small Business Size for the Small Business Competitiveness Demonstration Program and for the Targeted Industry Categories under the Small Business Competitiveness Demonstration Program. [Complete only if the offeror has represented itself to be a small business concern under the size standards for this solicitation.]

(i) (Complete only for solicitations indicated in an addendum as being set-aside for emerging small businesses in one of the four designated industry groups (DIGs).) The offeror represents as part of its offer that it [] is, [] is not an emerging small business.

(ii) (Complete only for solicitations indicated in an addendum as being for one of the targeted industry categories (TICs) or four designated industry groups (DIGs).) Offeror represents as follows:

(A) Offeror's number of employees for the past 12 months (check the Employees column if size standard stated in the solicitation is expressed in terms of number of employees); or

(B) Offeror's average annual gross revenue for the last 3 fiscal years (check the Average Annual Gross Number of Revenues column if size standard stated in the solicitation is expressed in terms of annual receipts).

(Check one of the following):

Number of Employees	Average Annual Gross Revenues
<input type="checkbox"/> 50 or fewer	<input type="checkbox"/> \$1 million or less
<input type="checkbox"/> 51--100	<input type="checkbox"/> \$1,000,001--\$2 million
<input type="checkbox"/> 101--250	<input type="checkbox"/> \$2,000,001--\$3.5 million

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_____ 251--500	_____ \$3,500,001--\$5 million
_____ 501--750	_____ \$5,000,001--\$10 million
_____ 751--1,000	_____ \$10,000,001--\$17 million
_____ Over 1,000	_____ Over \$17 million

(9) (Complete only if the solicitation contains the clause at FAR 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns, or FAR 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting, and the offeror desires a benefit based on its disadvantaged status.)

(i) General. The offeror represents that either--

(A) It is, is not certified by the Small Business Administration as a small disadvantaged business concern and identified, on the date of this representation, as a certified small disadvantaged business concern in the database maintained by the Small Business Administration (PRO-Net), and that no material change in disadvantaged ownership and control has occurred since its certification, and, where the concern is owned by one or more individuals claiming disadvantaged status, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); or

(B) It has, has not submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.

(ii) Joint Ventures under the Price Evaluation Adjustment for Small Disadvantaged Business Concerns. The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements in 13 CFR 124.1002(f) and that the representation in paragraph (c)(9)(i) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. [The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture: _____.]

(10) HUBZone small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents, as part of its offer, that--

(i) It is, is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It is, is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (c)(10)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. [The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: _____.] Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(11) (Complete if the offeror has represented itself as disadvantaged in paragraph (c)(4) or (c)(9) of this provision.) The offeror shall check the category in which its ownership

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falls:

 Black American. Hispanic American. Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians). Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory or the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru). Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal). Individual/concern, other than one of the preceding. (11) HUBZone small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents as part of its offer that- (i) It is, is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns Maintained by the Small Business Administration, and no material change in ownership and control, principal place of ownership, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and (ii) It is, is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (c)(11)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating on the joint venture. [The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: _____.] Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation. (d) Representations required to implement provisions of Executive Order 11246-- (1) Previous contracts and compliance. The offeror represents that-- (i) It has, has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation; and (ii) It has, has not filed all required compliance reports. (2) Affirmative Action Compliance. The offeror represents that-- (i) It has developed and has on file, has not developed and does not have on file, at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 CFR parts 60-1 and 60-2), or (ii) It has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor. (e) Certification Regarding Payments to Influence Federal Transactions (31 U.S.C. 1352). (Applies only if the contract is expected to exceed \$100,000.) By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer

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or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract.

(f) Buy American Act Certificate. (Applies only if the clause at Federal Acquisition Regulation (FAR) 52.225-1, Buy American Act--Supplies, is included in this solicitation.)

(1) The offeror certifies that each end product, except those listed in paragraph (f)(2) of this provision, is a domestic end product and that the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products. The terms "component," "domestic end product," "end product," "foreign end product," and "United States" are defined in the clause of this solicitation entitled "Buy American Act--Supplies."

(2) Foreign End Products:

Line Item No	Country of Origin
_____	_____
_____	_____
_____	_____

(List as necessary)

(3) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(g) (1) Buy American Act--Free Trade Agreements--Israeli Trade Act Program Certificate. (Applies only if the clause at FAR 52.225-3, Buy American Act--Free Trade Agreements--Israeli Trade Act, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(1)(ii) or (g)(1)(iii) of this provision, is a domestic end product and that the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The terms "component," "domestic end product," "end product," "foreign end product," and "United States" are defined in the clause of this solicitation entitled "Buy American Act--Free Trade Agreements--Israeli Trade Act."

(ii) The offeror certifies that the following supplies are FTA country end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act--Free Trade Agreements--Israeli Trade Act":

FTA Country or Israeli End Products:

Line Item No	Country of Origin
_____	_____
_____	_____
_____	_____

(List as necessary)

(iii) The offeror shall list those supplies that are foreign end products (other than those listed in paragraph (g)(1)(ii) of this provision) as defined in the clause of this solicitation entitled "Buy American Act--Free Trade Agreements--Israeli Trade Act." The offeror shall list as other foreign end products those end products manufactured in the United States that do not qualify as domestic end products.

Other Foreign End Products:

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Line Item No	Country of Origin
_____	_____
_____	_____
_____	_____

(List as necessary)

(iv) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(2) Buy American Act--Free Trade Agreements--Israeli Trade Act Certificate, Alternate I (Jan 2004). If Alternate I to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g) (1) (ii) for paragraph (g) (1) (ii) of the basic provision:

(g) (1) (ii) The offeror certifies that the following supplies are Canadian end products as defined in the clause of this solicitation entitled "Buy American Act--Free Trade Agreements--Israeli Trade Act":

Canadian End Products:

Line Item No.

(List as necessary)

(3) Buy American Act--Free Trade Agreements--Israeli Trade Act Certificate, Alternate II (Jan 2004). If Alternate II to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g) (1) (ii) for paragraph (g) (1) (ii) of the basic provision:

(g) (1) (ii) The offeror certifies that the following supplies are Canadian end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act--Free Trade Agreements--Israeli Trade Act":

Canadian or Israeli End Products:

Line Item No	Country of Origin
_____	_____
_____	_____
_____	_____

(List as necessary)

(4) Trade Agreements Certificate. (Applies only if the clause at FAR 52.225-5, Trade Agreements, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g) (4) (ii) of this provision, is a U.S.-made, designated country, Caribbean Basin country, or FTA country end product, as defined in the clause of this solicitation entitled "Trade Agreements."

(ii) The offeror shall list as other end products those end products that are not U.S.-made, designated country, Caribbean Basin country, or FTA country end products.

Other End Products:

Line Item No	Country of Origin
_____	_____
_____	_____
_____	_____

(List as necessary)

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(iii) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25. For line items subject to the Trade Agreements Act, the Government will evaluate offers of U.S.-made, designated country, Caribbean Basin country, or FTA country end products without regard to the restrictions of the Buy American Act. The Government will consider for award only offers of U.S.-made, designated country, Caribbean Basin country, or FTA country end products unless the Contracting Officer determines that there are no offers for such products or that the offers for such products are insufficient to fulfill the requirements of the solicitation.

(h) Certification Regarding Debarment, Suspension or Ineligibility for Award (Executive Order 12549). (Applies only if the contract value is expected to exceed the simplified acquisition threshold.) The offeror certifies, to the best of its knowledge and belief, that the offeror and/or any of its principals--

(1) Are, are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(2) Have, have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(3) Are, are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses.

(i) Certification Regarding Knowledge of Child Labor for Listed End Products (Executive Order 13126). [The Contracting Officer must list in paragraph (i)(1) any end products being acquired under this solicitation that are included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, unless excluded at 22.1503(b).]

(1) Listed end products.

Listed End Product

Listed Countries of Origin

(2) Certification. [If the Contracting Officer has identified end products and countries of origin in paragraph (i)(1) of this provision, then the offeror must certify to either (i)(2)(i) or (i)(2)(ii) by checking the appropriate block.]

(i) The offeror will not supply any end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product.

(ii) The offeror may supply an end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture any such end product

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furnished under this contract. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.

(End of provision)

This Request for Quotations (RFQ) covers the establishment of a firm-fixed price purchase order for the furnishing of a Low Speed Flexible Element Coupling with Flange Adapters. This RFQ is issued using Simplified Acquisition Procedures in accordance with the Test Program for Certain Commercial Items authorized by Subpart 13.5 of the Federal Acquisition Regulation (FAR).

The articles to be furnished shall be in accordance with the requirements contained in the Purchase Specification for Propulsion Motor Flexible Coupling provided as Attachment 1 to this RFQ.

The Government intends to make an award to the offeror who submits the low price technically acceptable quotation. Technical acceptability shall be determined based on an evaluation of whether the Coupling being offered complies with the requirements set forth in the attached Purchase Specification for Propulsion Motor Flexible Coupling. To assist the Government in determining technical acceptability, offerors are required to submit information as part of their quotation on the Coupling it intends to furnish demonstrating that it will comply with the specification requirements. As a minimum, offerors must provide a drawing of the Coupling in intends to furnish containing the dimensions, maintenance space requirements, weight, location of coupling centers of gravity, the limit of axial extension/compression, angular stiffness, axial stiffness, torsional stiffness, the angular velocity (WR^2), maximum allowable deflections, axial natural frequency, lateral critical speed, coupling service factor, transient torque for shear failure, transient torque limit for shear failure and balancing requirements.

Based on the results of the Government's evaluation, each quotation shall be assigned a rating of acceptable or unacceptable. The Government intends to make an award based on initial quotations. Therefore, offerors are advised their initial quotation should contain their best offer from both a price and a technical standpoint. Offerors who do not submit sufficient information on the Coupling being offered shall be considered technically unacceptable and will not be eligible for award.

Attachment: 1 – Purchase Specification for Propulsion Motor Flexible Coupling (13 pages)

Technical Evaluation Criteria
for
IPS PMM Coupling

It is recommended to award this contract to the low price, technically acceptable offeror. Technical acceptability will be determined based on the following evaluation criteria:

1. **Technical Compliance:** In this factor, offerors shall provide information on the Coupling it intends to furnish demonstrating that it will comply with the requirements contained in the Purchase Specification for Propulsion Motor Flexible Coupling. As a minimum, offerors shall provide the dimensions, maintenance space requirements, weight, location of coupling centers of gravity, the limit of axial extension/ compression, angular stiffness, axial stiffness, torsional stiffness, WR^2 , maximum allowable deflections, axial natural frequency, lateral critical speed, coupling service factor, transient torque for shear failure, transient torque limit for shear failure, and balancing requirements.

Purchase Specification
For
Propulsion Motor Flexible Coupling

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1.0 Introduction

This specification establishes the requirements for the manufacture and delivery of a Low Speed Flexible Coupling complete with Flange Adapters, Fasteners and Associated Technical Data to be located indoors at the Naval Surface Warfare Center Carderock Division (NSWCCD), Philadelphia, PA for a prototype, variable speed, electric ship's propulsion motor Land Based Test Site. The Coupling will be used to conduct performance/operational testing of the propulsion motor and will interface with the propulsion motor on its driving end and with a four quadrant electric motor dynamometer on its driven end. The electric motor dynamometer will be installed in tandem with a waterbrake dynamometer. The dynamometers will operate at the same speed (RPM's) as the propulsion motor. The fitted bolts at the adapters' interfaces with the propulsion motor and the dynamometer will be furnished and installed by the Government. The Coupling described in this specification must be capable of continuously transmitting the torque specified herein at the RPMs and parallel offset alignment specified herein. Also, the Coupling must be capable of handling transient torque spikes up to the shear stress failure of the coupling shear pins or shear section.

2.0 Scope

2.1 Equipment and Services to be provided by the Contractor:

2.1.1 The Coupling, Flange Adapters and Fasteners shall be suitable for a horizontal industrial installation and shall be constructed in accordance with the best commercial practices. The Supplier shall be responsible for delivery of the following to NSWCCD-SSES of Philadelphia:

Item	Qty	Description
0001	1 Each	Low Speed Flexible Element Coupling as specified herein.
0002	1 Each	Drive End Flange Adapter. The adapter shall interface with the Government furnished propulsion motor at its driving end. It shall be provided with undersized bolt holes (2.75" diameter) at its propulsion motor interface. The holes will be taper reamed (1/8" on diameter per inch of bolt hole length; with the bolt head, large end, located at the flange adapter) to 2.906" at the interface plane with the propulsion motor shaft flange by the Government at final assembly in the field. The adapter shall be provided with a male spigot that is concentric with its axis of rotation and will fit inside a rabbet at the mating flange interface.
0003	1	Driven End Flange Adapter. The adapter shall interface

		with the Government furnished dynamometer at its driven end. It shall be provided with undersized bolt holes (3.375") at its dynamometer interface. The holes will be taper reamed (1/8" on diameter per inch of bolt hole length; with the bolt head, large end, located at the flange adapter) to 3.500" at the interface plane with the dynamometer shaft flange by the government at final assembly in the field. The adapter shall be provided with a male spigot that is concentric with its axis of rotation and will fit inside a rabbet at the mating flange interface.
0004	2 Each	Flange Spacers, 0.125" thick, peelable shim. One spacer is to be incorporated into the original coupling assembly. The second spacer may be used as required. See sketch SK050-01 attached for the axial locations of the installed and second flange spacers. The bolt holes in the flange spacers shall locate them radially in the coupling assembly.
0005	1 Set	Replacement Shear Pins (or replacement coupling shear section).
0006	1 Each	Bearing to maintain alignment of disconnected coupling parts during coastdown following failure of the shear pins or shear section.
0007	1 Lot	Fasteners for all bolted interfaces, excluding the Fasteners at the flange adapter surfaces that interface with the Government furnished equipment, which will be furnished by the Government. The contractor shall also provide two spare nuts and bolts for each flange connection.
0008	3 Each	The Contractor shall furnish Coupons (Metallurgical Test Samples) from the torque meter spacer tube (part of the spacer piece – measurement section, component 1 on Sketch No. SK050-01) tested to determine the shear modulus and Poisson's ratio of the spacer tube material in accordance with paragraphs 3.2.3 and 3.2.4, respectively. The contractor shall furnish an uncertainty analysis for the shear modulus and Poisson's ratio for the spacer tube material as described in Section 5 of this specification in accordance with paragraph 3.2.6. The Contractor shall also supply three coupons to the Government suitable for independent testing of shear modulus and Poisson's ratio by the Government in accordance with paragraphs 3.2.3 and 3.2.4.
0009	1 Lot	Technical Data (Section 5)

2.1.2 Nothing in this specification shall relieve the Contractor of the responsibility to insure that the design, material, and workmanship are satisfactory for the service intended, or as may be required by common usage and/or good practice.

2.2 Equipment and Services to be provided by the Government:

2.2.1 The Government will install the coupling.

2.2.2 The Government will provide the torsion meter to the contractor for installation on the coupling spacer tube prior to factory balancing of the coupling/torsion meter assembly as required by paragraph 4.12 below.

2.2.3 The Government will ream the coupling bolt holes at the coupling interface with the driving and driven equipment at assembly.

2.2.4 The Government will disassemble the coupling as necessary to install the bolts at the equipment interfaces. Any special actions that are needed to reestablish the coupling balance during reassembly shall be clearly stated in the Technical Manual provided by the Contractor.

2.2.5 The Government will furnish and install the bolts/nuts at the flange adapter surfaces that interface with the Government furnished equipment.

3.0 Applicable Documents

3.1 The following specifications, standards, and codes, latest edition, form a part of this specification. The design of the items identified in this specification shall be in strict compliance with all applicable sections herein.

3.2 Referenced Specifications, Standards, and Codes

3.2.1 American National Standards Institute (ANSI), Standards B1.1, American (National) Standard Screw Threads; B46.1 Surface Finish

3.2.2 American Petroleum Institute (API), Standard 671, Flexible Couplings

3.2.3 ASTM Standard E 143-02, Standard Test Method for Shear Modulus at Room Temperature

3.2.4 ASTM Standard E132-97, Standard Test Method for Poisson's Ratio at Room Temperature

3.2.5 American Iron and Steel Institute, AISI 4340 Steel

3.2.6 American National Standards Institute/American Society of Mechanical Engineers (ANSI/ASME), Performance Test Code (PTC) 19.1, Measurement Uncertainty

4.0 Technical Requirements

4.1 Coupling Configuration

4.1.1 See attached sketch SK 050-01, COUPLING ARRANGEMENT, dated 05-14-04. This sketch provides a conceptual arrangement for the coupling.

4.1.1.1 For normal operating service, a torque meter weighing 140 pounds (component 7 on the conceptual sketch) will be furnished and mounted at final installation by the Government at the center of the 23 inch diameter spacer piece measurement section (component 1 on the conceptual sketch). The distance from centerline to centerline of the torque meter knife edges is 17.641 inches and each knife edge is about 1/8" wide. When installed, the torque meter knife edges will be centered on a location about 8.820" on each side of the transverse centerline of the spacer piece.

4.1.1.2 Prior to normal operational service, for a short period of time and for limited speed/load scenarios, a temporary installation will be used that employs two torque meters on the spacer piece, each identical to the torque meter described above. One of these torque meters will be located on the driving end of the spacer piece. Its knife edges will be centered on locations 8.820 inches and $17.641 + 8.820 = 26.461$ " from the transverse centerline of the spacer piece. The second torque meter will be located on the driven end of the spacer piece. Its knife edges will also be centered on locations 8.820" and 26.461" from the transverse centerline of the spacer piece. Each torque meter will weigh 140 pounds.

4.1.1.3 No coatings shall be provided on the outside surface of the spacer piece for a 1" wide circumferential strip centered on the four locations of the future torque meters' knife edges as described above. Prohibited coatings at these locations include both anodic corrosion protection coating and chemically resistant paints. The bare spacer piece metal shall be exposed at these four locations. There shall also be no increase or decrease in the outside diameter of the spacer piece metallic surface in way of the uncoated strips. Prior to shipment of the coupling, a non-permanent

removable preservative shall be applied to the uncoated, exposed, external, strip surfaces of the spacer piece. The solvent to be used to remove this preservative shall be specified by the Contractor. This solvent shall not damage the anodic corrosion protection coating or the chemically resistant paint that coats the remainder of the spacer piece.

4.1.2 Coupling Length

4.1.2.1

Free coupling length (excluding spigots on flange adapters), flange to flange, with one flange spacer (item 4) installed:	112 inches
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4.1.3 Interface Requirements

4.1.3.1 Driven end

Flange Outer Diameter:	44.5 inches
Bolt Circle Diameter:	38.000 inches
Bolt Hole Diameter:	3.375 inches (will be reamed to 3.500 inches at assembly)
Bolt Holes:	12 (equally spaced)
Male Spigot Diameter:	25.999 +0.000", -0.002"
Male Spigot Length:	0.400 ± 0.010 inches

4.1.3.2 Drive end

Flange Outer Diameter:	37.200 inches
Bolt Circle Diameter:	32.318 inches
Bolt Hole Diameter:	2.75 inches (will be reamed to 2.906 inches at assembly)
Bolt Holes:	12 (equally spaced)
Male Spigot Diameter:	18.600 +0.000", -0.002"
Male Spigot Length:	1.163 ± 0.010 inches

4.1.4 Maximum Allowable Static Overhung Moments on the Coupled Motor Shafts

At propulsion Motor Coupling interface is 9430 pound-feet.
At dynamometer Coupling Interface – LATER (**SSSES to obtain clarification provided by the load system vendor**).

4.1.5 Spacer Piece Between Flexible Diaphragms

4.1.5.1 The spacer piece O.D./I.D. in way of the torsionmeter are 23.000" \pm 0.005", and 18.750" \pm 0.005", respectively.

4.1.5.2 The O.D./I.D. of the spacer piece shall be concentric within \pm 0.002" T.I.R.

4.1.5.3 The minimum length of continuous uniform spacer piece section required in way of the torsionmeter is 68".

4.1.5.4 The maximum inside/outside surface finish of the spacer piece shall be 63 microinches in accordance with Paragraph 3.2.1, above.

4.1.5.5 The spacer tube part of the spacer piece measurement section (see Sketch SK050-01, attached) shall be constructed of seamless/homogenous AISI 4340 steel. See paragraph 3.2.5 above. The only welds allowed are at the spacer tube's interface with its end flange and flexible diaphragm.

4.1.6 Adapter Fasteners Installation Access Holes

Access holes shall be provided in the large diameter disk of both the drive end and driven end adapters to allow installation of the bolts that fasten the adapters to the propulsion motor and dynamometer. The Government will disassemble the coupling as necessary to install these bolts.

4.1.7 Jacking Taps

Three jacking taps shall be provided in each adapter to facilitate disengaging the adapter spigots from the rabbets at the equipment interfacing surfaces.

4.1.8 Shear Pin or Shear Section Assembly

The coupling assembly shall include a shear pin or shear section assembly which will shear at 27.0×10^6 to 30.0×10^6 in-lbs torque. The shear pins are to be replaceable without requiring coupling disassembly. Special tools required to remove and install shear pins shall be provided. If a shear section is provided it shall be replaceable by disassembly of the flanged joints at the ends of the shear section only. The design is to incorporate a coast down bearing (spark free design) in the coupling assembly to support the assembly halves in the event pins are sheared.

4.1.9 Flange Spacers

The coupling assembly shall include two 0.125-inch thick flange spacers. One flange spacer is to be incorporated between a pair of coupling assembly flanges during original assembly. This spacer is to provide a means to increase the coupling's axial stretch by unpeeling lamina from, or machining of, this spacer. The second spacer shall be provided in the event that the coupling assembly stretch needs to be decreased as a result of the machinery alignment. Bolting at the spacer flange locations should be able to accommodate removal of the original 0.125-inch spacer and also the use of second 0.125-inch spacer.

4.2 Coupling Operating Conditions

Maximum Continuous Power	36,500 KW (48,947 HP)
Speed	127 RPM
Maximum Continuous Torque	24,290,431 pound-inches
Coupling Service Factor	To be recommended by the contractor based on the information provided in paragraph 4.3 below.
Coupling Rating	To be recommended by the contractor based on the maximum continuous coupling torque and the recommended service factor.
Transient torque for shear pins or shear section failure	27,000,000 pound-inches, or as recommended by the Contractor and approved by the Government.
Transient torque limit for shear pins or shear section failure	30,000,000 pound-inches, or as recommended by the Contractor and approved by the Government.
Maximum transient short circuit system torque	43,564,723 pound-inches. See paragraph 4.3.1.3 below.

4.3 Service Factor

4.3.1 The following is provided for the contractor's use in developing a service factor for the coupling:

4.3.1.1 The propulsion motor can operate from 0 to 127 RPM in both the clockwise and counterclockwise directions.

4.3.1.2 The first dynamometer is a four quadrant load motor. It can absorb up to ½ the full power output of the propulsion motor.

Its power input shaft is capable of transmitting the full power output of the propulsion motor.

4.3.1.3 During a short circuit, this dynamometer can develop 31,419,507 pound-inches of transient torque when operating at full load. When added to the waterbrake full load torque of 12,145,216 pound-inches, the maximum torque imposed on the flexible coupling is 43,564,723 pound-inches. It is expected that the shear section (or shear pins) in the coupling would fail at between 27,000,000 and 30,000,000 pound-inches.

4.3.1.4 The second dynamometer is a water brake. It is capable of absorbing $\frac{1}{2}$ the full power output of the propulsion motor.

4.3.1.5 Both dynamometers operate at the same RPM as the propulsion motor.

4.3.1.6 The Government plans to couple the two tandem dynamometers together using an existing contoured diaphragm flexible coupling owned by the Navy. Its torsional stiffness is 228×10^6 lb-in/RAD. The rotational inertia of the electric motor dynamometer rotor is 82.20×10^6 pound inches². The rotational inertia of the waterbrake dynamometer rotor (with entrained water at full power) is 27.95×10^6 pound inches².

4.3.1.7 A test is planned for the propulsion motor to test it from full power ahead to crash astern. There will be a torque reversal in the coupling during this test. The torque will not exceed the maximum continuous coupling torque during the crash astern test.

4.4 Operating Temperature

The coupling operates at ambient temperature of 105° F or less.

4.5 Angular Capability

The angular capability of each flexible element is at least $\frac{1}{4}$ degree.

4.6 Coupling Parallel Offset Capability

The parallel offset capability is at least 0.350".

4.7 Axial Compression/Extension Capability

To be provided by the Contractor.

4.8 Angular Capability of the Flexible Elements

To be provided by the contractor.

4.9 Axial Stiffness of the Coupling

To be provided by the contractor.

4.10 Angular Stiffness of Each Diaphragm Assembly

To be provided by the contractor.

4.11 Torsional Stiffness of the Coupling

To be provided by the contractor.

4.12 Balancing

The coupling components and coupling assembly shall be balanced by the Contractor in accordance with the document referenced in paragraph 3.2.2 above. In addition, each coupling component and the assembled coupling (including the Government furnished torsion meter) shall be statically and dynamically balanced using a machine that has a minimum detectable unbalance below the maximum unbalance of:

$$U = 0.177 W$$

Where U = Maximum allowable unbalance in oz-inch

W = Weight of shaft section in lbs

4.13 Site Conditions:

4.13.1 Location: Indoor

4.13.2 Ambient Temperature Range: 45°F to 105°F

4.13.3 Relative Humidity Range: 5% to 100%

5.0 Technical Data

5.1 Drawings:

Three copies of final assembly drawings, section drawings, and parts lists are to be submitted and approved by the Government prior to delivery of the coupling. Review and approval of final drawings will be provided 14 days after receipt of the drawing package by the Government.

5.2 Test Data

Copies of the factory test data specified in paragraphs 6.1, 6.2, and 6.3 below shall be submitted to the Government prior to delivery of the coupling.

5.3 Technical Manuals

Two (2) copies of the coupling technical manuals containing coupling drawings; component drawings; installation, operation, maintenance, inspections and instructions, and special tools data, shall be furnished at the time of delivery of the coupling. The manual shall be standard commercial quality and coverage for the coupling furnished.

5.4 Uncertainty Analyses

Two (2) copies of the uncertainty analyses for the shear modulus and Poisson's ratio for the spacer tube material in accordance with paragraph 3.2.6 shall be submitted to the Government prior to delivery of the coupling.

6.0 Inspection and Testing

6.1 Testing of the equipment shall be performed by the Contractor to ensure that the equipment is fully functional and structurally and mechanically sound. The Government reserves the right to perform equipment inspections at the Contractor's facility where such inspections are deemed necessary to assure supplies and services conform to the prescribed requirements.

6.2 The Contractor shall measure and report the inside and outside diameters of the uncoated spacer piece – measurement section (Component 1 on attached Sketch No. SK050-01) at five cross sectional planes along its length. These five planes are located at the transverse centerline of the spacer piece, ten inches off this centerline in both directions, and ten inches from each end of the spacer piece. The inside and outside diameters shall be measured to an accuracy of ± 0.005 inches at 0, 45, 90, and 135 degrees at each plane.

6.3 The contractor shall provide the laboratory test data of the shear modulus and Poisson's ratio for the torque meter spacer tube material as required by item 8 under paragraph 2.1.1, above. The Contractor shall supply three coupons to the Government suitable for independent testing of shear modulus and Poisson's

ratio by the Government in accordance with paragraphs 3.2.3 and 3.2.4. The coupons for testing shall:

- be from the same heat and lot of steel,
- have the processing parameters as the processing parameters used on the spacer tube so that there is the same amount of deformation in the coupons as there is in the spacer tube, and,
- have a hardness which does not differ from the hardness of the spacer tube by more than 1 point on the Rockwell C scale.

7.0 Shipping

7.1 The Government will provide a release for shipping to the Contractor following approval of the final drawings by the Government.

7.2 Packaging

7.2.1 Equipment shall be packed for shipping in a manner that will ensure acceptance and safe delivery at destination. Supplier is responsible for damage during shipment.

7.2.2 Each package shall be marked with the Contract Number, Contract Item Number and Purchase Specification Number TS050-12.

7.3 Shipping Address: Naval Surface Warfare Center
Carderock Division
Ship Systems Engineering Station
901 Admiral Peary Way
Naval Business Center
Philadelphia, Pa 19112
Attn: Howard Feinstein, Code 9112
Phone: (215) 897-8895
Cell: (215) 837-1787